General Research Series
PAPER NO. 147
August, 1990

MEASURING ACTIVITY AND COSTS IN IRISH HOSPITALS:
A STUDY OF HOSPITAL CASE MIX

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THE ECONOMIC & SOCIAL RESEARCH INSTITUTE

No. 147 MEASURING ACTIVITY AND COSTS IN IRISH HOSPITALS Wiley, Fetter August, 1990

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MEASURING ACTIVITY AND COSTS IN IRISH HOSPITALS:

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ISBN 0 7070 0113 7

Acknowledgements

This study was made possible by the co-operation of a large number of individuals and organisations both in Ireland and the US. M. Wiley would especially like to express sincere appreciation to colleagues and organisations in Ireland for the support and assistance provided throughout the conduct of this project. The Department of Health commissioned this report and provided the funding which made it possible. In addition, the Department made available all necessary facilities required for the conduct of the research. The Department of Health, as an organisation, has been an outstanding host through all stages of this research project and I offer my sincere thanks for the assistance provided by all over a long, and sometimes difficult, project. While acknowledgeing and respecting the traditional anonymity of civil servants, the following individuals in the Department of Health deserve particular thanks for contributions made to the conduct and completion of this project: the current and former Secretaries of the Department, Mr J. Hurley and Mr P.W. Flanagan; current and former Assistant Secretaries, Mr D. Devitt, Mr J.A. Enright, Mr C. McCartney, Mr J. O'Dwyer, Mr S. Trant; colleagues in the Finance Unit and the Resource Allocation Group, Mr T. Mooney, Mr D. Smyth, Mr R. Carroll, Mr D. Mulligan; the programming assistance provided by Mr T. O'Sullivan, Mr M. Moran and Ms C. McManus and the very valuable assistance of other members of the Organisation Unit, including Mr C. Hardy and Mr P. Cantwell. My very special thanks for the constant support and assistance provided at all times and in all circumstances must go to current and former members of the Planning Unit, particularly Ms S. Barnes, Ms M. Stack Kennedy, Ms J. Wilson, Mr G. Coffey, Mr M. Kelly, Mr H. McGee, Mr D. McCarthy, Mr T. O'Mahony, Mr J. Collins, Mr J. O'Toole, Mr R. Smyth, Mr F. Lynch, Mr B. Lucy and Ms M. O'Keeffe.

The data requirements for this project were very substantial. In this regard, I am grateful for the assistance provided by Mr J. O'Gorman of the Health Research Board and Ms A. Purcell and her colleagues on the Hospital In-Patient Enquiry Scheme. I must also express my appreciation for the courtesy received from all Health Boards and hospitals which I have approached many times in recent years with different requests for information and assistance. The helpfulness and co-operation which have always been forthcoming from these institutions and individuals while working under great pressure is indicative of the high standards of service provision and quality care which have been the corner stones of our hospital system. I must express my particular appreciation to the managers concerned in the three pilot hospitals who agreed to participate in the costing study. We are indebted to the managers and accountants in these hospitals who undertook a substantial amount of work for the purpose of participating in this exercise.

At the Health Systems Management Group, Yale School of Organisation and Management, R. Fetter would like to express appreciation for assistance provided by Dr D. Brand, Dr J. Freeman, Mr R. Newbold, Mr M. Mador, Dr H. Park and Mr I. Chandler.

Earlier drafts of this report benefited from comments offered by Dr C. Whelan and Dr B. Nolan of the ESRI, an anonymous external referee and a number of health agencies and government departments.

Finally, we are indebted for assistance provided by ESRI colleagues, particularly Ms M. McElhone for valuable support and assistance in supervising the printing of the report, Ms P. Hopkins for excellent assistance with difficult artwork and Ms M. Cleary and the staff of the general office for clerical assistance.

In expressing our appreciation to particular organisations and individuals for assistance provided during the course of this research project, it must be emphasised that this does not imply any expressed or implicit support from these sources for the research or opinions contained in this report. The views and opinions expressed in this report, together with any errors of omission or commission, remain the full and complete responsibility of the authors.

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GENERAL SUMMARY

During the period of rapid growth within the health sector which characterised the 1970s, routine evaluation of efficiency and/or effectiveness within the system was minimal. The crisis which subsequently gripped the public finances led, however, to a rather dramatic reversal of this trend and the expansion of the 1970s was abruptly constrained by the financial controls of the 1980s, when maintenance of the health service system, at best, rather than continued expansion, became the priority.

While health service effectiveness must be recognised as the highest priority for any health system, this area of investigation is, of necessity, outside the scope of the present study. It is the area of health system efficiency which provides the focus for our investigations here. More specifically, our concerns relate to the measurement of efficiency within the hospital service sector in particular. While efficiency in service provision and resource deployment are, in themselves, important objectives for the hospital system, efficiency is also a necessary pre-condition for the pursuit of optimal quality of care standards within this system.

While the study begins with an overview of developments and changes within the Irish hospital system since 1980, this is a necessary backdrop to the central question addressed in the study: what do hospitals do? While the patients treated by a hospital and the bed-days used can be easily quantified, the question which arises is whether this type of descriptive information can adequately portray the complexity of patient demand and service provision within the hospital system. To take an example: what conclusion can be drawn from the information that a maternity hospital and an acute general hospital both have 10,000 discharges in a particular year? Does this mean that both hospitals would be expected to have the same level of resource requirement within the time period under review? The usefulness of the information on discharge levels varies between these hospitals. Discharge level in the maternity hospital may provide a worthwhile starting point for the assessment of service demand and resource requirement because the service mix for a specialty hospital of this type is quite predictable. This is not the case for the acute general hospital, and information on discharge levels would be an inadequate basis for the assessment of service requirements and resource needs.

This problem is magnified many times over within the acute hospital

sector in Ireland where the task of assessing resource requirements for many different hospitals supporting a mixed range of specialties must be addressed on an ongoing basis with very limited information. Given the importance of improving the information base as an input to the process of assessing resource requirements at the hospital level, a core objective for this study is to test the application of one approach to the quantification of the patient mix, or case mix, treated within the acute hospital sector. From this basis, we proceed to test potential applications for the approach in the pursuit of improved efficiency in the deployment of resources at the hospital level.

The Irish Hospital System: 1980-1988

The review of changes within the acute hospital system between 1980 and 1988 may be summarised as follows: there was a 20 per cent decline in acute hospital beds, a 19 per cent decline in average length of stay, a 25 per cent decline in hospital bed/days produced, and just a 5 per cent decline in discharges from the acute hospital system. Over the same period, the proportion of Gross National Product (GNP) devoted to public health expenditure declined by 11 per cent, from 8.1 per cent in 1980 to 7.2 per cent in 1988. Hospital expenditure as a proportion of GNP dropped from a high of 4.4 per cent in 1980 to 3.6 per cent in 1988, a decline of 18 per cent. At constant prices, health expenditure has declined by 8 per cent between 1980 and 1988, while expenditure on the hospital services has declined by almost 15 per cent over the period.

While the change in discharge levels between 1980 and 1988 appears to be small, relative to changes in the other measures, it is important to stress that other areas of hospital activity, including the use of out-patient departments and day treatment facilities, have shown an increase over the period. An analysis of changes in these areas of activity is, however, outside the scope of this study as our concern here must, of necessity, be concentrated on the acute in-patient sector.

Against this backdrop to the acute hospital system, an important question which must be raised is whether the reduced numbers of people receiving in-patient care are actually making the same, or perhaps greater, demands on the hospital system, compared with the patient numbers treated in previous years. This question relates to the illness experience, or morbidity, of the patients requiring treatment by the hospital system. These issues have important implications for resource deployment and management within the hospital sector. It is not necessarily the *number* of patients treated within the hospital which will constitute the most important determinant of resource use within the hospital. Rather, it is the

type and *mix* of patients requiring treatment which will have the greatest influence on service delivery and resource needs at the hospital level. Given the limitations on public expenditure in recent years, it is becoming essential to develop a system for differentiating between hospitals in terms of the *type* and not just the *number* of patients treated if resources are to be directed to hospitals in accordance with the needs of the patients treated.

Defining the Hospital Product

While not denying that individuals are unique, patients may share common clinical attributes which, in turn, gives rise to the expectation that they will receive a similar "bundle" of services as part of the therapeutic process. If classes of patients which cover all possible patient types can be differentiated, this framework constitutes the basis for a case-mix classification scheme which "provides a means for examining the products of the hospital, since patients within each class are expected to receive a similar product" (Fetter *et al*, 1980). The hospital product can therefore be defined by the development and application of a case-mix classification system consisting of discrete classes of patients exhibiting common clinical attributes and similar output utilisation patterns.

The complexity of both illness and the therapeutic process means that the development of a system for classifying case mix is a complicated undertaking. The 1970s saw significant advancements towards the achievement of the objective of operational case-mix measures. A number of the most advanced measures of hospital case mix are reviewed in the report, including Diagnosis Related Groups, Medisgrps, Disease Staging, Computerised Severity Index, APACHE II, and Patient Management Categories. The results of recent comparative studies of these case-mix classification techniques are also reported. An important conclusion emerging from one such study was that "diagnosis-related groups (DRGs) are the most appropriate available measure of hospital case mix for PPS" (Prospective Payment System) (Prospective Payment Assessment Commission, April, 1988, p.3).

In recognising the integral importance of case-mix measurement in any approach to hospital product definition, together with the strength of the available evidence on the performance of available case-mix measures, it was decided to proceed with a test of the application of the Diagnosis Related Group (DRG) system on Irish hospital discharge data. Two core objectives for proceeding with this application of case-mix measurement in the context of the Irish hospital system were identified as follows: (1) to test the technical feasibility of using an advanced case-mix measure like DRGs on Irish data; and (2) to assess the potential which DRGs might offer

as a resource management tool within the Irish hospital system.

Measuring Hospital Case Mix

The Diagnosis Related Group (DRG) patient classification system was developed by the Health Systems Management Group at the Yale School of Organisation and Management in the late 1960s. The objective for the DRG system is specified as follows by Fetter, Thompson and Averill (1981):

> "The fundamental purpose of the DRG approach is to identify in the acute-care setting a set of case types, each representing a class of patients with similar processes of care and a predictable package of services (or product) from an institution" (p.27).

The development of a system to achieve this objective required the initial specification of independent variables which were descriptive of the patient, the patient's disease condition and the treatment process. Ultimately, the independent variables which were identified as representing the essential demographic and clinical attributes of in-patients were the following: primary diagnosis, secondary diagnoses, surgical procedures performed, age, sex and discharge status.

The specification of the appropriate dependent variable for the development of the DRG system had to be guided by the requirements of homogeneity with respect to identified clinical attributes, together with the additional expectation that resource use at the DRG level will also be relatively homogeneous. Taking all of these factors into account, the measure of output used as the dependent variable was length of stay (LOS) (Fetter, *et al.*, 1980). As a measure of output, length of stay has the advantage of being standardised, reliable and routinely available on discharge abstract summaries.

In addition to the availability of data on these independent and dependent variables, the development of the DRG classification system required the following key inputs: physician review, efficient information systems and statistical algorithms.

The DRG system developed on the basis of this approach consisted of 467 groups when released in 1983. The DRG system has subsequently been subject to annual updates and revisions to take account of changes in medical technology and service provision and also to correct for any inadequacies identified within the system. With these revisions, the number of DRGs within the system has expanded to 477 groups within the current (1989) version.

Data Sources and Requirements

There are two principle sources of data on acute hospital discharges in

Ireland: (1) the Hospital In-Patient Enquiry Scheme (HIPE) and (2) the Perinatal Reporting System (PRS). All of the data elements identified above as being required for DRG assignment are available on the HIPE for acute hospital discharges and on the PRS for all births. While some adaptations were necessary to achieve compatibility in the coding schemes used for diagnoses and procedures, these were completed without difficulty with the result that DRG assignment of hospital discharges was successfully achieved with these data sources.

Hospital Activity Analysis by Diagnosis Related Group

Data on acute hospital discharges in Ireland were successfully classified into DRGs for each year from 1984 to 1988. The discharge breakdown for each DRG, together with length of stay information and measures of variation, are presented and discussed in the report.

The initial objective of testing the feasibility of using the "DRG Grouper" on Irish data was successfully achieved with close to 99 per cent of cases being successfully assigned to a DRG for each of the five years analysed. In addition, the information generated and presented in the report provides important baseline data on the national case-mix profile. For each of the three years 1984, 1985 and 1986, the first 4 DRGs account for more than a quarter of the discharges, the first 10 DRGs account for more than one-third of the discharges and over a half of all discharges can be accounted for by the top 30 DRGs. This would suggest a significant concentration, rather than variation, of case mix at the national level over this period.

Normal newborns (DRG 391) and normal deliveries (DRG 373) together account for approximately 22 per cent of discharges over the 1984-1986 period. It seems reasonable to assume that this trend continued through the 1987-1988 period. Based on this assumption for 1987 and 1988, almost one-third of all discharges would be expected to arise in the top 4 groups, with over 62 per cent of discharges falling into the top 30 DRGs. The comparison of the 1987-1988 period with the 1984-1986 period suggests that the distribution of acute hospital case mix is becoming more concentrated over time, as the number of hospital discharges found within the top 30 groups in the later period is substantially greater than the proportion of discharges found at the same level in the earlier period.

For the 1984-1986 period, normal newborns (DRG 391) and normal delivery (DRG 373) account for the first and second most frequently occurring group, and it is to be assumed that this is also the case for 1987 and 1988. The third and fourth most frequently occurring conditions over the period fall into diseases and disorders of the digestive system, specifically oesophagitis, gastroenteritis and misc digestive disorders, up to

the age of 69. While the rank order may change, four of the six remaining groups in the top 10 DRGs are the same in each year: appendicectomy, without complicated principal diagnosis, age < 70, (DRG 167), other factors influencing health status (DRG 467), other skin, subcutaneous tissue & breast operating room procedure (DRG 270) and chronic obstructive pulmonary disease (DRG 88).

In addition to changes in the distribution of discharges, changes in the distribution and use of hospital bed-days are also evident from the results of the case-mix analysis presented in the report. While length of stay at the national level is declining, this trend is not maintained consistently for all case types. There are very substantial swings, both negative and positive, in mean length of stay variation over the 1984-1988 period. For the high volume DRGs listed above, the greatest decline in mean length of stay is found for DRG 88 (chronic obstructive pulmonary disease), which shows a decline of 43 per cent in mean length of stay from 1984 to 1988. We also find mean length of stay declining consistently and gradually for DRGs 167 and 243. For both groups, length of stay drops by about one-fifth from 1984-1988. It is interesting, however, that out of the top 10 groups listed above, 5 groups, including DRGs 183, 184, 467, 30 and 270 show increases in length of stay from 1987 to 1988 which is contrary to the trend towards decreasing mean length of stay in evidence at the national level.

It is clear from this analysis that it is important to go beyond both the national and the hospital level in any attempt at developing an understanding of bed/day use. Using a case-mix framework allows us to track bed/day use to the patient group level and, consequently, to gain a better understanding of the distribution of bed/day utilisation by patient type within the acute hospital sector. In addition to facilitating a study of inter-temporal changes in hospital case mix, this type of DRG analysis was also undertaken to estimate inter-sectoral and inter-hospital variations in the case mix treated.

For selected health board and voluntary hospitals, DRG distribution and mean length of stay for hospital discharges is presented in the report. For both hospital groups, 48 DRGs account for just over 50 per cent of discharges, while the remaining 50 per cent of discharges are spread across 404 DRGs for the health board hospitals and 405 DRGs for the voluntary hospitals. With regard to discharge distribution across DRGs, it is interesting to note that, of the 10 high volume DRGs in the health board hospitals, only three of these DRGs (DRG 183, 467 and 088) appear in the top 10 DRGs for the voluntary hospital group. This would indicate that case-mix concentration in both groups of hospitals is quite different. The top 10 DRGs account for 21 per cent of all discharges for both the health

board and for the voluntary hospital group.

For each of the high volume DRGs listed for both groups of hospitals, mean length of stay is longer in the voluntary hospital group compared with the health board hospital group. The magnitude by which the mean length of stay in the voluntary hospitals exceeds the length of stay in the health board hospitals for the DRGs listed, ranges from a low of 4.2 per cent for DRG 167 to a high of 108 per cent for DRG 029.

The changes in the volume and distribution of hospital discharges and hospital bed-day use observed in the study may be attributed to a number of factors requiring further investigation. These areas would include epidemiological factors and changes in the pattern of illness, changes in treatment patterns and service availability, technological developments and availability, changes in demographic and environmental factors, in addition to such fundamental influences as changes in data coding and reporting practices. It is important to recognise that the magnitude and direction of change in discharge distribution and bed-day use is not consistent across all case types. Controlling for case mix within this analysis of hospital activity therefore enables us to identify those case types for which change in discharge distribution and bed-day use is greatest.

Estimation of Hospital Costs by Diagnosis Related Group

While a case-mix analysis of activity data constitutes an important basis for estimating and understanding the utilisation of hospital resources, the power of this tool is greatly enhanced when activity data and cost data can be related on a case-mix basis. Knowing the cost of treating particular types of patients, as well as the distribution of patients treated, considerably strengthens the potential power of this technique.

The decision to undertake a pilot study to estimate costs by DRG for selected Irish hospitals was taken with the objective of providing the essential link between hospital activity and hospital costs. While the study was pursued with the aim of estimating costs by DRG, limitations on information availability meant that the operational objective was to test and, where necessary, modify a DRG costing model for use in Irish hospitals.

A case-mix, cost accounting model developed and applied in US hospitals is described in detail in Thompson, et al., (1979). According to these authors, "the goal of case-mix cost accounting is to provide a complete financial picture of the costs of treating individual patients grouped into similar classes based on use of resources" (p.113). As the DRGs provide a definition of the hospital product, the resources used and costs incurred by the hospital can be related directly to the patient types

treated within the hospital by means of the DRGs. The relationship between the case mix of the hospital, the resources it consumes and the costs it incurs can therefore be established.

Following a review of potential sites for the conduct of the study of hospital costs by DRG, three acute hospitals were finally selected for the study. The application of the DRG cost model was successfully completed and the estimated average costs by DRG for the combined study hospitals are presented in Appendix 8. Caution is, however, advised in interpreting these results due to the fact that the cost data used for the analysis was incomplete which meant that there were a number of gaps in the data which had to be supplemented from other sources.

While the development of a mechanism to relate hospital costs to hospital activity was our first objective here, a more fundamental objective involved the assessment of *relative* resource consumption between different patient types. This was achieved by converting the estimated DRG costs to DRG cost weights. As the cost weights constitute a standardised measure of relative resource consumption by DRG, they provide a tool for quantifying the relationship between hospital activity and hospital resource use.

The potential offered by the DRG cost weights as a basis for the assessment of the resource needs of the hospital was tested with the estimation of a *case-mix index* for a number of health board and voluntary hospitals. A case-mix index (CMI) is essentially a measure of the relative costliness of the case mix treated by the hospital. For the hospitals for which the CMI was estimated, it is interesting that the direction and magnitude of the changes observed for the CMI over the 1984-1988 period were not necessarily consistent over time, underlining again the importance of adjusting for case mix in any analysis of changes in the nature of hospital activity and resource requirements. The potential offered by the case mix index as a support tool in any exercise directed at resource allocation between hospitals is substantial. Where agencies have previously had to depend on inadequate measures like variation in bed-day costs to attempt to differentiate the needs of different hospitals, the CMI is a mechanism which enables the quantification of the relative costliness of the case mix treated by a hospital.

This is the first attempt at producing costings on a case-mix basis for Irish hospitals. We therefore have no other Irish data which can be used for comparison with the results of this pilot study. Success in the estimation of DRG costs and cost weights is in itself, however, of limited usefulness unless some mechanism can be derived which will facilitate the application of this information within the hospital system. A number of possible applications for these potentially powerful techniques are explored in the report and summarised here.

Case-Mix Applications

Case-Mix Based Global Budget Model: One of the most serious and most frequently voiced criticisms of traditional approaches to hospital budgeting is that budgets do not accurately reflect the relationship between activity and funding within the hospital. The accurate quantification of the relationship between hospital activity and hospital funding demands that both sides of the equation can be related by means of some common unit of measurement. A case-mix based hospital budget model may offer some potential for the achievement of this objective in the Irish context.

Within the hospital budget model, the budget for in-patient hospital services is based on an agreed price per unit of activity, which is measured on the basis of "case-mix adjusted discharges (CMADs)". The CMADs constitute a standardised measure of hospital activity, adjusted for case mix. For a hospital supporting a more resource intensive patient mix, the ratio of CMADs relative to discharges will be greater, compared with that estimated for a hospital supporting a patient mix with lower resource intensity. The case-mix based hospital budget model has the advantage that it requires that both the funding agency and the budget holder agree on *what level of activity* at *what price* is covered over the budget period. A decision must therefore be reached on the level and type of adjustment required to project hospital activity for the budget period on the basis of information on current (or most recent) hospital activity.

The determination of these factors will not depend exclusively on technical considerations but will require a strong *policy* input by the funding agency. The determination of a price/CMAD, and the relationship between the price and the projected cost/CMAD will depend on the funding agency's approach to allowing adjustments for factors generally believed to have an influence on resource requirements at the hospital level. Care must be taken here to ensure that any adjustments which are made to the projected price and activity levels are based on factors which are *known,* rather than assumed, to have a significant effect on resource use. Decisions on the type and nature of adjustments to be applied within the budgeting process must be taken in the policy arena and are in no way pre-judged by the particular approach adopted to quantifying hospital activity or adjusting for hospital case mix.

The global budgeting model as described here would seem to have considerable potential for application in the Irish context. We have shown in this study that hospital activity data are available in a form which allows classification into DRGs. The estimation of CMADs on a hospital by hospital basis is therefore feasible and achievable in the Irish context.

The introduction of a case-mix measure into the hospital budgeting

process in Ireland should not be delayed until "the perfect model" with "a complete data base" is developed. It is unlikely that such an objective is feasible and, if so, it would take too long to achieve to be viable. The unfortunate consequences of a delay in reforming the funding process to reflect the knowledge and the technology which is now available may be manifest in the perpetuation of inequities in resource allocation between hospitals which would become increasingly difficult to correct. The use of a case-mix measure, in itself, should initially provide enough information to enable the development of a more equitable basis for resource allocation between hospitals, with more specific measures being introduced over time as more detailed information becomes available.

Product Line Management for Hospitals: Internal resource allocation at the hospital level must also be addressed if hospital resources are to be used efficiently. While the exact management framework may vary from hospital to hospital, an essentially hierarchical approach to hospital management tends to predominate both in Ireland and other European countries. A fundamental problem with a hierarchical management structure is the difficulty arising in relating service provision from many different departments to a particular patient type. Communication is also rendered difficult both within and between the different disciplines involved in service delivery and resource management.

An alternative to this hierarchical model is the matrix management model. An important advantage of the matrix approach is that it can accommodate a case-mix classification system like the DRGs which, in turn, provides a means of overcoming the problems identified within the hierarchical model. A DRG-based approach to matrix management will facilitate the organisation of service providers into teams which are expected to have responsibility for patients grouped on a DRG basis. This approach will facilitate a prediction of the resources which may be required by patients in the different DRGs and will also enable the physicians to track patients through the individual hospital departments if they need to specify the services used or needed by the patient.

The administrators, in turn, have clearly defined lines of responsibility which also cut across the DRGs. This means that these non-medical managers will be able to relate utilisation of the support services to particular patients and patient types. The essential point here is that there are two lines of responsibility and authority which meet at a common point: the DRG.

Within this system clinicians have identified responsibility and accountability for determining the utilisation of the relevant resources and

the service mix required to treat the patients within their groups. The administrators, on the other hand, have identified responsibility and accountability for the intermediate product centres and the production of those services deemed necessary by the clinicians for the provision of patient care.

For each management group, both services and costs can be related to a common unit, the DRG. Communication between both groups is thereby facilitated as a common language is shared by all resource managers. The potential for planning will also be greatly enhanced as both sets of managers become more proficient at predicting resource requirements for the particular groups of patients treated. From this basis, performance and efficiency both at the departmental and the hospital level may be accurately assessed.

Conclusions

One of the most important conclusions to emerge from this study is that it is technically possible to define and measure the case mix treated in the acute in-patient setting in Ireland. The application of the DRG system in this study to classify acute discharges from Irish hospitals for each of the five years from 1984-1988 proved to be highly successful. The results of this analysis leads to the conclusion that the potential for success of any policy interventions directed at influencing change in the pattern and mix of hospital service utilisation will be substantially enhanced if the case-mix profile for the area under review is taken into account.

The fact that the case-mix analysis of hospital activity and hospital costs undertaken for this study was successful, in addition to yielding important and interesting results, provides a strong basis from which to pursue the introduction of a case-mix measurement system within the acute hospital sector in Ireland. The range of possible management applications spans both the intra- and inter-hospital level. As DRGs provide a means of relating resource use and requirements to patient type, the potential power of the technique as a management tool is significant. It seems reasonable to conclude that if DRGs can be used to identify the areas of greatest need within the hospital system, resources may be targeted accordingly. Improvements in the efficiency of resource deployment throughout the system as a whole would therefore be expected.

The findings emerging from this study are relevant to a number of proposals for health service reform which have been put forward in recent reports. The report of the Commission on Health Funding which was presented to the Minister for Health in September 1989 contained a number of recommendations on the funding and financing of the acute

hospital sector which are of specific relevance to our interests in this study. As a means of overcoming the problems identified, and achieving the objectives considered crucial to the development of an efficient and effective approach to hospital funding, the main recommendation put forward by the Commission in this area was that:

> Hospitals should receive global budgets for the provision of an agreed service level. The calculation of these budgets should be based on an assessment of the activity level implied by the hospital's agreed role and catchment area, and the case-mix based cost of meeting this (p.257-258).

Both the research project reported in this study and the Commission on Health Funding had the same starting point, where the resourcing of the acute hospital services is concerned, in identifying the absence of a specified relationship between hospital resources and hospital activity as the greatest weakness in the approach currently adopted for the funding of hospital services. This research and the report of the Commission also come to the same conclusion, i.e., that an equitable and efficient basis of resource allocation to the acute hospitals requires that funding be related to the case mix treated by the hospital. The achievement of this objective would not, however, have been possible without the conduct of the research reported here. Prior to the commencement of this project, the feasibility of case-mix measurement within the acute hospital system had not been tested in the Irish context. In this project we have shown that the application of an advanced and sophisticated measure of hospital case mix is both feasible and valuable within the Irish hospital system. This research has therefore fulfilled a necessary pre-condition for the pursuit of the recommendation that hospital budgets should be based on the "case-mix based cost" of supporting a specified level of hospital activity (Commission on Health Funding, 1989).

Concern about current approaches to resource allocation for hospital services was also expressed in the Report on Hospital Consultants published by the Review Body on Higher Remuneration in the Public Sector (1990) (The Gleeson Report). The views expressed by this Review Body may be summarised as follows:

> Under the traditional method of determining hospital and sub-hospital budgets there is little incentive for consultants (or other health service personnel) to maximise efficiency. Historical budgeting means that savings in a unit in one year will sometimes be punished, rather than rewarded, by a reduction in the budget the following year. This approach is obviously counterproductive and potentially wasteful of scarce resources. What is needed is a funding and budgetary

> approach which would give hospital personnel every incentive to seek out and support potential cost savings and efficiency improvements (p.33).

The Review Body goes beyond this position statement to comment that:

> We were advised in this context by the Department of Health that it is committed to developing a resource allocation system which would link hospital budgets to the type and volume of services to be provided (p.33).

The Commission on Health Funding, the Gleeson Report and the Department of Health would therefore seem to share important common ground, i.e., that funding for hospitals should be linked in a meaningful way to the activity supported by the hospital, if resource allocation to the hospitals is to be both efficient and effective. Prior to the conduct of the research reported here, the feasibility of the achievement of this objective in the context of the Irish hospital system was open to question. In this project, we have been successful in demonstrating the application of an advanced technique for relating hospital costs to hospital activity "in a meaningful way". The technical issues addressed, together with the information base developed and presented in the report provide the essential starting point for the pursuit of the recommendations of both the Commission on Health Funding (1989) and the Gleeson Report (1990) regarding improvements in the approach to funding acute hospital services in Ireland.

In conclusion, it is worth reiterating that the integration of a valid and reliable case-mix measure within the resource allocation process for hospital services, combined with the application of a case-mix framework for internal management at the hospital level, should offer greatly expanded opportunities for achieving both equity and efficiency within the hospital system and is worthy of serious pursuit at both the policy and the operational level. Efficiency in resource use is an important component of any policy aimed at improving care standards for all users of the acute hospital system. Approaches to resource allocation and management techniques which help to improve efficiency must, therefore, be seen as an aid towards the optimisation of the quality of care delivered through our hospitals.

Chapter I

INTRODUCTION

> It can be claimed that Ireland has quite a well developed health care system which addresses the main health problems of the population.....Questions can, however, be raised about the relationship between the different types of care provided, the emphasis which is placed on each, particularly in the allocation of resources, and whether the organisation of the system is such as to ensure for the population the most appropriate care in the most appropriate setting (Department of Health, *Health, The Wider Dimensions,* 1986, p.29).

The starting point for this study is succinctly summarised here in this statement from the Department of Health's consultative statement on health policy, *Health, The Wider Dimensions* (1986). While an assessment of the merits and deficiencies of the Irish health care system has become the subject of frequent and widespread debate over time, discussion is too often based on individual perception and experience with very little scientific evaluation or research into the operation and effectiveness of the system. This study is directed at contributing to the development of this research base for the purpose of enabling more precise and in-depth evaluation of the operation of the Irish health care system.

An exhaustive assessment of the merits of any health service would have to be undertaken along two dimensions. First, the effectiveness of the system would have to be assessed. This would be concerned with the extent to which the system is judged to be successful in meeting the needs of the population it is supposed to serve and, secondly, the efficiency of the system would be measured in terms of the return achieved on the investment within the system.

While health service effectiveness must be recognised as the highest priority for any system, this area of investigation is outside the scope of the present study. It is the second dimension, health system efficiency, which provides the focus for our investigations here. More specifically, our concerns relate to the measurement of efficiency within the hospital service sector in particular. To place this study in context, however, a brief

description of the Irish hospital system is first required and this is provided in the next section.

THE IRISH HOSPITAL SYSTEM

The current structure of the hospital system has its roots in the Health Act, 1970. Under this legislation, eight regional health boards were created which took over the management of public hospitals from the local authorities. At the time of the creation of the health boards, voluntary public hospitals were maintained outside of this structure. Many voluntary public hospitals have traditionally been run by religious orders and function as teaching hospitals. Alternatively, voluntary public hospitals may be incorporated by charter or statute and work under lay boards of governors. Voluntary public hospitals are more numerous in Dublin and other large centres of population.

The administrative and managerial division between health board and voluntary hospitals established in 1970 continues today and is associated, in turn, with two different approaches to funding for these hospitals. The regional health boards receive an annual budget from the Department of Health out of which all health services, including hospital services, are financed by the Health Board. Voluntary public hospitals, on the other hand, receive their annual budgets directly from the Department of Health.

Health board hospitals can be disaggregated into a number of different hospital types, namely, regional hospitals, county hospitals, district hospitals, fever hospitals and orthopaedic hospitals. Regional hospitals are distinguished by the fact that they tend to have specialised units catering for a large population base. Many regional hospitals are also teaching hospitals. County hospitals will tend to have consultant-staffed units for general medicine, general surgery, obstetrics and gynaecology. District hospitals are not included in this study as they are increasingly caring for more long-stay patients. For the purpose of the information presented here, fever and orthopaedic hospitals will be collapsed into a broader category called "special hospitals" which will also include voluntary special hospitals covering maternity, paediatrics, cancer, eye and ear, and voluntary orthopaedic hospitals.

To facilitate an appreciation for the size and mix of the Irish hospital system, time series data on hospital beds, hospital discharges, hospital bed/days, average length of stay and percentage occupancy is presented in summary form in Table 1.1 and graphically in subsequent figures. Each area of interest will now be briefly reviewed.

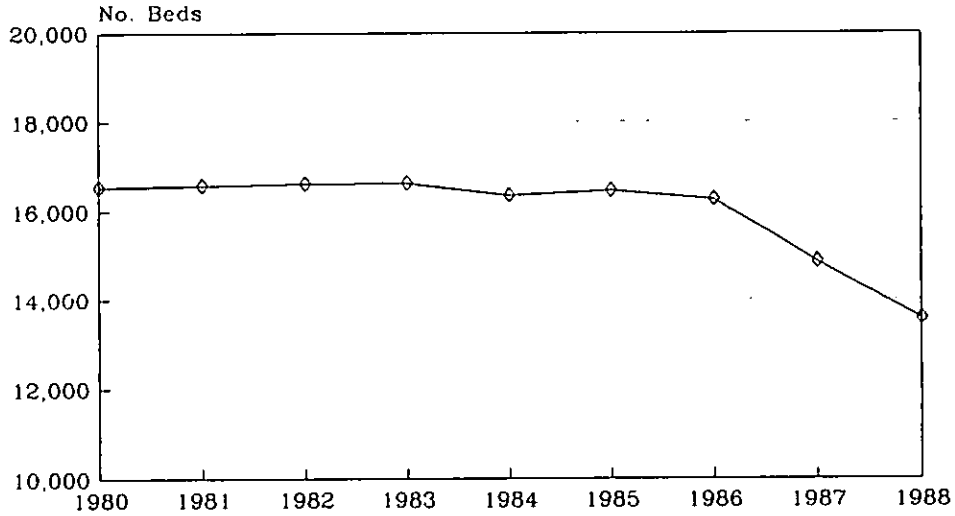
Bed Complement

The number of hospital beds by type and in total is presented in Table 1.1. It must be emphasised that what is presented here is the approved bed complement, which may, at times, differ from the actual number of beds in use within the hospital system.

Changes in the total number of acute hospital beds between 1980 and 1988 are shown graphically in Figure 1.1. From a high of 16,622 beds in 1983, the total number of hospital beds dropped by 3,144 to an estimated 13,478 beds in 1988. This represents a reduction of 19 per cent of all acute hospital beds in the period between 1983 and 1988. Between 1980 and 1988, the number of acute beds in *public* hospitals dropped by more than one-fifth (21.8 per cent) over all.

In Figure 1.2 changes in the number of acute beds by hospital type is shown. Between 1980 and 1988 the bed complement for the voluntary hospitals dropped by one-third (1,723 beds). When the bed complement of this group of hospitals for 1988 is compared with that for 1982, the high point in bed numbers for this hospital group, the reduction in bed numbers rises to 35 per cent (1,902 beds).

Figure 1.1
Total Number of Acute Hospital Beds: Ireland: 1980–1988



Source: Health Statistics, Department of Health

Table 1.1: *Bed Complement, Discharges, Occupancy, Average Length of Stay and Bed/Days by Hospital Type, Ireland 1980-1988*

Bed Complement	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*
Voluntary	5,197	5,287	5,376	5,346	5,165	5,132	4,968	4,452	3,474
Regional	2,524	2,853	3,022	3,022	3,021	3,020	2,980	2,775	2,589
County	3,398	3,201	3,196	3,216	3,189	3,400	3,514	3,131	3,178
Special	3,885	3,686	3,512	3,513	3,448	3,279	3,054	2,653	2,485
Private	1,518	1,535	1,498	1,525	1,522	1,599(*)	1,675(*)	1,752	1,752(*)
Total	16,522	16,562	16,604	16,622	16,345	16,430	16,191	14,763	13,478
Discharges	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*
Voluntary	179,754	185,211	189,712	188,081	181,452	184,989	186,909	153,317	135,875
Regional	97,306	114,548	123,412	124,312	119,616	121,200	117,867	112,493	109,714
County	135,513	129,027	130,885	133,880	135,009	143,068	143,944	137,352	144,112
Special	107,328	110,620	106,249	105,940	104,375	101,862	99,842	94,685	90,409
Private	41,483	41,126	42,089	42,612	44,099	46,049(*)	48,000(*)	49,950	52,048(*)
Total	561,384	580,532	592,347	594,825	584,551	597,168	596,562	547,797	532,158
*Occupancy***	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*
Voluntary	86.6%	84.8%	84.9%	79.1%	80.8%	78.4%	79.2%	75.0%	85.5%
Regional	85.3%	86.9%	85.0%	83.4%	81.1%	81.4%	81.3%	83.3%	78.9%
County	82.8%	79.5%	78.5%	77.6%	76.3%	76.1%	76.3%	76.7%	79.3%
Special	70.9%	76.7%	70.5%	70.5%	66.9%	66.2%	66.7%	68.6%	70.5%
Total	81.4%	81.9%	80.0%	77.4%	76.7%	75.6%	76.1%	75.6%	78.8%

Table 1.1: — *Continued*

*Average Length of Stay** (days)*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*
Voluntary	9.2	8.8	8.8	8.2	8.4	7.9	7.7	7.9	8.0
Regional	8.1	7.9	7.6	7.4	7.5	7.4	7.5	7.5	6.8
County	7.6	7.2	7.0	6.8	6.6	6.6	6.8	6.4	6.3
Special	9.4	9.3	8.5	8.5	8.1	7.8	7.4	7.0	7.0
Total	8.6	8.3	8.0	7.7	7.7	7.4	7.4	7.2	7.0

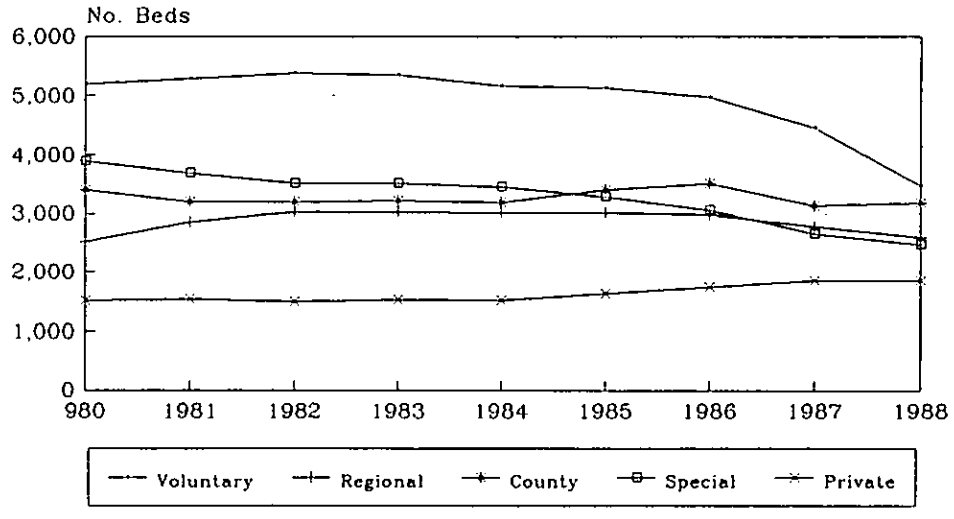
*Bed/Days***	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*
Voluntary	1,646,749	1,637,030	1,665,543	1,543,928	1,526,712	1,469,463	1,436,873	1,218,015	1,083,715
Regional	788,179	904,929	937,931	919,909	897,120	896,880	884,003	843,698	741,667
County	1,029,899	928,994	916,195	910,384	891,059	944,249	978,819	876,306	907,906
Special	1,007,507	1,031,716	904,131	904,291	844,041	792,164	743,543	664,122	639,065
Total	4,472,334	4,502,670	4,423,800	4,278,512	4,158,933	4,102,756	4,043,238	3,602,141	3,372,353

Source. Department of Health, Ireland. * Estimated Figures ** Information on Private Hospitals not available.

A contrasting pattern of change is in evidence for the voluntary and regional hospitals during the 1980s. While the number of beds in the voluntary hospitals shows a fairly consistent pattern of decline over the period 1980 to 1988, the number of beds in the regional hospitals increased between 1980 and 1982, remained quite constant between 1982 and 1985, and was followed by a decline in the number of beds through to 1988. The decline over the 1985 to 1988 period in regional hospital beds amounted to 14 per cent (431 beds). Over the whole 1980-1988 period, the bed complement in the regional hospitals actually increased by 65 (2.3 per cent), from 2,524 beds in 1980 to 2,589 beds in 1988. Caution must, however, be urged in interpreting the aggregated data presented here because in some instances the *designation* of a hospital may change, for example from voluntary to health board, without beds actually opening or closing. In this review it is not possible to address changes in specific hospitals as our objective is to present a picture of change in the system as a whole throughout the 1980s.

The trend for county hospital beds is also somewhat inconsistent throughout the period with a decline in bed numbers from 1980 to 1982, increases between 1982 and 1986, followed by decline through to 1988.

Figure 1.2
Distribution of Acute Hospital Beds By Hospital Type: Ireland 1980–1988



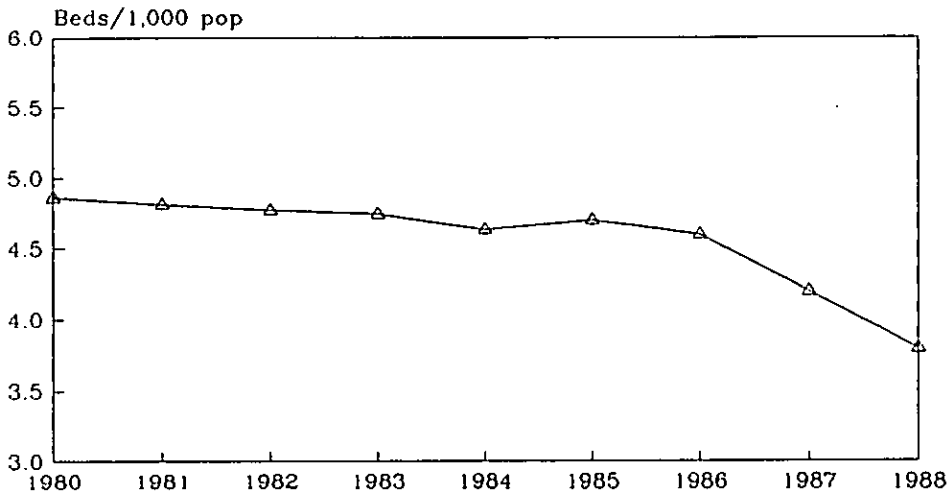
Source: Health Statistics, Department of Health

The percentage decline between the high point in 1986 and 1988 is 9.6 per cent, while the overall decline from 1980-1988 is 6.5 per cent (220 beds). The combined reduction in health board beds, regional and county, between 1980 and 1988 is just 2.7 per cent (155 beds). The combined category of special hospital beds shows a fairly consistent and substantial decline throughout the 1980s, amounting to a reduction of 1,400 beds (36 per cent) between 1980 and 1988.

While the number of acute beds in private hospitals is available for earlier years, the number of beds in this hospital group has had to be estimated on the basis of available data since 1985 because of the absence of a centralised source for this information. The estimated data must therefore be treated with some caution. On the basis of the information which is presented, an increase of approximately 15 per cent in the number of beds in private hospitals is indicated, from 1,518 beds in 1980 to an estimated 1,752 beds in 1988. In 1980, beds in private hospitals represented 9.2 per cent of total hospital beds, while in 1988 the share of all beds found in private hospitals had risen to 12.9 per cent.

Changes in hospital bed complement must be standardised for population levels if an analysis of changes in bed supply from 1980-1988 is to be complete. Figure 1.3 shows the number of acute hospital beds per

Figure 1.3
Ratio of Acute Hospital Beds to Population: Ireland 1980–1988



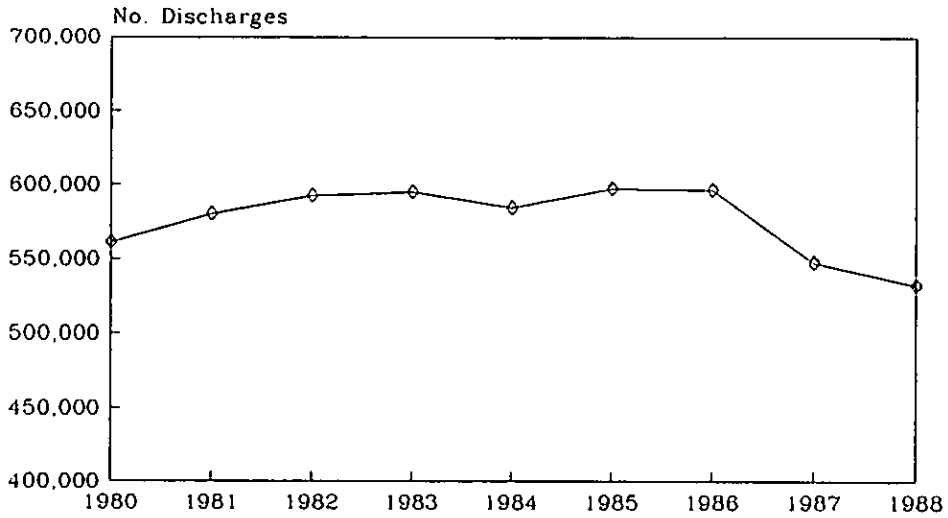
Source: Health Statistics, Department of Health

1,000 population for this period. The general trend of overall decline is again evident here. In 1980 Ireland supported approximately 4.8 beds/1,000, while in 1988 this had dropped to a rate of 3.8 beds/1,000 population. For the 1980-1988 period, this amounts to a decline of 21 per cent in the bed/population ratio.

Hospital Discharges

Information on total acute discharges and discharges by hospital type is presented in Table 1.1. A graphical representation of changes in total acute discharges from 1980 to 1988 is shown in Figure 1.4. With the exception of 1984, the total number of discharges from acute hospitals increased steadily between 1980 and 1985, despite the fact that bed numbers stayed fairly constant over this period. After 1985 discharge numbers tended to decline through to 1988. The overall change from 1980 to 1988 shows a decrease of 5.2 per cent (29,226) in total discharges. The total number of discharges peaked at 597,562 in 1985. Between 1980 and the peak in 1985, the number of discharges from acute hospitals increased by 6.4 per cent (35,784), while the 1985-1988 period shows a decrease in total discharges of 10.9 per cent (65,010).

Figure 1.4
Acute Hospital Discharges from All Hospitals: Ireland 1980–1988



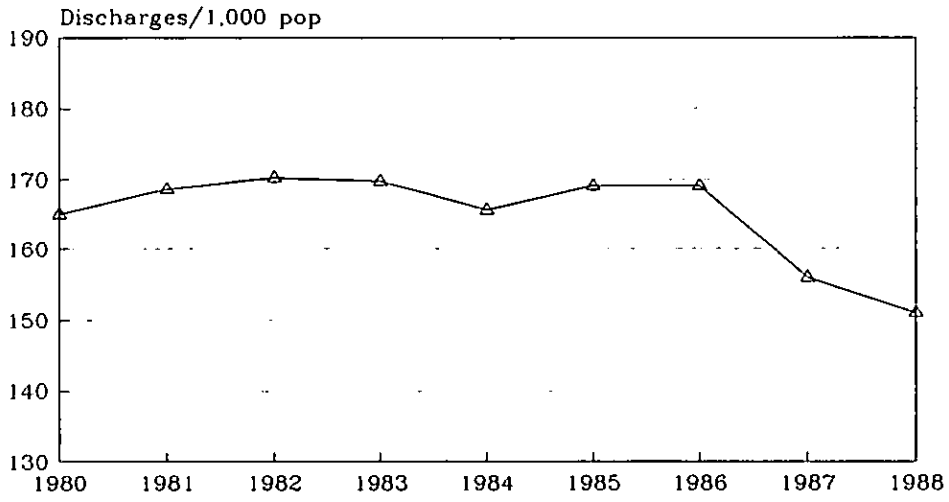
Source: Health Statistics, Department of Health

If the analysis is restricted to focus on discharge levels in the voluntary, regional and county hospitals, a similar pattern is evident. The overall decrease between 1980-1988 is again just over 5 per cent, though the increase in discharge levels between 1980-1985 is comparatively higher at 8.9 per cent (36,684) and a greater decline of 13.3 per cent (59,556) is evident between 1985 and 1988.

When standardised for population, the crude discharge rate shown in Figure 1.5 is very similar to the overall trend in evidence for total discharges. There were approximately 165 acute discharges/1,000 in 1980, which dropped to just over 150/1,000 in 1988, a decrease of over 9 per cent. The discharge rate peaked in 1982-83 at 170/1,000 and dropped to its lowest point in 1988, a drop of 11.8 per cent.

It is interesting to note that the discharge rate of 150/1,000 found for Ireland in 1988 is the same as that found for the United States in 1965 (Pokras, *el al*, 1990). The crude discharge rate for the US increased from 150/1,000 in 1965, to a high of 169/1,000 in 1981 and subsequently dropped to a low of 143/1,000 in 1986. This represents a drop of 4.6 per cent over the 1981-86 period for the US which is fairly close to the decline of 5.2 per cent found for Ireland over the same period.

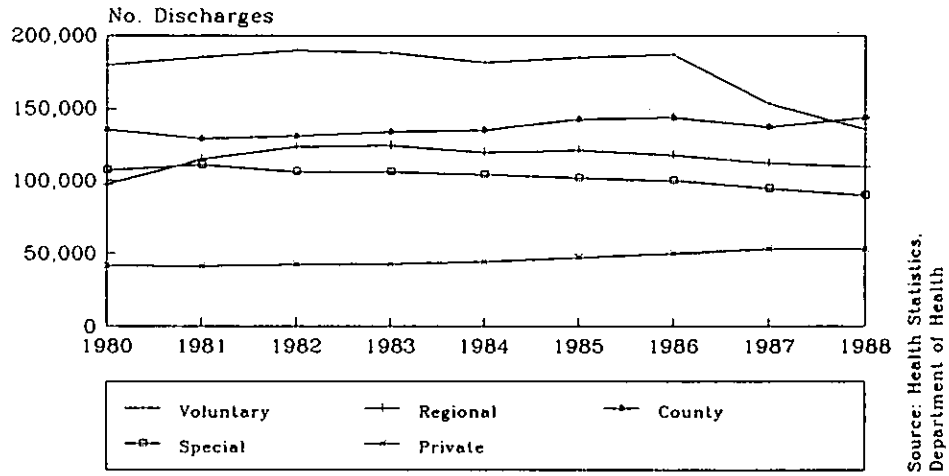
Figure 1.5
Ratio of Acute Hospital Discharges to Population: Ireland 1980–1988



Source: Health Statistics, Department of Health

Variations in discharge levels for Ireland by hospital type between 1980 and 1988 are shown in Figure 1.6. The trend over the period varies considerably by hospital type. Between 1980 and 1988, discharges from the voluntary hospitals dropped by about a quarter (24.4 per cent). Voluntary hospital discharges peaked at 189,712 in 1982, declined between 1982 and 1984, increased again between 1984 and 1986 and dropped sharply between 1986 and 1988. Over the two year period 1986-1988, voluntary hospital discharges dropped by over 27 per cent, while the decline over the 1982-1988 period amounted to 28 per cent.

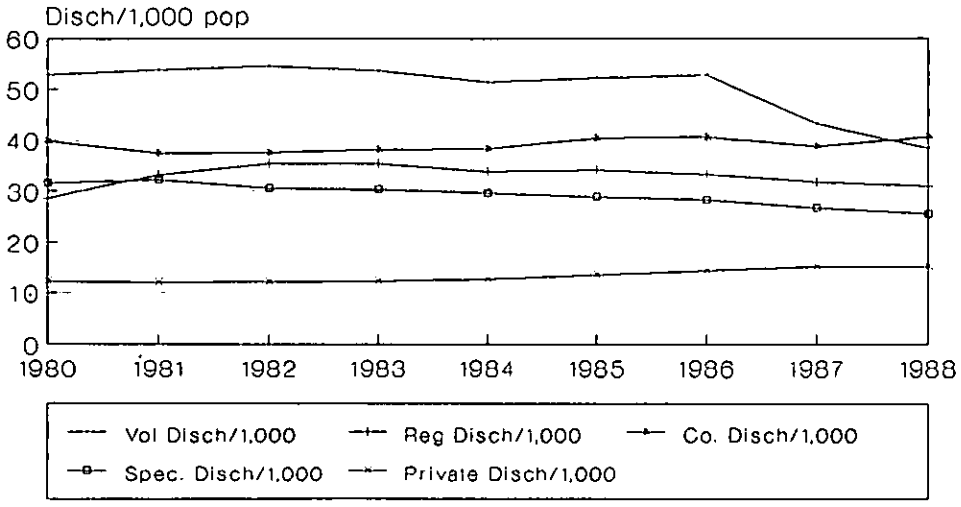
Figure 1.6
Acute Hospital Discharges By Hospital Type: Ireland 1980–1988



The discharge rate for the voluntary hospitals from 1980-1988 is shown in Figure 1.7. There were approximately 53 discharges/1,000 from the voluntary hospitals in 1980. While this ratio fluctuated in subsequent years, the same level was regained in 1986 and subsequently dropped to approximately 38 discharges/1,000 in 1988, a decline of 28 per cent.

Over the period 1980-1988, discharges from regional hospitals increased by almost 13 per cent. We have previously noted the increase in the number of hospital beds over the same period for this group of hospitals. The 1988 estimate of discharges evident in Figure 1.6 is, however, a reduction of 11.7 per cent compared with the peak of 124,312 discharges in 1983. With the exception of 1985 when there was a slight increase, discharges from the regional hospitals declined fairly steadily from 1983 through to 1988.

Figure 1.7
Ratio of Acute Hospital Discharges to Population by Hospital Type:1980-1988



Source: Health Statistics, Department of Health

The discharge rate for the regional hospitals shown in Figure 1.7 again shows an increase, amounting to 10.7 per cent from approximately 28/1,000 in 1980 to 31/1,000 in 1988. In line with the trend for total discharges for this group, the discharge rate peaked in 1982/83 at approximately 36/1,000, an increase of 28.5 per cent from 1980, and declining by 13.9 per cent from 1983-1988.

Returning to Figure 1.6 we note that discharges from the county hospitals over the period have gradually increased, while discharges from the special hospitals have gradually decreased. Between 1980 and 1988, discharges from the county hospitals increased by 6.3 per cent, while discharges from the special hospitals decreased by 17.6 per cent over the same period. While the discharge rate for the county hospitals will be seen to fluctuate in Figure 1.7, the overall change during the period is marginal with the 40 discharges/1,000 in 1980 increasing to 41/1,000 in 1988. The discharge rate for the special hospitals is shown to decrease from 31/1,000 in 1980 to approximately 25/1,000 in 1988, a drop of 19.4 per cent.

A general increase in discharge levels for the private hospitals is in evidence in Figure 1.6. The fact that the discharge data for the later years have been estimated would, however, suggest that the magnitude of the change should be treated with some caution, though the direction of the trend would seem to be acceptable. When the estimated discharges for

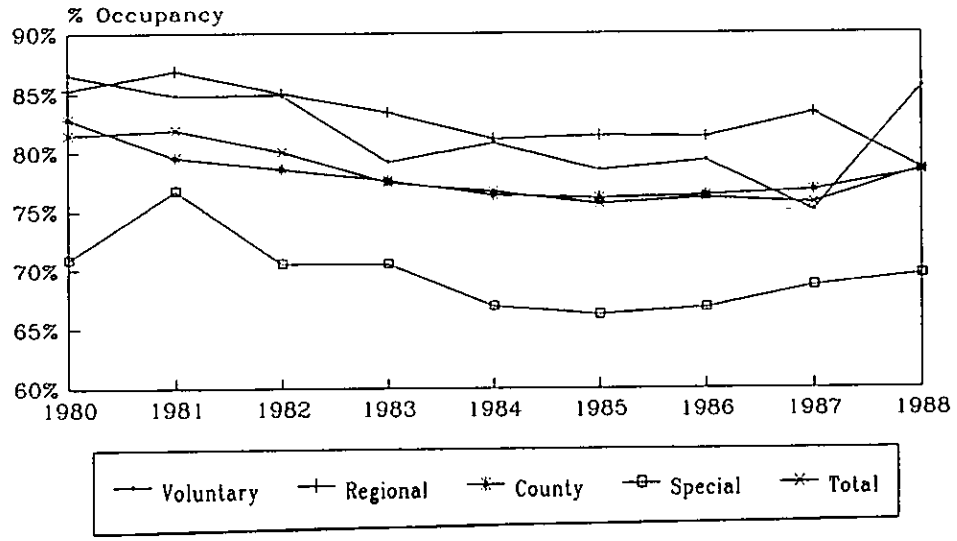
1988 are compared with the discharge level for 1980, discharges are shown to have increased by more than a quarter over the period. The discharge rate for the private hospitals shows a 25 per cent increase from 12/1,000 in 1980 to 15/1,000 in 1988.

Hospital Occupancy

Changes in percentage occupancy for all hospitals and by hospital type between 1980 and 1988 are shown in Table 1.1. Occupancy for the acute hospitals represented in Figure 1.8 shows a general trend of decline over the 1980-1988 period (despite very marginal increases in 1981 and 1986), and an increase from 1987 to 1988. While percentage occupancy decreased by 7.1 per cent, from 81.4 per cent in 1980 to 75.6 per cent in 1987, an increase of 4.2 per cent is shown for the 1988 level of 78.8 per cent, compared with the previous year.

An examination of percentage occupancy by hospital type in Figure 1.8 reveals some interesting patterns for the voluntary and regional hospitals in particular. Despite some exceptions, a generally downward trend in occupancy for the voluntary hospitals is evident over the years 1980-1987 during which time a drop of 13.3 per cent for the period may be estimated. Over just one year, 1987 to 1988, this decline was recovered as occupancy

Figure 1.8
Occupancy Rate For Acute Hospitals:
Ireland 1980–1988



Source: Health Statistics

increased by 14 per cent, from 75 per cent in 1987 to 85.5 per cent in 1988. The 1988 occupancy level for the voluntary hospitals is now very close to the 1980 level of 86.6 per cent.

Changes in occupancy for the regional hospitals in recent years contrast with those observed for the voluntary hospitals. In 1987-88, occupancy in the regional hospitals decreased by 5.3 per cent, from 83.3 per cent in 1987 to 78.9 per cent in 1988. In the preceding year, 1986-87, the trend was reversed, with occupancy in the regional hospitals increasing by over 2.5 per cent, while occupancy in the voluntary hospitals dropped by 5 per cent over this period. Between 1980 and 1987, occupancy in the regional hospitals dropped by just over 2 per cent, while the complete 1980-1988 period shows a drop in occupancy of 7.5 per cent for the regional hospitals.

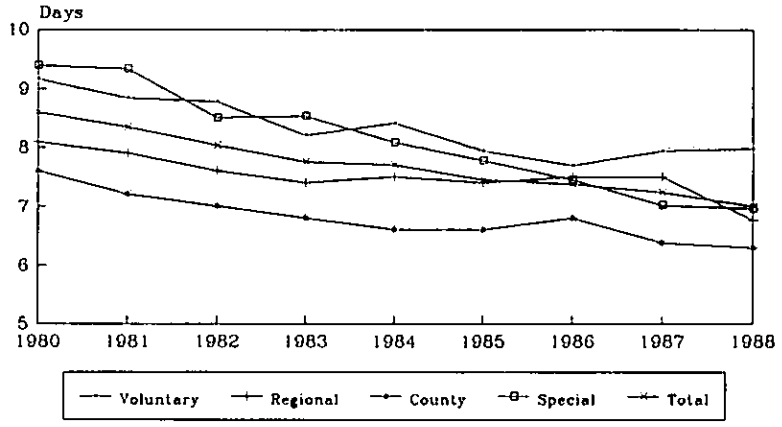
Occupancy for the county hospitals shows a gradual decline from 1980 to 1985 followed by a gradual and sustained increase. The overall change from 1980 to 1988 is a drop of 4.2 per cent, from 82.8 per cent in 1980 to 79.3 per cent in 1988. This level of decline increased to 8.1 per cent over the 1980-85 period, while the 1985-88 period supported an increase of 4.2 per cent in occupancy levels. At just over 70 per cent, occupancy in the special hospitals in 1988 is almost identical to the level supported in 1980. Occupancy levels have, however, changed considerably in the intervening years with an initial increase of 8.1 per cent from 1980-81, followed by a decline up to 1985 when the trend turns and occupancy levels continue to increase over the 1985-88 period.

Length of Stay

Changes in average length of stay for each hospital type and for all hospitals combined are shown in Table 1.1 and Figure 1.9. For all hospitals combined (excluding private hospitals), average length of stay has fallen consistently over the period from 8.6 days in 1980 to 7.0 days in 1988, a decline of 18.6 per cent. The US experience may again provide a useful point of comparison here. Average length of stay dropped from approximately 7.3 days in 1980 to about 6.3 days in 1986, a drop of almost 14 per cent (Pokras, *et al*, 1990).

The pattern shown in Figure 1.9 for the Irish voluntary and regional hospitals is particularly interesting. After a fairly consistent decline in voluntary hospital average length of stay from 1980 to 1986 (with the exception of 1984), length of stay for this group increased steadily between 1986 and 1988. Between 1980 and 1988, average length of stay for the voluntary hospitals declined by 13 per cent over all. The length of stay decline between 1980 and 1986, however, amounted to 16.3 per cent, while the 1986 to 1988 period shows an increase of 3.8 per cent.

Figure 1.9
Average Length of Stay by Hospital Type
Ireland: 1980–1988



Source. Health Statistics
Department of Health

A contrasting pattern emerges for the regional hospitals on this indicator. Average length of stay for this hospital group has quite consistently declined (with small exceptions in 1984 and 1986) between 1980 and 1988, amounting to an overall decrease of 16 per cent. For each year under study here, average length of stay in the regional hospitals has been shorter than that for the voluntary hospitals. While 1980 shows the voluntary hospitals with an average length of stay which is more than 1 day longer than the average found for the regional hospitals, the gap narrowed to 0.2 of a day in 1986, but subsequently expanded again up to 1988 to a situation where length of stay in the voluntary hospitals is 1.2 days longer (17.6 per cent) in the voluntary hospital sector, compared with the regional hospital group.

The special hospitals started the period in 1980 with the longest average length of stay at 9.4 days, but exhibit a substantial decline over the period such that in 1988 with a length of stay of 7.0 days, average length of stay in the special hospitals is 1 day shorter than the average length of stay found for the voluntary hospitals. Average length of stay in the special hospitals declined by over one-quarter (25.5 per cent) between 1980 and 1988. For the same period, the decline in average length of stay for the county hospitals amounted to over 17 per cent. The decline was, again, quite

consistent over the period, with the exception of 1986 when length of stay increased slightly compared with the previous year, but resumed the trend of decreasing length of stay in subsequent years.

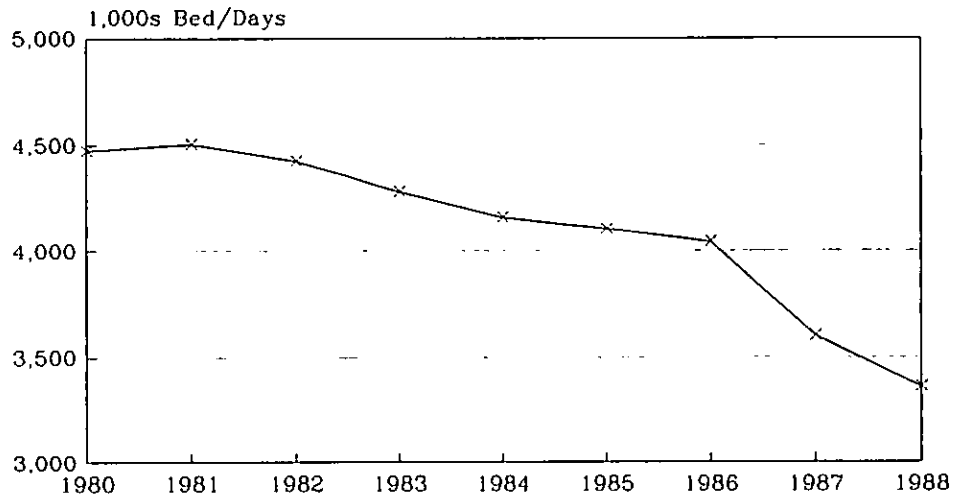
The combined effects of the changes in discharge levels and length of stay can be assessed by examining the trend in the volume of hospital bed/days produced by hospital type. This analysis is presented in the next section.

Hospital Bed/Days

With declines in the number of discharges and average length of stay, the volume of hospital bed/days produced will also decline and this is shown quite clearly for the acute hospital sector in Table 1.1 and Figure 1.10.

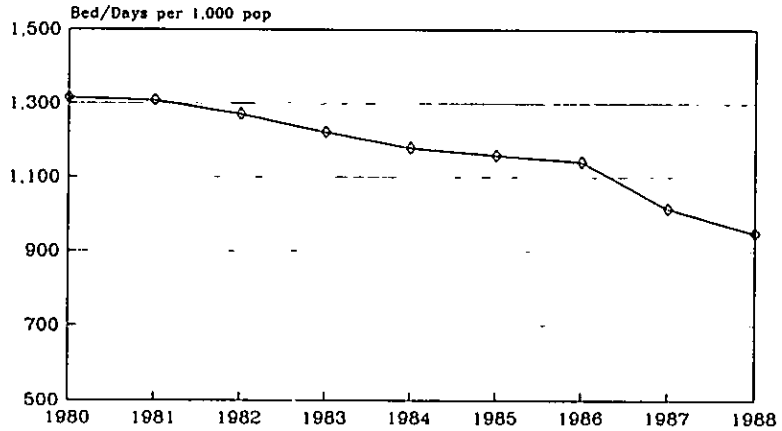
More than 1 million bed/days were lost to the acute hospital system between 1980 and 1988 when the total number of bed/days produced dropped by one-quarter (25 per cent), from a high of almost 4.5 million bed/days in 1980 to approximately 3.4 million in 1988. (The private hospitals must be excluded from this analysis because of the unavailability of the required data). This is a substantial decline and quite consistent over time. When changes in bed/days produced are standardised for population in Figure 1.11, a decline of similar magnitude is estimated. The

Figure 1.10
Total Patient Bed/Days: All Acute Discharges



Source: Health Statistics, Department of Health

Figure 1.11
Ratio of Patient Bed/Days to Population
Ireland 1980–1988



Source: Health Statistics, Department of Health

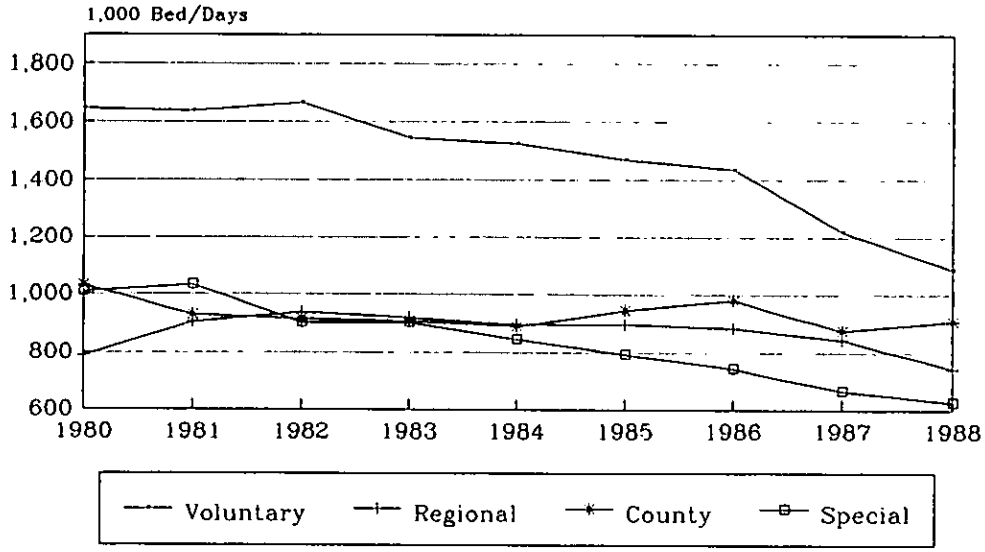
1,300 hospital bed/days produced per 1,000 population in 1980 dropped by almost 27 per cent over the period to a low of 950 bed/days per 1,000 in 1988.

Changes in volume of acute hospital bed/days by hospital type is shown in Figure 1.12. In 1980 the number of bed/days produced by the voluntary hospitals was more than twice the volume produced by the regional hospitals, while in 1988 the voluntary hospitals were only producing approximately 46 per cent more bed/days compared with the regional hospitals. Voluntary hospital bed/days have declined by one-third (34 per cent), from a high of 1.6 million in 1980 to a low of just over 1 million in 1988.

A contrasting trend is again in evidence for the regional hospitals where the number of bed/days produced increased between 1980 and 1983, when the decline began which lasted through to 1988. In total, regional hospital bed/days have declined by just 6 per cent, from close to 0.8 million in 1980 to approximately 0.7 million in 1988.

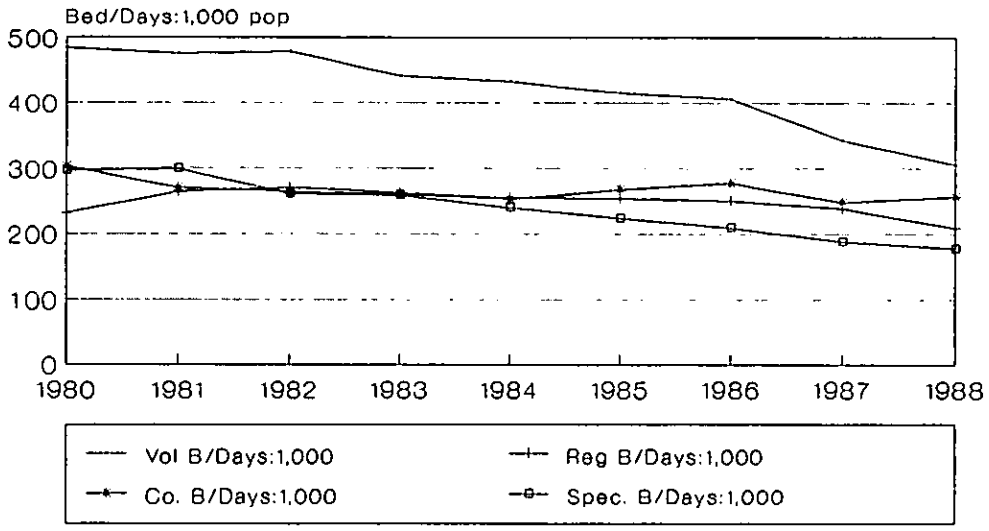
Similar trends are clearly in evidence for both hospital groups when standardised for population in Figure 1.13. For the voluntary hospitals the bed/days:population ratio has dropped by almost 38 per cent from a high of 480/1,000 in 1980 to approximately 300/1,000 in 1988. The net

Figure 1.12
Patient Bed/Days By Hospital Type
Ireland 1980–1988



Source: Health Statistics,
Department of Health

Figure 1.13
Ratio of Patient Bed/Days to Population
By Hospital Type: Ireland 1980-1988



Source: Health Statistics,
Department of Health

decline over the period has not been as high for the regional hospitals, with the bed/days:population ratio declining by 8.7 per cent from 230/1,000 in 1980 to 210/1,000 in 1988. For the regional hospitals, however, bed/days produced increased to a high of 270/1,000 in 1982. If the decline in bed/days produced is estimated from the 1982 peak through to 1988, the bed/days:population ratio will be found to have declined by 26 per cent.

The volume of bed/days produced by the county hospitals (Figure 1.12) dropped by 11.8 per cent, from a high of over 1 million in 1980 to approximately 0.9 million in 1988. The pattern of change is again somewhat erratic for this group with a decline in bed/days produced between 1980 and 1984, followed by an increase in volume between 1984 and 1986, another decrease in 1987, followed by an increase in 1988. The same pattern of change is clearly evident for the bed/day:population ratio shown in Figure 1.13. From a high of 300 bed/days per 1,000 population in 1980, this ratio drops by 17.6 per cent to 255 bed/days per 1,000 population in 1988.

The number of bed/days produced by the special hospitals (Figure 1.12) shows a substantial decline from over 1 million bed/days in 1980 to just over 0.6 million in 1988, a drop of 37 per cent. The decline in special hospital bed/days is quite consistent over the period, as clearly shown when standardised for population in Figure 1.13. In 1980 the special hospitals produced close to 300 bed/days per 1,000 population, a level which dropped by 40 per cent to a low of almost 180 bed/days per 1,000 in 1988.

The above indicators, including hospital bed numbers, discharges, occupancy, average length of stay and bed/days which have been included in this review are generally indicative of substantial retrenchment in the acute hospital sector over the 1980-1988 period. An assessment of the period would not, however, be complete without an analysis of changes in health and hospital expenditure throughout the 1980s. This will be presented in the next section, following which this review of the hospital sector for this period will be concluded.

Health and Hospital Expenditure

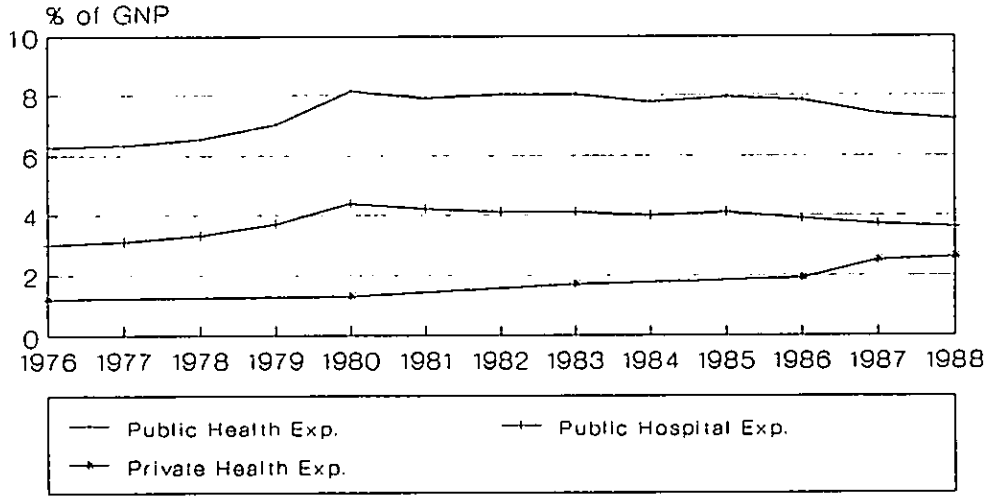
Gross non-capital expenditure from exchequer sources on the health service and the general hospital programme between 1976 and 1988 is shown in Table 1.2. This information is also presented graphically with public health and hospital expenditure, together with private health expenditure as a percentage of Gross National Product (GNP) shown in Figure 1.14, and public health and hospital expenditure in current and constant terms shown in Figure 1.15.

Table 1.2: *Gross Non-Capital Expenditure on Health and the Hospital Programme, Ireland: 1976-1988*

Year	*Health Expenditure (£)*	*% GNP*	*Hospital Expenditure (£)*	*% GNP*
1976	290.600	6.29	139.514	3.0
1977	355.122	6.35	172.568	3.1
1978	428.760	6.57	213.200	3.3
1979	537.500	7.04	282.900	3.7
1980	732.000	8.13	393.800	4.4
1981	858.000	7.90	458.370	4.2
1982	998.700	8.02	507.659	4.1
1983	1090.500	8.02	558.100	4.1
1984	1155.500	7.78	592.650	4.0
1985	1245.000	7.95	637.212	4.1
1986	1298.700	7.83	647.900	3.9
1987	1314.500	7.40	657.400	3.7
1988	1338.500	7.23	662.610	3.6

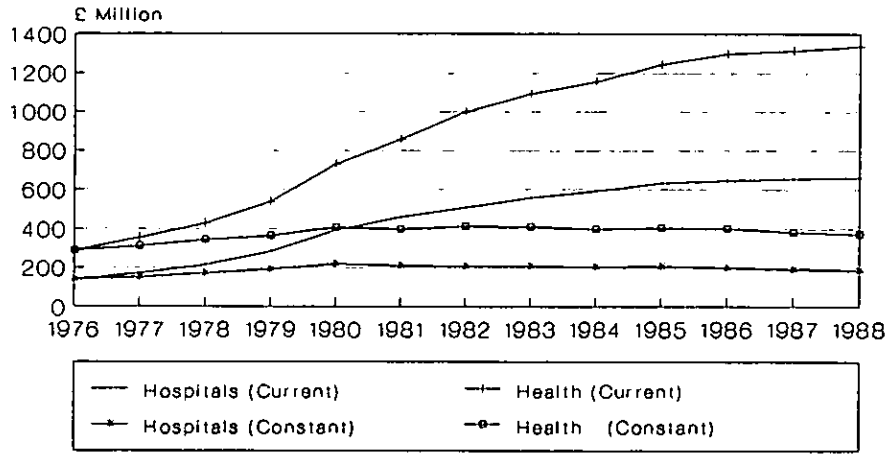
Source: Department of Health, Ireland.

Figure 1.14
Health and Hospital Expenditure as a Percentage of GNP: 1976-1988*



Gross Non-Capital Expenditure, Ireland
Source: Department of Health
*Private health expend. starts 1975

Figure 1.15
Expenditure (Current/Constant) on Health and the Hospital Programme: 1976-1988*



* General Hospital Programme
Gross Non-Capital Expenditure, Ireland
Source: Department of Health

It is evident from Figure 1.14 that between 1976 and 1980, the proportion of GNP devoted to public health expenditure rose sharply, from 6.3 per cent in 1976 to a high of 8.1 per cent in 1980, an increase of 29 per cent. Between 1980 and 1983, public health expenditure as a proportion of GNP fluctuated between 7.9 and 8.1 per cent. The decrease in the share of GNP devoted to public health expenditure has been consistent since 1985, dropping to a low of 7.2 in 1988. Between 1980 and 1988, the proportion of GNP devoted to public health expenditure declined by 11 per cent.

Available sources of information on private health expenditure in Ireland are very limited. In Figure 1.14 we have presented recent estimates of private health expenditure as a percentage of GNP (Institute of Public Administration, 1990, Wiley, 1987). While this series is incomplete, it does enable a general appreciation for the magnitude and direction of changes in expenditure in this area in recent years. It is interesting to note that the trend for private health expenditure is in direct contrast to the trend for public health expenditure in both the pre- and post-1980 periods. From the mid-1970s until 1980, when public health expenditure as a proportion of GNP increased, the GNP share of private health expenditure decreased slightly. The 1980s have, however, seen a substantial increase in the GNP

share of private health expenditure, in direct contrast to the fairly consistent decline in public health expenditure relative to GNP over this period. Between 1980 and 1988, the GNP share of private health expenditure doubled, from 1.3 per cent in 1980 to 2.6 per cent in 1988. Due to the inadequacy of source data, it is not possible to disaggregate private health expenditure by service type. It is therefore not possible to identify which types of private health expenditure may account for the recent increase in the overall level of expenditure and, of specific relevance to this study, it is not possible to quantify private expenditure on hospital services. The discussion of hospital expenditure presented here will therefore have to be limited to funding provision from exchequer sources.

The proportion of GNP devoted specifically to public hospital expenditure, to some extent, mirrors the trends in evidence for public health expenditure with the peak of 4.4 per cent arising in 1980 constituting a 47 per cent increase over the 3 per cent figure recorded in 1976. The reduction in hospital expenditure as a proportion of GNP began after 1980, however, following which the decline is quite consistent (with the exception of 1985), to a low of 3.6 per cent in 1988. The proportion of GNP devoted to the hospital programme dropped by over 18 per cent between 1980 and 1988.

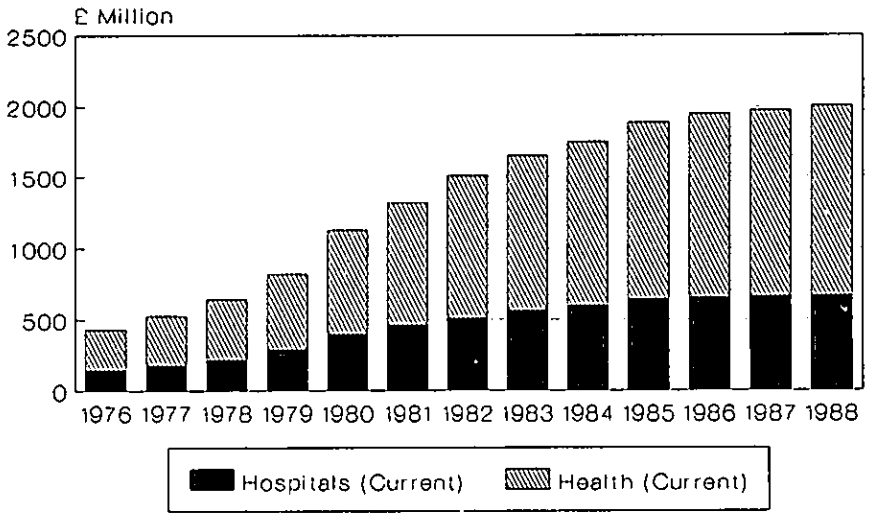
The trends in health and hospital expenditure between 1976 and 1988 are shown in Figure 1.15 at current and constant prices and the relationship between health and hospital expenditure over the same period is shown graphically in Figure 1.16. While the current expenditure series shows a consistent increase in expenditure levels over the period, this increase seems to grow at a faster rate between 1979 and 1985, following which the trend levels off. The adjustment of the current expenditure figures to produce the constant series reveals a very different trend, with a gradual increase in expenditure between 1976 and 1980, following which expenditure levels begin a gradual and consistent decline.

For the current expenditure series, the proportion of gross non-capital health expenditure devoted to the public hospital programme (Figure 1.16) increased from 48 per cent in 1976 to reach its highest point of 54 per cent in 1980 and dropped to a level of about 50 per cent in 1986 and 1987, with a further drop to 49.5 per cent in 1988.

For the constant series (at 1976 values), the deflator used is public authority net current expenditure (PANCE)[1]. Here, again, expenditure for

[1]The use of both PANCE and the CPI as a deflator for health expenditure is open to question as neither is ideal for use in this area of public expenditure. In the absence of a specific deflator for the health area, the PANCE deflator tends to be used most frequently by the Department of Health and is therefore used here for the estimation of the constant expenditure series.

Figure 1.16
Gross Non-Capital Expenditure on Health and the Hospital Programme: 1976-1988



Source: Department of Health, Ireland

both health and hospital services is seen to peak in 1980, with a gradual decline in expenditure in both areas in subsequent years. For health expenditure, there were slight increases in 1982 and 1985 over previous years, while hospital expenditure declined throughout the 1980s, with the exception of 1985 when there was a slight increase over the previous year. At constant prices, health expenditure increased by 40 per cent between 1976 and 1980, while hospital expenditure increased by 57 per cent over the same time period. While hospitals may have taken more than a proportionate share of the increase in expenditure in the pre-1980 period, the same pattern has held true for the distribution of the expenditure cut backs since 1980. Between 1980 and 1988, health expenditure has declined by 8 per cent, at constant prices, while expenditure on the hospital services has declined by almost 15 per cent over the period.

CONCLUSION

This overview of the Irish hospital system shows that between 1980 and 1988, there was a 20 per cent decline in hospital beds, a 19 per cent decline in average length of stay, a 25 per cent decline in hospital bed/days produced, and just a 5 per cent decline in discharges from the acute

hospital system. While the change in discharge levels over the period appears to be small, relative to changes in the other measures, it is important to stress that other areas of hospital activity, including the use of out-patient departments and day treatment facilities, have shown an increase over the period. An analysis of changes in these areas of activity is, however, outside the scope of this study as our concern here must, of necessity, be concentrated on the in-patient sector.

While the descriptive information presented here provides a useful backdrop to understanding the organisation and the dimensions of the acute hospital system in Ireland, the question may be validly asked - what does it really tell us about the merits or deficiencies of the way the hospital system, in particular, is functioning?

As increasing attention has been paid to assessments of the amounts and types of resources devoted to the hospital system, and particularly to reductions in resource levels, relatively little attention has been applied to the question of exactly what is being produced for the many millions of pounds spent on these services. While the capacity of the hospital system has been subject to significant limitations throughout the 1980s, reductions in bed numbers would seem to have been associated with reductions in lengths of stay so that the reductions in throughput and discharge levels could be kept to a minimum.

Given this background, an important question which should be raised is whether the reduced numbers of people receiving in-patient care are actually making the same, or perhaps greater, demands on the hospital system compared with the patient numbers treated in previous years. This question relates to the illness experience, or morbidity, of the patients requiring treatment by the hospital system. These issues have important implications for resource deployment and management within the hospital sector. It is not necessarily the *number* of patients treated within the hospital which will constitute the most important determinant of resource use within the hospital. Rather, it is the *type* of patients requiring treatment which will have the greatest influence on service delivery and resource needs at the hospital level. Given the limitations on public expenditure in recent years, it is becoming essential to develop a system for differentiating between hospitals in terms of the *type* and not just the *number* of patients treated, if resources are to be directed to hospitals in accordance with the needs of the patients treated.

When faced with the question of exactly what do hospitals do, many commentators make reference to the descriptive information presented here on patient numbers, bed/days, etc. Alternatively, it may be noted that hospitals produce other services like diagnostic services, such as X-rays and

pathology tests; together with therapeutic services, like pharmacy and physiotherapy. While hospitals certainly produce a great range of services, this cannot be considered as the *raison d'etre* of the hospital. Diagnostic and therapeutic services may be produced in many different types of institutions and are not exclusive to the hospital setting.

What is really at issue here is exactly what is the product of the hospital? The recognition that any precise definition of the hospital product is a difficult undertaking is not a recent phenomenon and sources identifying the problem can be traced back to the early years of this century (Codman, 1914), with more recent interest stimulated by research by Feldstein (1965), and others, on variations in hospital costs. The fact that hospitals are amongst the most complicated types of institutions may account, in part, for the delay in addressing this problem in the past.

Before any production system can be understood, we have to know what the product is. These are also prerequisites for the estimation of efficiency, the development and application of performance measures and the adoption or adaptation of effective management processes within any production system.

It is meaningless to speak of efficiency unless the inputs to the hospital system can be related to the outputs and the product of the system. It is also unreasonable to demand advanced management practices within the sector when the managers are unable to define the product.

Our task in this study, therefore, is to present and test one approach to the definition and measurement of the hospital product. The availability of such a measure should enable us to address a number of the issues raised previously, particularly the assessment of the morbidity, or illness experiences, of the people treated within the in-patient, hospital system. In Chapter II the theoretical context for this exercise is discussed and Chapter III contains a technical presentation of one operational approach to hospital product definition. Following the description of data sources and requirements in Chapter IV, an analysis of hospital activity is included in Chapter V. A methodology for relating hospital costs to hospital activity is described in Chapter VI and the results of a pilot study undertaken in a number of Irish hospitals to estimate service costs are also included in this chapter. In Chapter VII, a number of possible applications in the area of resource allocation and hospital management are presented and, finally, conclusions and recommendations emerging from the study are presented in Chapter VIII, the final chapter.

This study is concerned with acute hospitals. These are hospitals where the length of stay might be expected to be 30 days or less for most patients. It will become clear from the analysis of activity presented in the report

that lengths of stay longer than 30 days will, in fact, arise for a minority of discharges from hospitals included in the study. Those hospitals which are included in the analysis are, however, generally categorised as acute hospitals.

Private hospitals are not included in this study as they do not typically participate in the data systems which provide the basis for the analysis. For the included hospitals, no attempt is made to separate public and private patients or income sources. Apart from the fact that the information available did not allow this breakdown, the study objective here was to test a methodology for describing, quantifying and costing the complete workload of the hospital. The same methodology could, however, be applied in some future study to enable a more in-depth examination of particular segments of the hospital workload.

Chapter II

DEFINING THE HOSPITAL PRODUCT: MEASURING CASE MIX

Introduction

During the period of rapid growth within the health sector which characterised the 1970s, any concern for routine evaluation of efficiency and/or effectiveness within the system was minimal. The crisis which subsequently gripped the public finances led, however, to a rather dramatic reversal of this trend and the expansion of the 1970s was abruptly constrained by the financial controls of the 1980s, when maintenance of the health service system, at best, rather than continued expansion, became the priority.

On the basis of the review of hospital activity and expenditure presented in the previous chapter, the 1980s may be accurately characterised as a period of curtailment for the acute hospital system in Ireland. The indicators reviewed show a gradual reduction in hospital beds, discharges, length of stay, bed/days and expenditure over the period reviewed. It must be acknowledged, however, that the in-patient service is just one component of an integrated health system and the trends observed for the in-patient service may differ for other areas. Internationally, reductions in the availability and use of in-patient services have been associated with increased availability and use of alternative services, particularly out-patient and day services and we would expect that similar trends would also hold true for Ireland (Prospective Payment Assessment Commission, 1990; Pokros, *et al,* 1990). The focus in this study has to be restricted to the in-patient sector, however, though it is hoped in a future study to examine trends in the development of day care in more detail. The fact that this study can only examine one component of a multi-faceted system is, therefore, a limitation which must be acknowledged.

As resources have become more limited, the choices which have to be faced within our economic system have become more explicit. In the same way, the importance of ensuring that the deployment of increasingly scarce resources is both efficient and effective has been afforded greater prominence within the public health services. The problem which arises in the health sector, and also applies to many other areas within the public sector, is how these core concepts are to be measured.

Efficiency and Effectiveness

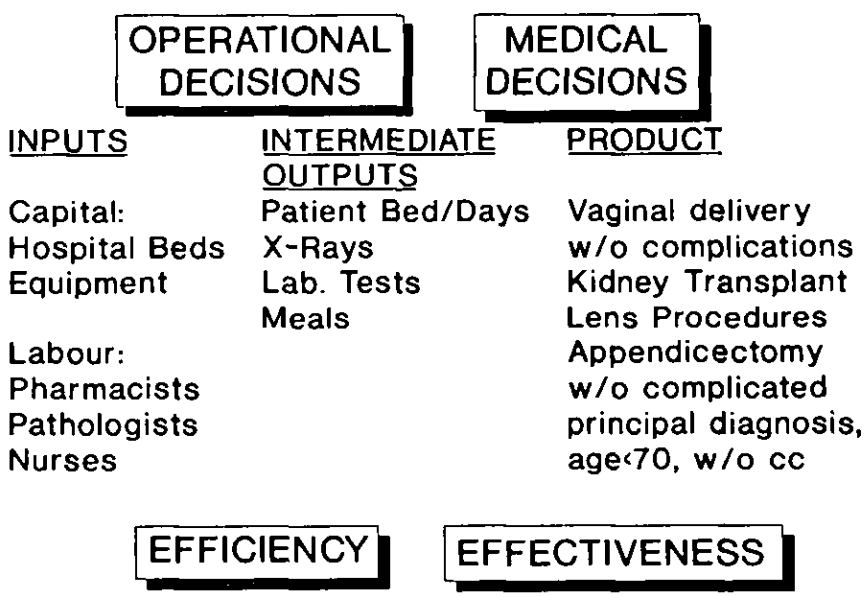
The terms efficiency and effectiveness are too often used interchangeably, and incorrectly, without regard to the important distinctions between the two concepts. While *efficiency* is concerned with the relationship between a standardised unit of output and the inputs required to produce that output, the definition of *effectiveness* implied is the ability to achieve the desired results, given the outputs produced. Figure 2.1, adapted from Fetter and Freeman (1986), portrays this distinction graphically with specific reference to the hospital sector.

It is suggested in Figure 2.1 that the application of efficiency is particularly relevant to the realm of operational decisions, while medical decisions may be measured against criteria for assessing effectiveness. The basic building blocks for the application of these concepts are *inputs, outputs and product.*

In the hospital services sector we are mainly dealing with labour (e.g., nurses, doctors) and capital (e.g., beds, equipment) as *inputs.* While the definition and measurement of inputs to the hospital system tends to be reasonably straightforward, this is not the case for the specification of the output and product of the hospital. The remainder of this chapter will be devoted to discussion of these concepts.

FIGURE 2.1

Specification of the Hospital Product



Adapted from Fetter and Freeman (1986)

Hospital Output and Hospital Product: Definition and Measurement

> ...the hospital's output is intrinsically difficult to define. Hospital output is a service which is less tangible than a good. It cannot be stored and examined at will, but only experienced or observed in real time. (Hornbrook, Part I, 1982, p.11)

In attempting to resolve the difficulties faced in defining the hospital's output, Hornbrook has identified three fundamental dimensions to the output of a hospital as follows: volume, case-mix, and quality (Hornbrook, 1985). While *volume* is straightforward and refers to the total number of patients treated by the hospital, the definition of case-mix and quality are more complex. Hornbrook defines *case-mix* as "the proportion of cases of each disease and health problem treated in the hospital"(1985, p.296); and *quality* as "the hospital's contribution to the successful outcome or resolution of patients' illnesses or health problems" (1985, p.295).

Quality of care must be of paramount importance to all concerned with the provision of hospital services and is, in itself, worthy of a complete study to investigate approaches to measurement and the development and implementation of controls to improve on prevailing standards. While recognising the importance of all dimensions of hospital output, this study will, of necessity, concentrate on one particular dimension, i.e., approaches to hospital case-mix definition and measurement.

The circumstance surrounding admission to hospital have been characterised as "extraordinary and overwhelming" whereby the patient experiences "uncertainty, pain and anxiety" such that a "considered, deliberate, rational choice process" is precluded (Hornbrook, 1982, Part I, p.12). Hornbrook concludes, therefore, that "shared experiences among consumers cannot be called upon in reaching an understanding of the nature of the hospital's product".

We must therefore return to the model presented in Figure 2.1 to provide the basis for a definition of the hospital product. Within this framework, the *hospital product* is defined as "a set of services provided to a patient as part of the treatment process controlled by his clinician" (Fetter, *et al*, 1980 p.2).

Discussion of an example from Figure 2.1 may prove helpful in understanding this concept. Appendicectomy, without complicated principal diagnosis, complications or comorbidity for age < 70 is presented as one product of the hospital. A surgical procedure will be required for the appendicectomy, together with X-rays, lab tests, medication, meals, laundry, patient bed/days, etc., all of which constitute intermediate outputs of the hospital. The surgical procedure, appendicectomy, in itself would not constitute the product in question because it is the combined

effect of providing all of the required intermediate outputs which achieve the objective of treating the observed appendicitis in the presenting patient in accordance with the preferred treatment process determined by the clinician concerned. The production of these intermediate outputs will, in turn, require a resource input like, for example, the pharmacists involvement in the provision of medication and the pathologists input in the provision of laboratory tests. Finally, it is worth noting that the definition of the product in this example is multi-dimensional, encompassing the nature of the procedure, the age of the patient, and the presence or absence of a complicated principal diagnosis, complications and/or comorbitites.

The relationship between the hospital output and the hospital product might therefore be summarised as follows: a hospital's outputs are many and varied; patients admitted to the hospital may receive many different outputs; because the ultimate objective of the hospital is to provide the appropriate "package" required to treat presenting problems of individual patients, each of the outputs provided may be considered as "intermediate outputs". It is the particular bundle of intermediate outputs delivered to each patient treated which constitutes the product of the hospital.

The hospital may therefore be recognised as a multiproduct firm which might, in theory, have a product line which is as diverse as the number of patients treated. The production function for each product is a multivariate function as represented in Figure 2.1. This production function may be specified as follows:

$$\underline{Y} = f(\underline{X})$$

where $\underline{Y}$ is the vector of outputs, and $\underline{X}$ is the vector of inputs (Fetter and Freeman (1986)).

While not denying that individuals are unique, patients may share common clinical attributes which, in turn, gives rise to the expectation that they will receive a similar "bundle" of services as part of the therapeutic process. If classes of patients which cover all possible patient types can be differentiated, this framework constitutes the basis for a case-mix classification scheme which "provides a means for examining the products of the hospital, since patients within each class are expected to receive a similar product" (Fetter *et al*, 1980). The hospital product can therefore be defined by the development and application of a case-mix classification system consisting of discrete classes of patients exhibiting common clinical attributes and similar output utilisation patterns.

The complexity of both illness and the therapeutic process means that,

in turn, the development of a system for classifying case-mix is a complicated undertaking. This area of research and development is of relatively recent vintage because of the demands that the exercise makes on the technology, the expertise and the information systems available. The pre-eminence of all three factors within the US health system throughout the 1970s has meant that this system has taken a leading role in cultivating developments in this area. All of the foremost case-mix measures currently available, or in the process of development, come from the US. A brief review of the most recent developments in case-mix measurements will first be provided here before proceeding to discuss alternative approaches to case-mix measurement in more detail.

Case-Mix Measurement and Resource Management

The US Medicare programme was established in 1965 as a federally-funded health care programme for the elderly and the disabled (Title XVIII, Social Security Act, 1965). Since commencement, hospital costs within this programme have increased dramatically and consistently surpassed the inflation rate in the economy as a whole. Between 1967 and 1983, Medicare hospital expenses increased at an annual rate of 17.9 per cent, while the overall rate of inflation was 7.4 per cent during this period (Arnett III, *et al*, 1986).

Until 1983, in-patient hospital costs for Medicare beneficiaries were reimbursed on a retrospective reasonable cost basis. The term "reasonable cost" may be understood to refer to the direct or indirect costs of a provider which are considered "necessary and proper for the efficient delivery of needed health care services to Medicare beneficiaries" (ProPAC, April, 1985). This system lacked any incentive for cost containment or cost control as hospitals were paid on the basis of claims submitted for costs incurred in treating Medicare patients. The rapid and continuous increase in programme costs noted above is evidence of the highly inflationary nature of this reimbursement method for hospital care.

The search for an alternative approach to financing hospital care led to the adoption of the prospective payment system (PPS) within the Medicare programme in 1983 (Tax Equity and Fiscal Responsibility Act, 1982). PPS probably constitutes the most significant innovation within this health care programme since its inception in 1965. Under the Medicare PPS, a rate of payment is determined for discrete in-patient groups and discharges are reimbursed on a retrospective basis at the predetermined rate for their respective group. The prospective payment rate does not include capital costs, direct medical education costs or outpatient costs (Davis and Rhodes, 1988).

The discrete, in-patient groups on which payment rates are based are called Diagnosis Related Groups (DRGs). The DRGs constitute a case-mix classification system, and PPS was the first national programme to introduce case-mix based payment as an alternative to cost-based payment for in-patient hospital care. The DRG system was chosen as the case-mix measure to be applied within PPS because it was the most developed and the most suitable measure available at the time. Two important points about the relationship between PPS and DRGs must, however, be stressed: (1) PPS and the DRG system are independent of each other; and (2) the use of DRGs for reimbursement is just one of a number of possible applications for this case-mix measure.

If an alternative measure of case-mix was found to be a preferable alternative, the DRGs could be replaced within an ongoing prospective payment system. The operation of the DRG system within PPS is, in fact, being continually monitored and the results of a study of alternative case-mix classification systems will be reported in the next section. The development of the DRG system, the experience within PPS and possible applications outside of PPS, will be considered in greater detail later in this report. For now, it is important to recognise that the significance of the change to PPS extends far beyond the US Medicare system: PPS has demonstrated that a product-based approach to the management of hospital resources is technically and administratively feasible, in addition to providing a basis on which to measure performance and introduce incentives for improved efficiency in the deployment of hospital resources.

In the next section a number of alternative case-mix classification systems, including DRGs, will be briefly reviewed. The systems covered in this section are in various stages of development and appear consistently in studies of case-mix measures as being representative of the approaches currently being pursued within this research arena (Hornbrook, 1982, Part II; Thomas, Ashcraft and Zimmerman, 1986; Bloomrosen and Kominski, 1988).

Alternative Case-Mix Classification Systems

The introduction of PPS in 1983 was accompanied by the establishment of the Prospective Payment Assessment Commission (ProPAC). ProPAC was established as an independent body to advise the Secretary of the Department of Health and Human Services on maintaining and updating PPS. The ProPAC mandate also includes an ongoing review of the DRG system and recommendations on amendments or revisions to the system.

In keeping with this mandate, the Commission convened a technical advisory conference on alternative case-mix measurement systems in June, 1987. In addition to DRGs, the other systems reviewed by this conference

included Medisgrps, Disease Staging, Computerized Severity Index, APACHE II and Patient Management Categories. With the exception of the Computerized Severity Index, these systems were also included in an evaluation of alternative severity of illness measures conducted by Thomas, Ashcraft and Zimmerman (The University of Michigan, 1986).

The measurement objective of a case-mix classification system is an important prerequisite to understanding the particular system and the contribution which may be forthcoming from the approach adopted. The six measures considered here will be briefly described with reference to the measurement objective employed and the technique pursued. A detailed analysis of alternative case-mix measures is outside the scope of this report so this overview will, of necessity, be limited. The findings of the comparative studies conducted for these measures will be presented subsequently.

Diagnosis Related Groups (DRGs)

Fetter, Thompson and Averill (1981) provide the following overview of the Diagnosis Related Group classification system:

> The fundamental purpose of the DRG approach is to identify in the acute-care setting a set of case types, each representing a class of patients with similar processes of care and a predictable package of services (or product) from an institution. (p.27)

DRG assignment is based on demographic data, diagnostic data and data on surgical procedures performed. Prior to assignment to DRG, discharges are first assigned to a Major Diagnostic Category (MDC). There are 23 MDCs, based mainly on the body system. The current version (1989) of the DRGs used within the Medicare programme is comprised of 477 groups.

Medisgrps

The Medical Illness Severity Grouping System (MEDISGRPS) was originally developed with the objective of estimating standardised morbidity and mortality rates for quality control purposes (Brewster, *et al*, 1985). This is an admission oriented severity grouping system which categorises patients into one of five severity groups on the basis of objective clinical findings from the medical record.

Disease Staging

The development of a more complete specification of the illness of the patient to ensure that differences in the patient's condition are not confounded with differences in the therapeutic response is presented as a starting point for the development of disease staging (Hornbrook, 1982, Part II). While the concept behind staging, in general, comes from clinical

oncology, disease staging is described as a clinically-based measure of severity which is based on aetiology and disease progression. Objective medical criteria are used to categorise diseases into four major stages of increasing severity based on system involvement of the disease and the presence of complications (Gonnella, *et al,* 1984)

Computerised Severity Index (CSI)

CSI was developed as a means of quantifying the difficulty of restoring a patient to health, taking account of the extent and interactions of his/her disease. Using the whole patient as the unit of analysis, the objective of CSI is the development of a five level index which can be easily applied to differentiate groups of patients which are homogeneous in terms of severity of illness (Horn, 1981).

APACHE II

The development of APACHE (Acute Physiology and Chronic Health Evaluation) was intended to facilitate an improved evaluation of the quality of medical care in intensive care units (ICUs) (Knaus, *et al,* 1985). The system was also intended to take account of the efficacy of specific treatment modalities used on patients who are critically ill. As a severity measure, APACHE II uses basic physiologic principles to stratify patients prognostically according to risk of death. Patients are assigned a severity score on the basis of twelve commonly available physiologic measures. Higher scores are indicative of greater severity and the maximum score on the scale is 71 points.

Patient Management Categories (PMCs)

Patient Management Categories were designed with the objective of representing clinically specific types of patients, each of which requires a distinct diagnostic and treatment strategy to ensure effective care (Young, 1984). Originally, PMCs were normatively specified by panels of physicians. The computerized approach to PMC assignment is a two stage process involving, first of all, assignment to up to five disease modules and, secondly, comparison of the diagnoses and procedures against those specified by the PMC software to enable final assignment to a PMC.

Evaluation of Alternative Case-Mix Classification Systems

One of the most important findings of The University of Michigan study (Thomas, *et al,* 1986) was that none of the other classification systems reviewed (including Medisgrps, Disease Staging, APACHE II and Patient Management Categories) performed as well as DRGs in terms of

prediction of patient resource use. When criteria other than ability to predict costs were assessed, this study found that in certain cases some of the options when used alone, or in conjunction with the DRG system, performed better than the exclusive use of the DRG system.

In the 1987 (April) Report of the Prospective Payment Assessment Commission, the principal approaches adopted for improving the measurement of case-mix within PPS are outlined as follows (p.63):

1. Retaining the current system but revising it incrementally as problems emerge;
2. Retaining the system in principle but reconstructing it using newer, more complete, data bases; and
3. Implementing an alternative system, either in conjunction with DRGs or to replace DRGs.

To date, the Commission has pursued the first approach i.e., retaining the current DRG system within PPS, but revising it incrementally as problems emerge. The conclusions of a Technical Advisory Conference convened in June, 1988 to evaluate the case- mix measures described in the previous section, support the continued pursuit of this approach. Conference participants agreed that "no system meets the multiple objectives of payment refinement, quality assurance monitoring, cost containment, and hospital management" (p.4) and the Commission concluded that "it is premature to recommend major DRG reconstruction or implementation of one of the alternative systems for Medicare payment" (Bloomrosen and Kominski, 1988, p.1).

The conference findings therefore corroborate the Commission's statement in the 1987 report that "it is unclear if any of the systems using existing discharge data significantly improves case-mix measurement" (ProPAC, April, 1987, p.67). In a subsequent annual report, the Commission offer continued support for the conclusion that "diagnosis-related groups (DRGs) are the most appropriate available measure of hospital case-mix for PPS" (ProPAC, April, 1988, p.3).

CONCLUSION

In this chapter, one approach to defining and measuring hospital output and product was outlined. This approach highlighted the importance of the availability of a comprehensive case-mix measure to the successful achievement of this objective. A number of approaches to case-mix measurement were briefly described and the results of a number of comparative studies of alternative case-mix classification techniques reported.

Given the results of studies reported, which identified the strengths of

the Diagnosis Related Group (DRG) approach relative to other available techniques, combined with the fact that this system is the case-mix measure which has been used as the basis for payment within a national health care programme in the United States since 1983, it was decided to proceed with a test of the DRG technique on Irish data. The decision to proceed with this test was further supported by the weight of accumulating evidence on the importance of integrating case-mix measurement within approaches to resource deployment and management in the hospital system.

In recognising the integral importance of case-mix measurement in any approach to hospital product definition, two core objectives for proceeding with this pilot exercise of case-mix measurement can be immediately identified: (1) to test the technical feasibility of using an advanced case-mix measure like DRGs on Irish data; and (2) to assess the potential which DRGs might offer as a resource management tool within the Irish hospital system. The DRG system is discussed in greater depth in the following chapter.

Chapter III

DIAGNOSIS RELATED GROUPS: DEVELOPMENT AND CONSTRUCTION OF AN OPERATIONAL CASE-MIX MEASURE

The Diagnosis Related Group (DRG) patient classification system was developed by the Health Systems Management Group at the Yale School of Organisation and Management in the late 1960s. The original motivation was provided by the need to develop operational techniques for utilisation review.[2] This objective was in keeping with the emphasis, at the time, on the development of more rational planning models for application within the hospital sector. The need to develop a means of making an explicit link between the clinical characteristics of patients and their use of hospital resources was recognised as an essential prerequisite to the evaluation of the appropriateness of service utilisation within the hospital setting (McMahon, 1984).

Attributes of a Case-Mix Classification System

In developing a classification system for the definition of case types within the acute hospital setting, the following attributes were specified for the system (Fetter *et al.*, 1980):

1. The system must be interpretable medically, with subclasses of patients from homogeneous diagnostic categories;
2. Individual patient classes should be defined on variables commonly found on hospital abstract systems and relevant to output utilisation;
3. The number of classes in the system must be manageable, mutually exclusive and exhaustive;
4. The classes should be constituted by patients with similar expected measures of output utilisation;
5. Class definitions should be comparable across different coding schemes.

[2] *Utilisation Review* refers to the formal process of checks put in place to ensure that care delivery and the associated treatment costs are reasonable and necessary. This process may involve comparisons between individual doctors or hospitals, and between treatment styles and costs for the same type of case. While utilisation review may be undertaken within a number of different types of organisation, *Peer Review Organisations* were set up specifically for this purpose within the Medicare programme.

Variable Specification and Measurement

The independent variables used for the purpose of specifying a system to achieve these objectives were selected to be descriptive of the patient, the patient's disease condition and the treatment process. In addition, it was considered essential that information relating to the selected variables should be easily available on discharge abstract summaries if the resultant system was to be available for general application.

The initial stages of the analyses identified a number of variables which, in descriptive studies of hospital activity, had been found to be associated with variations in length of stay and other resource use measures (Fetter, *et al,* 1980). Ultimately, a set of independent variables were identified as representing the essential demographic and clinical attributes of in-patients. These variables include the following: primary diagnosis, secondary diagnoses, surgical procedures performed, age, sex and discharge status.

We have seen from the previous chapter that the measurement of the output of the hospital is a complicated undertaking. For the purpose of defining an accurate and acceptable measure of hospital case mix, a measure of hospital output had to be incorporated into the development process.

To place the choice of output measure for the purpose of case-mix measurement in context, it may be useful at this point to consider the hierarchy of hospital output classification schemes constructed by Hornbrook (Part I, 1982) which is presented in Figure 3.1. This hierarchy

FIGURE 3.1

HIERARCHY OF HOSPITAL OUTPUT CLASSIFICATION SCHEMES

ISO-VALUE GROUPS
CASES HOMOGENEOUS WITH RESPECT TO SOCIAL VALUE

ISO-OUTCOME GROUPS
CASES HOMOGENEOUS WITH RESPECT TO HEALTH STATUS

ISO-RESOURCE GROUPS
CASES HOMOGENEOUS WITH RESPECT TO RESOURCE USE

ISO-ILLNESS GROUPS
CASES HOMOGENEOUS WITH RESPECT TO ILLNESS

ISO-DISEASE GROUPS
CASES HOMOGENEOUS WITH RESPECT TO PRIMARY DIAGNOSIS

ISO-SYMPTOM GROUPS
CASES HOMOGENEOUS WITH RESPECT TO SYMPTOMS PRESENT

Source: Hornbrook (Part 1, 1982)

follows the sequence of the medical care process and begins with iso-symptom groups, progressing through to iso-disease groups and iso-illness groups. When iso-illness groups are collapsed into classes which are homogeneous in terms of the level of resources used in treatment, iso-resource groups are produced. The DRG system fits into this category as homogeneity with respect to clinical attributes is an essential prerequisite for class determination, with the additional expectation that resource use at the group level will also be relatively homogeneous.[3]

For the development of the iso-resource groups, or DRGs, limitations on data availability meant that the options available for choosing an appropriate dependent variable were restricted. While costs may be a most desirable measure of output, accurate and comprehensive data on costs for a representative sample of hospitals are notoriously difficult to obtain. Even where cost data are available, it can be very difficult to interpret because of variations in the method of collection and estimation.

These data problems led to the Yale researchers choosing length of stay (LOS) as the measure of output to be used as the dependent variable (Fetter, *et al.*, 1980). Length of stay, as a measure of output, has the advantage of being standardised, reliable and routinely available on discharge abstract summaries. Further justification for the use of LOS as an output measure is derived from findings by Luke (1979) that length of stay is highly correlated with total patient charges, and Lave and Leinhardt (1976) finding significant correlation between length of stay and case-mix complexity. In addition, length of stay and ancillary service use have been found to be significantly interrelated for a number of common medical and surgical conditions (Hornbrook and Goldfarb, 1981, Goldfarb *et al.*, 1983).

Data Base for DRG Construction

A data base of 700,000 hospital records from New Jersey and Connecticut was used as the basis for the development of the initial DRGs. Prior to 1979 the coding systems used for diagnostic information and surgical procedures in US hospitals were ICDA-8 and HICDA-2. The initial set of 383 DRGs was therefore based on the ICDA-8 and HICDA-2 coding schemes. This set of DRGs was tested in a hospital payment demonstration project undertaken in New Jersey in the late 1970s.[4]

[3]Iso-outcome groups are concerned with patient health status and iso-value groups are based on social welfare considerations. While obviously addressing the very essence of the health care system, the development and application of these two latter measures is outside the scope of this study.

[4]New Jersey subsequently adopted a statewide prospective payment system for all acute care hospitals and all payers, recognizing differences in hospital case mix as measured by DRGs (Vladeck, 1984).

In 1979 all US hospitals converted their discharge abstract coding from ICDA-8 and HICDA-2 to the 9th revision of the International Classification of Diseases, Clinical Modification version (ICD-9-CM). This change in coding practice, combined with the experience from the New Jersey demonstration project, necessitated a revision of the initial DRGs.

In 1979, the Yale research team was awarded a contract by the Health Care Financing Administration to develop the ICD-9-CM based DRGs (The New ICD-9-CM Diagnosis Related Groups (DRGs) Classification Scheme, Final Report, 1982). For this exercise, a data base of 400,000 records was selected from a total of 1.4 million records representing US acute care hospitals. An additional 335,000 records were added to this data base from the New Jersey hospitals. This project produced the revised set of DRGs, consisting of 467 categories which were accepted as the Medicare DRGs in 1983. Since 1983 the Medicare DRGs have been subject to annual updates and revisions to take account of changes in medical technology and service provision and also to correct for any inadequacies identified within the system. With these revisions, the number of DRGs currently within the Medicare system has grown to 477 groups.

The DRG Assignment Process

In developing a classification system with the required attributes, three key inputs were required: physician review, efficient information systems and statistical algorithms. The objective of ensuring that the patient groups formed by the classification process were medically meaningful was the responsibility of panels of physicians established for this purpose.

The technology used to do the actual grouping had to have an interactive basis to accommodate continuous physician involvement in the grouping process. A grouping system, called AUTOGRP, was developed for this purpose. AUTOGRP is an interactive system which can process large data bases efficiently and allows the partitioning of hospital discharge data into homogeneous groups based on an assessment of both clinical characteristics and a specified measure of resource consumption (Mills, *et al.*, 1976).

Statistically, the methodology required had to facilitate the estimation of the interrelationships between selected independent variables and the dependent variable, which was the specified measure of output. A variation of the Automated Interaction Detector (AID) method previously applied by Sonquist and Morgan (1964) was selected for this purpose. The application of this methodology allowed the recursive subdivision of the observations through binary splits into subgroups based on the values of selected variables which maximised variance reduction or minimised the

predictive error of the dependent variable (Fetter, *et al,* 1980). The subgroups are called terminal groups when they cannot be further subdivided and each observation can only be assigned to one terminal group. The predicted value for the observation will be close to the mean of the terminal group. The relationship may be represented as follows (Fetter, Thompson and Averill, 1981 p.34):

$$Y_{kj} = \overline{Y}_k + e_{kj}$$

where
$\overline{Y}_k$ is the mean for all members in the kth group,
e_{kj} is the error in using $\overline{Y}_k$ to predict or estimate Y_{kj}, the value of the dependent variable for the jth observation within the kth group.

On the basis of this statistical approach, the following four step process was developed for the purpose of DRG assignment:

Step 1: Hospital discharges are partitioned into mutually exclusive and exhaustive primary diagnostic groupings called *Major Diagnostic Categories (MDCs).* The MDCs were specified under the following conditions (Fetter, *et al,* 1980):

1. Major Diagnostic Categories must be consistent with regard to the anatomic, physiopathologic classification, or in the manner in which they are clinically managed;
2. Major Diagnostic Categories must have sufficient numbers of patients; and
3. Major Diagnostic Categories must cover all codes without overlap.

While the original version of the DRGs had 83 Major Diagnostic Categories, the revised version has 23 MDCs. The MDCs are listed in Figure 3.2. It will be apparent that this classification is primarily based on the organ system or the specialty which would usually provide patient care. The exceptions are MDC 12 (Diseases and Disorders of the Male Reproductive System) and MDC 13 (Diseases and Disorders of the Female Reproductive System) where urogenital conditions are split on the basis of the sex of the patient.

Step 2: Where relevant, discharges within the Major Diagnostic Category are subdivided according to whether or not a surgical procedure was performed. For specific MDCs, there are some exceptions to this initial major procedure split, for example, MDC 14 (pregnancy, child birth and the puerperium) where the initial split is "delivery during this admission".

FIGURE 3.2

MAJOR DIAGNOSTIC CATEGORY

01 Diseases and Disorders of the Nervous System

02 Diseases and Disorders of the Eye

03 Diseases and Disorders of the Ear, Nose and Throat

04 Diseases and Disorders of the Respiratory System

05 Diseases and Disorders of the Circulatory System

06 Diseases and Disorders of the Digestive System

07 Diseases and Disorders of the Hepatobiliary System and Pancreas

08 Diseases and Disorders of the Musculoskeletal System and Connective Tissue

09 Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast

10 Endocrine, Nutritional, and Metabolic Diseases and Disorders

11 Diseases and Disorders of the Kidney and Urinary Tract

12 Diseases and Disorders of the Male Reproductive System

13 Diseases and Disorders of the Female Reproductive System

14 Pregnancy, Childbirth and the Puerperium

15 Newborns and Other Neonates with Conditions Originating in the Perinatal Period

16 Diseases and Disorders of the Blood and Blood-Forming Organs and Immunological Disorders

17 Myeloproliferative Diseases and Disorders, Poorly Differentiated Neoplasms

18 Infectious and Parasitic Diseases (Systemic or Unspecified Sites)

19 Mental Diseases and Disorders

20 Substance Use and Substance Induced Organic Mental Disorders

21 Injury, Poisoning and Toxic Effects of Drugs

22 Burns

23 Factors influencing Health Status and Other Contacts with Health Services

Step 3: Coming into this level, there are two groups within most MDCs - the medical group and the surgical group. During this stage, the medical patients are further subdivided into categories based on their principal diagnosis. Surgical patients are categorised according to the procedures performed. The procedures, in turn, are ranked in terms of resource intensity. Surgical patients are categorised into subgroups on the basis of the most resource intensive procedure received which is related to the primary diagnosis.

Step 4: The final stage in the classification involves the derivation of additional diagnostic or surgical subgroups on the basis of age, specific secondary diagnoses, comorbidities or complications, non-operating room procedures and discharge status where these variables have been found to have a significant effect on length of stay. The decision on whether or not to further divide any subgroup based on these variables was made with reference to the following conditions: partitioning ceased when the number of observations in the subgroup was less than 100, or, none of the variables reduced the unexplained variation by at least 1 per cent (Fetter, *et al.*, 1980).

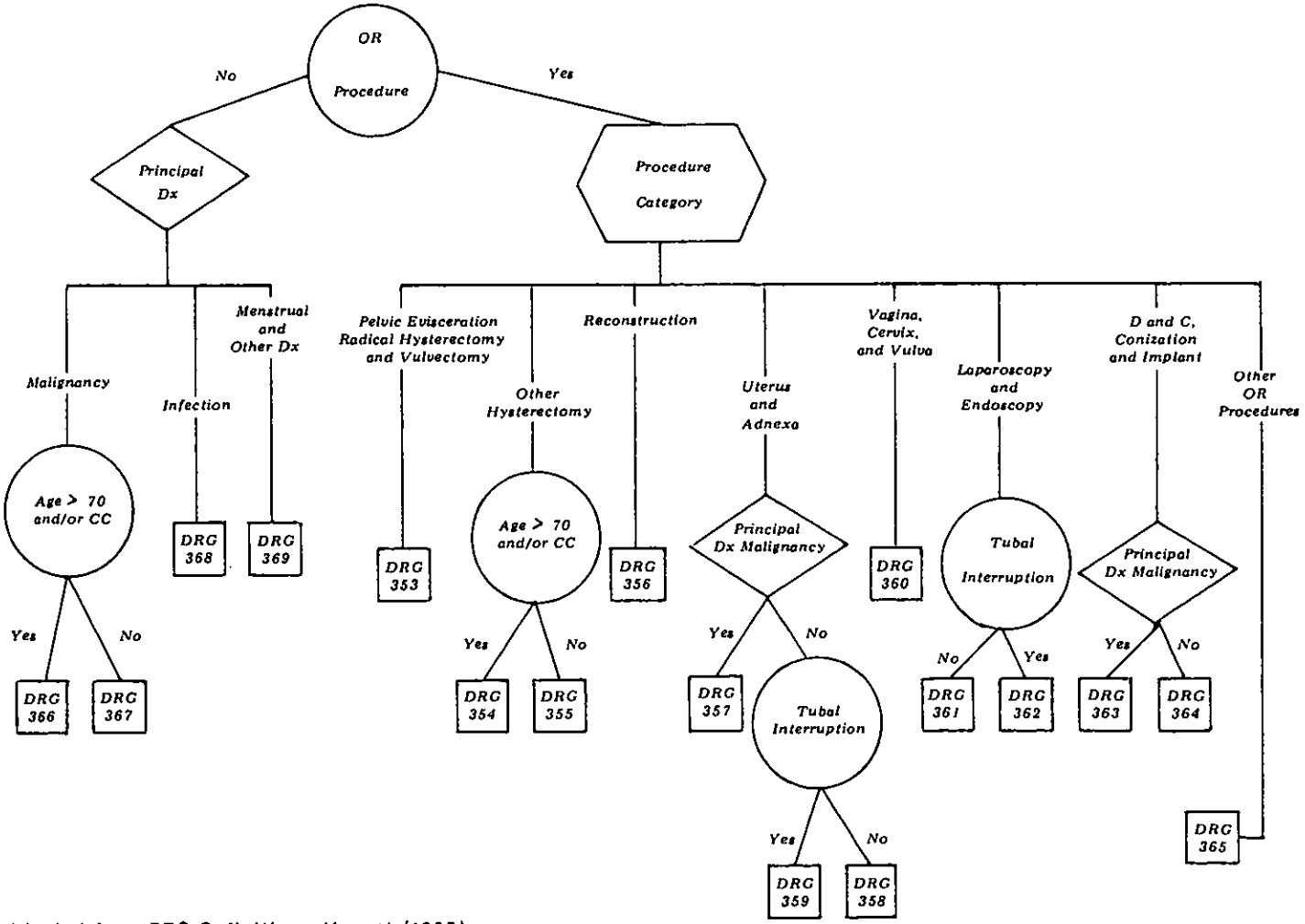
To aid in understanding this process, Figure 3.3 outlines the subgroup classification for MDC 13: Diseases and Disorders of the Female Reproductive System. For MDC 13 it is clear that the surgical procedures are grouped in rank order according to the hierarchy of resource use. Within the surgical groups, variables such as a diagnosis of malignancy which are both clinically meaningful and statistically significant in terms of resource use result in further within group splits (e.g. DRGs 357, 358, 359). The medical groups are clearly defined in terms of principal diagnosis here. Within this MDC, a composite variable "Age>70 and/or CC (complication/comorbidity)" causes a number of within group splits where the joint conditions of clinical and statistical significance are satisfied.

CONCLUSION

This chapter is intended to provide an overview of the development and construction of the DRG system as an operational case-mix measure. An exhaustive account of all modifications to the system since it was originally developed is outside the scope of this review. A comprehensive overview of changes and adaptations to the system since it was adopted for use by the Medicare programme can be found in McGuire (1990).

Figure 3.3

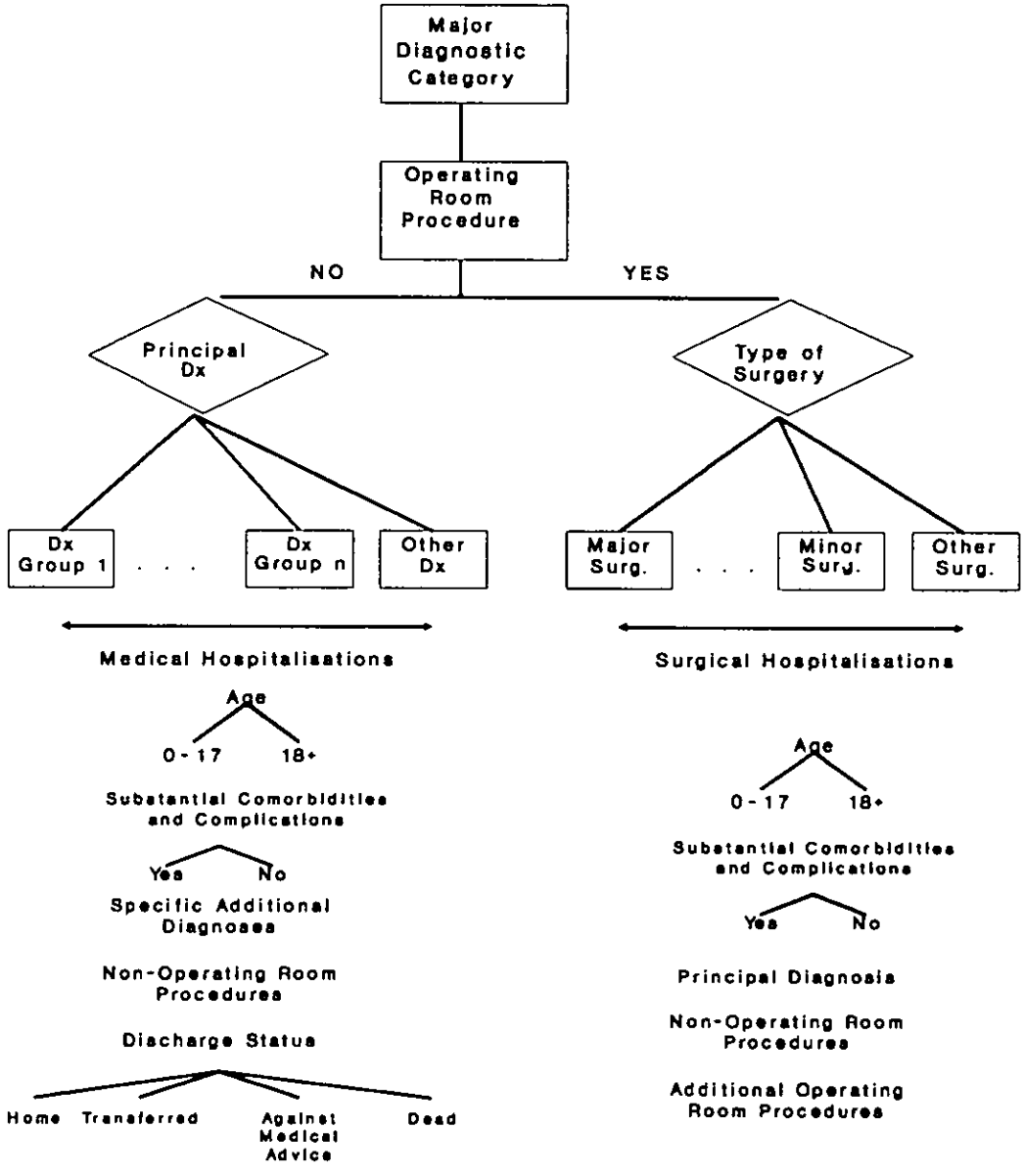
Major Diagnostic Category 13: Diseases and Disorders of the Female Reproductive System



Adapted from DRG Definitions Manual (1985)

Figure 3.4

Structure of the DRG Classification within Major Diagnostic Categories •



• Structure according to the fourth revision of the DRGs

The Medicare annual updates have resulted in a number of substantial modifications which must be considered in any decision relating to the use of DRGs. For the Irish experiment with DRGs, it was decided to use that version of the system which most closely resembled the system as it was originally developed, prior to any major Medicare modifications. The DRG Grouper Version 3.0 comprising 467 DRGs was therefore used for the Irish experiment, and the list of DRGs relevant to this version is attached in Appendix 1.

This review of DRG development would not, however, be complete without noting a major research effort completed in 1989 directed at developing a fundamental revision of the DRG system (Health Systems Management Group, 1989). This project was concerned with developing the "Refined DRGs" to take specific account of substantial comorbidities and complications. The proposed structure for the refined DRGs within the MDC is outlined in Figure 3.4. The refined DRGs are, however, still at the research stage and have not been adopted for implementation by Medicare at this time.

In proceeding with the Irish DRG experiment, a number of technical issues had to be addressed. These issues mainly concerned data availability and the use of particular coding schemes for diagnoses and procedures within the Irish system. These issues will be discussed in detail in the next chapter.

Chapter IV

HOSPITAL ACTIVITY: REVIEW AND EVALUATION OF DATA SOURCES

There are two principle sources of data on acute hospital discharges in Ireland: (1) the Hospital In-Patient Enquiry Scheme (HIPE) and (2) the Perinatal Reporting System (PRS).[5] While both schemes are national schemes, they function independently so they will be described separately.

The Hospital In-Patient Enquiry Scheme

The Hospital In-Patient Enquiry Scheme (HIPE) was established by the Medico-Social Research Board (now the Health Research Board) in 1972 and has continued to operate to date, with the Department of Health taking over responsibility for the scheme from January 1989. This scheme collects data on hospital discharges and maintains a national data base of discharge summaries. It is the only source of morbidity data for acute hospital services available at the national level in Ireland.

Data Collected by the HIPE Scheme

The data collected by the HIPE Scheme can be logically grouped into demographic data, diagnostic data and data on procedures performed. Additional descriptors concerned with the hospital stay are also collected. The basic form used for collecting the HIPE data is included, for information, in Appendix 2.

What is immediately relevant here, however, is the information collected and used for the DRG analysis and this will be described in greatest detail. As described in the previous chapter, the following data are required for DRG assignment: principal diagnosis, secondary diagnoses, procedures performed, age, sex and discharge status. Length of stay is most often used as a measure of resource use. All of these data elements are available on the HIPE data base.

[5]Additional information on specific types of hospital discharges also exists, for example, The Psychiatric In-Patient Reporting Scheme. Our concern in this study is, however, limited to the acute hospital sector. As the Hospital In-Patient Enquiry and the Perinatal Reporting System provide close to comprehensive coverage of acute hospital discharges, these schemes constitute the primary sources for activity data for this study.

Coding Requirements for the DRG Analysis of HIPE Data

Availability of the required data, in itself, is not sufficient to guarantee success with the DRG assignment process. The data must also be coded in a way which is acceptable to the assignment software, known as the DRG Grouper. The coding of age and sex are straightforward and acceptable for grouping purposes. A relatively minor adaptation for the discharge codes was required to fit the standardised assignment framework.[6]

It was noted in the previous chapter that the DRGs are now based on ICD-9-CM, the clinical modification version of ICD-9 which was developed for use in the US for coding both diagnoses and procedures. Up to the end of 1989, two different coding schemes were in use in Ireland for coding both diagnoses and procedures. The 9th revision of the International Classification of Diseases was used for coding diagnoses and the Classification of Surgical Procedures (3rd edition) produced by the Office of Population Censuses and Surveys (OPCS) was used to code procedures. With effect from January 1, 1990, both of these coding schemes have been replaced and ICD-9-CM has been adopted for coding both diagnoses and procedures within the HIPE. While this will ensure compatibility with the DRG Grouper from 1990 onwards, the fact that different coding schemes were in use in the 1980s meant that a significant challenge faced in using HIPE data for the DRG analysis was in achieving compatibility for the diagnostic and procedure codes used locally over the period covered by the data analysis.

We were not alone in Ireland in facing this problem as other European countries attempting a similar task also had to cope with the problem presented by incompatible coding schemes. While ICD-9 has been in use in a majority of European countries for coding dignoses, there is a great variety of schemes in use for coding procedures (Rodrigues, *et al,* 1988, Wiley, 1990A). In recent years, however, ICD-9-CM has been adopted for use in a number of countries, including Spain, Portugal and Belgium where ICD-9-CM is in use for coding diagnoses and procedures and the Netherlands where diagnoses are coded in ICD-9-CM and Italy where this scheme is used for coding procedures (Wiley, 1990A).

[6]Adaptation of Discharge Codes:

	HIPE	DRG Grouper
Self discharge	0	07
Home	1	01
Convalescent home or long-stay	2	03
Other hospital	3	02
Died — post mortem	6	20
Died — no post mortem	7	20

In Ireland, together with the countries concerned, a number of options emerged as possible solutions to the problem presented by the incompatibility between coding schemes in use locally and the requirements of the DRG Grouper software (Rodrigues, *et al.*, 1988). In listing these options here, the factors determining acceptance or rejection of the solutions proposed will also be presented:

1. Redefine the DRGs on the basis of the coding schemes used in Ireland.

For a number of reasons, this option was considered to be impractical for the purposes of this study. The resource requirements needed to attempt such a major task were considered to be prohibitive within the context of the present project. The scarcity of the expertise needed to undertake such an exercise would be a particular problem in an Irish context. Finally, a serious problem with this approach is that standardisation and comparability across systems could be lost. An important advantage of using the Yale DRG Grouper is that it allows a comparison of "like with like". DRG definitions must be standardised if comparisons across hospitals, regions or countries, are to be accepted as valid and meaningful.

2. Change Irish coding practices to use ICD-9-CM for both diagnoses and procedures.

For this study, we were interested in using the data base which had already been collected and coded. This option was therefore not feasible as it would have required recoding a very large data base. While such an exercise would have been prohibitive in terms of resource requirements, it is also likely that problems of accuracy and validity would have arisen because of the inability to access the original data sources. It has been noted above that ICD-9-CM was subsequently adopted for use in Ireland so the relevant HIPE data from January 1990 will be coded accordingly.

3. Map the ICD-9 and OPCS codes into ICD-9-CM

A mapping to ICD-9-CM from ICD-9 diagnostic codes and local procedure codes was developed by the Yale School of Organisation and Management. This option was finally chosen as the most feasible, in addition to being the option which has been the most widely tested and validated in other countries. In addition to being used in Ireland, this mapping procedure has been used successfully in a number of countries, including the Nordic countries, England, Wales, France, Switzerland and the Netherlands (Rodrigues, 1987, Wiley, 1990A).

There are a number of clear advantages in adopting the strategy of mapping from local codes to ICD-9-CM. Ease of application is obviously important. The mapping procedure was computerised which meant that manual recoding of data was unnecessary. A major advantage of pursuing

this option was that standardisation and comparability are maintained within the DRG system. This factor was the subject of a recent study by Reid (1990), which supported the approach and concluded that "using mapped data for the allocation of DRGs gives a good result. The definitions of the DRGs will be different in a few cases using mapped data, however, the DRGs are just as homogeneous using mapped data as the US DRGs." (Reid, 1990, p.17)

After mapping the codes into ICD-9-CM, discharges are successfully assigned to DRGs using the DRG Grouper. The results of any subsequent DRG-based analysis can then be used for inter-hospital, inter-region or inter-country comparison on the understanding that the DRG definitions are standardised and consistent at all points of comparison.

Operation of the HIPE Scheme

The HIPE data are collected on a standard form supplied to hospitals by the Health Research Board (HRB). The instruction manual and training for coding staff is also provided by the HRB.[7]

The data requirements for the HIPE are supposed to be completed and returned to the HRB for all patients discharged from participating hospitals. Individual patient confidentiality is maintained within the HIPE as patient name is never entered on the masterfile. While the HIPE data are collected manually at the hospital level, validation and checking is undertaken centrally by the HRB. Errors are returned to the hospitals for correction and validated returns are finally entered on the HIPE masterfile.

In recent years, a number of hospitals have begun to collect the HIPE data in computer form as a by-product of computerised patient administration systems (PAS). This approach has the advantage of reducing the demands on clerical staff, where the data required for the HIPE returns can be downloaded from the hospital's PAS and duplication at the hospital level in the collection of the same data within separate information systems is avoided. This approach has the potential for improving the timeliness and the response rate for submitting the completed returns.

In recognising the advantages of a computerised system for collecting the HIPE data, the Department of Health, in collaboration with the ESRI and the HRB embarked upon the process of developing and implementing a "Hospital Activity Data Capture System" (HADCS) at the beginning of

[7]From December, 1989, The Economic and Social Research Institute (ESRI) has been contracted by the Department of Health to conduct the data processing for the HIPE and to undertake training for coders using ICD-9-CM.

1988. This system is currently in use in a number of hospitals. The software replicates the current HIPE system and has the added advantage that the validation checks are built into the HADCS. This means that validation checks can be undertaken when the data are first entered and corrections made as required, thus reducing the delays encountered when errors must await detection centrally and have to be returned to the hospital for correction. When the HIPE data are entered and checked on the HADCS, the facility exists for direct transmission of the data to the masterfile. As in the manual system, patient name is never entered in the masterfile to ensure that patient confidentiality will be preserved. An added advantage of a computerised system is that the HIPE data should be immediately available to the hospital staff for internal use when data entry has been completed.

Weaknesses

The HIPE is the only source of morbidity data for acute discharges from public hospitals available in Ireland. As such, the system should provide a very valuable source of information for all concerned with the funding, delivery, organisation and management of acute hospital services in this country.

There are, however, a number of problems with the operation of the scheme, most of which are well known to people working with, and within, the system. The HIPE is a labour-intensive system which, to date, has had limited use with the result that it has been particularly vulnerable in times of resource constraint. The principal problem areas are related to coverage, timeliness, access and quality.

Coverage

It is estimated that the HIPE is running at approximately 84 per cent coverage of discharges from public hospitals of county status or higher (The Medico-Social Research Board, 1986). While the ultimate objective continues to be 100 per cent coverage, the present level is considered acceptable by European standards (Rodrigues, *et al.*, 1988). The 15 per cent not currently covered may be attributed to the following factors: (1) the non-participation of two significant county hospitals due to historical reasons/resource constraints; (2) the non-participation of a number of hospital consultants who retain the right to refuse participation in the scheme; and (3) low response rates in a small number of significant hospitals. In the context of the future development of this system, every effort should be made to achieve comprehensive coverage of all acute hospital discharges.

Timeliness

This is problematic where hospitals are not committed to full participation in the system and/or the system continues to be operated on a manual basis. While computerisation offers the potential for speeding up the process of collecting and transmitting data, commitment to the system is essential if the technology is to be used to full advantage. Ideally, a turn around time of approximately two to three months after discharge should be the objective for completing returns. In reality, however, very few hospitals achieve this goal. If data are not current, then obviously there are implications for the usefulness of the data. Many hospitals do maintain a HIPE system which is reasonably current and this should be the objective for all hospitals.

Validation

While validation checks currently carried out on the data are useful, it is recognised that they need to be reviewed and updated. In addition, a system of quality reviews needs to be instituted to assess the data at source and ensure that accurate data are collected on the system.

Access

Access to the HIPE data is currently cumbersome for many actual or prospective users. The availability of the data on a computer system at the hospital level will obviously make access easier for medical personnel and management locally. While safeguards need to be maintained to ensure that unauthorised use of the data is prevented and patient confidentiality is ensured, it is essential that an appropriate balance is achieved to facilitate ease of access to the data by legitimate users.

All of these factors should be seriously addressed in any upgrading of the HIPE system aimed at ensuring that all discharges are accurately recorded within the system in a timely and efficient manner.

The Perinatal Reporting System

The Perinatal Reporting System (PRS) has been undertaken by the Department of Health since 1981. The extension of the scheme into a comprehensive national system took place gradually between the years 1981 and 1984. In 1984, coverage reached the 94 per cent level, and coverage has approached 100 per cent in all subsequent years.

The primary aim of the perinatal reporting system is:

> ....to provide national statistical tables on perinatal events and more specifically to describe fundamental social and biological characteristics of mothers and their babies, to highlight some

> important aspects of care, and to report on the outcomes of pregnancies, including perinatal mortality (Department of Health, *Perinatal Statistics 1984,* 1987, p.7)

Data Collected by the PRS

Detailed data on the hospital stay, demographic characteristics and morbidity of both mother and baby, together with method of delivery, are collected by the scheme. A copy of the PRS form is included in Appendix 2 for information. All necessary information for DRG assignment of both the mother and the baby are collected within the PRS.

While diagnostic data for mother and baby are coded in ICD-9, the method of delivery is coded on the basis of a seven point scale which is unique to the PRS.[8] This coding scheme was not acceptable for grouping by DRG so the scale had to be converted to ICD-9-CM. The diagnostic codes were also mapped from ICD-9 to ICD-9-CM for grouping purposes. Following the code conversions, the PRS discharges could be successfully assigned to the appropriate MDC and DRG. Within the DRG classification system, the mother is assigned to the relevant DRG within MDC 14: Pregnancy, Childbirth and Puerperium, and the baby is assigned to the relevant DRG within MDC 15: Newborns and Other Neonates with Conditions Originating in the Perinatal Period.

Operation of the PRS

The PRS return consists of one part of a four-part form used for the registration and notification of births. This form is distributed as follows: Part I is sent by the hospital to the Registrar of Births; Part II is sent to the Director of Community Care and Medical Officer of Health in the area of residence of the mother; Part III has all personal identifying information deleted and is sent to the Department of Health for inclusion within the PRS system; and finally, Part IV is retained by the hospital.

This operational framework has important implications for both coverage and confidentiality. Because the PRS form has been incorporated into the birth registration procedure, comprehensive coverage within the

[8]Coding scheme for Method of Delivery within the PRS:
1 = Spontaneous
2 = Breech (with or without forceps)
3 = Forceps extraction
4 = Vacuum extraction
5 = Caesarian section
6 = other methods
9 = not specified

scheme has been greatly facilitated. This association has also helped to encourage confidence in the quality of the data base. Preservation of individual confidentiality within any national information system must always be recognised as a priority. This has also been successfully accomplished within the PRS by the use of an instrument which blanks out personal identifiers at the reporting stage.

Overlap and Gaps Between the PRS and the HIPE

As the HIPE operates in general hospitals it is almost inevitable that in some cases births are entered into the system. Having achieved full coverage, however, the PRS is accepted as the primary data source on maternity. To avoid duplication of maternity activity, births are therefore excluded from the HIPE and the PRS is used as the only source of data on maternity for the analysis undertaken in this study.

While births may be reported on both systems, there is the possibility that some gynaecology cases may actually be missed altogether. An increasing proportion of the workload in gynaecology now seems to be undertaken in the maternity hospitals. The HIPE system does not cover all of the maternity hospitals and the PRS does not collect information on gynaecology activity, with the result that there is a likelihood that this area of activity is being under-reported in this country. This factor should be taken into account when reviewing the activity analysis for this specialty. The gaps and the overlaps should also be addressed by facilitating greater co-ordination between the two systems.

Weaknesses Within the PRS

Two principal weaknesses must be acknowledged for the PRS. The first relates to timeliness and the turn around time on the availability of the data. While there is some variability, it can take up to 18 months before data are available. Any routine data system which is collected manually can be expected to suffer delays at many stages, for example, submitting and coding forms, data input, data processing, error correction, etc. The expansion of computerisation within the system would be expected to eliminate some of the possibilities for delay on data availability.

The second weakness arises where some discrepancies occur in results issued by the Department of Health and the Central Statistics Office because definitions and coding procedures used are not always identical (Department of Health, *Perinatal Statistics 1984,* 1987). These discrepancies are being addressed as part of the development of the system. To ensure consistency, the Department of Health file is used in all analyses of the PRS undertaken for this study.

CONCLUSION

We are fortunate in Ireland in having a national discharge abstract reporting scheme which meant that this study could be undertaken without an original data collection effort for hospital activity. Despite the shortcomings noted above, the existence of the HIPE and the PRS meant that the study of hospital activity in Ireland could commence at a more advanced level. This contrasts favourably with the situation found in countries like France, Belgium, Spain and Portugal where national discharge abstract systems had to be developed in parallel with attempts to study hospital case mix (Rodrigues, *et al.*, 1988, Wiley, 1990A). Between the HIPE and the PRS we have close to comprehensive coverage of all discharges from acute general hospitals and maternity hospitals.

While acknowledging the advantage offered by the existence of both the HIPE and the PRS, it is recognised that these systems could be improved in the areas of *timeliness, coverage, access* and *data quality*. These issues will have to be addressed if the systems are to constitute the basis for the ongoing assessment of hospital activity.

In the interim, however, the value of these data must be fully explored and appreciated. The analyses of the HIPE conducted for this study was the most far-reaching ever conducted for the scheme and, as such, constituted a means of learning more about the scheme as well as the technique. The results of this analysis of hospital activity data reported for the HIPE and PRS data will be presented in the next chapter.

Chapter V

HOSPITAL ACTIVITY ANALYSIS BY DRG

Introduction

The analysis presented in Chapter I shows that average length of stay, and the use of hospital bed-days in Ireland declined substantially over the 1980-1988 period. An important question which arises from the trends observed is whether this reduction in bed-day use and average duration of stay was constant for all hospitals and for all case types. In attempting to understand the implications of these trends for the management of hospital resources, it is important to address the issue of case-mix measurement and variation within the hospital system. To begin to address this question, a case-mix analysis of acute hospital activity, using the DRG classification framework, was undertaken for a five year period from 1984 to 1988, inclusive.

DRG Assignment

The discharge data from the acute hospitals recorded on the Hospital In-patient Enquiry (HIPE) had to be merged with the Perinatal Reporting System (PRS) to provide a comprehensive data base of acute in-patient discharges[9].

Due to the coding practices in operation in Ireland, as discussed in the previous chapter, DRG assignment had to be undertaken as part of a two stage process. The first stage may be called the "Mapping Stage" and involved the translation of the ICD-9 diagnostic codes and the OPCS procedure codes into ICD-9-CM. DRG assignment then took place at the second stage.

Records which have an operating room (OR) procedure which is unrelated to the principal diagnosis (dx), or which have an invalid principal diagnosis, or which are considered ungroupable for other reasons are assigned to one of three residual groups - DRGs 468, 469 or 470. The proportion of cases assigned to these DRGs is therefore a useful

[9]Data for the Perinatal Reporting System were unavailable for 1987 and 1988 so the analysis for this period had to be applied exclusively to the Hospital In-Patient Enquiry data. The interpretation of the analysis for 1987 and 1988 must therefore be undertaken with care as data on hospital births are not included in the analysis for these years.

check on both the quality of the data and the technique applied. The number of discharges processed, together with the proportion assigned to each of the residual groups (DRGs 468-470) is shown in Table 5.1 for the five years in the analysis.

Table 5.1: *Number of Cases Grouped by DRG and Assignment to DRGs 468 and 470: 1984-1988*

	1984	*1985*	*1986*	*1987*	*1988*
Number of Cases	530,776	525,641	517,249	341,766*	326,710*
DRG 468: Unrelated OR Procedure	4,079 (0.8%)	4,037 (0.8%)	3,960 (0.8%)	3,953* (1.1%)	3,486* (1.1%)
DRG 470: Ungroupable	1,182 (0.2%)	1,192 (0.2%)	540 (0.1%)	372* (0.1%)	420* (0.1%)
Combined Total for DRGS 468,470	5,261 (1.0%)	5,229 (1.0%)	4,500 (0.9%)	4,325* (1.3%)	3,906* (1.2%)

* Excludes Births

For each year of study from 1984 to 1988, there were no cases assigned to DRG 469. For DRGs 468 and 470, the number of cases assigned dropped consistently from 1984 to 1988, with the proportion of cases in this category remaining at approximately 1.0 per cent over the period. The 1.0 per cent level actually dropped in 1986, a trend which would be expected to be maintained into 1987 and 1988 except for the fact that the total number of cases for these years was reduced because data on births were not available. This means that close to 99 per cent of cases were successfully assigned to one of the 467 DRGs for each of the five years analysed.

To place these results in context, it is worth noting the findings of a recent comparative study based on a DRG-based case-mix analysis of hospitals covering 14 regions/states in nine countries, including Ireland (Palmer, *et al.*, 1989). The proportion of cases found in DRG 470 (Ungroupable) for Ireland was smallest compared with regions covered in Norway, Sweden, Finland, Spain, Wales, two Australian states and four regions in England. At the high end of the scale, it was found that 10 per cent of cases could not be grouped for the data available from Wales and the South East Thames Region in England (Palmer and Reid, 1989). The fact that the proportion of cases falling into the three residual groups for

the analysis of Irish data is so small is a very good result and inspires some confidence in the data. While the number of cases assigned to the residual groups is relatively small, a separate study of these data may, in time, be warranted to establish if coding, mapping or grouping are determining factors for assignment to these groups. For the purpose of the present study, however, the use of the code mapping procedure and the "DRG Grouper" was considered successful, given the relatively small proportion of cases rejected or assigned to the residual groups.

A small number of DRG cells remained empty after case assignment. For the 1984-86 period, when births are included, the majority of empty cells are found for MDC 14. The perinatal data available nationally only allows assignment to one of four DRGs, depending on method of delivery: caesarean section, with/without complications/comorbidities (DRGs 370, 371); and vaginal delivery, with/without complications/comorbidities (DRGs 372, 373). There are 11 other DRGs within this MDC which remain empty because data of adequate detail are not available to enable record assignment. This is not considered a serious problem, however, because the factor of greatest interest here, i.e., method of delivery, is available to facilitate record assignment to the appropriate DRG for childbirth. As the perinatal data for 1987 and 1988 were not available, there are no records assigned to any of the DRGs in MDCs 14 and 15 for 1987 and 1988.

Apart from MDCs 14 and 15, there is some variation from year to year in the DRGs which do not have records assigned. In each case, however, the number of groups involved is small, ranging from 11 in 1984 and 1985 to a low of 6 in 1986 and 1988. Because the numbers involved are small, this does not give rise to concern about the validity of application of this technique. It might, however, be interesting in some future study to investigate if the reasons for these empty cells may be attributed to such factors as data quality or coding problems or, more importantly, to real differences in practice patterns or case mix between Ireland and other countries.

The results of the DRG-based analysis of acute hospital activity will now be presented for the study period 1984-1988.

Results of DRG Analysis of Acute In-Patient Discharges: 1984-1988

Discharge Distribution by DRG

The number and percentage breakdown for discharges assigned to all DRGs for each year from 1984-1988 is presented in Appendix 3. This information is helpful in gaining an understanding of changes in volume and distribution of discharges from year to year at the patient group level.

It is recognised that it would also be useful to present this type of information in the form of discharge rates for each DRG. In the review of data sources in Chapter IV it was noted that, while the HIPE and the PRS are the most comprehensive sources available for hospital activity data, the HIPE includes approximately 84 per cent of discharges. Because coverage for the HIPE has not yet reached the 100 per cent level, the accuracy of discharge rates calculated on the basis of the HIPE data might be open to question. We have therefore limited our analysis of hospital activity here to variations in discharge distribution and bed/day utilisation.

A more concise picture of acute hospital case mix in Ireland may be derived from ranking the DRG data presented in Appendix 3 in order of descending frequency. This information is shown in Appendix 4 for each year over the 1984-1988 period. For each of the three years 1984, 1985 and 1986, the first 4 DRGs account for more than a quarter of the discharges, the first 10 DRGs account for more than one third of the discharges and over one half of all discharges can be accounted for by the top 30 DRGs. This would suggest a significant concentration, rather than variation, of case mix at the national level over this period.

The fact that births are missing from the 1987 and 1988 data results in a somewhat different distribution, with close to 11 per cent of discharges falling into the first 4 DRGs, 21 per cent of discharges falling into the first 10 groups and, finally, 30 groups accounting for over 40 per cent of discharges. It seems reasonable to assume, however, that as normal newborns (DRG 391) and normal deliveries (DRG 373) together account for approximately 22 per cent of discharges over the 1984-1986 period, this trend is likely to continue through the 1987-1988 period. Based on this assumption for 1987 and 1988, almost one third of all discharges would be expected to arise in the top 4 groups, with over 62 per cent of discharges falling into the top 30 DRGs. The comparison of the 1987-1988 period with the 1984-1986 period suggests that the distribution of acute hospital case mix is becoming more concentrated over time, as the number of hospital discharges found within the top 30 groups in the later period is substantially greater than the proportion of discharges found at the same level in the earlier period.

The ranking for the high volume DRGs for each year, together with the percentage change in length of stay for each DRG over the period is shown in Table 5.2. For the 1984-1986 period, normal newborns (DRG 391) and normal delivery (DRG 373) account for the first and second most frequently occurring group, and it is to be assumed that this is also the case for 1987 and 1988. The third and fourth most frequently occurring conditions over the period fall into diseases and disorders of the digestive

system, specifically oesophagitis, gastroenteritis and misc digestive disorders, up to the age of 69. While the rank order may change, four of the six remaining groups in the top 10 DRGs are the same in each year: appendicectomy, w/o complicated principal diagnosis, age < 70 (DRG 167), other factors influencing health status (DRG 467), other skin, subcut tiss & breast OR proc. (DRG 270) and chronic obstructive pulmonary disease (DRG 88).

Table 5.2: *Rank and Length of Stay (LOS) for High Volume DRGs: 1984-1988*

DRG NUM	*DRG*	*1984*	*1985*	*1986*	*1987*	*1988*	*LOS Change (%) 1984-1988*
391	Normal Newborns	1	1	1	1*	1*	–4**
373	Vag Delivery w/o Compl. Dx	2	2	2	2*	2*	–3**
183	Msc Dig Dis, Age 18-70	3	3	3	3	3	+47
184	Msc Dig Dis, Age <18	4	4	4	4	4	+26
167	Append w/o Compl Dx	5	7	8	7	9	–22
467	Oth Health Factors	6	6	5	5	5	+46
030	Tr St. Cma<1HR, Age<18	7	9	10	11	14	+110
270	Oth Skin Prob	8	8	6	6	8	+123
243	Med Back Probs	9	12	12	12	15	–21
088	Chrn Pulm Obstr	10	5	7	10	10	–43
098	Brnch & Asth, Age<17	15	10	11	9	7	–4
364	D & C, Conzth, w/o Malign	12	11	9	8	6	+97
143	Chest Pain	19	18	15	13	11	+21

* Assumed rank in the absence of data on births
** LOS change 1984-1986

It is interesting to note that DRG 30 (traumatic stupor and coma < 1hr, age 0-17) which ranked 7 in 1984, dropped to a rank of 14 in 1988, and DRG 243 (medical back problems), dropped from rank 9 in 1984 to rank 15 in 1988. As these conditions drop out of the top 10 group, other conditions are progressing gradually through the hierarchy from one year to the next. DRG 98, bronchitis and asthma, age 0-17, is a good example. In 1984 this DRG occupied fifteenth position on the hierarchy with less than 5,000 discharges, and in 1988 the ranking had progressed to seventh position, with over 6,000 discharges. The ranking for chest pain (DRG 143) is progressing in a similar way, moving from a rank of 19 and 4,000 discharges in 1984 to eleventh position in 1988 with almost 5,000 discharges.

When substantial changes in the volume and distribution of hospital

discharges are observed, a range of factors should be investigated in seeking to explain the changes observed. The areas requiring investigation should cover epidemiological factors and changes in the pattern of illness, changes in treatment patterns and service availability, technological developments and availability, changes in demographic and environmental factors, in addition to such fundamental influences as changes in data coding and reporting practices.

While recognising the relatively concentrated nature of acute hospital case mix in evidence from this analysis, some interesting changes in the pattern of hospital morbidity are also in evidence and these may warrant further investigation. It is important to recognise here that the magnitude and direction of change in discharge distribution is not consistent across all case types. Controlling for case mix within this analysis of hospital activity therefore enables us to identify those case types for which change in discharge distribution is greatest.

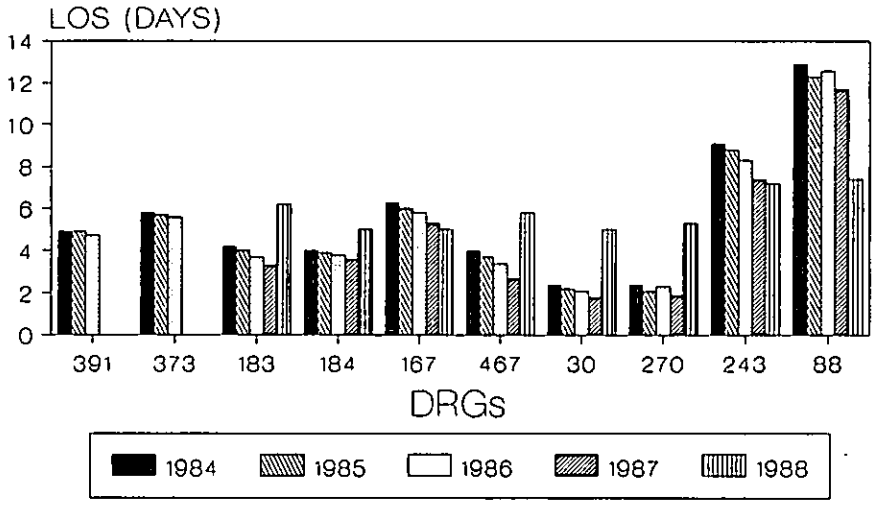
An explanation of the observed variations in discharge distribution noted above is beyond the scope of this study. What is important from our perspective is developing and testing a framework within which such variation can be observed and measured. From this basis, research on explanatory factors may be better targeted to the areas of greatest change in the interest of gaining a better understanding of the illness experience requiring an effective response from the acute hospital system.

Length of Stay Variation for High Volume DRGs

The mean length of stay for the high volume DRGs for 1984-1988 is presented graphically in Figure 5.1. It is clear from Figure 5.1 that there are some interesting variations in mean length of stay over time and between different DRGs. While length of stay at the national level is declining, as discussed in Chapter 1, this trend is obviously not maintained consistently for all case types. There are very substantial swings, both negative and positive, in mean length of stay variation over the 1984-1988 period. For the high volume DRGs included in Table 5.2, the greatest decline in mean length of stay is found for DRG 88 (chronic obstructive pulmonary disease), which shows a decline of 43 per cent in mean length of stay from 1984 to 1988. At the other end of the scale, however, we find DRG 270 (other skin, subcut tissue and breast O.R. proc., age <70, w/o cc) where mean length of stay increased by 123 per cent from 1984 to 1988.

The smallest decline in mean length of stay for the DRGs shown in Figure 5.1 is found for DRGs 391 and 373, though it must again be pointed out that data for these groups are only available for 1984-1986. At the next level we find mean length of stay declining consistently and gradually for

FIGURE 5.1
HIGH VOLUME DRGs: IRELAND
MEAN LENGTH OF STAY, 1984-1988



DRGs 167 and 243. For both groups, length of stay drops by about one fifth from 1984-1988. It is interesting, however, that out of the 10 groups included in Figure 5.1, 5 groups, including DRGs 183, 184, 467, 30 and 270 show increases in length of stay from 1987 to 1988 which is contrary to the trend towards decreasing mean length of stay in evidence at the national level and discussed in Chapter I.

While demonstrating that the national trends in bed/day use are not necessarily reflected in the trends in evidence at the patient group level, we are not in a position to explain the patterns observed here. The factors listed above as possible explanatory variables for changes in the distribution of discharges should certainly be investigated in any attempt at explaining variations in mean length of stay. An additional factor which might also have an important influence on the lengths of stay observed for the 1988 data is the trend towards increasing use of day treatment facilities where possible and where available. Unfortunately, data availability on the use of day treatment are very limited. In some future study an hypothesis which would seem to warrant investigation in attempting to explain the trends observed for 1988 is the possibility that the increased use of day treatment where suitable and possible has resulted in hospital admission for the more difficult cases within a particular treatment group. This

might, in turn, result in proportionately longer lengths of stay for those DRGs which have a greater potential pool of patients who may be able to use day treatment as an alternative to the more conventional in-patient treatment. This is, however, only an hypothesis which, unfortunately, we are not in a position to test in the present study. What is clear, is that it is important to go beyond both the national and the hospital level in any attempt at developing an understanding of bed/day use. Using a case-mix framework allows us to track bed/day use to the patient group level and, consequently, to gain a better understanding of the distribution of bed/day utilisation by patient type within the acute hospital sector.

Length of Stay Variation by Hospital Type

The information presented in Appendices 3 and 4 can be analysed and reformated in many different ways. The confidentiality constraints governing the use of the HIPE data do not allow an analysis of discharge distribution and length of stay by individual hospital. We can, however, do an analysis by hospital type as one example of the type of analysis which can be applied to these data.

For selected health board and voluntary hospitals, DRG distribution and mean length of stay for the first 50 per cent of discharges is presented in Appendix 5. For both hospital groups, 48 DRGs account for just over 50 per cent of discharges, while the remaining 50 per cent of discharges are spread across 404 DRGs for the health board hospitals and 405 DRGs for the voluntary hospitals.

Table 5.3 presents information on rank, distribution and mean length of stay for high volume DRGs in a number of the health board and voluntary hospitals included in the analysis for Appendix 5. The length of stay information in Table 5.3 is presented graphically in Figure 5.2 where mean length of stay for the high volume DRGs in health board hospitals is compared with the same DRGs in the voluntary hospitals and Table 5.3 where mean length of stay for the high volume DRGs in the voluntary hospitals is compared with the same DRGs in the health board hospitals. The number of cases included in the analysis for the health board hospital group is 72,791 and the number of cases included in the analysis for the voluntary hospital group is 68,510. For confidentiality reasons it is not possible to identify the number or the names of the hospitals included in these groups.

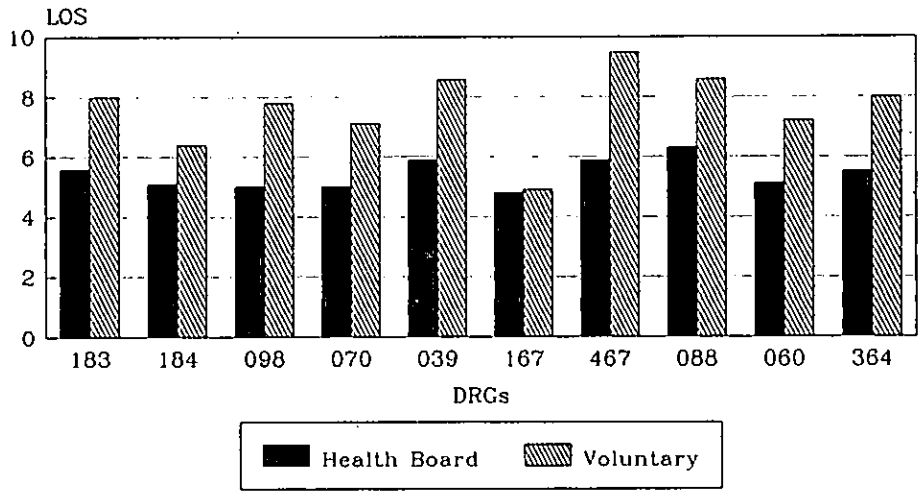
With regard to discharge distribution across DRGs, it is interesting to note that, of the 10 high volume DRGs in the health board hospitals, only 3 of these DRGs (DRG 183, 467 and 088) appear in the top 10 DRGs for the voluntary hospital group. This would indicate that case-mix concentration

Table 5.3: *Rank, Distribution of Discharges (%) and Mean Length of Stay (LOS) for High Volume DRGs in selected Health Board and Voluntary Hospitals, Ireland 1988*

DRG	Health Board			Voluntary			LOS*
	Rank	Disch %	LOS (Days)	Rank	Disc %	LOS (Days)	Vol/HB %
183 Msc Dig Dis, Age 18-70	1	3.2	5.6	1	4.5	8.0	42.9
184 Msc Dig Dis, Age < 18	2	3.1	5.1	79	0.4	6.4	25.5
098 Branch + Asth age < 17	3	2.5	5.0	240	0.1	7.8	56.0
070 OM + Uri Age 0-17	4	1.9	5.0	176	0.1	7.1	42.0
039 Lens Procedures	5	1.9	5.9	20	1.0	8.6	45.8
167 Appendc w/o Cmp Dx Age < 70	6	1.8	4.8	15	1.2	5.0	4.2
467 Other Health Factors	7	1.8	5.9	4	2.2	9.5	61.0
088 Chrn Pulm Obstr	8	1.6	6.3	5	1.9	8.6	36.5
060 Tnsect Adct Age < 18	9	1.6	5.1	14	1.2	7.2	41.2
364 D + C, Conzth w/o Malign	10	1.5	5.5	18	1.0	8.0	45.5
243 Med Back Probs	20	0.9	5.5	2	2.2	6.9	25.5
410 Chemotherapy	29	0.7	7.1	3	2.2	8.6	21.1
182 Msc Dgstv Dis, AC	11	1.4	6.8	6	1.5	7.4	8.8
014 Spec Crbrvsc Dis Age > 69	17	1.0	6.7	7	1.5	8.2	22.4
143 Chest Pain	13	1.3	5.8	8	1.4	7.0	20.7
270 Oth Skin Pr Age > 69	14	1.3	5.1	9	1.4	6.9	35.3
029 Tr St. Cma, <1 HR Age <70	15	1.2	5.1	10	1.3	10.6	107.8

*Per cent by which mean length of stay by DRG in the voluntary hospital group exceeds mean length of stay in the health board hospital group.

FIGURE 5.2
LOS BY DRG FOR HEALTH BOARD HOSPITALS: COMPARISION WITH VOLUNTARY HOSPITALS



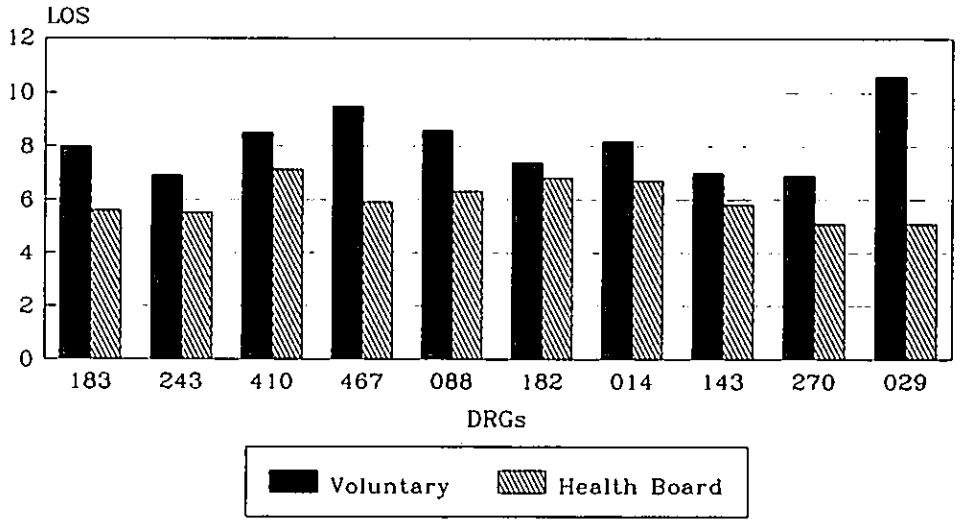
LOS: Mean Length of Stay
High volume DRGs in select health board and voluntary hospitals, Ireland, 1988

in both groups of hospitals is quite different. The top 10 DRGs in the health board hospital group accounts for 21 per cent of all discharges, with the 17 DRGs listed in Table 5.3 accounting for 28.7 per cent of discharges. For the voluntary hospital group, the top 10 high volume DRGs also account for 21 per cent of discharges, with the 17 DRGs from Table 5.3 accounting for 25.3 per cent of discharges.

For each of the DRGs listed in Table 5.3 and included in Figures 5.2 and 5.3, mean length of stay is longer in the voluntary hospital group compared with the health board hospital group. The magnitude by which the mean length of stay in the voluntary hospitals exceeds the length of stay in the health board hospitals for these DRGs ranges from a low of 4.2 per cent for DRG 167 to a high of 108 per cent for DRG 029.

An explanation for the trends observed here would require that the analysis be refined to a lower level of aggregation so that, for example, it should be possible to identify if particular hospitals within the voluntary hospital group are accounting for the relatively longer lengths of stay found here, or alternatively, if this is a trend found consistently across all hospitals of this type. As long as the data are made available at the appropriate level, there are no technical reasons preventing this type of case-mix analysis from being conducted at the individual hospital level. A

FIGURE 5.3
LOS BY DRG FOR VOLUNTARY HOSPITALS: COMPARISON WITH HEALTH BOARD HOSPITALS



LOS: Mean Length of Stay
High volume DRGs in select voluntary and health board hospitals, Ireland, 1988

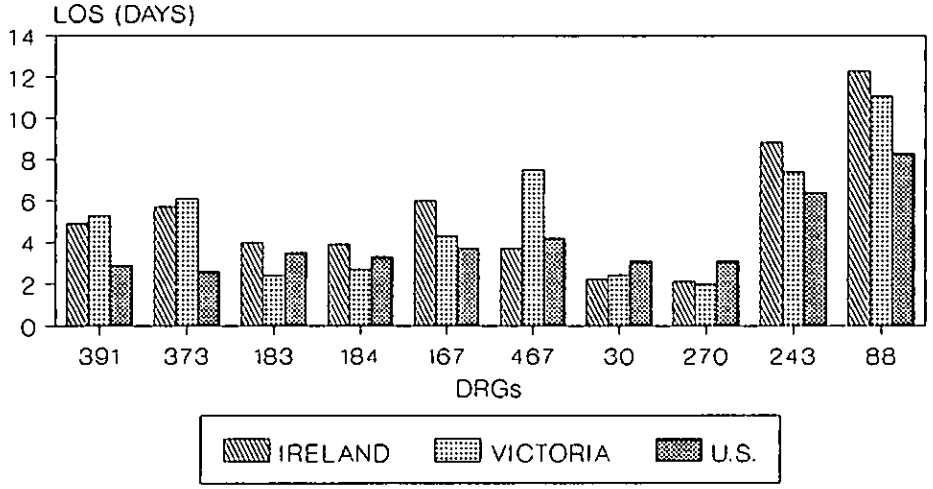
thorough understanding of the trends observed must also, of course, have regard to the other potentially important factors mentioned previously, including data reporting and data quality, coding practices, changing treatment patterns, technology development, etc.

International Variations in Length of Stay by DRG

While a thorough analysis of international trends in the utilisation of hospital services by DRG is beyond the scope of this study, mean length of stay for selected high volume DRGs in Ireland, Victoria (Australia) and the US is shown in Figure 5.4 for 1985. No one country or state can be identified as consistently having the longest or shortest mean length of stay from this comparison. Ireland has the longest mean length of stay for five groups (DRGs 183, 184, 167, 243 and 88), Victoria has the longest mean length of stay for three groups (DRGs 391, 373, 467), and the US has the longest mean length of stay for two groups (DRGs 30 and 270).

In addition to the direction of the variation, the magnitude of the difference is also important. Mean length of stay for DRG 88 is obviously substantially longer in Ireland compared with the US, while the length of stay for DRG 467 in Victoria is much greater compared with both Ireland and the US. Whether these differences reflect real differences in treatment

FIGURE 5.4
HIGH VOLUME DRGs: IRELAND, VICTORIA, US MEAN LENGTH OF STAY, 1985



Source: Victoria: Health Department;
US: Dept of Health and Human Services

patterns or practices, or basic differences in coding practices and data availability is an issue which should be investigated in greater depth in a more wide ranging study of international trends. Such a study should be all the more meaningful because comparisons on the basis of patient type across health systems and countries is facilitated by the use of a standardised case-mix classification system.

Analysis of Untrimmed and Trimmed Data

More detailed information on the discharge distribution by DRG is presented in Appendix 6. This includes a listing for frequency, length of stay and the coefficient of variation by DRG for all discharges for 1984, 1985, 1986, 1987 and 1988.[10] These statistics are presented for both untrimmed and trimmed data.

Untrimmed data include all observations, regardless of length of stay. As discussed previously, DRGs were developed specifically for the measurement of case mix in *acute* hospitals. DRGs, by definition, are therefore intended for application to short stay, rather than long stay, cases. It will be evident from a review of untrimmed average length of stay in Appendix 6 that for some DRGs this exceeds the range which might be expected for acute discharges. As a statistic, the "mean" or the "average" may also be particularly susceptible to the disproportionate influence of extreme outliers.[10] To overcome this problem, extreme outliers may need to be identified and excluded, or trimmed, from the data for the purpose of certain types of analysis.

In the development of the DRGs, a trimming algorithm was developed to enable the identification of those discharges which did not appear to belong to the underlying frequency distribution of length of stay for most cases in the DRG. Trimming refers to the deletion of those data in order to provide the most effective estimation of the parameters of the distribution of interest.

The trimming algorithm finally adopted in the development of the DRG system is based on the Tukey procedure. When cases are ranked by length of stay, this procedure employs the interquartile range as follows:

$$t = Q3 + 1.5\ (Q3 - Q1)$$

[10] *Frequency* refers to number of discharges; *length of stay* is the difference between the date of discharge and the date of admission; the *coefficient of variation (cv)* is derived by dividing the standard deviation by the arithmetic mean. The cv is a commonly used measure of variability. While the mean and the standard deviation may be expressed as "days of stay", the coefficient of variation is a pure number and is not associated with a unit of value. An *outlier* may be defined as a case with an extremely long length of stay (day outlier) or very high costs (cost outlier) when compared to other discharges classified in the same DRG (ProPAC, 1988).

where t is the upper trim point, Q3 is the length of stay for the third quartile and Q1 is the length of stay for the first quartile (Fetter, *et al*, 1981).

This trimming algorithm was also used to define outliers in the analysis of the Irish data. Following the exclusion of the outliers so defined, the trimmed data were analysed to find the trimmed frequency, the trimmed length of stay and the trimmed coefficient of variation. These data are presented in Appendix 6 for the period covered by the analysis.

Of immediate importance to us here is the performance of the DRG system on Irish data and the potential which this approach may offer as a measure of hospital case mix within the Irish context. The within group variation for the DRG, measured here by the coefficient of variation (cv), is therefore of interest. We cannot define a limit, at the outset, which would be considered "the most desirable" for the cv. It is, however, reasonable to suggest that cv values of less than or close to 1 would be quite acceptable and values as high as 5 and 6 would be problematic, as higher values imply greater variation and a greater spread in the distribution.

A review of the cv for the untrimmed data does show quite high values for certain DRGs over the period covered by the analysis. To illustrate the effect of trimming, we can take DRG 90 for 1988 as a useful example of the effects of the process described. For DRG 90 (simple pneumonia & pleurisy, age 18-69, w/o cc), the cv in 1988 for the untrimmed data was 7.16. After applying the trimming algorithm, the cv for the trimmed data dropped to 0.81, well within the boundaries of acceptability. This standard was achieved by trimming just over 6 per cent of the observations, resulting in a drop in the mean length of stay from 8.39 days for the untrimmed data to 4.85 days for the trimmed data. It is clear, therefore that the high cv for the untrimmed data may be attributed to a small number of cases with long lengths of stay which are eliminated as part of the trimming process.

With a very small number of exceptions, the coefficients of variation for the trimmed data for each year from 1984 to 1988 are less than or close to 1, suggesting limited within group variation for the DRGs. The severity of the trimming does, however, vary between groups depending on the nature of the untrimmed distribution. The percentage of cases trimmed is shown in Appendix 6 and is well in excess of 10 per cent for many groups. It is not possible, in absolute terms, to define a limit beyond which it is not reasonable to trim, the boundary will depend on the purpose of the exercise.

In Table 5.4 a comparison of the coefficient of variation for untrimmed and trimmed data for 1985 for selected high volume DRGs in the US and Ireland is presented. For the trimmed data, the cv is quite similar for the

Table 5.4: *Coefficient of Variation for Untrimmed and Trimmed Length of Stay for High Volume DRGs: Ireland and the US, 1985*

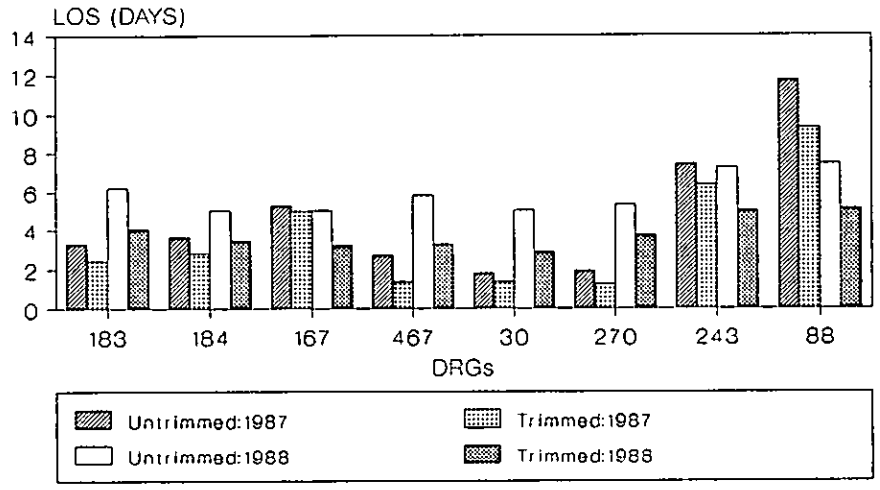
DRG NUM	*Coefficient of Variation*			
	Ireland		*US*	
	Untrim	*Trim*	*Untrim*	*Trim*
391 Normal Newborns	3.2	0.3	0.6	0.5
373 Vag Delivery w/o Compl Dx	1.4	0.3	0.8	0.4
183 Msc Dig Dis, Age 18-70	1.3	0.8	0.9	0.6
184 Msc Dig Dis, Age < 18	1.4	0.6	1.4	0.6
167 Append w/o Compl Dx	0.5	0.3	0.9	0.4
467 Oth Health Factors	3.4	0.6	1.7	0.9
030 Tr St. Cma < 1HR, Age < 18	1.7	0.5	1.6	0.8
270 Oth Skin Prob	2.8	0.5	1.1	0.8
243 Med Back Probs	1.1	0.8	1.0	0.6
088 Chrn Pulm Obstr	1.4	0.6	1.2	0.6
098 Brnch & Asth, Age < 17	1.2	0.7	0.8	0.5
364 D & C, Conzth, w/o Malign	1.0	0.2	1.2	0.5

Source for US: US Department of Health and Human Services

DRGs listed for both countries. The cv for the untrimmed data for these DRGs is also quite similar in each country, with a number of exceptions. These exceptions would include the cvs for the untrimmed data in DRGs 391, 270 and 467 in Ireland which are obviously considerably higher than those found in the US.

As one illustration of the effect of trimming on mean length of stay (LOS), Figure 5.5 presents untrimmed and trimmed LOS for high volume DRGs in Ireland for 1987 and 1988. For most of the DRGs included in Figure 5.5, the trimming process would seem to have greatest effect in 1988, compared with 1987. It was noted previously, that LOS for 5 of the 8 DRGs included here increased between 1987 and 1988, a trend which is contrary to the national trend for mean length of stay. Figure 5.5 shows quite clearly, however, that a substantial proportion of the observed LOS increase may be attributed to the presence of a small number of outlier cases with particularly long lengths of stay within these groups. When these outlier cases are trimmed out of the data, the LOS drops to a level which is more in keeping with the 1987 level. DRG 184 provides a useful example. For the 1987 data, 4.5 per cent of the observations were trimmed resulting in a 23 per cent drop in mean length of stay from 3.6 days to 2.8 days. In 1988, however, the application of the same trimming algorithm resulted in 7.2 per cent of the observations being trimmed, with a consequent drop of 31 per cent in mean length of stay from 4.99 days to 3.44 days.

FIGURE 5.5
UNTRIMMED AND TRIMMED LOS FOR HIGH VOLUME DRGs,IRELAND:1987,1988



LOS: Mean length of stay

Summary measures of length of stay data will be influenced by the presence of outlier cases in the distribution. It is important, therefore, to guard against preliminary conclusions before a thorough assessment has been undertaken on the nature of the underlying distribution at the patient group level. For the purpose of this study, the trimming algorithm used is intended to define those discharges which do not appear to belong to the underlying distribution of length of stay postulated for most cases in the DRG. The use of the inter-quartile range for this purpose means that the number of discharges which fall beyond the trim point for the DRG will depend on the spread of the distribution, which may vary considerably between DRGs. It should be emphasised, however, that the approach to trimming presented here is just one of a number of possible approaches. The choice of approach will be influenced by the objectives of the exercise, and will also have to take account of data availability and the level of sophistication of the technique required for this purpose.

The decision between the use of trimmed or untrimmed data will also be determined by the objectives of the exercise. For such objectives as the estimation of resource deployment and requirements, the untrimmed values, rather than the trimmed values would be used. Outlier cases obviously generate costs and will be of direct relevance in any study of

hospital service use. The so called outlier cases may, in fact, warrant particular attention by both medical and non-medical staff as they are, by definition, not typical in their use of resources and the reasons why service utilisation varies from the norm may need to be investigated. For other purposes, however, and particularly for the use of DRGs as one component within a payment system, it would be important to be able to identify cases which are outliers on the basis of length of stay or cost. A patient-based payment system incorporating DRGs would generally be expected to incorporate an "outlier payment" policy to cover those catastrophic cases which occasionally, but inevitably, arise.

CONCLUSION

National discharge abstract data for acute hospitals in Ireland were successfully classified into DRGs for 1984, 1985, 1986, 1987 and 1988. The discharge breakdown for each DRG, together with length of stay information and measures of variation, were presented and discussed in this chapter.

The initial objective of testing the feasibility of using the "DRG Grouper" on Irish data was successfully achieved. In addition, the information generated and presented here provides important baseline data on the national case-mix profile. Changes in this profile and in the distribution and use of hospital bed-days can also be assessed from the results of the case-mix analysis presented here.

In addition to facilitating a study of inter-temporal changes in hospital case mix, this type of DRG analysis can also be undertaken to estimate inter-regional, inter-sectoral and inter-hospital variations in the case mix treated. The confidentiality constraints applying to the use of the HIPE data prohibit the publication of data at the individual hospital level. Where DRG analyses of the type presented here have been undertaken for individual hospitals (at the hospital's request), the information has been found to yield important insights into service utilisation patterns within the hospital.

While a case-mix analysis of activity data constitutes an important basis for estimating and understanding the utilisation of hospital resources, the power of this tool is greatly enhanced when activity data and cost data can be related on a case-mix basis. Knowing the cost of treating particular types of patients, as well as the distribution of patients treated, considerably strengthens the potential power of this technique. In the next chapter the results of a pilot study undertaken to integrate cost information within the DRG activity model will be presented and discussed.

Chapter VI

ESTIMATION OF HOSPITAL COSTS BY DIAGNOSIS RELATED GROUP

Introduction

The fact that DRGs can be successfully used for measuring and analysing hospital activity has been demonstrated in the previous chapter. While this level of analysis does provide one measure of the resource consequences for hospitals of supporting a particular case-mix level, an assessment of the *financial* consequences implied for the support of a hospital's case-mix requires that hospital costs be estimated to the DRG level.

The decision to undertake a pilot study to estimate costs by DRG for selected Irish hospitals was taken with the objective of providing the essential link between hospital activity and hospital costs. The fact that detailed information on hospital costs was not generally available for Irish hospitals was recognised as a constraint at the outset. While the study was pursued with the aim of estimating costs by DRG, limitations on information availability meant that the operational objective was to test and, where necessary, modify a DRG costing model for use in Irish hospitals.

The DRG Cost Model

A product line, or case-mix, cost accounting model developed and applied in US hospitals is described in detail in Thompson, *et al.*, (1979). According to these authors, "the goal of case-mix cost accounting is to provide a complete financial picture of the costs of treating individual patients grouped into similar classes based on use of resources" (p.113). As the DRGs provide a definition of the hospital product, the resources used and costs incurred by the hospital can be related directly to the patient types treated within the hospital by means of the DRGs. The relationship between the case-mix of the hospital, the resources it consumes and the costs it incurs can therefore be established.

An overview of the case-mix cost accounting process tested in this pilot study is reproduced in Figure 6.1 from Fetter and Freeman (1986). It will be clear from Figure 6.1 that the DRG cost-finding methodology begins as a dichotomous process with patient discharge data and hospital cost data being analysed and processed separately.

The data sources required to implement this cost model will be apparent from the framework represented here. These *data sources* can be specified as follows:

1. Patient discharge information.
2. Patient services delivered.
3. General ledger for the hospital.
4. Allocation statistics for support services.

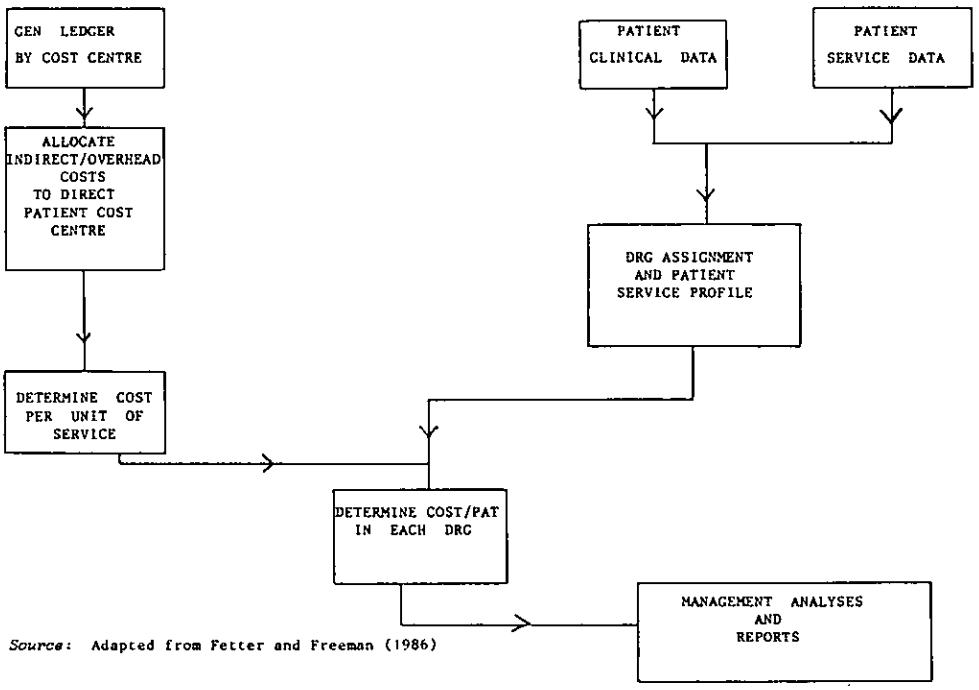
The assignment of discharges to DRGs is achieved with the application of the DRG Grouper as described in Chapter III. The methodology for the breakdown of costs from the general ledger to the DRG level is a multi-stage process which is represented graphically in Figure 6.2 and will now be discussed in greater detail.

The DRG Cost-Finding Process

Step 1: Definition of Initial Cost Centres from General Ledger

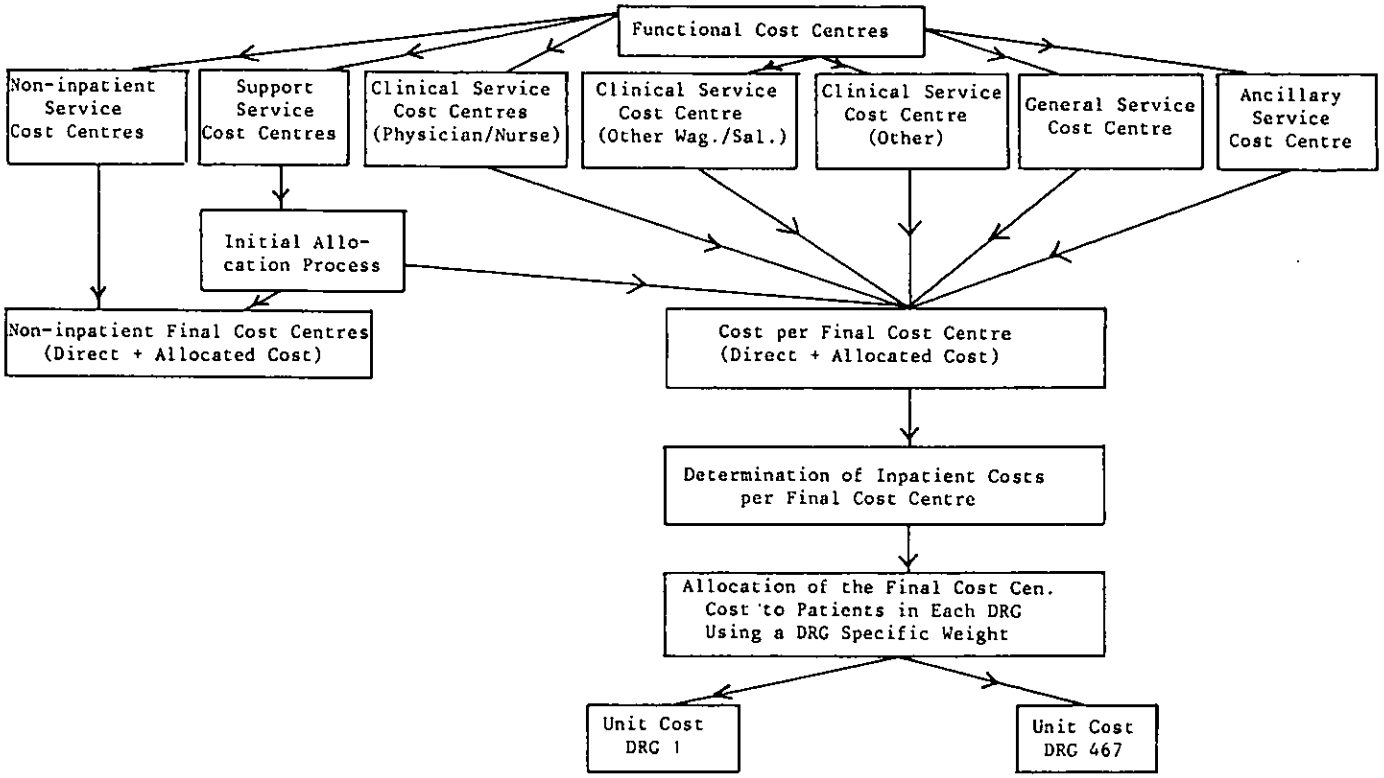
The first step in this process begins with the hospitals general ledger and involves the assignment of all line items to *initial cost centres (ICCs)*. Initial cost centres are defined to be synonymous with physically discrete patient or support services such that each one represents a centre of responsibility

FIGURE 6.1: OVERVIEW OF CASEMIX COST ACCOUNTING PROCESS



Source: Adapted from Fetter and Freeman (1986)

FIGURE 6.2: Estimation of DRG Costs in Select Irish Hospitals



Adapted from: Fetter and Freeman (1986)

for the production of a specific good or service required for patient care or for the functioning of the hospital (Freeman, *et al.*, 1986). Five general types of initial cost centres may be described:

1. Support service cost centres (e.g. laundry, maintenance);
2. Ancillary service cost centres (e.g. radiology, pharmacy, laboratory);
3. Clinical service cost centres (e.g. nursing);
4. General service cost centres (e.g. casualty);
5. Non-inpatient service cost centres (e.g. out-patient departments).

This initial step of defining initial cost centres from the general ledger is clearly represented in Figure 6.2. The non-in-patient cost centre is also shown to be subsequently defined as a final cost centre and maintained outside of the DRG cost allocation process. As DRGs are specifically concerned with in-patient care, all non-in-patient care related costs must be extracted from this process.

Step 2: Allocation of Costs from Support Service Cost Centres to Final Cost Centres

Cost centres may be defined as final cost centres (FCCs) if available information will support the following requirements: the allocation of costs from the support service cost centres to the FCCs; the estimation of the proportion of costs in FCCs incurred by in-patients; and finally, the allocation of costs from FCCs to the DRG level (Freeman and Fetter, 1986). The final cost centres may be constructed from the first four types of initial cost centres defined in Step 1 above.

The cost-finding process begins at this level with the allocation of support service costs to the final cost centres. This can be undertaken when a set of allocation statistics has been developed which reflect the relative distribution of costs for a designated support service cost centre across the final cost centres.

The main input for the development of the allocation statistics is the distribution of service utilisation by cost centre. For each support service, a decision must be made on the measure which is to be applied for the allocation of costs to the final cost centres. To take examples from two support services, laundry and maintenance. It may be reasonable to use weight in kilos/lbs to allocate laundry from the ICC level to the FCC level, and floor area might be used for the allocation of maintenance services to the FCCs.

The actual allocation process is complicated by the fact that support service costs may be simultaneously allocated to each other before eventually being allocated to the final cost centres. An additional complication arises because some proportion of support service costs may revert back to the cost centre of origin. For example, maintenance may

itself occupy workspace which will ultimately mean that some proportion of the maintenance cost centre costs will revert back to maintenance.

One important implication of the circular nature of the allocation process is that the use of the standard hospital accounting stepdown procedure is problematic (Thompson, *et al.*, 1979). The stepdown procedure would only approximate this circular behaviour and would not preserve the identity of the original source of all costs allocated to the final cost centres.

This problem has been solved by drawing on the linear algebra approach to cost accounting. By approaching the manipulation of the allocation statistics matrix as a Markov process, a special algorithm has been developed to deal with the circular nature of the allocation process. This algorithm generates a set of linear equations whose solution provides the identifiable fraction of each account allocated to each final cost centre (Fetter, *et al.*, 1977, Thompson, *et al.*, 1979, Chandler, 1988).

To summarise, therefore, the proportion of support service costs which is allocated to final cost centres is estimated on the basis of a matrix of allocation coefficients which is derived by means of a linear algebra formulation. The completion of this initial allocation means that the direct costs of the final cost centre and the allocated costs of support services together represent the total cost of providing services in each of the final cost centres.

Step 3: Estimation of In-Patient Fractions

Because the cost-finding process within this model only applies to in-patients, the fraction of the total costs incurred for in-patient care must be estimated for each final cost centre. The total costs are then multiplied by the relevant in-patient fraction to derive an estimate of the in-patient costs applicable to each final cost centre.

Step 4: Allocation of In-Patient Costs from Final Cost Centres to DRGs

Ideally, where information on service use for individual patients is available, this would provide the basis for the allocation of costs from the FCCs to the DRGs. Some measure of resource consumption, or a patient-related statistic reflecting the relative intensity of services delivered, is determined for each FCC. A cost per statistic ratio can then be calculated for each FCC. The cost for an identified patient type and a specific FCC is the total of that patient's statistic for that FCC multiplied by the cost per statistic ratio (Freeman, *et al.*, 1986).

Direct in-patient service costs may be allocated on the basis of patient days while nursing services and catering may be allocated on the basis of "weighted days" which are estimated to reflect the relative amount of

nursing care and meals required per patient day in each DRG. Ancillary service costs may be allocated on the basis of charges or relative value units (RVUs) which correspond to the procedures provided to each patient while costs associated with centres like "Admitting" will be allocated uniformly to all in-patients (Freeman, *et al.*, 1986).

The ideal data set for the calculation of service utilisation statistics for individual patients may not, however, be available for all hospitals or all systems. This is generally the case in Irish hospitals where information on service utilisation at the patient level is not routinely available. The only feasible solution, in the short term, to deal with the problem caused by this gap in the Irish data, was the use of DRG specific service utilisation weights for the allocation of costs from the FCCs to the DRGs. The source and application of these weights will be discussed in greater detail later in this chapter when the cost-finding process applied in selected Irish hospitals is described.

Estimation of DRG Costs for Selected Irish Hospitals

Hospital Selection

An initial short list of eight hospitals was compiled on the basis of information availability within the categories listed above, i.e., patient discharge information, patient service utilisation, detailed general ledger and allocation statistics for support services. A meeting was arranged with each hospital to review the level of detail available for the information under each of these headings. Three hospitals were finally selected for the pilot study of DRG costs.

A number of criteria were applied to the selection of the pilot hospitals. While a study involving just three hospitals could not be considered to be representative of all hospitals, attempts were made to ensure that the group would include both voluntary and health board hospitals, Dublin hospitals and non-Dublin hospitals. An acceptable mix was therefore achieved with the inclusion of one Dublin voluntary hospital, one non-Dublin voluntary hospital and one general health board hospital. The identity of the three hospitals in the study is not being disclosed here to ensure that confidentiality is preserved. The hospitals will therefore be referred to (rather unimaginatively) as Hospital A, Hospital B and Hospital C. While all three hospitals have between 200 and 300 beds, Hospital A is a Dublin voluntary teaching hospital, Hospital B is a non-Dublin health board hospital and Hospital C is a non-Dublin voluntary hospital.

A final factor influencing hospital selection was the availability of the required information in an accessible and adequately detailed format.

None of the hospitals would be considered to have the "perfect" data set, i.e., the facilities to produce cost and patient service information to the cost centre level. While Hospitals A and B were able to produce cost information to the cost centre level, cost information for Hospital C was limited to the standard general ledger (or chart of accounts) format. This selection of hospitals therefore approximated the range of information availability prevalent throughout the hospital system at the time.

At the time this study was carried out, detailed information on patient service utilisation was not generally available within the Irish hospital system. The selected hospitals therefore had to undertake some original data collection, in some instances, or use alternative data sources where available. The approach adopted will become apparent as the analysis is described. Finally, the Hospital In-Patient Enquiry and the Perinatal Reporting System served as the source for patient discharge data for all hospitals. Data availability also dictated the time period for the study which, unless otherwise specified, is 1984.

The DRG Cost Finding Process in Hospitals A, B, and C

The cost finding process was executed in accordance with the four steps outlined above in the description of the cost model. In Appendix 7 selected information on each stage of the process is given for the study hospitals. The presentation of this information must, of necessity, be selective to safeguard the identity of the hospitals concerned.

The first step involved the definition of the initial and final cost centres for each hospital. It will be apparent from Figure A7.1 that the initial cost centres will generally consist of support services, general services and clinical services, with final cost centres mainly consisting of clinical and ancillary services together with a small number of general service centres. Two alternative approaches can be applied to the definition of cost centres. One option suggests that cost centres should fit a hospital's managerial structure so that information generated for each cost centre can be used efficiently for management purposes. The second option, however, accords priority to consistency in cost centre definition across hospitals so that standardisation will be achieved and hospital performance can be compared between institutions. In this study an attempt was made to achieve an optimal balance between both approaches. Ultimately, however, the cost centre structure can only be as detailed as the raw data allow.

Figure A7.2 presents an example of the statistics used for the allocation of the support service costs to the final cost centres. The statistics used and the level of detail applied are, again, a function of the data available.

The third step in this exercise is straightforward and involves the

estimation of in-patient fractions for the final cost centres. This is illustrated in Figure A7.3. For some cost centres, the breakdown is self-evident. For example, Accident & Emergency and the out-patients department will have an in-patient fraction of 0 as they are exclusively concerned with out-patients. For some of the ancillary services, costs may be split between the in-patient and the out-patient sectors. The in-patient proportion of radiology is estimated at 50 per cent for Hospital A, 65 per cent for Hospital B and 20 per cent for Hospital C. These estimates were derived by the hospitals specifically for this study and represent an assessment of the in-patient/out-patient distribution of the hospitals workload in these service areas.

The final step in the cost finding process is the allocation of costs from the final cost centres to the DRGs. This allocation is based on the statistics listed for each hospital, some examples of which are presented in Figure A7.4. Where possible, hospital specific statistics have been used, for example, bed/days may be used to allocate laundry. The reality for Irish hospitals, however, is that information which could be used to relate nursing resources and ancillary service use to individual patients is not available. The collection of this information for the specific purpose of this study was not feasible because the exercise would have been too costly, too time consuming and would place excessive demands on participating hospitals. If hospital costs were to be disaggregated to the DRG level, an alternative source of information therefore had to be found.

The procedure which was finally adopted for this task was a process of mapping costs from the final cost centres to the DRGs on the basis of weighted case-mix, or weighted bed/days. The allocation weights used for this purpose were developed in the US in 1985 on a data base of 600,000 hospital discharges for the State of Maryland. The calculation of these allocation weights involved the estimation of, for example, the relative amount of nursing care and dietary supplies required per day for each DRG (Chandler, 1988). A similar exercise was conducted for each service area to estimate the relative amounts of operating room, laboratory, radiology, physical and occupational therapy, drugs, and general supplies, required per case type in each DRG. It should be emphasised here that these weights measure *relative resource consumption between DRGs* and that no conclusions are inferred about the *cost* of this resource consumption. The allocation statistics derived, therefore, estimate the amount of services each patient would be expected to receive, relative to other patients, using the best information available.

The procedure adopted for the calculation of these weights may be illustrated by a simple example. Drug costs were allocated from the final

cost centre to the DRGs using pharmacy weights. Pharmacy weights were computed as the ratio of average drug charges for discharges by DRG to average drug charges across all DRGs (Freeman, *et al*, 1986), that is:

$$w_i = pharm_i / (\Sigma_j\ pharm_j / 470)$$

where

w_i = the pharmacy weight for the ith DRG
$pharm_i$ = average drug charges for discharges in DRG_i
$pharm_j$ = the average drug charge per patient in the jth DRG

This definition means that a weight of 1 would be average while a weight of 2 would imply twice the average pharmacy resource consumption. A similar process was used for the estimation of laboratory weights, radiology weights, etc. These weights were then combined with the patient service statistics to generate an allocation matrix for mapping FCC costs into DRGs.

It is, however, probable that the profile of resource consumption, by DRG, for nursing and ancillary services will be different in Ireland compared with the United States. This is a hypothesis which would need to be tested in some future study. The use of these data in this study is based on the assumption that the application of a common set of allocation weights for the apportionment of final cost centre costs to the DRG level will provide some insight into inter-hospital variations in patterns of resource utilisation associated with particular levels of case-mix. Hospitals in Ireland are not funded on the basis of patient-based costs, therefore the estimation of *relative* resource consumption, rather than *absolute* costs, assumes a higher priority in this study.

Caution is thus advised in interpreting the results of the process of DRG cost estimation presented below. We have already referred to the gaps and the inadequacies of the data used for this analysis. Relativities in trends and patterns of resource use must be given prominence over estimations of absolute cost. The reservations expressed above regarding the application of externally developed allocation weights have greatest relevance to the estimation of absolute costs. Because the same basis for cost estimation is used, the effect of using these data is, however, expected to be minimised where inter-hospital relativities are concerned. International comparison of DRG costs are also avoided to safeguard against any erroneous interpretation of the results which follow.

Results of Pilot Study of DRG Costs

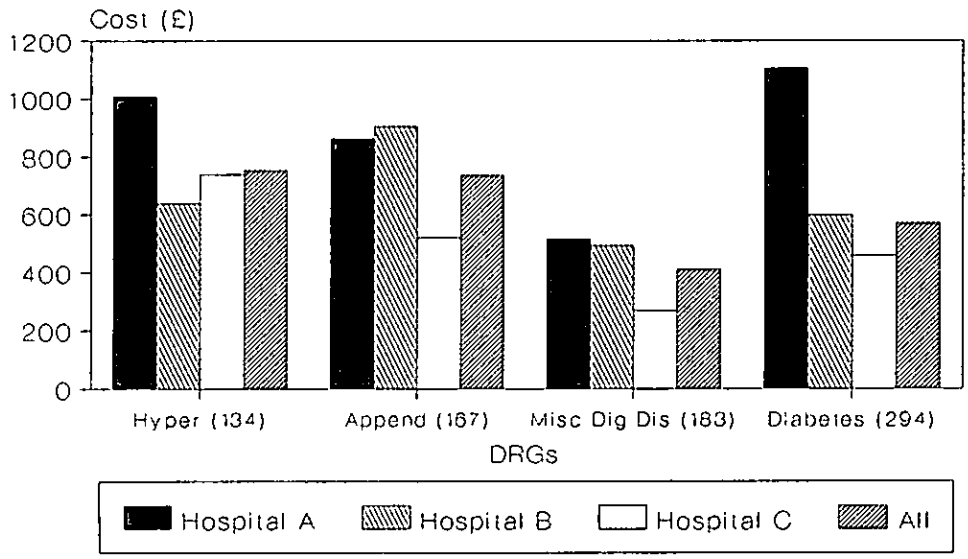
In Appendix 8 we present the estimated average cost by DRG for the study hospitals combined. Cost information is only presented for those DRGs represented in the hospitals in the study. The 1984 costs are shown,

together with these costs estimated at the 1988 level. Caution must again be urged in the interpretation of this information, given the reservations which have already been expressed about the adequacy of the data available for the estimation process.

To facilitate some appreciation for the inter-hospital variation in DRG costs which emerged from the study, the estimated costs of treating patients in each of the three hospitals in a number of high volume DRGs is presented in Figure 6.3. For three of the four DRGs examined here, DRG 167, 183 and 294, Hospital C has the lowest average cost, while Hospital B has the lowest cost for treating patients in the fourth DRG, 134. For DRGs 294, 183 and 134, the average cost is highest for Hospital A. While one hospital does not consistently come through with the highest or lowest average cost for each of these DRGs, the trend would suggest that, after standardising for case-mix, costs will tend to be higher in Hospital A and lower in Hospital C, relative to the others in the group.

To facilitate a more meaningful interpretation of the cost data provided for the hospitals, the cost estimates presented in Appendix 8 have been standardised to produce a cost weight. The cost weight for each DRG is the ratio of the average cost for the DRG to the average cost across all DRGs. While the development of a mechanism to relate hospital costs to hospital activity was our first objective here, a more fundamental objective is the

Figure 6.3
Average Cost per Patient for Selected DRGs: Hospitals A, B, C



Estimated 1988 costs

assessment of *relative* resource consumption between different patient types. As the cost weights constitute a standardised measure of relative resource consumption by DRG, they provide a tool for quantifying the relationship between hospital activity and hospital resource use.

For the data presented in Appendix 8, a cost weight of 1 is worth £639.38 at the 1984 cost level and £772.37 at the 1988 cost level. The average cost of treating a patient in a DRG with a cost weight of 2 would therefore be £1,278.76 (i.e., £639.38 x 2) at the 1984 level and £1,544.74 (£772.37 x 2) at the 1988 level. DRG costs, like other costs, change over time due to such factors as inflation, wage increases and the many other influences which contribute to cost increases in all sectors. While the DRG cost weights might be validly used from one year to the next for estimating expected resource consumption by DRG, the unit value will change, as illustrated here, to keep in line with changing cost levels generally.

Changes in the cost weights themselves will also be required from time to time where information becomes available on changes in relative resource consumption by DRG. This might arise, for example, where advances in technology result in an alternative treatment option being substituted for a long-established procedure adopted for the treatment of a specific problem. The increased and widespread use of shock wave lithotripsy as an alternative to surgery for the treatment of certain types of kidney stones is one example of an occasion when the cost weight for this condition had to be adjusted to reflect changes in relative resource consumption resulting from changes in the treatment process applied.

This is the first attempt at producing costings on a case-mix basis for Irish hospitals. We therefore have no other Irish data which can be used for comparison with the results of this pilot study. Limitations on the comparability of the Irish cost data have been readily acknowledged. As the DRG cost weights are, however, proposed as a measure of relative resource consumption, it was considered reasonable to measure the strength of the relationship between the cost weights estimated for the Irish study hospitals and the DRG weights in use within the US Medicare programme for the period covered by the Irish study.[11] A statistically significant

[11]The Medicare DRG weights are estimated on the basis of charges, while the Irish DRG weights are estimated on the basis of costs. This is an important distinction because costs and charges are not interchangeable, though they are related. Charge-based DRG weights were estimated for use within the Medicare programme because adequate cost data were not available at the time. A subsequent study directed at estimating the effects of using charge-based rather than cost-based DRG weights within this programme found that the substitution of cost-based weights for charge-based weights would not result in a change in aggregate payments within the system as a whole, though this substitution would result in some redistribution of payments from the surgical DRGs to the medical DRGs (Price, 1989). The fact that the Irish DRG weights are cost-based, and the Medicare DRG weights are charge-based demands that the results for the correlation analysis between both sets of weights presented here should be interpreted with some caution. The outcome of the Price (1989) study does, however, provide support for the acceptance of the strong, positive relationship indicated by the analysis as valid.

($p > 0.0001$) correlation coefficient of 0.78 was estimated for the Irish DRG weights and the US Medicare DRG weights. This correlation suggests that the relationship between *relative* resource consumption across the DRGs common to both systems is quite strong. It is, of course, accepted that there is a great difference in *absolute* terms in resource consumption at the DRG level between the US Medicare programme and the Irish study hospitals. While Irish data were used to disaggregate cost data to the cost centre level, US relative value units were used to disaggregate costs from the cost centre level to the DRG level. While it is possible that this factor may have an influence on the strength of the correlation observed for the Irish and the US DRG weights, it is not clear if this is, in fact, the case. This question can only be answered when sufficient Irish data become available to fully support the costing process.

These results go some way towards supporting the robustness of the process used for DRG classification and the derivation of DRG costs. Despite variations in the availability of cost data, the cost finding process proved to be adequately adaptable so that the objective of estimating DRG costs was successful in all hospitals in the study.

Success in the estimation of DRG costs and cost weights is, in itself, of limited usefulness unless some mechanism can be derived which will facilitate the application of this information within the hospital system. It was stated at the outset of this report that two of the basic unknowns accounting, in large part, for the difficulties encountered in achieving (or indeed measuring) efficiency in the hospital sector are the definition of the hospital product and the ability to relate resources consumed to hospital activity. If this starting point is accepted, the fact that classification by DRGs, together with the estimation of DRG costs, has been shown to be feasible in the Irish context, should immediately open previously locked doors leading to improved techniques for the allocation and management of hospital resources. This process should also enable the quantification of the relationship between hospital activity and the resource requirements implied by the case-mix supported at the hospital level. In the next section, one example is presented of how the technique and information presented here can be applied towards the achievement of these objectives.

Applications at the Inter-Hospital Level

One immediate difficulty faced in attempting to assess the resource needs of a hospital is the quantification of the relative costliness of the case-mix treated by the hospital. A measure which could now assist in the achievement of this objective is the *Case-Mix Index* (CMI) (Fetter and

Hindle, 1988). The CMI is essentially a measure of the relative costliness of the hospitals case-mix and may be defined as follows:

$$CMI_j = \sum_{i=1}^{470} [N_{ij} * W_i] \; / \; \sum_{i=1}^{470} [N_{ij}]$$

where CMI_j : the case-mix index of hospital j
N_{ij} : the number of patients in DRG i at hospital j
W_i : the cost weight for DRG i

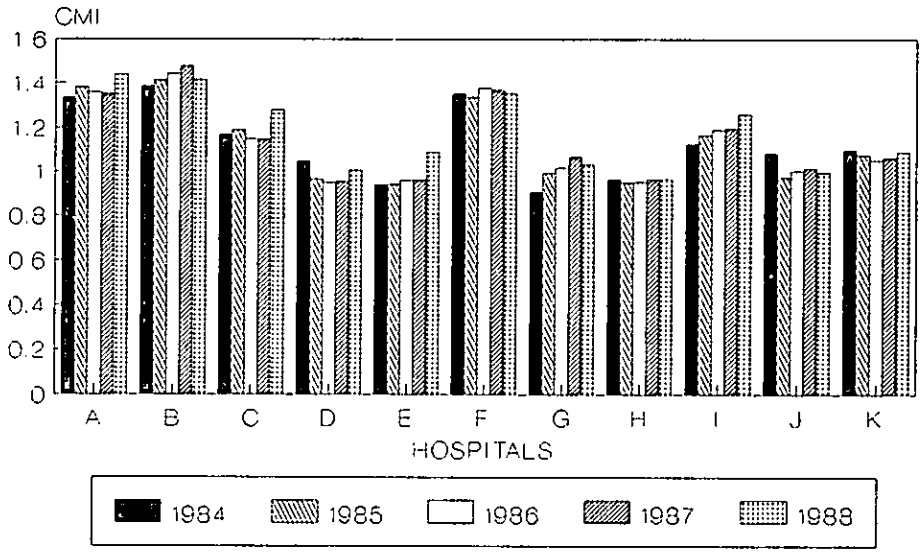
A case-mix index of 1 means that costliness of the case-mix treated by the hospital is the same as that treated by all hospitals in the group combined. A CMI value of less than 1 means that the hospital, on average, treats a relatively less costly case-mix while a CMI value of more than 1 indicates that the hospital treats a more costly case-mix relative to all hospitals in the group combined.

The case-mix index for a number of health board and voluntary hospitals has been estimated and presented in Table 6.1, and shown graphically in Figure 6.4. The experimental nature of this exercise must again be emphasised as the cost weights developed for the Irish hospitals have been used. The list of Irish cost weights was not complete as all DRGs were not represented in the pilot hospitals. Cost weights were missing for 47 DRGs in total. To proceed with the calculation of the CMI it was decided to incorporate the US DRG weights where Irish DRG weights were

Table 6.1: *Case-Mix Index for Selected Irish Hospitals, 1984-1988*

Hospital	*1984*	*1985*	*1986*	*1987*	*1988*	*Percentage change 1984-1988*
						%
A	1.333	1.381	1.357	1.350	1.439	+ 8.0
B	1.385	1.412	1.443	1.478	1.416	+ 2.2
C	1.168	1.190	1.150	1.149	1.279	+ 9.5
D	1.050	0.966	0.950	0.955	1.006	- 4.2
E	0.943	0.942	0.960	0.963	1.092	+15.8
F	1.352	1.338	1.378	1.370	1.355	+ 0.3
G	0.907	0.993	1.019	1.070	1.033	+13.9
H	0.967	0.949	0.953	0.966	0.970	+ 0.3
I	1.128	1.168	1.191	1.200	1.262	+11.9
J	1.086	0.975	1.004	1.018	0.996	- 8.3
K	1.102	1.076	1.053	1.066	1.093	- 0.8

FIGURE 6.4
CASE MIX INDEX FOR SELECTED HOSPITALS IRELAND, 1984-1988



missing. The DRGs concerned were not high volume DRGs, for the most part, so we do not believe that the use of this supplementary data had a major effect on the outcome. The identity of the hospitals must again remain confidential so the letters A to K have not been assigned to imply any particular order with regard to hospital size or type.

Table 6.1 presents the case-mix index for the 11 hospitals for each of the five years 1984, 1985, 1986, 1987 and 1988. The proportional change in the CMI for each hospital between 1984 and 1988 is shown in the final column. Variations between hospitals and over time are evident from Table 6.1 and Figure 6.4. The 11 hospitals tend to fall logically into two groups: Hospitals A, B, C, F and I have an estimated CMI substantially greater than 1 for each year in the study, while the remaining hospitals (D, E, G, H, J, K) have a CMI close to, or less than 1, for the same time period. This means that the case-mix treated by Hospitals A, B, C, F and I is more costly, relative to the average for all hospitals, while the costliness of the case-mix treated by the other six hospitals is close to, or less than, the average over the period.

Over the five year period, Hospitals B, A and F rank in the top three as treating the most costly case-mix relative to all other hospitals. For four of the five years studied, the case-mix treated by Hospital B is the most costly,

relative to the other hospitals in the group. The greatest percentage increase in the CMI over the period is found for Hospital E, where the costliness of the case-mix treated increased by 15.8 per cent between 1984 and 1988. Hospital J shows the greatest percentage decline in the costliness of the case-mix treated over the period with a drop of 8.3 per cent in the CMI between 1984 and 1988. It is interesting that the direction and magnitude of the changes observed for the CMI are not necessarily consistent in any one time period, underlying again the importance of adjusting for case-mix in any analysis of changes in the nature of hospital activity and resource requirements.

The usefulness of the CMI is evident in facilitating a ranking of hospitals with regard to the costliness of the case-mix treated. This ranking might also translate into a hospital hierarchy for the purpose of estimating cost expectations. While the trends observed in Table 6.1 are of some considerable interest, we are not in a position to provide all of the information necessary to facilitate a comprehensive understanding of the information presented here. The missing information relates to the actual expenditure of the hospitals in question over the relevant period. This information could not be provided without breaching the confidentiality of the hospitals concerned. This does not, however, preclude us from asking questions like, for example, if the costliness of the case-mix treated by hospital A in 1988 is shown to be almost 50 per cent greater than that treated by hospital H, does this mean that a similar level of variation should be expected in the expenditure levels for the two hospitals? Additional questions need to be directed at the budgeting process and whether the budgets allocated to these hospitals reflect the observed variations in the case-mix treated. These questions cannot be answered in this report because of confidentiality constraints and, also, because the report is primarily concerned with testing the application of an approach to measuring case-mix for acute hospital services. The questions raised here regarding the relationship between the costliness of the case-mix treated by a hospital and the hospitals budget and expenditure are, nevertheless, important and should be followed up subsequently in a more appropriate forum.

The potential offered by the case-mix index as a support tool in any exercise directed at resource allocation between hospitals should be apparent. Where agencies have previously had to depend on inadequate measures like variation in bed-day costs to attempt to differentiate the needs of different hospitals, the CMI offers some potential as a mechanism which enables the quantification of the relative costliness of the case-mix treated by a hospital.

CONCLUSION

This chapter began with a presentation of one approach to the estimation of a DRG cost model and proceeded to a discussion of the application of this model in a pilot project involving three Irish hospitals. The pilot project proved successful in that costs by DRG were estimated for the study hospitals and the technique applied proved adaptable to different hospital types with different levels of data availability.

Reservations must, however, be expressed about the quality and timeliness of the cost data used for this exercise and, in particular, potential problems arising from the non-availability of patient level data on nursing and ancillary service use. Used with caution, however, the cost weights derived for the DRGs from this pilot study provide a standardised measure which might be used as a basis for developing measures like the case-mix index. The estimation of the case-mix index for 11 hospitals served as an illustration of the potential which this measure offers towards the objective of quantifying the costliness of the hospital's case-mix when compared with the case-mix supported by other hospitals.

Having demonstrated the facility to measure and to cost hospital case-mix, the next chapter reviews a number of possible applications for these potentially powerful techniques.

Chapter VII

CASE-MIX APPLICATIONS: RESOURCE ALLOCATION AND INTERNAL HOSPITAL MANAGEMENT

Introduction

While the discussion in previous chapters has concentrated on techniques for measuring and costing hospital case-mix, this chapter will concentrate on possible applications for these techniques within the acute hospital system. While there is a wide range of potential applications, two specific levels of application will be considered in detail here: (i) case-mix based budgeting for acute, in-patient hospital services; and (ii) product line management for hospitals (Wiley and Leidl, 1989; Wiley, 1990B).

Case-Mix Based Budgeting for Acute, In-patient Hospital Services

Prospective Payment and Case-Mix Measurement

Prospective payment for hospital care has been the norm in many European countries for some time. Finland, France, Ireland, Sweden, the Netherlands and the United Kingdom, among others, all fund hospital services on the basis of prospectively determined annual budgets (OECD, 1987, Glaser, 1987).

While there are variations between these countries in the methodology adopted for the estimation of hospital budgets, the major differences between the approach prevailing in these European countries and the US is that the US Medicare system is case-mix based and patient based, whereas in Europe payment tends to be based on a global budgeting or per diem method (Wiley, 1988).

The decision to adopt a prospective payment approach to hospital funding may be taken independently of the decision to incorporate a case-mix measure into the funding or payment mechanism. In addition, the decision to use a case-mix measure should not lead to the immediate conclusion that DRGs are going to be used, despite the fact that currently the most extensive application of a case-mix based reimbursement system, as found within the US Medicare programme, is based on the DRG approach. Improvements in the DRG system and other available systems

can be expected over time so the choice between case-mix classification systems will logically follow a decision, in principle, to adopt a case-mix based approach to resource allocation and management.

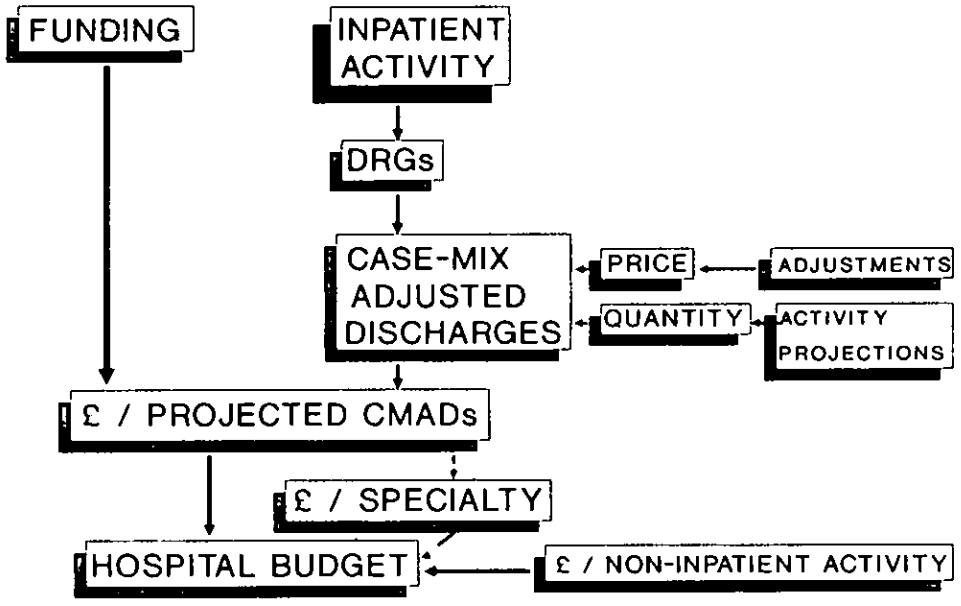
Because the budgeting approach to prospective payment for hospital services has been predominant in Ireland, the following presentation of an alternative approach to resource allocation within the hospital programme has been developed within this framework. One of the most serious and most frequently voiced criticisms of traditional approaches to hospital budgeting is that budgets do not accurately reflect the relationship between activity and funding within the hospital. The accurate quantification of the relationship between hospital activity and hospital funding demands that both sides of the equation can be related by means of some common unit of measurement. One approach which may offer some potential for the achievement of this objective in the Irish context is outlined in the following section.

Case-Mix Based Global Budget Model

The essential elements of the proposed approach to the estimation of case-mix based global budgets is presented in Figure 7.1. The measure of case-mix used for the presentation and discussion of the model in this

FIGURE 7.1

GLOBAL BUDGET MODEL



context is the DRG approach, though it must again be stressed that the application of the basic approach is not dependent on the use of this particular measure of hospital case-mix.

In discussing the model in Figure 7.1, we will begin with the progression on the activity side of the model. The first step proposed here, towards the objective of quantifying in-patient activity, is the assignment of the hospital case load to DRGs in accordance with the process described in Chapter III. Following the completion of this assignment, the next step involves the estimation of "case-mix adjusted discharges" for the hospital. The procedure applied for the estimation of the case-mix adjusted discharges (CMADs) (Fetter and Hindle, 1988) may be summarised as follows:

$$CMADs_j = \sum_{i=1}^{470} (N_{ij} * W_i)$$

where:

$CMADs_j$ is the number of case-mix adjusted discharges in Hospital j;

N_{ij} is the number of discharges in DRG_i at Hospital j;

W_i is the cost weight for DRG_i.

The estimation of total case-mix adjusted discharges (CMADs) for the hospital may be concisely summarised as the product of the number of discharges in each DRG by the DRG-specific cost weight, summed across all DRGs.

The concept of the DRG cost weight was introduced in Chapter VI and may be defined for the purpose of this application as "the conversion factor necessary to set a price for a hospital product, defined as the discharge of a patient categorised into a DRG" (Prospective Payment Assessment Commission, 1985 p.4). Each unit of the DRG cost weight may be assigned the same monetary value. DRGs comprised of more resource intensive patient types will attract a higher cost weight (i.e., more DRG cost units). It therefore follows that a more resource intensive patient mix will generate a relatively greater number of DRG cost units. The nature of the relationship between the CMADs estimated for a hospital and the hospitals discharges will be a function of the proportion of resource intensive patients treated by the hospital. If the number of resource intensive patients treated by the hospital is high, relative to the hospital's case load, then the number of CMADs estimated for the hospital would be expected to exceed the number of discharges.

Having estimated the CMADs for the hospital, a standardised measure of hospital activity, adjusted for case-mix, is now available as an input into the

budgeting process. At this stage of the process, two factors which require decisions are (i) the price per CMAD which will be funded and (ii) the projected activity which will be funded for the budget period.

The determination of these factors will not depend exclusively on technical considerations but will require a strong *policy* input by the funding agency. The determination of a price/CMAD, and the relationship between the price and the projected cost/CMAD will depend on the funding agency's approach to allowing adjustments for factors generally believed to have an influence on resource requirements at the hospital level. Price setting may also be used by the funding agency to provide incentives to hospitals to reduce costs and/or to bring costs more into line with an acceptable standard for the type of hospital in question.

An additional important issue which arises with regard to the determination of a price level, is the planned rate of progression towards the adoption of a national standard, rather than a hospital-specific standard. Within the US Medicare programme, the full implementation of the prospective payment system, based on federal payment rates, took a number of years to complete. During a pre-determined transition period, a blend of hospital-specific and Federal payment rates was used, with the overall proportion of the hospital-specific rate declining annually until ultimately the full payment rate was based on the Federal level (Kalison and Averill, 1984; Russell, 1989). Again, the timing of full implementation of uniform payment rates within any health system is a decision which will have to be made in the policy arena and will, to some extent, be influenced by the level of dispersion known to exist between hospital-specific and national payment rates. The importance which policy makers attach to the application of a uniform payment rate across hospitals will also influence the pre-determined rate of progression towards the full-scale implementation of a case-mix based global budgeting system.

Care must be taken here to ensure that any adjustments which are made to the projected price and activity levels are based on factors which are *known,* rather than assumed, to have a significant effect on resource use. The factors which might be tested to assess the strength and significance of their relationship with hospital resource use include: the demographic composition of the population served by the hospital (e.g. dependency ratio), the geographic location of the hospital (urban/rural), hospital manpower mix, hospital teaching status, etc.

In Ireland, in particular, the extent to which these and other factors may, or may not, have a significant effect on hospital resource use demands in-depth investigation to ensure that budget adjustments will accurately reflect the nature of the relationships involved. It is worth repeating that

decisions on the type and nature of adjustments to be applied must be taken in the policy arena and are in no way pre-judged by the particular approach adopted to estimating activity or adjusting for hospital case-mix.

The estimation of case-mix adjusted discharges on the basis of actual discharges is, of course, a retrospective measure, while budget determination is a prospective exercise. The approach depicted in Figure 7.1 has the advantage that it requires that both the funding agency and the budget holder agree on *what level of activity* at *what price* is covered over the budget period. A decision must therefore be reached on the level and type of adjustment required to project hospital activity for the budget period on the basis of information on current (or most recent) hospital activity. This projection should take account of important factors influencing demand for in-patient services, for example, changing patterns of care (e.g., increasing use of day treatment as an alternative to in-patient care), declining lengths of stay, demographic trends (e.g., declining birth rate), improvements in medical technology, etc.

In determining the type and level of activity to be covered over the budget period, it may be useful for both the funding agency and the hospital to plan on the basis of specialty, as an alternative to a hospital-wide approach. Where the medical specialty framework is the basis for organisation within the hospital, it may be useful for management purposes to specify a budget based on an agreed level of activity by specialty. This approach may also be useful for service planning at the regional or national level. An alternative to the specialty, which is meaningful in conceptual and organisational terms for the hospital, may also be substituted here.

Within the global budgeting model, the budget for in-patient hospital services may be summarised as the product of the price per unit of activity (CMAD) by the projected level of activity over the budget period. This discussion of a DRG-based approach to hospital budgeting is, of necessity, restricted to in-patient services. It is recognised, however, that the estimation of a budget for all non-in-patient services, including out-patient, casualty, etc., will have to be addressed separately, and ultimately integrated within a comprehensive hospital budget model.

Global budgeting does not presume that any particular approach will be adopted for financing *capital* requirements. The global budgeting model outlined here may be restricted to funding revenue requirements with a separate system being put in place for the allocation of capital funding. If funding for capital expenditure is going to be put through the system independently of the revenue allocation system, possible areas of interaction or overlap between both systems may need to be investigated.

Resource Allocation for Irish Hospitals

The global budgeting model as described here would seem to have considerable potential for application in the Irish context. We have shown in this study that hospital activity data are available in a form which allows classification into DRGs. The DRG data can then be transformed into case-mix adjusted discharges following the application of the DRG weights which are considered most appropriate. The estimation of CMADs on a hospital by hospital basis is therefore feasible and achievable in the Irish context. This is really the pivotal point of the model and is an essential pre-requisite for the approach to budgeting on a case-mix basis which is presented here.

The specificity of the projection of activity for the budget period on a hospital by hospital basis, and the estimation of a price per CMAD, will depend, to a great extent, on the specificity of the information which is available. If individual hospitals are expected to take on, or lose, service commitments in particular specialties, the appropriate adjustment can be made to the level of CMADs assigned. At the crudest level of operation, the price per CMAD can be estimated on the basis of available funding. It would be more desirable, however, to develop a more accurate and more specific basis for determining funding levels which reflect a standardised approach to costing, and make appropriate adjustments for additional factors shown to have a significant relationship to resource use at the hospital level.

While the research conducted for this study has specifically addressed the area of case-mix measurement and analysis in the context of the Irish hospital system, the information currently available on the nature of the relationship between hospital resource use and variables such as teaching status, geographic location, population structure, etc., is currently inadequate. These questions, and others, now have to be dealt with on an *ad hoc* basis within the funding system because the information is not available to enable a more accurate estimation of the nature of the relationships involved. While this type of information is being sought, however, the estimation of a case-mix based hospital budget may proceed with *ad hoc* adjustments applied, as required, pending the determination of more accurate information on these factors over time.

The introduction of a case-mix measure into the hospital budgeting process in Ireland should not be delayed until "the perfect model" with "a complete data base" is developed. It is unlikely that such an objective is feasible and, if so, it would take too long to achieve to be viable. The unfortunate consequences of a delay in reforming the funding process to reflect the knowledge and the technology which is now available may be

manifest in the perpetuation of inequities in resource allocation between hospitals which would become increasingly difficult to correct (Wiley, 1990B). The use of a case-mix measure, in itself, should initially provide enough information to enable the development of an equitable basis for resource allocation between hospitals, with more specific measures being introduced over time as more detailed information becomes available.

The first step in this direction has, in fact, been taken by the Department of Health with the setting up of the *Resource Allocation Group* in October 1987 to work towards the development of an objective basis for allocating funds to hospitals which will reflect the relationship between funding and hospital activity. A pilot study involving 12 hospitals was undertaken in 1988 and this was extended to 27 hospitals for 1989. This study was initially involved in a data collection effort and has proceeded to undertake the estimation of relative case loads and associated costs for the participating hospitals. The opportunity offered by this study to test the operational potential of using a case-mix based measure of hospital activity within the framework of a global budgeting model is very valuable and is being explored on an ongoing basis.

While the development of techniques for resource allocation at the inter-hospital level may be a priority for a central or regional funding agency, internal resource allocation at the hospital level must also be addressed if hospital resources are to be used efficiently. One approach to the integration of case-mix techniques for internal management purposes will be described in the following section.

Product Line Management for Hospitals

At the outset, this study identified problems in defining the hospital product as a major contributing factor to difficulties encountered and observed in resource management at the inter- and intra-hospital level. To demonstrate the contribution which advancements in case-mix measurement may make to overcoming some of these problems, a product line management model for hospitals will be described here.

Traditionally, the organisation and management of hospitals has been centred around the production of what we now call the "intermediate outputs" of the hospital, i.e., surgical procedures, laboratory procedures, meals, etc. Typically, non-medical staff have reporting responsibility for operating departments which range from those providing direct medical services (e.g., cardiology, orthopaedics) to the support service departments (e.g., pharmacy, radiology).

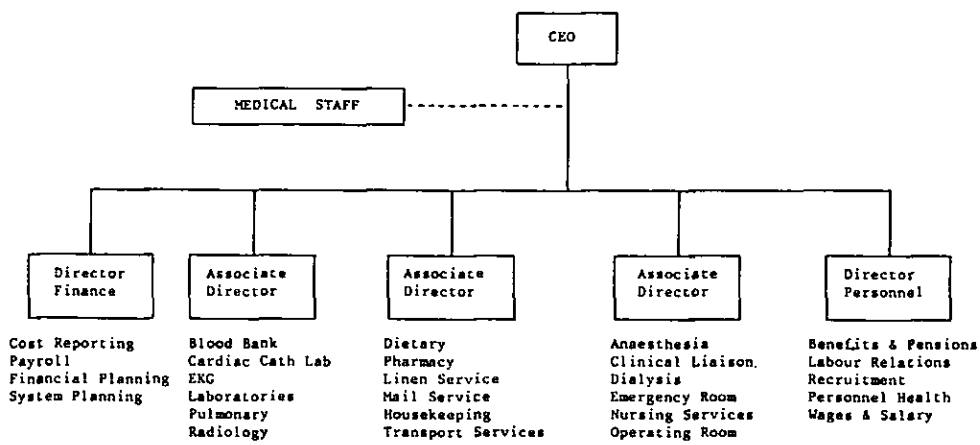
While the medical staff are the ultimate managers of the hospital's resources, their role in this regard has tended to be less well defined,

compared with the management structure of the administrative staff. In general, there has tended to be limited, if any, integration of the medical and non-medical components within the hospital management structure. While individual hospitals might vary in the particular structure applied, this essentially hierarchical approach to hospital management is presented graphically in Figure 7.2.

One of the many problems with an organisation of the type depicted in Figure 7.2 is that it does not accommodate the many inter-connections between service areas required for patient care. The treatment of a patient may require the provision of many services, including meals, laundry, operating theatre time, X-rays, lab tests and medications. Within the hierarchical management structure there is great difficulty in relating service provision from many different departments to a particular patient type.

If it is accepted that the hospital product should be defined as the combination of services and outputs prescribed by the attending physician to treat the needs of presenting patients, then it follows that the hospital's management structure should be adapted accordingly. In considering such an adaptation, Fetter and Freeman suggest that "what is needed is a structure that recognises the products and product lines treated

FIGURE 7.2: HOSPITAL ORGANISATION CHART



Source: Adapted from Fetter and Freeman (1986)

individually and collectively by physicians...A matrix structure captures this idea in operational terms" (Fetter and Freeman, 1986, p.47).

The application of matrix management to hospitals was first proposed by Neuhauser (1972) and has since been greatly advanced with developments in case-mix measurement techniques. A DRG-based approach to matrix management is presented in Figure 7.3 for illustrative purposes.

What is clear from Figure 7.3 is that teams of physicians are expected to have responsibility for patients grouped on a DRG basis. This approach will facilitate a prediction of the resources which may be required by patients in the different DRGs and will also enable the physicians to track patients through the individual departments if they need to specify the services used or needed by the patient.

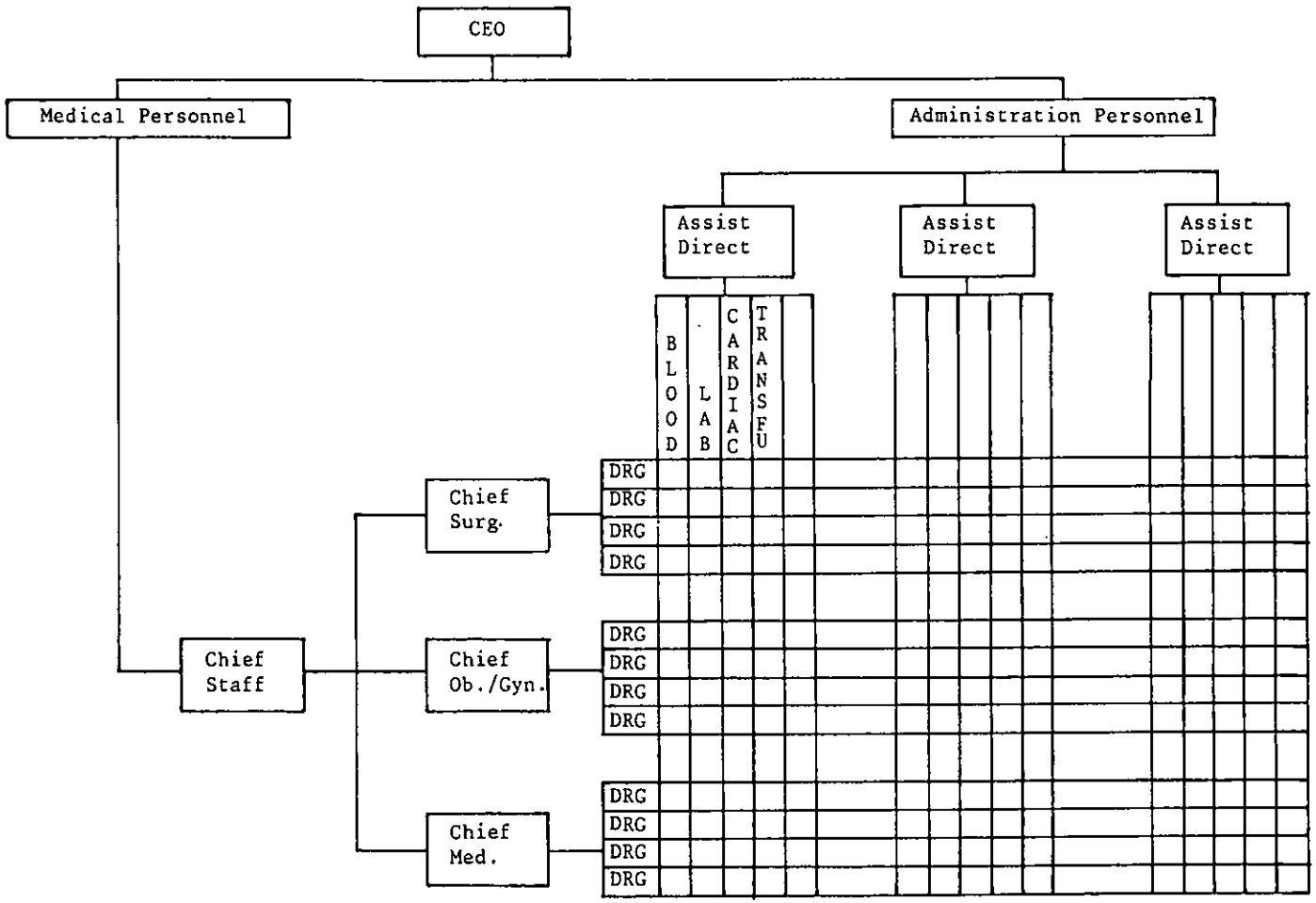
The administrators, in turn, have clearly defined lines of responsibility which also cut across the DRGs. This means that these non-medical managers will be able to relate utilisation of the support services to particular patients and patient types. The essential point here is that there are two lines of responsibility and authority which meet at a common point: the DRG.

Within this system clinicians, as product-line managers, are responsible and accountable for determining the utilisation of the relevant resources and the service mix required to treat the patients within their groups. The administrators, on the other hand, must be responsible and accountable for the intermediate product centres and the production of those services required for the provision of patient care.

For each management group, both services and costs can be related to a common unit, the DRG. Communication between both groups is thereby facilitated as a common language is shared by all resource managers. The potential for planning will also be greatly enhanced as both sets of managers become more proficient at predicting resource requirements for the particular groups of patients treated.

Within the matrix management model, the hospital's inputs and intermediate outputs can be directly related to the hospital's products. From this basis, performance and efficiency at the departmental and the hospital level may be accurately assessed.

FIGURE 7.3: MATRIX MANAGEMENT OF HOSPITAL SERVICES



Source: Adapted from Fetter and Freeman (1986)

CONCLUSION

In this chapter, alternative approaches to the estimation of hospital budgets and the management of hospital resources have been explored. It seems clear from the preceding discussion that, within the broad constraints of the different models presented, there is substantial scope for pursuing a number of different options for the improvement of the methodology which is currently in use for the purpose of resource allocation within the hospital programme and at the internal hospital level.

In Ireland, progress towards the development of an operational, case-mix based budgeting model for hospitals is probably moving faster than progress towards the development of product-line management techniques for implementation within the hospital. The techniques used for resource allocation and management at the centre and at the hospital level will, inevitably, interact (Wiley, 1988). Over the long run, therefore, effecting progress at both levels would seem to be in the best interests of ensuring that resources are used efficiently throughout the entire hospital system.

Chapter VIII

CONCLUSIONS

One of the most important conclusions to emerge from this study is that it is technically possible to define and measure the case mix treated in the acute in-patient setting in Ireland. The application of the DRG system in this study to classify acute discharges from Irish hospitals for each of the five years from 1984-1988 proved to be highly successful.

The review of the Irish hospital system presented in Chapter I identified large and significant changes in such indicators as average length of stay, utilisation of hospital bed/days and discharge levels over the 1980-1988 period. Nationally, average length of stay declined by almost one-fifth, utilisation of hospital bed/days declined by over one-quarter and discharge levels declined by just 5 per cent over this period. The results of the case-mix analysis for the 1984-1988 period, however, targeted important variations in these areas of resource consumption at the patient group level which did not necessarily reflect the trends observed at the national level. Important changes in average length of stay and discharge levels over time, by hospital type and between hospitals were estimated to the patient group level within the case-mix analysis of hospital activity. The results of this analysis leads to the conclusion that the potential for success of any policy interventions directed at influencing change in the pattern and mix of hospital service utilisation will be substantially enhanced if the case-mix profile for the area under review is taken into account.

The estimation of the relationship between costs and activity within the hospital system is recognised as a critical objective in the pursuit of improvements in resource deployment and management at the hospital level. In this study, for the first time in Ireland, costs have been estimated to the patient group level with the application of a DRG-based cost model in a number of pilot hospitals. While the results of the DRG costing exercise must be treated with caution due to the fact that a small number of hospitals were involved and the available cost data were incomplete, this information does facilitate a meaningful appreciation for relative resource consumption at the patient group level, which was not previously possible within the Irish hospital system.

The fact that the case-mix analysis of hospital activity and hospital costs

undertaken for this study was successful, in addition to yielding important and interesting results, provides a strong basis from which to pursue the introduction of a case-mix measurement system within the acute hospital sector in Ireland. The range of possible management applications spans both the intra- and inter-hospital level. As DRGs provide a means of relating resource use and requirements to patient type, the potential power of the technique as a management tool is significant. It seems reasonable to conclude that if DRGs can be used to identify the areas of greatest need within the hospital system, resources may be targeted accordingly. Improvements in the efficiency of resource deployment throughout the system as a whole would therefore be expected.

The fact that the specification and the quantification of the relationship between funding and activity is an important starting point for the reform of resource allocation and management practices within the acute hospital sector in Ireland is rapidly gaining widespread acceptance. Difficulties with attaining this objective in the past have resulted in ensuing difficulties in implementing policies for the improvement of efficiency and management practices and the rationalisation of resource allocation for acute hospital services. The successful application of one measure of hospital case-mix for the analysis of both hospital activity and costs, as reported in this study, therefore constitutes an important advancement. Having overcome the obstacle of case-mix measurement, the opportunities for the successful implementation of policies for the rationalisation of resource management and deployment should be greatly expanded.

The relationship between the findings emerging from this study and proposals for health service reform which have been put forward by a number of reports in recent months will need to be considered in some detail here. First, however, an overview of relevant technical issues arising from this study will be identified, and this will be followed by a brief review of international developments of relevance to this study.

Outstanding Technical Issues

Some refinement of both the case-mix measure and the data base may be required for the development of applications in identified areas. The issues which will need to be considered include the following:

DRG Refinement

There may be a legitimate basis for undertaking adaptations to the DRGs or any other externally developed case-mix system if local practice patterns for particular conditions are found to vary significantly from the case-mix system applied. A further, more detailed, study of variation within

DRGs would be required to determine if such adaptations were required in the Irish context. It should be pointed out, however, that an investigation at this level of detail would become a priority only if applications for DRGs at the individual patient level were being considered. The use of DRGs as a case-mix adjustment at the level of the department or the hospital would not require the same level of detailed adjustment. For this type of application, we have shown in this study that the DRG system can be successfully applied as a case-mix measure for acute, in-patient hospital activity.

The DRG Grouper

The DRG analysis reported in this study was conducted with Version 3.0 of the DRG Grouper. Other versions of the DRG Grouper have subsequently been developed, and important research is currently underway which is directed at completing a major refinement of the DRG system. These developments were noted in Chapter III and are described in detail in McGuire (1990) and Freeman (1990). It is important that the use of DRGs by any agency in Ireland be preceded by agreement on one DRG Grouper as a national standard. This agreement would follow a thorough assessment of the available alternatives to determine which offered the best option for case-mix measurement in Ireland. The use of one national standard is essential if comparability at all levels is to be safeguarded and maintained.

Data Availability for Case-mix Measurement

Any discussion of data requirements must differentiate between *Hospital Activity Data* and *Hospital Cost Data.*

Hospital Activity Data: We are fortunate in Ireland in having a national discharge abstract reporting scheme and a perinatal reporting scheme already in operation. This contrasts favourably with the situation found in countries like France, Belgium, Spain and Portugal where national discharge abstract systems had to be developed in parallel with attempts to study hospital case mix.

While acknowledging the advantage offered by the existence of both the HIPE and the PRS, we have already noted in Chapter IV that some aspects of these systems warrant attention if the quality of the data is to be maintained at the highest standard. The four key areas of concern which we have identified for the development of these data bases are *accuracy, comprehensiveness, quality* and *timeliness.*

If the goal of developing a national data base of hospital activity which is

generally acceptable to all potential users is to be seriously attempted, the following objectives will be important for the achievement of this goal:

1. Local (i.e., hospital) responsibility for data collection and local access to relevant data bases;
2. Replacement of manual data collection systems with computer based systems;
3. The integration of all existing data bases currently concerned with acute hospital provision;
4. Updating and upgrading of coding support and validation checks to ensure that the quality of data is maintained to the highest standard;
5. The objective of comprehensive coverage of all discharges nationally should be actively pursued.

The fact that these objectives now serve as guiding principles for Department of Health involvement in the development and support of hospital information systems is to be welcomed. It is, therefore, to be hoped that the development of activity-based information systems in accordance with these objectives will be achieved in the not too distant future.

The importance of complete, high quality information on hospital activity is also recognised in the recent report on remuneration of consultant medical staff prepared by the Review Body on Higher Remuneration in the Public Sector (1990) (also referred to as the Gleeson Report) which includes a specific recommendation that:

> There should be a contractual obligation on consultants to provide information for hospital information systems on diagnoses, treatment, length of stay, etc. We are satisfied this can be achieved without breaching the confidentiality of the individual patient/doctor relationship (p.26).

The early implementation of this recommendation will be crucial to the achievement of the required objectives for a hospital activity data system at national level which can support sophisticated measures of hospital case mix on an ongoing basis.

Hospital Cost Data: Despite significant recent advancement, systems for collecting hospital cost data in Ireland are less well developed and less widespread, compared with the hospital activity data systems. This problem was also recognised in the Gleeson Report which commented that:

> The lack of information on matters such as cost of procedures, cost comparability between different units and even the number of procedures actually carried out at particular hospitals was the subject of severe criticism by consultants. These criticisms seem to us to be well founded (p.26).

While hospitals are required to return a standard set of financial accounts to the Department of Health annually, there are no requirements for hospitals to return more disaggregated expenditure data. The three hospitals included in the pilot study of DRG costs for this project are a good indication of the variation between hospitals in the availability of cost and expenditure data. It must be accepted, however, that greater expansion and refinement in these data systems will be very dependent on developments in computerisation at the hospital level as the data demands could not be adequately fulfilled on a manual basis. A programme for computerisation of hospital data requirements has been developed by the Department of Health and is being implemented on an incremental basis, as resources allow.

The resource constraints may mean, however, that the deployment of full scale financial systems may not be as rapid as the hospitals and the Department would desire. In this event, it would be very helpful if a number of interim measures were adopted by the hospitals. One such measure would involve the adoption of a standardised cost centre breakdown for reporting financial expenditure. A standardised format has been developed by the Department of Health which covers the complete range of cost centres encountered in the hospital. The adoption of this format will greatly facilitate further studies of hospital costs and improve the potential for inter-hospital comparisons of expenditure profiles and case-mix adjusted costs. The objectives of *accuracy, comprehensiveness, quality* and *timeliness* must also be adopted for any financial systems developed if the data are to be accepted as valuable for all potential users.

A final point which should again be stressed, because it has general application for both activity and financial systems, is the importance of local responsibility for data collection as a pre-requisite for generating local commitment to the data system. This would, in turn, be expected to contribute to the maintenance of the highest standards of data quality. In return for responsibility and commitment at the local level, access to local data bases must also be facilitated as required.

International Developments

The fact that the DRG system was developed in the United States has caused some commentators to conclude that this system is specific to the US health care system. There is no doubt that the US system, essentially private and insurance based, is very different to the Irish health care system, and most other systems found in Western Europe, so concerns about the transferability of US developed systems are understandable. While the US system facilitated the supply of data, technology and

expertise for research on case-mix measurement, we have already noted in Chapter III that the suitability of the DRGs for use in other types of health care systems was a prerequisite for their development. This study, together with similar research and experimentation with DRGs in thirteen countries in Europe and a number of Australian states, provides very solid evidence for the achievement of this objective (Palmer, *et al.*, 1989). The DRGs constitute a measure of acute hospital case-mix which is not specific to any particular type of health system.

While recognising that DRGs are a stand alone case-mix measure, it must also be acknowledged that the US Medicare programme provides the longest established example of a case-mix based system of reimbursement for hospital services. As this system has now been in place since 1983, it is opportune to consider the findings of a recent comprehensive and independent evaluation of the Prospective Payment System published by the Brookings Institution.

In this book, *Medicare's New Hospital Payment System: Is It Working?*, Russell (1989) sets out to undertake an assessment of the performance of the Medicare Prospective Payment System with reference to the twin dimensions of financial savings and quality of care. Following a detailed and careful analysis of available evidence, Russell concludes, with regard to the first objective, that:

> Prospective payment has succeeded in its primary objective, slowing the growth of medicare spending...Expenditures from the Hospital Insurance Trust Fund, which pays hospital bills, are running substantially below the levels projected before prospective payment was passed: they are now expected to be $18 billion less in 1990 than was estimated in the early 1980s - a saving of about 20 per cent (p.84).

While acknowledging the significance and importance of savings of this magnitude, the author took the investigation to a greater level of detail to measure what could be considered to be the "real" savings, given the possibility that cost shifting could also have contributed to the savings observed. Changes in treatment patterns were observed, resulting in fewer hospital admissions, reduced use of tests and procedures, shorter hospital stays and the "lowest occupancy rates in four decades" (p.83). The shift of many services to the out-patient setting has resulted in substantial development of out-patient departments, day care units, home health programmes etc. It is estimated that approximately 40 per cent of *all* surgery in the US is now being done on an out-patient basis (Guterman, *et al.*, 1988; ProPAC, 1987). When the cost implications of such changes in practice patterns were taken into account, however, the savings associated with PPS continue to be very significant, and Russell concludes that:

> Even when extra spending for outpatient care, possibly due to prospective payment, is deducted, the net saving in 1990 is more than $17 billion. Studies of other payers show that the savings have not been achieved at their expense, as was initially feared might be the case. If anything, prospective payment has reduced their expenditures as well as those of the medicare programme (p.84).

With regard to the crucial question of the effect of PPS on quality of care, Russell acknowledges that while this is less easy to determine, "indirect measures of quality, such as readmission to hospitals or transfers to other institutions, offer no clear-cut signals that prospective payment has brought ill effects" (p.84). Russell notes that serious concern about quality of care received a major impetus with the move to PPS in 1983 as it had been largely taken for granted previously. The requirements covering data collection and routine quality reviews are considered to be a significant bonus arising out of the move to prospective payment.

While acknowledging the achievements of the Medicare prospective system as documented by the Russell (1989) study, it would be incorrect to conclude that the DRGs were in any way pre-ordained for use exclusively within this framework. If the DRGs are correctly recognised as a system for classifying discharges into homogeneous diagnostic groups based on expected resource use, then this misconception will be successfully repudiated. It must again be emphasised that where the required data are available, classification and applications for case-mix measures in general, and DRGs in particular, are independent of the prevailing health care system. This conclusion is supported by strategies for reform which have been proposed or adopted in a number of European countries and in Australia. A brief review follows of a select number of these proposals.

"Working for Patients", the White Paper published in the United Kingdom in January 1989 represents one such proposal for health system reform. In this White Paper, the importance of linking information about the diagnosis of patients and the cost of treatment is accorded a high priority. While research and experimentation on the development and application of case-mix measures continue, the most widely used measure in resource management sites to date has been the DRG system. Based on this experience, it is concluded that "all the evidence to date suggests that UK data can be successfully grouped into DRGs and that the resultant groups are medically valid and resource homogeneous" (Mills, 1989, p.10). The resource management initiative has now been extended to a large number of acute hospitals in England with a view to "linking improvements in the coding of medical records and experimentation in analysing activity data into case-mix groups" ("Working for Patients" (1989), 2.15). The

objective is to incorporate up to 260 acute hospitals within the resource management process by 1991-1992.

Important reforms have actually been implemented in Portugal where the allocation of budgets to hospitals for 1990 incorporated an adjustment for case mix based on DRGs (Bentes, *et al.*, 1989). In Australia, the federal government and a number of State governments have devoted substantial funds to support research and experimentation on case-mix measurement and applications, including a number of large scale projects on DRGs specifically. Hindle, *et al.*, (1990) report that "since 1985, the South Australian Health Commission has been preparing to move away from hospital budget allocations based on historical expenditures, and towards funding based on measurement of outputs" (p.2).

Given the explicit and acknowledged importance of case-mix measurement in the proposals for health system reform reviewed here, the question arises as to whether recent proposals for health system reform in Ireland portray a similar perspective. This question will now be addressed.

Health System Reform in Ireland

Two important reports dealing with different aspects of the health services in Ireland have been published in recent months: the report of the Commission on Health Funding was presented to the Minister for Health in September 1989 and the report of the Review Body on Higher Remuneration in the Public Sector (the Gleeson Report) presented its recommendations for hospital consultants to the Minister for Finance in June, 1990. The findings emerging from the present study could have significant implications for the implementation of a number of important recommendations proposed by these reports.

The Commission on Health Funding was set up in 1987 with a broad brief to examine the financing and funding of the health service as a whole. The recommendations of the Commission on the funding and financing of the acute hospital sector in particular, are of specific relevance to our interests in this study.

The approach currently in use for financing public hospitals in Ireland was described by the Commission as an approach "based on incremental budgeting, so that a hospital's allocation is, in general, based on its level of expenditure for the previous year, with adjustments made for inflationary factors, changes in service provision, and government policy on the overall level of expenditure" (p. 251). While the Commission accepted that this approach could be effective in limiting overall expenditure provided that the hospitals were not permitted to overrun their budgets, the Commission attributed the main weakness of the approach to the fact that "it sustains,

over time, the cost differences between efficient hospitals and resource-wasting ones" (p.251). From this basis, the Commission concluded that this deficiency could be best overcome by "the development of a system of measuring the output of hospitals, and relating this to their budgets. In practice this requires measuring activity in terms of the case-mix, and identifying the cost of each type of case" (p.251).

As a means of overcoming the problems identified and achieving the objectives considered crucial to the development of an efficient and effective approach to hospital funding, the main recommendation put forward by the Commission in this area was that:

> Hospitals should receive global budgets for the provision of an agreed service level. The calculation of these budgets should be based on an assessment of the activity level implied by the hospital's agreed role and catchment area, and the case-mix based cost of meeting this (p.257-258).

In considering how this approach might be implemented, the Commission noted the research on case-mix measurement and costing reported in the present study and proceeded to recommend that "the work on deriving case-mix based cost weightings should be extended to cover a wide range of acute hospitals" (p.252). A number of points were put forward as justification for this recommendation, including the fact that the pilot project (reported here) has shown that valid results can be derived from a case-mix analysis of hospital activity and hospital costs; information on the relationship between output and the cost of inputs is required if hospital management is to deliver efficient and cost effective services; and, finally, that the extension of the existing research to a greater number of hospitals would enable differences in the cost of various types of activity to be identified (p.253).

Both the research project reported in this study and the Commission on Health Funding had the same starting point where the resourcing of the acute hospital services is concerned in identifying the absence of a specified relationship between hospital resources and hospital activity as the greatest weakness in the approach currently adopted for the funding of hospital services. This research and the report of the Commission also come to the same conclusion, i.e., that an equitable and efficient basis of resource allocation to the acute hospitals requires that funding be related to the case mix treated by the hospital.

Concern about current approaches to resource allocation for hospital services was also expressed in the Report on Hospital Consultants published by the Review Body on Higher Remuneration in the Public Sector (1990) (the Gleeson Report). While this Review Body was primarily

concerned with reporting on remuneration and associated terms and conditions of employment for consultant medical staff, the views expressed on resource allocation to hospitals are important and may be summarised as follows:

> Under the traditional method of determining hospital and sub-hospital budgets there is little incentive for consultants (or other health service personnel) to maximise efficiency. Historical budgeting means that savings in a unit in one year will sometimes be punished, rather than rewarded, by a reduction in the budget the following year. This approach is obviously counterproductive and potentially wasteful of scarce resources. What is needed is a funding and budgetary approach which would give hospital personnel every incentive to seek out and support potential cost savings and efficiency improvements (p.33).

The Review Body go beyond this position statement to comment that:

> We were advised in this context by the Department of Health that it is committed to developing a resource allocation system which would link hospital budgets to the type and volume of services to be provided (p.33).

The Commission on Health Funding, the Gleeson Report and the Department of Health would therefore seem to share important common ground, i.e., that funding of hospitals should be linked in a meaningful way to the activity supported by the hospital, if resource allocation to the hospitals is to be efficient and effective.

Future Directions

This study has been primarily concerned with testing one approach to case-mix measurement and exploring potential applications for case-mix classification in the context of the acute hospital system in Ireland.

The technical issues addressed in this study, involving the assessment of data sources and the performance of the DRG system on national data, were an essential prerequisite for any attempt at introducing case-mix measurement into the hospital system at the local or national level. The study findings are strongly supportive of the introduction of a case-mix measurement system within the acute hospital system in Ireland. The structures which may offer the greatest potential for the successful achievement of this objective were discussed in detail in the previous chapter. The global budget model described in Chapter VII might provide a useful starting point for the implementation of the recommendations of both the Gleeson Report and the Commission on Health Funding for the specification of the relationship between funding and activity within the

resource allocation process. In the analysis of hospital activity presented in both Chapters I and V, important variations in indicators like average length of stay by hospital type were identified. While we have not been in a position to undertake an investigation in this study into possible explanations for the variations observed, a future research undertaking should consider the extent to which differences in the funding process applicable to the voluntary public hospitals and the regional hospitals have an effect on resource requirements and resource use by hospital type.

In addition to commenting on desired reforms in the resource allocation process, the Gleeson Report also recognised the importance of defining a role for clinicians in management within the hospital. Some adaptation of the matrix management model described in Chapter VII could make an important contribution towards fulfilling the need "to establish a mechanism for regular discussions between management and consultants (both individually and collectively) on the question of resource allocation" (Gleeson Report, 1990, p.33).

As the DRG system is limited to the in-patient care setting, this study has also, of necessity, concentrated on the analysis and costing of in-patient hospital activity. Activity in the out-patient and day treatment setting is also of great importance and has been growing considerably in recent years. The reasons for this growth are multi-factorial, and relate to such developments as advancements in treatment practices, medical technology and rising health care costs. The fact that the development of facilities for day and out-patient treatment as an alternative to in-patient care, where appropriate, is an explicit policy objective for the Irish health services has also contributed to the growth in activity in these sectors (*Health, The Wider Dimensions,* 1986). Information on activity in day centres and out-patient care is, however, limited and inadequate within the Irish system and would constitute serious difficulties for any study directed at the measurement and analysis of non-inpatient activity. This is a problem which should be recognised and rectified as there is no denying the fact that a comprehensive study of hospital activity should cover the day and out-patient setting, in addition to the in-patient setting. If the current trends continue, a study of this nature will become a priority before too long if planning and management are to truly reflect the nature of the activity supported across the hospital system as a whole.

While this study has, of necessity, been more concerned with technical issues of case-mix measurement and classification, it would be erroneous to conclude that this implies less than full commitment to the achievement and maintenance of the highest standards of quality of care within our hospital system. Safeguarding quality of care must be a priority for all

concerned with advancements within the Irish hospital system.

As the development of systems of medical audit are now actively supported by both consultants and management in Irish hospitals, these systems will have to be applied within some type of case- mix framework if they are to be effective (Gleeson Report, 1990). DRGs can be used as a means of performance measurement and utilisation review which, in turn, may form the basis for quality assurance mechanisms (Wiley and Leidl, 1989). The constraints prevailing for this study meant that this area of application could not be adequately addressed here but most definitely warrants investigation in the future.

In conclusion, it is worth reiterating that the integration of a valid and reliable case-mix measure within the resource allocation process for hospital services, combined with the application of a case-mix framework for internal management at the hospital level, should offer greatly expanded opportunities for achieving both equity and efficiency within the hospital system and is worthy of serious pursuit at both the policy and the operational level. Efficiency in resource use is an important component of any policy aimed at improving care standards for all users of the acute hospital system. Approaches to resource allocation and management techniques which help to improve efficiency must, therefore, be seen as an aid towards the optimisation of the quality of care delivered through our hospitals.

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Appendix 1

Drg	DRG Title
001	CRANIOTOMY AGE >17 EXCEPT FOR TRAUMA
002	CRANIOTOMY FOR TRAUMA >17
003	CRANIOTOMY AGE <18
004	SPINAL PROCEDURES
005	EXTRACRANIAL VASCULAR PROCEDURES
006	CARPAL TUNNEL RELEASE
007	PERIPH + CRANIAL NERVE + OTHER NERV SYST PROC AGE >69 +/OR C.C.
008	PERIPH + CRANIAL NERVE + OTHER NERV SYST PROC AGE <70 W/O C.C.
009	SPINAL DISORDERS + INJURIES
010	NERVOUS SYSTEM NEOPLASMS AGE >69 AND/OR C.C.
011	NERVOUS SYSTEM NEOPLASMS AGE <70 W/O C.C
012	DEGENERATIVE NERVOUS SYSTEM DISORDERS
013	MULTIPLE SCLEROSIS + CEREBELLAR ATAXIA
014	SPECIFIC CEREBROVASCULAR DISORDERS EXCEPT TIA
015	TRANSIENT ISCHEMIC ATTACKS
016	NONSPECIFIC CEREBROVASCULAR DISORDERS WITH C.C.
017	NONSPECIFIC CEREBROVASCULAR DISORDERS W/O C.C
018	CRANIAL + PERIPHERAL NERVE DISORDERS AGE >69 AND/OR C.C.
019	CRANIAL + PERIPHERAL NERVE DISORDERS AGE <70 W/O C.C.
020	NERVOUS SYSTEM INFECTION EXCEPT VIRAL MENINGITIS
021	VIRAL MENINGITIS
022	HYPERTENSIVE ENCEPHALOPATHY
023	NONTRAUMATIC STUPOR + COMA
024	SIEZURE + HEADACHE AGE >69 AND/OR C.C.
025	SEIZURE + HEADACHE AGE 18-69 W/O C.C.
026	SEIZURE + HEADACHE AGE 0-17
027	TRAUMATIC STUPOR + COMA, COMA >1 HR
028	TRAUMATIC STUPOR + COMA, COMA <1 HR AGE >69 AND/OR C.C.
029	TRAUMATIC STUPOR + COMA <1 HR AGE 18-69 W/O C.C.
030	TRAUMATIC STUPOR + COMA <1 HR AGE 0-17
031	CONCUSSION AGE >69 AND/OR C.C.
032	CONCUSSION AGE 18-69 W.O C.C.
033	CONCUSSION AGE 0-17
034	OTHER DISORDERS OF NERVOUS SYSTEM AGE >69 AND/OR C.C.
035	OTHER DISORDERS OF NERVOUS SYSTEM AGE <70 W.O C.C.
036	RETINAL PROCEDURES
037	ORBITAL PROCEDURES
038	PRIMARY IRIS PROCEDURES
039	LENS PROCEDURES
040	EXTRAOCULAR PROCEDURES EXCEPT ORBIT >17
041	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGED 0-17
042	INTRAOCULAR PROCEDURES EXCEPT RETINA, IRIS + LENS
043	HYPHEMA
044	ACUTE MAJOR EYE INFECTIONS
045	NEUROLOGICAL EYE DISORDERS
046	OTHER DISORDERS OF THE EYE AGE >17 WITH C.C.
047	OTHER DISORDERS OF THE EYE AGE >17 W/O C.C.
048	OTHER DISORDERS OF THE EYE AGE 0-17
049	MAJOR HEAD + NECK PROCEDURES
050	SIALOADENECTOMY
051	SALIVARY GLAND PROCEDURES EXCEPT SIALOADENECTOMY
052	CLEFT LIP + PALATE REPAIR
053	SINUS + MASTOID PROCEDURES AGE >17
054	SINUS + MASTOID PROCEDURES AGE 0-17
055	MISCELLANEOUS EAR,NOSE + THROAT PROCEDURES

Drg	DRG Title
056	RHINOPLASTY
057	T+A PROC EXCEPT TONSILLECTOMY +/OR ADENOIDECTOMY ONLY, AGE >17
058	T+A PROC EXCEPT TONSILLECTOMY +/OR ADENOIDECTOMY ONLY, AGE 0-17
059	TONSILLECTOMY AND/OR ADENOIDECTOMY ONLY AGE >17
060	TONSILLECTOMY AND/OR ADENOIDECTOMY ONLY AGE 0-17
061	MYRINGOTOMY AGE >17
062	MYRINGOTOMY AGE 0-17
063	OTHER EAR, NOSE + THROAT O.R. PROCEDURES
064	EAR, NOSE + THROAT MALIGNANCY
065	DYSEQUILIBRIUM
066	EPISTAXIS
067	EPIGLOTTITIS
068	OTITIS MEDIA + URI AGE >69 AND/OR C.C.
069	OTITIS MEDIA + URI AGE 18-69 W/O C.C.
070	OTITIS MEDIA + URI AGE 0-17
071	LARYNGOTRACHEITIS
072	NASAL TRAUMA + DEFORMITY
073	OTHER EAR, NOSE + THROAT DIAGNOSES AGE >17
074	OTHER EAR, NOSE + THROAT DIAGNOSES AGE 0-17
075	MAJOR CHEST PROCEDURES
076	O.R. PROC ON THE RESP SYSTEM EXCEPT MAJOR CHEST WITH C.C.
077	O.R. PROC ON THE RESP SYSTEM EXCEPT MAJOR CHEST W/O C.C.
078	PULMONARY EMBOLISM
079	RESPIRATORY INFECTIONS + INFLAMMATIONS AGE >69 AND/OR C.C.
080	RESPIRATORY INFECTIONS + INFLAMMATIONS AGE 18-69 W/O C.C.
081	RESPIRATORY INFECTIONS + INFLAMMATIONS AGE 0-17
082	RESPIRATORY NEOPLASMS
083	MAJOR CHEST TRAUMA AGE >69 AND/OR C.C.
084	MAJOR CHEST TRAUMA AGE <70 W/O C.C.
085	PLEURAL EFFUSION AGE >69 AND/OR C.C.
086	PLEURAL EFFUSION AGE <70 W/O C.C.
087	PULMONARY EDEMA + RESPIRATORY FAILURE
088	CHRONIC OBSTRUCTIVE PULMONARY DISEASE
089	SIMPLE PNEUMONIA + PLEURISY AGE >69 AND/OR C.C.
090	SIMPLE PNEUMONIA + PLEURISY AGE 18-69 W/O C.C.
091	SIMPLE PNEUMONIA + PLEURISY AGE 0-17
092	INTERSTITIAL LUNG DISEASE AGE >69 AND/OR C.C.
093	INTERSTITIAL LUNG DISEASE AGE <70 W/O C.C.
094	PNEUMOTHORAX AGE >69 AND/OR C.C.
095	PNEUMOTHORAX AGE <70 W/O C.C.
096	BRONCHITIS + ASTHMA AGE>69 AND/OR C.C.
097	BRONCHITIS + ASTHMA AGE 18-69 W/O C.C.
098	BRONCHITIS + ASTHMA AGE 0-17
099	RESPIRATORY SIGNS + SYMPTOMS AGE >69 AND/OR C.C.
100	RESPIRATORY SIGNS + SYMPTOMS AGE <70 W/O C.C.
101	OTHER RESPIRATORY DIAGNOSES AGE >69 AND/OR C.C.
102	OTHER RESPIRATORY DIAGNOSES AGE <70
103	HEART TRANSPLANT
104	CARDIAC VALVE PROCEDURE WITH PUMP + WITH CARDIAC CATH
105	CARDIAC VALVE PROCEDURE WITH PUMP + W/O CARDIAC CATH
106	CORONARY BYPASS WITH CARDIAC CATH
107	CORONARY BYPASS W/O CARDIAC CATH
108	CARDIOTHOR PROC, EXCEPT VALVE + CORONARY BYPASS, WITH PUMP
109	CARDIOTHORACIC PROCEDURES W/O PUMP
110	MAJOR RECONSTRUCTIVE VASCULAR PROCEDURES AGE >69 AND/OR C.C.

Drg	DRG Title
111	MAJOR RECONSTRUCTIVE VASCULAR PROCEDURES AGE <70 W/O C.C.
112	VASCULAR PROCEDURES EXCEPT MAJOR RECONSTRUCTION
113	AMPUTATION FOR CIRC SYSTEM DISORDERS EXCEPT UPPER LIMB + TOE
114	UPPER LIMB + TOE AMPUTATION FOR CIRC SYSTEM DISORDERS
115	PERMANENT CARDIAC PACEMAKER IMPLANT WITH AMI OR CHF
116	PERMANENT CARDIAC PACEMAKER IMPLANT W/O AMI OR CHF
117	CARDIAC PACEMAKER REPLACE + REVIS EXC PULSE GEN REPL ONLY
118	CARDIAC PACEMAKER PULSE GENERATOR REPLACEMENT ONLY
119	VEIN LIGATION + STRIPPING
120	OTHER O.R. PROCEDURES ON THE CIRCULATORY SYSTEM
121	CIRCULATORY DISORDERS WITH AMI + C.V. COMP. DISCH. ALIVE
122	CIRCULATORY DISORDERS WITH AMI W/O C.V. COMP. DISCH. ALIVE
123	CIRCULATORY DISORDERS WITH AMI, EXPIRED
124	CIRCULATORY DISORDERS EXC AMI, WITH CARD CATH + COMPLEX DIAG
125	CIRCULATORY DISORDERS EXC AMI WITH CARD CATH W/O COMPLEX DIAG
126	ACUTE + SUBACUTE ENDOCARDITIS
127	HEART FAILURE + SHOCK
128	DEEP VEIN THROMBOPHLEBITIS
129	CARDIAC ARREST, UNEXPLAINED
130	PERIPHERAL VASCULAR DISORDERS AGE >69 AND/OR C.C.
131	PERIPHERAL VASCULAR DISORDERS AGE <70 W/O C.C.
132	ATHEROSCLEROSIS AGE >69 AND/OR C.C.
133	ATHEROSCLEROSIS AGE <70 W/O C.C.
134	HYPERTENSION
135	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE >69 AND/OR C.C.
136	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE 18-69 W/O C.C.
137	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE 0-17
138	CARDIAC ARRHYTHMIA + CONDUCTION DISORDERS AGE >69 AND/OR C.C.
139	CARDIAC ARRHYTHMIA + CONDUCTION DISORDERS AGE <70 W/O C.C.
140	ANGINA PECTORIS
141	SYNCOPE + COLLAPSE AGE >69 AND/OR C.C.
142	SYNCOPE + COLLAPSE AGE <70 W/O C.C.
143	CHEST PAIN
144	OTHER CIRCULATORY DIAGNOSES WITH C.C.
145	OTHER CIRCULATORY DIAGNOSES W/O C.C.
146	RECTAL RESECTION AGE >69 AND/OR C.C.
147	RECTAL RESECTION AGE <70 W/O C.C.
148	MAJOR SMALL + LARGE BOWEL PROCEDURES AGE >69 AND/OR C.C.
149	MAJOR SMALL + LARGE BOWEL PROCEDURES AGE <70 W/O C.C.
150	PERITONEAL ADHESIOLYSIS AGE >69 AND/OR C.C.
151	PERITONEAL ADHESIOLYSIS AGE <70 W/O C.C.
152	MINOR SMALL + LARGE BOWEL PROCEDURES AGE >69 AND/OR C.C.
153	MINOR SMALL + LARGE BOWEL PROCEDURES AGE <70 W.O C.C.
154	STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE >69 AND/OR C.C.
155	STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE 18-69 W/O C.C.
156	STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE 0-17
157	ANAL PROCEDURES AGE >69 AND/OR C.C.
158	ANAL PROCEDURES AGE <70 W/O C.C.
159	HERNIA PROCEDURES EXCEPT INGUINAL + FEMORAL AGE >69 AND/OR C.C.
160	HERNIA PROCEDURES EXCEPT INGUINAL + FEMORAL AGE 18-69 W/O C.C.
161	INGUINAL + FEMORAL HERNIA PROCEDURES AGE >69 AND/OR C.C.
162	INGUINAL + FEMORAL HERNIA PROCEDURES AGE 18-69 W/O C.C.
163	HERNIA PROCEDURES AGE 0-17
164	APPENDECTOMY WITH COMPLICATED PRINC. DIAG AGE >69 AND/OR C.C.
165	APPENDECTOMY WITH COMPLICATED PRINC.DIAG AGE <70 W/O C.C.

Drg	DRG Title
166	APPENDECTOMY W/O COMPLICATED PRINC. DIAG AGE >69 AND/OR C.C.
167	APPENDECTOMY W/O COMPLICATED PRINC. DIAG AGE <70 W/O C.C.
168	PROCEDURES ON THE MOUTH AGE >69 AND/OR C.C.
169	PROCEDURES ON THE MOUTH AGE <70 W/O C.C.
170	OTHER DIGESTIVE SYSTEM PROCEDURES AGE >69 AND/OR C.C.
171	OTHER DIGESTIVE SYSTEM PROCEDURES AGE<70 W/O C.C.
172	DIGESTIVE MALIGNANCY AGE >69 AND/OR C.C.
173	DIGESTIVE MALIGNANCY AGE <70 W/O C.C.
174	G.I. HEMORRHAGE AGE >69 AND/OR C.C.
175	G.I. HEMORRHAGE AGE <70 W/O C.C.
176	COMPLICATED PEPTIC ULCER
177	UNCOMPLICATED PEPTIC ULCER AGE >69 AND/OR C.C.
178	UNCOMPLICATED PEPTIC ULCER AGE <70 W/O C.C.
179	INFLAMMATORY BOWEL DISEASE
180	G.I. OBSTRUCTION AGE >69 AND/OR C.C.
181	G.I. OBSTRUCTION AGE <70 W/O C.C.
182	ESOPHAGITIS, GASTROENT. + MISC. DIGEST. DIS AGE >69 +/OR C.C.
183	ESOPHAGITIS, GASTROENT. + MISC. DIGEST. DIS AGE 18-69 W/O C.C.
184	ESOPHAGITIS, GASTROENTERITIS + MISC. DIGEST. DISORDERS AGE 0-17
185	DENTAL + ORAL DIS. EXC EXTRACTIONS + RESTORATIONS, AGE >17
186	DENTAL + ORAL DIS. EXC EXTRACTIONS + RESTORATIONS, AGE 0-17
187	DENTAL EXTRACTIONS + RESTORATIONS
188	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >69 AND/OR C.C.
189	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 18-69 W/O C.C.
190	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 0-17
191	MAJOR PANCREAS, LIVER + SHUNT PROCEDURES
192	MINOR PANCREAS, LIVER + SHUNT PROCEDURES
193	BILIARY TRACT PROC EXC TOT CHOLECYSTECTOMY AGE >69 +/OR C.C.
194	BILIARY TRACT PROC EXC TOT CHOLECYSTECTOMY AGE <70 W/O C.C.
195	TOTAL CHOLECYSTECTOMY WITH C.D.E. AGE >69 AND/OR C.C.
196	TOTAL CHOLECYSTECTOMY WITH C.D.E. AGE <70 W/O C.C.
197	TOTAL CHOLECYSTECTOMY W/O C.D.E. AGE >69 AND/OR C.C.
198	TOTAL CHOLECYSTECTOMY W/O C.D.E. AGE <70 W/O C.C.
199	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR MALIGNANCY
200	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY
201	OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES
202	CIRRHOSIS + ALOCHOLIC HEPATITIS
203	MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS
204	DISORDERS OR PANCREAS EXCEPT MALIGNANCY
205	DISORDERS OF LIVER EXC MALIG, CIRR, ALC HEPA AGE >69 AND/OR C.C.
206	DISORDERS OF LIVER EXC MALIG, CIRR, ALC HEPA AGE <70 W/O C.C.
207	DISORDERS OF THE BILIARY TRACT AGE >69 AND/OR C.C.
208	DISORDERS OF THE BILIARY TRACT AGE <70 W/O C.C.
209	MAJOR JOINT PROCEDURES
210	HIP+FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >69 AND/OR C.C.
211	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 18-69 W/O C.C.
212	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 0-17
213	AMPUTATIONS FOR MUSCULOSKELETAL SYSTEM + CONN. TISSUE DISORDERS
214	BACK + NECK PROCEDURES AGE >69 AND/OR C.C.
215	BACK + NECK PROCEDURES AGE <70 W/O C.C.
216	BIOPSIES OF MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSUE
217	WND DEBRID + SKN GRAFT EXC HAND, FOR MUSCSKELETAL + CONN. TISS. DIS
218	LOWER EXTREM + HUMER PROC EXC HIP, FOOT, FEMUR AGE >69 +/OR C.C.
219	LOWER EXTREM + HUMER PROC EXC HIP, FOOT, FEMUR AGE 18-69 W/O C.C.
220	LOWER EXTREM + HUMER PROC EXC HIP, FOOT, FEMUR AGE 0-17

Drg	DRG Title
221	KNEE PROCEDURES AGE >69 AND/OR C.C.
222	KNEE PROCEDURES AGE <70 W/O C.C.
223	UPPER EXTREMITY PROC EXC HUMERUS + HAND AGE >69 AND/OR C.C.
224	UPPER EXTREMITY PROC EXC HUMERUS + HAND AGE <70 W/O C.C.
225	FOOT PROCEDURES
226	SOFT TISSUE PROCEDURES AGE >69 AND/OR C.C.
227	SOFT TISSUE PROCEDURES AGE <70 W/O C.C.
228	GANGLION (HAND) PROCEDURES
229	HAND PROCEDURES EXCEPT GANGLION
230	LOCAL EXCISION + REMOVAL OF INT FIX DEVICES OF HIP FEMUR
231	LOCAL EXCISION + REMOVAL OF INT FIX DEVICES EXCEPT HIP + FEMUR
232	ARTHROSCOPY
233	OTHER MUSCULOSKELET SYS + CONN TISS O.R. PROC AGE >69 +/OR C.C.
234	OTHER MUSCULOSKELET SYS + CONN TISS O.R. PROC AGE <70 W/O C.C.
235	FRACTURES OF FEMUR
236	FRACTURES OF HIP + PELVIS
237	SPRAINS, STRAINS, + DISLOCATIONS OF HIP, PELVIS + THIGH
238	OSTEOMYELITIS
239	PATHOLOGICAL FRACTURES + MUSCULOSKELETAL + CONN. TISS. MALIGNANCY
240	CONNECTIVE TISSUE DISORDERS AGE >69 AND/OR C.C.
241	CONNECTIVE TISSUE DISORDERS AGE <70 W/O C.C.
242	SEPTIC ARTHRITIS
243	MEDICAL BACK PROBLEMS
244	BONE DISEASES + SEPTIC ARTHROPATHY AGE >69 AND/OR C.C.
245	BONE DISEASES + SEPTIC ARTHROPATHY AGE >69 W/O C.C.
246	NON-SPECIFIC ARTHROPATHIES
247	SIGNS + SYMPTONS OF MUSCULOSKELETAL SYSTEM + CONN TISSUE
248	TENDONITIS, MYOSITIS + BURSITIS
249	AFTERCARE, MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSUE
250	FX, SPRNS, STRNS + DISL OF FOREARM, HAND, FOOT AGE >69 +/OR C.C.
251	FX, SPRNS, STRNS + DISL OF FOREARM, HAND, FOOT AGE 18-69 W/O C.C.
252	FX, SPRNS, STRNS + DISL OF FOREARM, HAND, FOOT AGE 0-17
253	FX, SPRNS, STRNS + DISL OF UPARM, LOWLEG EX FOOT AGE >69 +/OR C.C.
254	FX, SPRNS, STRNS + DISL OF UPARM, LOWLEG EX FOOT AGE 18-69 W/O C.C.
255	FX, SPRNS, STRNS + DISL OF UPARM, LOWLEG EX FOOT AGE 0-17
256	OTHER DIAGNOSES OF MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSUE
257	TOTAL MASTECTOMY FOR MALIGNANCY AGE >69 AND/OR C.C.
258	TOTAL MASTECTOMY FOR MALIGNANCY AGE <70 W/O C.C.
259	SUBTOTAL MASTECTOMY FOR MALIGNANCY AGE >69 AND/OR C.C.
260	SUBTOTAL MASTECTOMY FOR MALIGNANCY AGE <70
261	BREAST PROC FOR NON-MALIG EXCEPT BIOPSY + LOC EXC
262	BREAST BIOPSY + LOCAL EXCISION FOR NON-MALIGNANCY
263	SKIN GRAFTS FOR SKIN ULCER OR CELLULITIS AGE >69 AND/OR C.C.
264	SKIN GRAFTS FOR SKIN ULCER OR CELLULITIS AGE <70 W/O C.C.
265	SKIN GRAFTS EXCEPT FOR SKIN ULCER OR CELLULITIS WITH C.C.
266	SKIN GRAFTS EXCEPT FOR SKIN ULCER OR CELLULITIS W/O C.C.
267	PERIANAL + PILONIDAL PROCEDURES
268	SKIN, SUBCUTANEOUS TISSUE + BREAST PLASTIC PROCEDURES
269	OTHER SKIN, SUBCUT TISS + BREAST O.R. PROC AGE >69 +/OR C.C.
270	OTHER SKIN, SUBCUT TISS + BREAST O.R. PROC AGE <70 W/O C.C.
271	SKIN ULCERS
272	MAJOR SKIN DISORDERS AGE >69 AND/OR C.C.
273	MAJOR SKIN DISORDERS AGE <70 W/O C.C.
274	MALIGNANT BREAST DISORDERS AGE >69 AND/OR C.C.
275	MALIGNANT BREAST DISORDERS AGE <70 W/O C.C.

Drg	DRG Title
276	NON-MALIGNANT BREAST DISORDERS
277	CELLULITIS AGE >69 AND/OR C.C.
278	CELLULITIS AGE 19-69 W/O C.C.
279	CELLULITIS AGE 0-17
280	TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE >69 +/OR C.C.
281	TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE 18-69 W/O C.C.
282	TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE 0-17
283	MINOR SKIN DISORDERS AGE >69 AND/OR C.C.
284	MINOR SKIN DISORDERS AGE <70 W/O C.C.
285	AMPUTATIONS FOR ENDOCRINE, NUTRITIONAL + METABOLIC DISORDERS
286	ADRENAL + PITUITARY PROCEDURES
287	SKIN GRAFTS + WOUND DEBRIDE FOR ENDOC, NUTRIT + METAB DISORDERS
288	O.R. PROCEDURES FOR OBESITY
289	PARATHYROID PROCEDURES
290	THYROID PROCEDURES
291	THYROGLOSSAL PROCEDURES
292	OTHER ENDOCRINE, NUTRIT + METAB O.R. PROC AGE >69 +/OR C.C.
293	OTHER ENDOCRINE, NUTRIT + METAB O.R. PROC AGE <70 W/O C.C.
294	DIABETES AGE => 36
295	DIABETES AGE 0-35
296	NUTRITIONAL + MISC. METABOLIC DISORDERS AGE >69 AND/OR C.C.
297	NUTRITIONAL + MISC. METABOLIC DISORDERS AGE 18-69 W/O C.C.
298	NUTRITIONAL + MISC. METABOLIC DISORDERS AGE 0-17
299	INBORN ERRORS OF METABOLISM
300	ENDOCRINE DISORDERS AGE >69 AND/OR C.C.
301	ENDOCRINE DISORDERS AGE <70 W/O C.C.
302	KIDNEY TRANSPLANT
303	KIDNEY, URETER + MAJOR BLADDER PROCEDURE FOR NEOPLASM
304	KIDNEY, URETER + MAJOR BLDR PROC FOR NON-MALIG AGE >69 +/OR C.C.
305	KIDNEY, URETER + MAJOR BLDR PROC FOR NON-MALIG AGE <70 W/O C.C.
306	PROSTATECTOMY AGE >69 AND/OR C.C.
307	PROSTATECTOMY AGE <70 W/O C.C.
308	MINOR BLADDER PROCEDURES AGE >69 ANDL/OR C.C.
309	MINOR BLADDER PROCEDURES AGE <70 W/O C.C.
310	TRANSURETHRAL PROCEDURES AGE >69 AND/OR C.C.
311	TRANSURETHRAL PROCEDURES AGE <70 W/O C.C.
312	URETHRAL PROCEDURES, AGE >69 AND/OR C.C.
313	URETHRAL PROCEDURES, AGE 18-69 W/O C.C.
314	URETHRAL PROCEDURES, AGE 0-17
315	OTHER KIDNEY + URINARY TRACT O.R. PROCEDURES
316	RENAL FAILURE
317	ADMIT FOR RENAL DIALYSIS
318	KIDNEY + URINARY TRACT NEOPLASMS AGE >69 AND/OR C.C.
319	KIDNEY + URINARY TRACT NEOPLASMS AGE <70 W/O C.C.
320	KIDNEY + URINARY TRACT INFECTIONS AGE >69 AND/OR C.C.
321	KIDNEY + URINARY TRACT INFECTIONS AGE 18-69 W/O C.C.
322	KIDNEY + URINARY TRACT INFECTIONS AGE 0-17
323	URINARY STONES AGE >69 AND/OR C.C.
324	URINARY STONES AGE <70 W/O C.C.
325	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE >69 AND/OR C.C.
326	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE 18-69 W/O C.C.
327	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE 0-17
328	URETHRAL STRICTURE AGE >69 AND/OR C.C.
329	URETHRAL STRICTURE AGE 18-69 W/O C.C.
330	URETHRAL STRICTURE AGE 0-17

Drg	DRG Title
331	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE >69 AND/OR C.C.
332	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE 18-69 W/O C.C.
333	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE 0-17
334	MAJOR MALE PELVIC PROCEDURES WITH C.C.
335	MAJOR MALE PELVIC PROCEDURES W/O C.C.
336	TRANSURETHRAL PROSTATECTOMY AGE AND/OR C.C.
337	TRANSURETHRAL PROSTATECTOMY AGE <70 W/O C.C.
338	TESTES PROCEDURES, FOR MALIGNANCY
339	TESTES PROCEDURES, NON-MALIGNANT AGE >17
340	TESTES PROCEDURES, NON-MALIGNANT AGE 0-17
341	PENIS PROCEDURES
342	CIRCUMCISION AGE >17
343	CIRCUMCISION AGE 0-17
344	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROCEDURES FOR MALIGNANCY
345	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXCEPT FOR MALIG
346	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, AGE >69 AND/OR C.C.
347	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, AGE W/O C.C.
348	BENIGN PROSTATIC HYPERTROPHY AGE >69 AND/OR C.C.
349	BENIGN PROSTATIC HYPERTROPHY AGE <70 W/O C.C.
350	INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM
351	STERILIZATION, MALE
352	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES
353	PELVIC EVISCERATION, RADICAL HYSTERECTOMY + VULVECTOMY
354	NON-RADICAL HYSTERECTOMY AGE >69 AND/OR C.C.
355	NON-RADICAL HYSTERECTOMY AGE <70 W/O C.C.
356	FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES
357	UTERUS + ADNEXA PROCEDURES, FOR MALIGNANCY
358	UTERUS + ADNEXA PROC FOR NON-MALIGNANCY EXCEPT TUBAL INTERRUPT
359	TUBAL INTERRUPTION FOR NON-MALIGNANCY
360	VAGINA, CERVIX + VULVA PROCEDURES
361	LAPAROSCOPY + ENDOSCOPY (FEMALE) EXCEPT TUBAL INTERRUPTION
362	LAPAROSCOPIC TUBAL INTERRUPTION
363	D+C, CONIZATION + RADIO-IMPLANT, FOR MALIGNANCY
364	D+C, CONIZATION EXCEPT FOR MALIGNANCY
365	OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES
366	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM AGE >69 AND/OR C.C.
367	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM AGE <70 W/O C.C.
368	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM
369	MENSTRUAL + OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS
370	CESAREAN SECTION WITH C.C.
371	CESAREAN SECTION W/O C.C.
372	VAGINAL DELIVERY WITH COMPLICATING DIAGNOSES
373	VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES
374	VAGINAL DELIVERY WITH STERILIZATION AND/OR D+C
375	VAGINAL DELIVERY WITH O.R. PROCEDURE EXCEPT STERIL AND/OR D+C
376	POSTPARIUM DIAGNOSES W/O O.R. PROCEDURE
377	POSTPARTUM DIAGNOSES WITH O.R. PROCEDUPE
378	ECTOPIC PREGNANCY
379	THREATENED ABORTION
380	ABORTION W/O D+C
381	ABORTION WITH D+C
382	FALSE LABOR
383	OTHER ANTEPARTUM DIAGNOSES WITH MEDICAL COMPLICATIONS
384	OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS
385	NEONATES, DIED OR TRANSFERRED

Drg	DRG Title
386	EXTREME IMMATURITY, NEONATE
387	PREMATURITY WITH MAJOR PROBLEMS
388	PREMATURITY W/O MAJOR PROBLEMS
389	FULL TERM NEONATE WITH MAJOR PROBLEMS
390	NEONATES WITH OTHER SIGNIFICANT PROBLEMS
391	NORMAL NEWBORNS
392	SPLENECTOMY AGE >17
393	SPLENECTOMY AGE 0-17
394	OTHER O.R. PROCEDURES OF THE BLOOD + BLOOD FORMING ORGANS
395	RED BLOOD CELL DISORDERS AGE 0-17
396	RED BLOOD CELL DISORDERS AGE 0-17
397	COAGULATION DISORDERS
398	RETICULOENDOTHELIAL + IMMUNITY DISORDERS AGE >69 AND/OR C.C.
399	RETICULOENDOTHELIAL + IMMUNITY DISORDERS AGE <70 W/O C.C.
400	LYMPHOMA OR LEUKEMIA WITH MAJOR O.R. PROCEDURE
401	LYMPHOMA OR LEUKEMIA WITH MINOR O.R. PROC AGE >69 AND/OR C.C.
402	LYMPHOMA OR LEUKEMIA WITH MINOR O.R. PROCEDURE AGE <70 W/O C.C.
403	LYMPHOMA OR LEUKEMIA AGE >69 AND/OR C.C.
404	LYMPHOMA OR LEUKEMIA AGE 18-69 W/O C.C.
405	LYMPHOMA OR LEUKEMIA AGE 0-17
406	MYELOPROLIF DISORD OR POORLY DIFF NEOPLASM W MAJ O.R. PROC + C.C.
407	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W/O C.C.
408	MYELOPROLIF DISORD OR POORLY DIFF NEOPL WITH MINOR O.R. PROC
409	RADIOTHERAPY
410	CHEMOTHERAPY
411	HISTORY OF MALIGNANCY W/O ENDOSCOPY
412	HISTORY OF MALIGNANCY WITH ENDOSCOPY
413	OTHR MYELOPROLIF DISORD OR POORLY DIFF NEOPL DX AGE >69 +/OR C.C.
414	OTHR MYELOPROLIF DISORD OR POORLY DIFF NEOPL DX AGE <70 W/O C.C.
415	O.R. PROCEDURE FOR INFECTIOUS + PARASITIC DISEASES
416	SEPTECEMIA AGE >17
417	SEPTECEMIA AGE 0-17
418	POSTOPERATIVE + POST-TRAUMATIC INFECTIONS
419	FEVER OF UNKNOWN ORIGIN AGE >69 AND/OR C.C.
420	FEVER OF UNKNOWN ORIGIN AGE 18-69 W/O C.C.
421	VIRAL ILLNESS AGE >17
422	VIRAL ILLNESS + FEVER OF UNKNOWN ORIGIN AGE 0-17
423	OTHER INFECTIOUS + PARASITIC DISEASES DIAGNOSES
424	O.R. PROCEDURES WITH PRINCIPAL DIAGNOSIS OF MENTAL ILLNESS
425	ACUTE ADJUST REACT + DISTURBANCES OF PSYCHOSOCIAL DYSFUNCTION
426	DEPRESSIVE NEUROSES
427	NEUROSES EXCEPT DEPRESSIVE
428	DISORDERS OF PERSONALITY + IMPULSE CONTROL
429	ORGANIC DISTURBANCES + MENTAL RETARDATION
430	PSYCHOSES
431	CHILDHOOD MENTAL DISORDERS
432	OTHER DIAGNOSES OF MENTAL DISORDERS
433	SUBSTANCE USE + SUBST INDUCED ORGANIC MENTAL DISORDERS, LEFT AMA
434	DRUG DEPENDENCE
435	DRUG USE EXCEPT DEPENDENCE
436	ALCOHOL DEPENDENCE
437	ALCOHOL USE EXCEPT DEPENDENCE
438	ALCOHOL + SUBSTANCE INDUCED ORGANIC MENTAL SYNDROME
439	SKIN GRAFTS FOR INJURIES
440	WOUND DEBRIDEMENTS FOR INJURIES

Drg	DRG Title
441	HAND PROCEDURES FOR INJURIES
442	OTHER O.R. PROCEDURES FOR INJURIES AGE >69 AND/OR C.C.
443	OTHER O.R. PROCEDURES FOR INJURIES AGE <70 W/O C.C.
444	MULTIPLE TRAUMA AGE >69 AND/OR C.C.
445	MULTIPLE TRAUMA AGE 18-69 W/O C.C.
446	MULTIPLE TRAUMA AGE 0-17
447	ALLERGIC REACTIONS AGE >17
448	ALLERGIC REACTIONS AGE 0-17
449	TOXIC EFFECTS OF DRUGS AGE >69 AND/OR C.C.
450	TOXIC EFFECTS OF DRUGS AGE 18-69 W/O C.C.
451	TOXIC EFFECTS OF DRUGS 0-17
452	COMPLICATIONS OF TREATMENT AGE >69 AND/OR C.C.
453	COMPLICATIONS OF TREATMENT AGE <70 W/O C.C.
454	OTHER INJURIES, POISONINGS + TOXIC EFF DIAG AGE >69 AND/OR C.C.
455	OTHER INJURIES, POISONINGS + TOXIC EFF DIAG AGE <70 W/O C.C.
456	BURNS, TRANSFERRED TO ANOTHER ACUTE CARE FACILITY
457	EXTENSIVE BURNS
458	NON-EXTENSIVE BURNS WITH SKIN GRAFTS
459	NON-EXTENSIVE BURNS WITH WOUND DEBRIDEMENT + OTHER O.R. PROC
460	NON-EXTENSIVE BURNS W/O O.R. PROCEDURE
461	O.R. PROC WITH DIAGNOSES OF OTHER CONTACT WITH HEALTH SERVICES
462	REHABILITATION
463	SIGNS + SYMPTOMS WITH C.C.
464	SIGNS + SYMPTOMS W.O C.C.
465	AFTERCARE WITH HISTORY OF MALIGNANCY AS SECONDARY DX
466	AFTERCARE W/O HISTORY OF MALIGNANCY AS SECONDARY DX
467	OTHER FACTORS INFLUENCING HEALTH STATUS
468	UNRELATED OR PROCEDURE
469	PDX INVALID AS DISCHARGE DIAGNOSIS
470	UNGROUPABLE

Appendix 2: Data Collection Forms for the Hospital In-Patient Enquiry and the Perinatal Reporting Scheme.

MEDICAL - IN CONFIDENCE **IRELAND - HOSPITAL INPATIENT ENQUIRY** **RECORDS SUMMARY SHEET**

(For use with discharges on or after 1 January 1990 using the ICD-9 CM manuals only)

Hospital Number

Chart Number (Case Rel. No.)

Date of Admission (Day Month Year)

Source of Admission

Date of Birth (Day Month Year)

Sex (Male = 1 Female = 2)

Marital Status (Single = 1 Married = 2 Widowed = 3 Other = 4 Unknown = 5)

Area of Residence

Consultant on Admission

Date of Discharge (Day Month Year)

Discharge Code

Was this a Day Case? (Yes,Day Case=1 No=0)

Diagnosis(es)		ICD-9 CM Diagnosis Code	Consultant
(Principal)	(1)		
(Other)	(2)		
	(3)		
	(4)		
	(5)		
	(6)		

Operation(s)/Procedure(s)		ICD-9 CM Procedure Code	Consultant
(Principal)	(1)		
(Other)	(2)		
	(3)		
	(4)		

Date of 1st Procedure (Day Month Year)

Date of Principal Procedure (Day Month Year)

For local use

Return to: HIPE Unit, ESRI, 4 Burlington Road, Dublin 4 Tel (01)- 760115

NOTIFICATION OF BIRTH –

1 To: The Planning Unit, Department of Health, Hawkins House, Dublin 2. 12

LIVE BIRTH ☐

LATE FETAL DEATH ☐ 2

HOSPITAL No. 3 CASE No. 6

NAME AND ADDRESS OF HOSPITAL

INFANT

DATE OF BIRTH 17

IF MULTIPLE BIRTH ORDER OF BIRTH No. 18 of 19

TIME OF BIRTH

SEX (Male = 1, Female = 2, Indeterminate = 3) 20

BIRTH WEIGHT 21 GRAMMES

PERIOD OF GESTATION 25 WEEKS

FATHER

COUNTY: 27

OCCUPATION 29

MOTHER

COUNTY: 31

DATE OF BIRTH 33

MARITAL STATUS (Married = 1, Single = 2, Widowed = 3, Seperated = 4, Divorced = 5) 39

DATE OF MARRIAGE 40

DATE OF LAST BIRTH 46

NO. OF PREVIOUS LIVE BIRTHS 52

NO. OF PREVIOUS CHILDREN STILL LIVING 54

NO. OF PREVIOUS LATE FETAL DEATHS 56

NO. OF PREVIOUS ABORTIONS 58

PERINATAL DEATH

TYPE OF DEATH (Early Neonatal = 1, Late Fetal = 2) 60

WAS AUTOPSY PERFORMED (Yes = 1, No = 2) 61

AGE AT DEATH 62 DAYS 63 HOURS

PLACE OF DEATH 65

IF LFD, DID DEATH OCCUR BEFORE LABOUR (1) DURING LABOUR (2) NOT KNOWN (3) 68

CAUSE OF DEATH

MAIN DISEASE OR CONDITION IN FETUS OR INFANT

69

OTHER DISEASES OR CONDITIONS IN FETUS OR INFANT

73

MAIN MATERNAL DISEASE OR CONDITION AFFECTING FETUS OR INFANT

77

OTHER MATERNAL DISEASE OR CONDITION AFFECTING FETUS OR INFANT

81

2 DUPLICATE 2 – 11 FROM CARD 1

MOTHER'S HEALTH

ANTE NATAL CARE THIS PREGNANCY (Hosp./Obstet. = 1, G.P. Only = 2, Combined = 3, None = 4) 12

DATE OF FIRST VISIT TO DOCTOR DURING PREGNANCY 13

DATE OF FIRST VISIT TO HOSPITAL DURING PREGNANCY 19

WAS MOTHER IMMUNE TO RUBELLA (Yes = 1, No = 2, Unknown = 3) 25

METHOD OF DELIVERY (Spontaneous = 1, Breech ± Forceps = 2, Forceps = 3, Vac. Extraction = 4, Caesarean Sec. = 5, Other = 6) 26

MAIN MATERNAL DISEASE OR CONDITON AFFECTING FETUS OR INFANT

27

OTHER MATERNAL DISEASE OR CONDITION AFFECTING FETUS OR INFANT

31

INFANT'S HEALTH

TYPE OF FEEDING (Artificial = 1, Breast = 2) 36

WAS BCG ADMINISTERED (Yes = 1, No = 2) 38

MAIN DISEASE OR CONGENITAL MALFORMATION AFFECTING INFANT

37

OTHER DISEASES OR CONGENITAL MALFORMATIONS AFFECTING INFANT

41

HOSPITAL

WAS ADMISSION BOOKED (Yes = 1, No = 2) 45

DATE OF MOTHER'S ADMISSION 46

DATE OF MOTHER'S DISCHARGE 52

DATE OF INFANT'S DISCHARGE 58

WAS INFANT TRANSFERRED TO OTHER HOSPITAL FOR MEDICAL REASONS (Yes = 1, No = 2) 64

IF 'YES', NAME OF HOSPITAL 65

GENERAL PRACTITIONER ATTENDED BY MOTHER

G.P.'s NAME AND ADDRESS

SIGNATURE DATE

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Appendix 3

Appendix 3 : Distribution of Discharges by DRG, Ireland 1984 - 1988

DRG	1984 No. Patients	1984 % of Total	1985 No. Patients	1985 % of Total	1986 No. Patients	1986 % of Total
001 CRNIOT A>=18 ~TR	359	.07	380	.08	427	.09
002 CRNIOT TR A>=18	121	.02	124	.02	131	.03
003 CRNIOT A<18	155	.03	152	.03	208	.04
004 SPINAL PROCS	110	.02	121	.02	108	.02
005 XTRACRNL VASC PR	25		16		68	.01
006 CARPL TUNNEL RLS	273	.05	285	.06	300	.06
007 OTH NRV PR A&|CC	75	.01	70	.01	48	.01
008 OTH NRV PR ~A,CC	284	.06	345	.07	238	.05
009 SPINAL DIS&INJ	131	.03	179	.04	130	.03
010 NRVS NEOPL A&|CC	121	.02	126	.03	72	.01
011 NRVS NEOPL ~A,CC	327	.07	341	.07	359	.07
012 DEGENR NRVS DIS	1250	.25	1309	.26	1338	.27
013 MP SCLER&CRBL AT	597	.12	555	.11	557	.11
014 SPEC CRBRVSC DIS	3955	.79	3709	.74	3578	.73
015 TRANS ISCHEM ATT	1240	.25	1271	.25	1369	.28
016 NONSP CBV DIS,CC	75	.01	62	.01	79	.02
017 NONSP CBC DIS~CC	230	.05	260	.05	263	.05
018 CRNL&PRPH A&|CC	196	.04	212	.04	178	.04
019 CRNL&PRPH ~A,CC	494	.10	514	.10	447	.09
020 NRV INF ~VRL MNG	688	.14	575	.11	740	.15
021 VIRAL MENINGITIS	741	.15	617	.12	578	.12
022 HYPRTNS ENCPHLOP	17		6		8	
023 NONTR STPR&COMA	169	.03	182	.04	176	.04
024 SZR&HDACH A&|CC	589	.12	578	.12	568	.12
025 SZR&HD A18-69~CC	2724	.54	2658	.53	2764	.56
026 SZR&HD A<17,~CC	2798	.56	2896	.58	2705	.55
028 TR ST,CMA<1,A&|C	1375	.27	1387	.28	1229	.25
029 TR ST,CMA<1,A<70	5392	1.07	5431	1.08	4718	.96
030 TR ST,CMA<1,A<18	6342	1.26	6322	1.26	5767	1.17
031 CONCUSSION A&|CC	17		34	.01	44	.01
032 CONCSN A18-69~CC	93	.02	109	.02	226	.05
033 CONCUSSION A<18	46	.01	68	.01	124	.03
034 OTH NRV DIS,A&|C	287	.06	296	.06	235	.05
035 OTH NRVS DIS,~AC	818	.16	930	.19	979	.20
036 RETINAL PROCS	328	.07	297	.06	263	.05
037 ORBITAL PROCS	120	.02	104	.02	78	.02
038 PRIM IRIS PROCS	197	.04	180	.04	179	.04
039 LENS PROCS	2672	.53	2464	.49	2622	.53
040 XTROC PR A>=18	1318	.26	1008	.20	1128	.23
041 XTROC PR A<18	1955	.39	1552	.31	1698	.34
042 INTROC PR,~R,I,L	428	.09	346	.07	344	.07
043 HYPHEMA	368	.07	293	.06	263	.05
044 ACUT MJR EYE INF	162	.03	139	.03	217	.04
045 NEUR EYE DISRDRS	254	.05	247	.05	269	.05
046 OTH EYE DS,A>17C	137	.03	137	.03	114	.02
047 OTH EYE DS,A>17~	2510	.50	2236	.45	2088	.42
048 OTH EYE DIS,A<18	804	.16	568	.11	526	.11
049 MJR HD&NECK PROC	32	.01	37	.01	36	.01
050 SIALOADENECTOMY	105	.02	114	.02	110	.02
051 SALV GLND PR~SIA	38	.01	53	.01	40	.01
052 CLFT LIP&PLT REP	171	.03	154	.03	169	.03

DRG	1984 No. Patients	1984 % of Total	1985 No. Patients	1985 % of Total	1986 No. Patients	1986 % of Total
053 SNS&MAST PR A>17	360	.07	339	.07	344	.07
054 SNS&MAST PR A<18	208	.04	184	.04	235	.05
055 MISC EAR,NS,THRT	2073	.41	2106	.42	1982	.40
056 RHINOPLASTY	447	.09	395	.08	473	.10
057 T&A ~TNS,AD A>17	73	.01	60	.01	47	.01
058 T&A ~TNS,AD A<18	1064	.21	982	.20	887	.18
059 TNSECT,ADCT A>17	1221	.24	1154	.23	1147	.23
060 TNSECT,ADCT A<18	5985	1.19	5486	1.10	4800	.97
061 MYRINGOTOMY A>17	196	.04	168	.03	189	.04
062 MYRINGOTOMY A<18	1653	.33	1709	.34	2271	.46
063 OTH E,N,T OR PR	1258	.25	1258	.25	359	.07
064 ER,NS,THRT MALIG	513	.10	517	.10	507	.10
065 DYSEQUILIBRIUM	637	.13	661	.13	650	.13
066 EPISTAXIS	1173	.23	1179	.24	1157	.23
067 EPIGLOTTIITIS	28	.01	17		34	.01
068 OM&URI, A&|CC	323	.06	300	.06	284	.06
069 OM&URI,A18-69~C	1459	.29	1217	.24	1031	.21
070 OM&URI, A<18	5296	1.06	5114	1.02	4753	.96
071 LARYNGOTRCHEITS	647	.13	840	.17	699	.14
072 NSL TR & DEFORM	434	.09	411	.08	1467	.30
073 OTH E,N,T A>17	1910	.38	1869	.37	1675	.34
074 OTH E,N,T A<18	1519	.30	1436	.29	1225	.25
075 MJR CHEST PROCS	349	.07	340	.07	331	.07
076 OR RSP,~MJRCH,CC	69	.01	56	.01	53	.01
077 OR RSP,~MJRCH,~C	158	.03	148	.03	153	.03
078 PULMNRY EMBOLISM	483	.10	487	.10	472	.10
079 RSP INF&INFL A|C	203	.04	208	.04	188	.04
080 RSP INF&INL A<70	261	.05	280	.06	218	.04
081 RSP INF&INL A<18	79	.02	132	.03	47	.01
082 RESP NEOPLASMS	2263	.45	2116	.42	2068	.42
083 MJR CHST TR A&|C	25		36	.01	30	.01
084 MJR CHST TR A<70	42	.01	66	.01	52	.01
085 PLRL EFFUSN A&|C	143	.03	150	.03	131	.03
086 PLRL EFFUSN A<70	145	.03	123	.02	123	.02
087 PLM EDEMA&RSP FL	514	.10	415	.08	149	.03
088 CHRN PULM OBSTR	6000	1.20	7034	1.40	6995	1.42
089 SMPL PNEU&PL A|C	2903	.58	3110	.62	2886	.58
090 SMPL PNEU&P A<70	1265	.25	1351	.27	1252	.25
091 SMPL PNEU&P A<18	1865	.37	2207	.44	1701	.34
092 INTRST LUNG A|CC	129	.03	149	.03	176	.04
093 INTRST LUNG ~A,C	316	.06	380	.08	497	.10
094 PNEUMOTHRX A|CC	146	.03	111	.02	114	.02
095 PNEUMOTHRX ~A,CC	406	.08	372	.07	380	.08
096 BRNCH&ASTH A|CC	763	.15	745	.15	695	.14
097 BRNCH&ASTH A<70	2221	.44	2417	.48	2246	.46
098 BRNCH&ASTH A<17	4861	.97	5761	1.15	5643	1.14
099 RESP SGN&SY A|CC	362	.07	393	.08	422	.09
100 RSP SGN&SY A<70	958	.19	1037	.21	1078	.22
101 OTHR RSP DX A|CC	1426	.28	1483	.30	1712	.35
102 OTHR RSP DX A<70	1546	.31	1734	.35	1929	.39
103 HEART TRANSPLANT					2	

DRG	1984 No. Patients	1984 % of Total	1985 No. Patients	1985 % of Total	1986 No. Patients	1986 % of Total
104 CRDC VLV W/P,CCT					2	
105 CRDC VLV W/P~CCT	229	.05	97	.02	108	.02
106 CRNRY BYPS W/CCT					9	
107 CRNRY BYPS,~CCTH	443	.09	295	.06	288	.06
109 CRDTHR PR,~PUMP	243	.05	195	.04	172	.03
110 MJR RCSTR VSC,AC	205	.04	257	.05	261	.05
111 MJR RCNST VSC,AC	233	.05	209	.04	220	.04
112 MJR RCNST VSC~AC	225	.04	275	.05	292	.06
113 AMP CRC~UP LIMB	217	.04	219	.04	230	.05
114 UP LIMB&TOE AMP	78	.02	80	.02	62	.01
115 PCMKR,AMI OR CHF	29	.01	19		27	.01
116 PCMKR,~AMI|CHF	361	.07	300	.06	295	.06
117 PCMKR REP~PLSGN	49	.01	34	.01	36	.01
118 PULSE GEN REPL	14		6		5	
119 VEIN LGTN&STRPNG	2824	.56	2770	.55	2722	.55
120 OTHER CRC OR PR	286	.06	297	.06	280	.06
121 CRC DIS,AMI&E,CC	745	.15	756	.15	775	.16
122 CRC DIS,AMI&CV	3595	.72	3580	.71	3551	.72
123 CRC DIS,AMI,XPRD	1087	.22	968	.19	968	.20
124 CRC~AMI,CCT&CPLX					60	.01
125 CRC~AMI,CCT~CPLX					1994	.40
126 ENDOCARDITIS	50	.01	59	.01	58	.01
127 HRT FLR&SHOCK	3581	.71	3696	.74	3582	.73
128 DP VN THRMBPHLEB	998	.20	994	.20	990	.20
129 CARDIAC ARREST	385	.08	432	.09	465	.09
130 PRPHL VSC DIS,AC	1339	.27	1421	.28	1299	.26
131 PRPHL VSC DIS~AC	1319	.26	1163	.23	1081	.22
132 ATHRSCLROSIS,A|C	1137	.23	1248	.25	1308	.27
133 ATHRSCLROSIS~A|C	1986	.40	2217	.44	1443	.29
134 HYPERTENSION	2469	.49	2118	.42	2055	.42
135 CRDC CNG&VLV,A|C	442	.09	447	.09	383	.08
136 CRDC CNG&VV,A<70	740	.15	645	.13	415	.08
137 CRDC CNG&VV,A<18	426	.08	462	.09	280	.06
138 ARRHYTH&CNDC,A|C	1271	.25	1338	.27	1360	.28
139 ARRHYTH&CNDC~A|C	1319	.26	1373	.27	1373	.28
140 ANGINA PECTORIS	2617	.52	2771	.55	2914	.59
141 SYNCP&CLLPS,A|CC	600	.12	715	.14	661	.13
142 SYNCP&CLLPS,~A|C	1122	.22	1179	.24	1081	.22
143 CHEST PAIN	4001	.80	4288	.86	4847	.98
144 OTH CIRC DX,CC	416	.08	406	.08	247	.05
145 OTH CIRD DX,~CC	1246	.25	1189	.24	526	.11
146 RECTAL RSCTN,A|C	174	.03	197	.04	203	.04
147 RECTAL RSCTN~A|C	175	.03	187	.04	164	.03
148 MJR BOWEL PR,A|C	591	.12	635	.13	660	.13
149 MJR BOWEL PR~A|C	575	.11	596	.12	542	.11
150 PRTNL ADHESLS,AC	47	.01	39	.01	62	.01
151 PRTNL ADHESLS~AC	100	.02	101	.02	139	.03
152 MNR BOWEL PR,A|C	175	.03	167	.03	183	.04
153 MNR BOWEL PR~A|C	818	.16	654	.13	589	.12
154 STM,ESO,DD PR,AC	437	.09	440	.09	425	.09
155 STM,ESO,DD A<70	810	.16	788	.16	683	.14

DRG	1984 No. Patients	1984 % of Total	1985 No. Patients	1985 % of Total	1986 No. Patients	1986 % of Total
156 STM,ESO,DD A<18	207	.04	189	.04	223	.05
157 ANAL PROCS A|CC	216	.04	224	.04	234	.05
158 ANAL PROCS ~A|CC	1529	.30	1548	.31	1610	.33
159 HRNIA~ING&FEM,AC	84	.02	80	.02	87	.02
160 HRN~ING&FEM,A<70	289	.06	302	.06	279	.06
161 ING&FML HRN,A|CC	678	.14	698	.14	751	.15
162 ING&FML HRN,A<70	2048	.41	2039	.41	1877	.38
163 HERNIA PROC,A<18	1168	.23	1155	.23	1193	.24
164 APPNDC,CMP DX,AC	46	.01	46	.01	39	.01
165 APPNDC,CMP DX~AC	347	.07	377	.08	374	.08
166 APPNDC~CMP DX,AC	224	.04	191	.04	164	.03
167 APPNDC~CMP DX~AC	7413	1.48	6858	1.37	6652	1.35
168 MOUTH PROCS,A|CC	72	.01	74	.01	82	.02
169 MOUTH PROCS~A|CC	688	.14	720	.14	590	.12
170 OTH DGSTV PR,A|C	103	.02	91	.02	313	.06
171 OTH DGSTV PR~A|C	435	.09	435	.09	842	.17
172 DGSTV MALIG,A|CC	1063	.21	1114	.22	1051	.21
173 DGSTV MALIG~A|CC	776	.15	697	.14	662	.13
174 GI HMRRHG,A|CC	846	.17	841	.17	840	.17
175 GI HMRRHG~A|CC	1401	.28	1531	.31	1445	.29
176 CMPL PEPTIC ULCR	233	.05	208	.04	223	.05
177 UNCMP PTC LCR,AC	672	.13	759	.15	764	.15
178 UNCMP PTC LCR~AC	2378	.47	2148	.43	2111	.43
179 INFLM BOWEL DIS	897	.18	897	.18	950	.19
180 GI OBSTRCTN,A|CC	254	.05	239	.05	236	.05
181 GI OBSTRCTN~A|CC	312	.06	323	.06	255	.05
182 MSC DGSTV DIS,AC	4737	.94	4965	.99	4916	1.00
183 MSC DIG DIS,A<70	15216	3.03	15140	3.02	15038	3.05
184 MSC DIG DIS,A<18	8884	1.77	8968	1.79	8886	1.80
185 DNTL DIS~XT,A>17	766	.15	753	.15	693	.14
186 DNTL DIS~XT,A<18	803	.16	703	.14	691	.14
187 DNTL EXTR&RESTOR	1897	.38	1791	.36	1764	.36
188 OTH DGSTV DX,A|C	698	.14	663	.13	698	.14
189 OTH DGST DX,A<70	2087	.42	2345	.47	2395	.49
190 OTH DGST DX,A<18	1187	.24	1298	.26	1215	.25
191 MJR PNC,LVR,SHNT	33	.01	34	.01	37	.01
192 MNR PNC,LVR,SHNT	76	.02	90	.02	58	.01
193 BLRY TR PR~CH,AC	127	.03	110	.02	134	.03
194 BLRY TR PR~CH~AC	138	.03	94	.02	140	.03
195 TOT CHLST,CDE,AC	16		13		15	
196 TOT CHLST,CDE~AC	11		6		6	
197 TOT CHLST~CDE,AC	478	.10	438	.09	462	.09
198 TOT CHLST~CDE~AC	2366	.47	2095	.42	2066	.42
199 HPTOBL DX PR,MLG	25		33	.01		
200 HPTOBL DX PR~MLG	21		29	.01	66	.01
201 OTH HPTBL/PNC PR	45	.01	57	.01		
202 CIRRH&ALC HPTTIS	287	.06	271	.05	271	.05
203 HPTOBL|PNC MALIG	500	.10	448	.09	407	.08
204 PANC DIS ~MALIG	366	.07	330	.07	372	.08
205 OTH LIVER DIS,AC	203	.04	197	.04	179	.04
206 OTH LIVER DIS~AC	677	.13	565	.11	527	.11

DRG		1984		1985		1986	
		No. Patients	% of Total	No. Patients	% of Total	No. Patients	% of Total
207	BLRY TR DIS,A|CC	590	.12	570	.11	580	.12
208	BLRY TR DIS~A|CC	1190	.24	1399	.28	950	.19
209	MJR JOINT PROCS	2009	.40	1730	.35	1757	.36
210	HIP&FEMUR PR,A|C	1403	.28	1381	.28	1227	.25
211	HIP&FMUR PR,A<70	581	.12	551	.11	465	.09
212	HIP&FMUR PR,A<18	227	.05	197	.04	164	.03
213	MUSCL&CN TIS AMP	56	.01	45	.01	33	.01
214	BACK&NECK PR,A|C	56	.01	49	.01	47	.01
215	BACK&NECK PR~A|C	926	.18	782	.16	746	.15
216	MUSCL&CONN BIOPS	62	.01	55	.01	51	.01
217	SKIN GRAFT~HAND	215	.04	301	.06	225	.05
218	LWR XTRM PR,A|CC	162	.03	177	.04	90	.02
219	LWR XTRM PR,A<70	695	.14	693	.14	482	.10
220	LWR XTRM PR,A<18	167	.03	146	.03	108	.02
221	KNEE PROCS,A|CC	12		4		88	.02
222	KNEE PROCS~A|CC	797	.16	595	.12	632	.13
223	UPR XTRM PR,A|CC	56	.01	50	.01	49	.01
224	UPR XTRM PR~A|CC	485	.10	356	.07	280	.06
225	FOOT PROCS	1015	.20	1129	.23	1067	.22
226	SOFT TISS PR,A|C	83	.02	72	.01	82	.02
227	SOFT TISS PR~A|C	1014	.20	912	.18	1014	.21
228	HAND GANGLION PR	4		7		6	
229	HAND PR~GANGLION	1351	.27	1358	.27	1312	.27
230	RMVL,HIP&FEM DEV	374	.07	273	.05	275	.06
231	RMVL~HIP&FEM DEV	1972	.39	1923	.38	2572	.52
233	OTH MSCL&CONN,AC	211	.04	223	.04	176	.04
234	OTH MSCL&CONN~AC	2039	.41	2133	.43	1413	.29
235	FRACTR OF FEMUR	1160	.23	977	.20	886	.18
236	FRAC OF HIP&PLVS	1307	.26	1334	.27	1257	.25
237	SPRN,STRN,DIS HP	81	.02	76	.02	56	.01
238	OSTEOMYELITIS	411	.08			324	.07
239	PATH FR&MSCL MLG	667	.13	733	.15	674	.14
240	CONN TISS DIS,AC	432	.09	436	.09	359	.07
241	CONN TISS DIS~AC	1012	.20	963	.19	925	.19
242	SEPTIC ARTHRITIS	195	.04	132	.03	130	.03
243	MED BACK PROBS	6074	1.21	5719	1.14	5571	1.13
244	BONE DISEASE,A|C	554	.11	546	.11	522	.11
245	BONE DISEASE~A|C	698	.14	619	.12	659	.13
246	ARTHROPATHIES,NS	236	.05	221	.04	217	.04
247	SGNS&SYMP,MSCLSK	2785	.56	3292	.66	2564	.52
248	TNDNTS,MYSTS,BRS	557	.11	504	.10	553	.11
249	AFTERCARE,MSCLSK	1896	.38	1576	.31	1559	.32
250	FX,SPR ARM&FT,AC	571	.11	592	.12	584	.12
251	FX,SPRN,DIS A<70	1762	.35	1871	.37	1753	.36
252	FX,SPRN,DIS A<18	2458	.49	2179	.44	2081	.42
253	OTH FX,SPR A|CC	790	.16	737	.15	727	.15
254	OTH FX,SPR A<70	2944	.59	3030	.60	2851	.58
255	OTH FX,SPR A<18	1624	.32	1627	.32	1462	.30
256	OTH DX,MSCL&CONN	1779	.35	1709	.34	2044	.41
257	TOT MAST MLG,A|C	167	.03	163	.03	165	.03
258	TOT MAST MLG~A|C	404	.08	411	.08	392	.08

DRG	1984 No. Patients	1984 % of Total	1985 No. Patients	1985 % of Total	1986 No. Patients	1986 % of Total
259 SUB MAST MLG,A|C	99	.02	95	.02	106	.02
260 SUB MAST MLG~A|C	179	.04	177	.04	209	.04
261 BRST PR~MLG~BIOP	168	.03	161	.03	173	.04
262 BRST BIOP&EXC~ML	2335	.47	2330	.47	2355	.48
263 SKN GRFT,ULCR,AC	35	.01	42	.01	37	.01
264 SKN GRFT,ULCR~AC	44	.01	48	.01	47	.01
265 SKN GRFT~ULCR,CC	43	.01	54	.01	54	.01
266 SKN GRFT~ULCR~CC	995	.20	1218	.24	1178	.24
267 PRANL&PILONDL PR	413	.08	414	.08	400	.08
268 SKN,SUBCT&BR PLS	698	.14	706	.14	684	.14
269 OTH SKN PR A|CC	580	.12	645	.13	877	.18
270 OTH SKN PR~A|CC	6203	1.24	6489	1.30	7503	1.52
271 SKIN ULCERS	539	.11	471	.09	430	.09
272 MJR SKN DIS,A|CC	173	.03	226	.05	181	.04
273 MJR SKN DIS~A|CC	523	.10	526	.11	506	.10
274 MLG BRST DIS,A|C	514	.10	570	.11	533	.11
275 MLG BRST DIS~A|C	304	.06	383	.08	344	.07
276 ~MALIG BRST DIS	378	.08	373	.07	376	.08
277 CELLULITIS,A|CC	347	.07	356	.07	307	.06
278 CELLULITIS,A<70	1314	.26	1352	.27	1194	.24
279 CELLULITIS,A<18	777	.15	711	.14	674	.14
280 SKN,SUBCT TR,AC	515	.10	500	.10	466	.09
281 SKN TRMA,A<70	2033	.41	2031	.41	1709	.35
282 SKN TRMA,A<18	1490	.30	1472	.29	1315	.27
283 MNR SKIN DIS,A|C	774	.15	745	.15	742	.15
284 MNR SKIN DIS~A|C	3795	.76	3800	.76	3773	.76
285 END,NUTR,MET AMP	7		5		11	
286 ADRNL&PIT PROCS	32	.01	38	.01	37	.01
287 SKN GRFTS,EN,N,M	5		3		1	
288 OBESITY OR PROCS	1		3		16	
289 PARATHYROID PROC	27	.01	22		25	.01
290 THYROID PROCS	519	.10	486	.10	475	.10
291 THYROGLOSSAL PR	48	.01	45	.01	61	.01
292 OTH E,N,M PR,A|C	12		11		19	
293 OTH E,N,M PR~A|C	63	.01	58	.01	32	.01
294 DIABETES AGE>35	3341	.67	3204	.64	3134	.64
295 DIABETES AGE<36	946	.19	985	.20	1127	.23
296 MISC MET DIS,A|C	537	.11	519	.10	495	.10
297 MISC MET DS,A<70	851	.17	765	.15	751	.15
298 MISC MET DS,A<18	1129	.23	1293	.26	1414	.29
299 INBORN MET ERROR	195	.04	218	.04	221	.04
300 ENDCRN DIS,A|CC	450	.09	339	.07	295	.06
301 ENDCRN DIS~A|CC	891	.18	942	.19	927	.19
302 KIDNEY TRANSPLNT	4		5		11	
303 KID,UR,BL PR,MLG	143	.03	144	.03	134	.03
304 KID,UR PR~MLG,AC	177	.04	169	.03	113	.02
305 KID,UR PR~MLG~AC	762	.15	838	.17	647	.13
306 PROSTATECTOMY,AC	56	.01	68	.01	59	.01
307 PROSTATECTOMY~AC	44	.01	41	.01	38	.01
308 MNR BLDR PR,A|CC	34	.01	32	.01	32	.01
309 MNR BLDR PR~A|CC	39	.01	57	.01	69	.01

DRG	1984 No. Patients	1984 % of Total	1985 No. Patients	1985 % of Total	1986 No. Patients	1986 % of Total
310 TRNSURETH PR,A|C	383	.08	321	.06	292	.06
311 TRNSURETH PR~A|C	516	.10	467	.09	454	.09
312 URETHRAL PR,A|CC	120	.02	101	.02	114	.02
313 URETHRAL PR,A<70	207	.04	178	.04	174	.04
314 URETHRAL PR,A<18	50	.01	73	.01	185	.04
315 OTH KID&URN PROC	81	.02	62	.01	5	.02
316 RENAL FLR~DLYSIS	913	.18	984	.20	867	.18
317 RENAL FLR,DLYSIS	3		2		29	.01
318 KID&UR NEOP,A|CC	365	.07	383	.08	373	.08
319 KID&UR NEOP~A|CC	313	.06	376	.07	274	.06
320 KID&UR INF,A|CC	906	.18	859	.17	890	.18
321 KID&UR INF,A<70	1805	.36	1687	.34	1624	.33
322 KID&UR INF,A<18	1650	.33	1634	.33	1648	.33
323 URNRY STONES,A|C	302	.06	216	.04	229	.05
324 URNRY STONES~A|C	1693	.34	1677	.33	1662	.34
325 KID&UR SG&SY,A|C	1009	.20	1079	.22	1020	.21
326 KID&UR S&S,A<70	1693	.34	1479	.30	1662	.34
327 KID&UR S&S,A<18	474	.09	447	.09	464	.09
328 URTHRL STRCT,A|C	333	.07	319	.06	269	.05
329 URTHRL STRC,A<70	381	.08	276	.06	268	.05
330 URTHRL STRC,A<18	33	.01	28	.01	22	
331 OTH KID&UR DX,AC	401	.08	360	.07	366	.07
332 OTH KID&UR,A<70	948	.19	822	.16	894	.18
333 OTH KID&UR,A<18	533	.11	514	.10	619	.13
334 MJR PELVIC PR,CC	49	.01	48	.01	30	.01
335 MJR PELVIC PR~CC	316	.06	285	.06	220	.04
336 TRNSUR PRSTCT,AC	1099	.22	1092	.22	1196	.24
337 TRNSUR PRSTCT~AC	789	.16	754	.15	824	.17
338 TESTES PR,MALIG	67	.01	92	.02	113	.02
339 TSTS PR~MLG,A>17	677	.13	716	.14	762	.15
340 TSTS PR~MLG,A<18	2096	.42	2096	.42	2052	.42
341 PENIS PROCS	238	.05	229	.05	231	.05
342 CIRCUMCSION,A>17	438	.09	399	.08	442	.09
343 CIRCUMCSION,A<18	1386	.28	1332	.27	1386	.28
344 OTH ML REPRO,MLG	21		13		24	
345 OTH ML REPRO~MLG	29	.01	60	.01	56	.01
346 ML RPRO MLG,A|CC	390	.08	363	.07	421	.09
347 ML RPRO MLG~A|CC	156	.03	147	.03	186	.04
348 BNGN PRST HYP,AC	465	.09	474	.09	439	.09
349 BNGN PRST HYP~AC	268	.05	268	.05	251	.05
350 MALE REPRO INFLM	586	.12	546	.11	619	.13
351 STERILIZATION,ML	309	.06	326	.07	404	.08
352 OTH ML REPRO DX	692	.14	659	.13	709	.14
353 PLVC EVISC,R HYS	35	.01	33	.01	42	.01
354 NON-RAD HYST,A|C	190	.04	181	.04	189	.04
355 NON-RAD HYST~A|C	2211	.44	2277	.45	2728	.55
356 FEM RPR RCNST PR	643	.13	614	.12	716	.15
357 UTRS&ADNEXA,MALG	47	.01	66	.01	75	.02
358 UTRS&ADNEXA~MLG	1122	.22	1096	.22	1244	.25
359 TUBAL INTRRP~MLG	608	.12	680	.14	731	.15
360 VGNA,CRVX&VLV PR	1295	.26	1230	.25	1379	.28

DRG		1984		1985		1986	
		No. Patients	% of Total	No. Patients	% of Total	No. Patients	% of Total
361	LAPSCPY&ENDSC,FE	921	.18	1038	.21	1057	.21
362	LAPRSCPC TBL INT	14		46	.01	181	.04
363	D&C,CON,R-I,MALG	167	.03	158	.03	335	.07
364	D&C,CONZTN~MALIG	5797	1.16	5758	1.15	6186	1.25
365	OTH FEM RPRO PR	228	.05	197	.04	315	.06
366	FEM RPRO MLG,A|C	272	.05	234	.05	181	.04
367	FEM RPRO MLG~A|C	503	.10	497	.10	444	.09
368	FEM RPRO INFCTNS	298	.06	276	.06	255	.05
369	MNSTRL&OTH F RPR	1929	.38	2022	.40	1813	.37
370	CESAREAN, CC	244	.05	30	.01	38	.01
371	CESAREAN,~CC	4175	.83	4735	.95	5068	1.03
372	VAG DEL,COMPL DX	848	.17				
373	VAG DEL~COMPL DX	54905	10.94	56961	11.37	55635	11.27
385	NEONTS,DIED|XFRD	1426	.28	1353	.27	1222	.25
386	NEONTS,XTRM IMMT	38	.01	91	.02	84	.02
387	PREMTRTY,MJR PRB	44	.01	58	.01	47	.01
388	PREMTRTY~MJR PRB	723	.14	665	.13	627	.13
389	FULL TRM NN,PRBS	593	.12	798	.16	784	.16
390	NEON,OTH SIG PRB	1106	.22	1523	.30	1580	.32
391	NORMAL NEWBORNS	56943	11.35	57908	11.56	57036	11.56
392	SPLENECTOMY,A>17	39	.01	33	.01	42	.01
393	SPLENECTOMY,A<18	16		27	.01	13	
394	OTH OR PR,BLOOD	201	.04	195	.04	203	.04
395	RED BLD CL,A>17	2052	.41	2023	.40	1844	.37
396	RED BLD CL,A<18	302	.06	288	.06	274	.06
397	COAGULATION DSRD	698	.14	652	.13	510	.10
398	RTCLEND&IMMN,A|C	144	.03	158	.03	130	.03
399	RTCLEND&IMMN~A|C	449	.09	423	.08	450	.09
400	LYMPH|LEUK,MJ PR	84	.02	92	.02	229	.05
401	LYMPH|LEUK,MN,AC	72	.01	84	.02	95	.02
402	LYMPH|LEUK,MN~AC	137	.03	115	.02	157	.03
403	LYMPH|LEUK,A|CC	836	.17	875	.17	803	.16
404	LYMPH|LEUK,A<70	1291	.26	1268	.25	1200	.24
405	LYMPH|LEUK,A<18	484	.10	697	.14	424	.09
406	MYELO DIS,OR,CC	13		7		28	.01
407	MYELO DIS,OR,~CC	10		11		36	.01
408	MYELO DISRDR,CC	152	.03	137	.03	201	.04
409	RADIOTHERAPY	217	.04	123	.02	232	.05
410	CHEMOTHERAPY	2567	.51	2426	.48	2398	.49
411	HIST MALG~ENDSCP	139	.03	48	.01	7	.02
412	HIST MALG,ENDSCP	49	.01	51	.01	68	.01
413	OTH MYELO DIS,AC	170	.03	190	.04	158	.03
414	OTH MYELO DIS~AC	120	.02	139	.03	155	.03
415	OR PR,INF&PAR DS	139	.03	118	.02	114	.02
416	SEPTICEMIA,A>17	178	.04	221	.04	196	.04
417	SEPTICEMIA,A<18	142	.03	128	.03	126	.03
418	PSTOP&PSTTR INFC	463	.09	487	.10	486	.10
419	FEVER UNKNWN,A|C	57	.01	39	.01	53	.01
420	FEVER UNKN,A<70	115	.02	127	.03	92	.02
421	VIRAL ILLNS,A>17	528	.11	613	.12	533	.11
422	VRL ILL,FVR,A<18	2229	.44	2003	.40	1831	.37

DRG	1984 No. Patients	1984 % of Total	1985 No. Patients	1985 % of Total	1986 No. Patients	1986 % of Total
423 OTH INF&PAR DIS	278	.06	333	.07	355	.07
424 OR PR,DX1=MENTAL	31	.01	33	.01	31	.01
425 PSYCHOSOC DYSFNC	690	.14	592	.12	481	.10
426 DEPRSV NEUROSES	968	.19	770	.15	703	.14
427 NEUROSES~DEPRSV	54	.01	46	.01	57	.01
428 PERS DIS&IMP CON	172	.03	169	.03	156	.03
429 ORG DISTRB&M RET	515	.10	536	.11	495	.10
430 PSYCHOSES	686	.14	705	.14	649	.13
431 CHILDHD MNTL DIS	122	.02	150	.03	185	.04
432 OTH DX=MNTL DSRD	103	.02	58	.01	82	.02
433 SUBST-INDCD MNTL	153	.03	191	.04	107	.02
434 DRUG DEPENDENCE	452	.09	507	.10	448	.09
435 DRUG USE~DEPNDNC	673	.13	698	.14	576	.12
439 SKIN GRAFTS,INJR	8		7		9	
440 WOUND DEBRD,INJR	301	.06	328	.07	230	.05
441 HAND PROC,INJURY	153	.03	127	.03	79	.02
442 OTH OR PR,INJ,AC	112	.02	82	.02	82	.02
443 OTH OR PR,INJ~AC	407	.08	366	.07	379	.08
444 MLTPL TRAUMA,A|C	364	.07	359	.07	336	.07
445 MLTPL TRMA,A<70	1725	.34	1708	.34	1500	.30
446 MLTPL TRMA,A<18	1115	.22	937	.19	972	.20
447 ALLRGC REAC,A>17	67	.01	49	.01		
448 ALLRGC READ,A<18	52	.01	48	.01	39	.01
449 TOX EFF,DRGS,A|C	488	.10	502	.10	481	.10
450 TOX EFF,DRG,A<70	2361	.47	2178	.43	2255	.46
451 TOX EFF,DRG,A<18	2090	.42	2132	.43	2071	.42
452 TRTMT CMPL,A|CC	128	.03	84	.02	78	.02
453 TRTMT CMPL~A|CC	495	.10	402	.08	394	.08
454 OTH INJ,TXC,A|C	77	.02	110	.02	126	.03
455 OTH INJ,TXC~A|C	212	.04	215	.04	201	.04
456 BURNS, TRANSFERD	111	.02	101	.02	107	.02
457 EXTENSIVE BURNS	6		13		7	
458 NON-EXT BRN,GRFT	23		15		9	
459 NON-EXT BRN,DBRD	204	.04	182	.04	187	.04
460 NON-EXT BRN~OR P	855	.17	712	.14	705	.14
461 OR PR,DX=OTH CTC	522	.10	571	.11	491	.10
462 REHABILITATION	298	.06	184	.04	201	.04
463 SIGNS&SYMPTMS,CC	77	.02	60	.01	71	.01
464 SIGNS&SYMPTMS~CC	855	.17	801	.16	665	.13
465 AFTRCR,DX2=MALIG	35	.01	27	.01	28	.01
466 AFTRCR,DX2=MALIG	489	.10	543	.11	510	.10
467 OTH HLTH FACTORS	7254	1.45	6992	1.40	7820	1.58
468 UNRELATED OR PRO	4079	.81	4037	.81	3960	.80
470 UNGROUPABLE	1025	.20	1096	.22	521	.11

(BIRTHS ARE EXCLUDED)

DRG	1987 No. Patients	1987 % of Total	1988 No. Patients	1988 % of Total
001 CRNIOT A>=18 ~TR	371	.11	358	.11
002 CRNIOT TR A>=18	117	.03	87	.03
003 CRNIOT A<18	187	.05	163	.05
004 SPINAL PROCS	75	.02	50	.02
005 XTRACRNL VASC PR	55	.02	76	.02
006 CARPL TUNNEL RLS	284	.08	259	.08
007 OTH NRV PR A&|CC	55	.02	42	.01
008 OTH NRV PR ~A,CC	256	.07	166	.05
009 SPINAL DIS&INJ	99	.03	74	.02
010 NRVS NEOPL A&|CC	93	.03	137	.04
011 NRVS NEOPL ~A,CC	344	.10	372	.11
012 DEGENR NRVS DIS	1151	.34	1004	.31
013 MP SCLER&CRBL AT	516	.15	468	.14
014 SPEC CRBRVSC DIS	3366	.98	3301	1.01
015 TRANS ISCHEM ATT	1150	.34	1191	.36
016 NONSP CBV DIS,CC	54	.02	59	.02
017 NONSP CBC DIS~CC	177	.05	175	.05
018 CRNL&PRPH A&|CC	179	.05	222	.07
019 CRNL&PRPH ~A,CC	434	.13	455	.14
020 NRV INF ~VRL MNG	559	.16	428	.13
021 VIRAL MENINGITIS	445	.13	334	.10
022 HYPRTNS ENCPHLOP	7		5	
023 NONTR STPR&COMA	118	.03	154	.05
024 SZR&HDACH A&|CC	570	.17	512	.16
025 SZR&HD A18-69~CC	2399	.70	2212	.68
026 SZR&HD A<17,~CC	2676	.78	2726	.83
028 TR ST,CMA<1,A&|C	1148	.34	1062	.33
029 TR ST,CMA<1,A<70	4333	1.27	3878	1.19
030 TR ST,CMA<1,A<18	5482	1.60	4562	1.40
031 CONCUSSION A&|CC	34	.01	36	.01
032 CONCSN A18-69~CC	115	.03	91	.03
033 CONCUSSION A<18	73	.02	80	.02
034 OTH NRV DIS,A&|C	207	.06	184	.06
035 OTH NRVS DIS,~AC	732	.21	776	.24
036 RETINAL PROCS	260	.08	301	.09
037 ORBITAL PROCS	66	.02	87	.03
038 PRIM IRIS PROCS	153	.04	212	.06
039 LENS PROCS	3050	.89	3484	1.07
040 XTROC PR A>=18	1290	.38	1371	.42
041 XTROC PR A<18	1721	.50	1718	.53
042 INTROC PR,~R,I,L	438	.13	482	.15
043 HYPHEMA	205	.06	221	.07
044 ACUT MJR EYE INF	199	.06	174	.05
045 NEUR EYE DISRDRS	199	.06	171	.05
046 OTH EYE DS,A>17C	89	.03	85	.03
047 OTH EYE DS,A>17~	1599	.47	1409	.43
048 OTH EYE DIS,A<18	475	.14	554	.17
049 MJR HD&NECK PROC	35	.01	45	.01
050 SIALOADENECTOMY	79	.02	91	.03
051 SALV GLND PR~SIA	33	.01	45	.01

(BIRTHS ARE EXCLUDED)

DRG	1987 No. Patients	1987 % of Total	1988 No. Patients	1988 % of Total
052 CLFT LIP&PLT REP	181	.05	144	.04
053 SNS&MAST PR A>17	476	.14	333	.10
054 SNS&MAST PR A<18	369	.11	352	.11
055 MISC EAR,NS,THRT	1570	.46	1538	.47
056 RHINOPLASTY	424	.12	385	.12
057 T&A ~TNS,AD A>17	66	.02	62	.02
058 T&A ~TNS,AD A<18	915	.27	923	.28
059 TNSECT,ADCT A>17	938	.27	807	.25
060 TNSECT,ADCT A<18	3995	1.17	3844	1.18
061 MYRINGOTOMY A>17	212	.06	169	.05
062 MYRINGOTOMY A<18	1991	.58	2028	.62
063 OTH E,N,T OR PR	285	.08	280	.09
064 ER,NS,THRT MALIG	507	.15	457	.14
065 DYSEQUILIBRIUM	511	.15	615	.19
066 EPISTAXIS	1057	.31	972	.30
067 EPIGLOTTIITIS	32	.01	43	.01
068 OM&URI, A&|CC	177	.05	185	.06
069 OM&URI,A18-69~C	826	.24	891	.27
070 OM&URI, A<18	4581	1.34	4615	1.41
071 LARYNGOTRCHEITS	697	.20	504	.15
072 NSL TR & DEFORM	1272	.37	1325	.41
073 OTH E,N,T A>17	1497	.44	1500	.46
074 OTH E,N,T A<18	1172	.34	1169	.36
075 MJR CHEST PROCS	285	.08	315	.10
076 OR RSP,~MJRCH,CC	58	.02	43	.01
077 OR RSP,~MJRCH,~C	129	.04	116	.04
078 PULMNRY EMBOLISM	431	.13	395	.12
079 RSP INF&INFL A|C	195	.06	176	.05
080 RSP INF&INL A<70	211	.06	156	.05
081 RSP INF&INL A<18	35	.01	34	.01
082 RESP NEOPLASMS	1797	.53	1879	.58
083 MJR CHST TR A&|C	33	.01	19	.01
084 MJR CHST TR A<70	52	.02	60	.02
085 PLRL EFFUSN A&|C	146	.04	160	.05
086 PLRL EFFUSN A<70	106	.03	106	.03
087 PLM EDEMA&RSP FL	126	.04	131	.04
088 CHRN PULM OBSTR	5773	1.69	5221	1.60
089 SMPL PNEU&PL A|C	2381	.70	2226	.68
090 SMPL PNEU&P A<70	1034	.30	930	.28
091 SMPL PNEU&P A<18	1588	.46	1653	.51
092 INTRST LUNG A|CC	152	.04	139	.04
093 INTRST LUNG ~A,C	384	.11	315	.10
094 PNEUMOTHRX A|CC	131	.04	101	.03
095 PNEUMOTHRX ~A,CC	353	.10	331	.10
096 BRNCH&ASTH A|CC	584	.17	623	.19
097 BRNCH&ASTH A<70	2094	.61	1972	.60
098 BRNCH&ASTH A<17	5999	1.76	6132	1.88
099 RESP SGN&SY A|CC	307	.09	299	.09
100 RSP SGN&SY A<70	918	.27	891	.27
101 OTHR RSP DX A|CC	1400	.41	1311	.40

(BIRTHS ARE EXCLUDED)

DRG	1987 No. Patients	1987 % of Total	1988 No. Patients	1988 % of Total
102 OTHR RSP DX A<70	1616	.47	1468	.45
103 HEART TRANSPLANT			2	
104 CRDC VLV W/P,CCT	13		4	
105 CRDC VLV W/P~CCT	78	.02	155	.05
106 CRNRY BYPS W/CCT	13		22	.01
107 CRNRY BYPS,~CCTH	259	.08	584	.18
109 CRDTHR PR,~PUMP	145	.04	124	.04
110 MJR RCSTR VSC,AC	227	.07	225	.07
111 MJR RCNST VSC,AC	187	.05	168	.05
112 MJR RCNST VSC~AC	230	.07	281	.09
113 AMP CRC~UP LIMB	200	.06	190	.06
114 UP LIMB&TOE AMP	51	.01	71	.02
115 PCMKR,AMI OR CHF	26	.01	32	.01
116 PCMKR,~AMI|CHF	267	.08	266	.08
117 PCMKR REP~PLSGN	28	.01	21	.01
118 PULSE GEN REPL	2		8	
119 VEIN LGTN&STRPNG	2425	.71	2576	.79
120 OTHER CRC OR PR	254	.07	238	.07
121 CRC DIS,AMI&E,CC	747	.22	716	.22
122 CRC DIS,AMI&CV	3225	.94	3331	1.02
123 CRC DIS,AMI,XPRD	925	.27	794	.24
124 CRC~AMI,CCT&CPLX	56	.02	57	.02
125 CRC~AMI,CCT~CPLX	1683	.49	1507	.46
126 ENDOCARDITIS	44	.01	37	.01
127 HRT FLR&SHOCK	3141	.92	3012	.92
128 DP VN THRMBPHLEB	909	.27	820	.25
129 CARDIAC ARREST	336	.10	346	.11
130 PRPHL VSC DIS,AC	1129	.33	915	.28
131 PRPHL VSC DIS~AC	987	.29	745	.23
132 ATHRSCLROSIS,A|C	1144	.33	914	.28
133 ATHRSCLROSIS~A|C	1275	.37	1055	.32
134 HYPERTENSION	1836	.54	1763	.54
135 CRDC CNG&VLV,A|C	351	.10	282	.09
136 CRDC CNG&VV,A<70	304	.09	290	.09
137 CRDC CNG&VV,A<18	233	.07	390	.12
138 ARRHYTH&CNDC,A|C	1435	.42	1332	.41
139 ARRHYTH&CNDC~A|C	1297	.38	1163	.36
140 ANGINA PECTORIS	2727	.80	2663	.82
141 SYNCP&CLLPS,A|CC	594	.17	596	.18
142 SYNCP&CLLPS,~A|C	924	.27	894	.27
143 CHEST PAIN	4655	1.36	4984	1.53
144 OTH CIRC DX,CC	238	.07	235	.07
145 OTH CIRD DX,~CC	503	.15	449	.14
146 RECTAL RSCTN,A|C	167	.05	240	.07
147 RECTAL RSCTN~A|C	179	.05	165	.05
148 MJR BOWEL PR,A|C	616	.18	618	.19
149 MJR BOWEL PR~A|C	574	.17	505	.15
150 PRTNL ADHESLS,AC	65	.02	65	.02
151 PRTNL ADHESLS~AC	149	.04	148	.05
152 MNR BOWEL PR,A|C	161	.05	186	.06

(BIRTHS ARE EXCLUDED)

DRG	1987 No. Patients	1987 % of Total	1988 No. Patients	1988 % of Total
153 MNR BOWEL PR~A|C	616	.18	671	.21
154 STM,ESO,DD PR,AC	397	.12	410	.13
155 STM,ESO,DD A<70	616	.18	643	.20
156 STM,ESO,DD A<18	226	.07	249	.08
157 ANAL PROCS A|CC	200	.06	230	.07
158 ANAL PROCS ~A|CC	1477	.43	1292	.40
159 HRNIA~ING&FEM,AC	79	.02	82	.03
160 HRN~ING&FEM,A<70	309	.09	294	.09
161 ING&FML HRN,A|CC	742	.22	722	.22
162 ING&FML HRN,A<70	1907	.56	1888	.58
163 HERNIA PROC,A<18	1137	.33	1098	.34
164 APPNDC,CMP DX,AC	32	.01	29	.01
165 APPNDC,CMP DX~AC	466	.14	430	.13
166 APPNDC~CMP DX,AC	163	.05	142	.04
167 APPNDC~CMP DX~AC	6133	1.79	5285	1.62
168 MOUTH PROCS,A|CC	82	.02	54	.02
169 MOUTH PROCS~A|CC	607	.18	314	.10
170 OTH DGSTV PR,A|C	273	.08	218	.07
171 OTH DGSTV PR~A|C	1029	.30	863	.26
172 DGSTV MALIG,A|CC	971	.28	1046	.32
173 DGSTV MALIG~A|CC	623	.18	627	.19
174 GI HMRRHG,A|CC	699	.20	716	.22
175 GI HMRRHG~A|CC	1230	.36	1129	.35
176 CMPL PEPTIC ULCR	179	.05	200	.06
177 UNCMP PTC LCR,AC	714	.21	624	.19
178 UNCMP PTC LCR~AC	1915	.56	1819	.56
179 INFLM BOWEL DIS	927	.27	959	.29
180 GI OBSTRCTN,A|CC	211	.06	226	.07
181 GI OBSTRCTN~A|CC	293	.09	299	.09
182 MSC DGSTV DIS,AC	4578	1.34	4722	1.45
183 MSC DIG DIS,A<70	14205	4.16	13727	4.20
184 MSC DIG DIS,A<18	8954	2.62	8276	2.53
185 DNTL DIS~XT,A>17	588	.17	524	.16
186 DNTL DIS~XT,A<18	638	.19	582	.18
187 DNTL EXTR&RESTOR	1619	.47	1333	.41
188 OTH DGSTV DX,A|C	635	.19	596	.18
189 OTH DGST DX,A<70	2152	.63	2303	.70
190 OTH DGST DX,A<18	1144	.33	943	.29
191 MJR PNC,LVR,SHNT	39	.01	37	.01
192 MNR PNC,LVR,SHNT	64	.02	94	.03
193 BLRY TR PR~CH,AC	129	.04	154	.05
194 BLRY TR PR~CH~AC	119	.03	110	.03
195 TOT CHLST,CDE,AC	13		10	
196 TOT CHLST,CDE~AC	7		7	
197 TOT CHLST~CDE,AC	425	.12	403	.12
198 TOT CHLST~CDE~AC	1913	.56	1867	.57
199 HPTOBL DX PR,MLG	69	.02	55	.02
200 HPTOBL DX PR~MLG	54	.02	50	.02
201 OTH HPTBL/PNC PR	56	.02	47	.01
202 CIRRH&ALC HPTTIS	293	.09	256	.08

(BIRTHS ARE EXCLUDED)

DRG	1987 No. Patients	1987 % of Total	1988 No. Patients	1988 % of Total
203 HPTOBL|PNC MALIG	366	.11	390	.12
204 PANC DIS ~MALIG	352	.10	349	.11
205 OTH LIVER DIS,AC	180	.05	154	.05
206 OTH LIVER DIS~AC	456	.13	407	.12
207 BLRY TR DIS,A|CC	583	.17	517	.16
208 BLRY TR DIS~A|CC	934	.27	854	.26
209 MJR JOINT PROCS	1412	.41	1404	.43
210 HIP&FEMUR PR,A|C	1219	.36	1035	.32
211 HIP&FMUR PR,A<70	398	.12	377	.12
212 HIP&FMUR PR,A<18	205	.06	172	.05
213 MUSCL&CN TIS AMP	34	.01	25	.01
214 BACK&NECK PR,A|C	38	.01	36	.01
215 BACK&NECK PR~A|C	710	.21	771	.24
216 MUSCL&CONN BIOPS	53	.02	53	.02
217 SKIN GRAFT~HAND	246	.07	262	.08
218 LWR XTRM PR,A|CC	82	.02	75	.02
219 LWR XTRM PR,A<70	458	.13	455	.14
220 LWR XTRM PR,A<18	98	.03	102	.03
221 KNEE PROCS,A|CC	66	.02	84	.03
222 KNEE PROCS~A|CC	545	.16	427	.13
223 UPR XTRM PR,A|CC	48	.01	42	.01
224 UPR XTRM PR~A|CC	338	.10	321	.10
225 FOOT PROCS	971	.28	923	.28
226 SOFT TISS PR,A|C	75	.02	66	.02
227 SOFT TISS PR~A|C	932	.27	916	.28
228 HAND GANGLION PR	1		3	
229 HAND PR~GANGLION	1228	.36	1192	.36
230 RMVL,HIP&FEM DEV	237	.07	223	.07
231 RMVL~HIP&FEM DEV	2120	.62	1811	.55
233 OTH MSCL&CONN,AC	132	.04	167	.05
234 OTH MSCL&CONN~AC	1114	.33	1062	.33
235 FRACTR OF FEMUR	761	.22	590	.18
236 FRAC OF HIP&PLVS	1145	.34	1048	.32
237 SPRN,STRN,DIS HP	43	.01	45	.01
238 OSTEOMYELITIS	284	.08	318	.10
239 PATH FR&MSCL MLG	616	.18	676	.21
240 CONN TISS DIS,AC	362	.11	315	.10
241 CONN TISS DIS~AC	879	.26	795	.24
242 SEPTIC ARTHRITIS	118	.03	113	.03
243 MED BACK PROBS	4997	1.46	4480	1.37
244 BONE DISEASE,A|C	520	.15	465	.14
245 BONE DISEASE~A|C	612	.18	615	.19
246 ARTHROPATHIES,NS	164	.05	141	.04
247 SGNS&SYMP,MSCLSK	2443	.71	2329	.71
248 TNDNTS,MYSTS,BRS	464	.14	487	.15
249 AFTERCARE,MSCLSK	1332	.39	707	.22
250 FX,SPR ARM&FT,AC	588	.17	569	.17
251 FX,SPRN,DIS A<70	1730	.51	1318	.40
252 FX,SPRN,DIS A<18	2054	.60	1795	.55
253 OTH FX,SPR A|CC	628	.18	565	.17

(BIRTHS ARE EXCLUDED)

DRG	1987 No. Patients	1987 % of Total	1988 No. Patients	1988 % of Total
254 OTH FX,SPR A<70	2524	.74	2262	.69
255 OTH FX,SPR A<18	1449	.42	1191	.36
256 OTH DX,MSCL&CONN	1694	.50	1679	.51
257 TOT MAST MLG,A|C	197	.06	171	.05
258 TOT MAST MLG~A|C	352	.10	330	.10
259 SUB MAST MLG,A|C	126	.04	130	.04
260 SUB MAST MLG~A|C	232	.07	240	.07
261 BRST PR~MLG~BIOP	141	.04	136	.04
262 BRST BIOP&EXC~ML	2256	.66	2115	.65
263 SKN GRFT,ULCR,AC	31	.01	26	.01
264 SKN GRFT,ULCR~AC	35	.01	40	.01
265 SKN GRFT~ULCR,CC	41	.01	42	.01
266 SKN GRFT~ULCR~CC	1219	.36	1275	.39
267 PRANL&PILONDL PR	323	.09	351	.11
268 SKN,SUBCT&BR PLS	603	.18	500	.15
269 OTH SKN PR A|CC	891	.26	800	.24
270 OTH SKN PR~A|CC	6497	1.90	6027	1.84
271 SKIN ULCERS	354	.10	331	.10
272 MJR SKN DIS,A|CC	163	.05	170	.05
273 MJR SKN DIS~A|CC	357	.10	415	.13
274 MLG BRST DIS,A|C	512	.15	550	.17
275 MLG BRST DIS~A|C	255	.07	268	.08
276 ~MALIG BRST DIS	337	.10	260	.08
277 CELLULITIS,A|CC	285	.08	264	.08
278 CELLULITIS,A<70	1047	.31	980	.30
279 CELLULITIS,A<18	542	.16	500	.15
280 SKN,SUBCT TR,AC	426	.12	360	.11
281 SKN TRMA,A<70	1551	.45	1346	.41
282 SKN TRMA,A<18	1323	.39	1243	.38
283 MNR SKIN DIS,A|C	597	.17	517	.16
284 MNR SKIN DIS~A|C	3072	.90	2642	.81
285 END,NUTR,MET AMP	5		6	
286 ADRNL&PIT PROCS	30	.01	38	.01
287 SKN GRFTS,EN,N,M	3		4	
288 OBESITY OR PROCS	14		12	
289 PARATHYROID PROC	20	.01	35	.01
290 THYROID PROCS	437	.13	444	.14
291 THYROGLOSSAL PR	50	.01	34	.01
292 OTH E,N,M PR,A|C	8		13	
293 OTH E,N,M PR~A|C	44	.01	46	.01
294 DIABETES AGE>35	2900	.85	2779	.85
295 DIABETES AGE<36	1160	.34	898	.27
296 MISC MET DIS,A|C	440	.13	446	.14
297 MISC MET DS,A<70	636	.19	530	.16
298 MISC MET DS,A<18	1230	.36	1069	.33
299 INBORN MET ERROR	254	.07	241	.07
300 ENDCRN DIS,A|CC	295	.09	258	.08
301 ENDCRN DIS~A|CC	752	.22	688	.21
302 KIDNEY TRANSPLNT	8		6	
303 KID,UR,BL PR,MLG	104	.03	142	.04

(BIRTHS ARE EXCLUDED)

DRG	1987 No. Patients	1987 % of Total	1988 No. Patients	1988 % of Total
304 KID,UR PR~MLG,AC	122	.04	134	.04
305 KID,UR PR~MLG~AC	697	.20	699	.21
306 PROSTATECTOMY,AC	58	.02	76	.02
307 PROSTATECTOMY~AC	38	.01	48	.01
308 MNR BLDR PR,A|CC	38	.01	46	.01
309 MNR BLDR PR~A|CC	52	.02	59	.02
310 TRNSURETH PR,A|C	256	.07	346	.11
311 TRNSURETH PR~A|C	371	.11	446	.14
312 URETHRAL PR,A|CC	87	.03	117	.04
313 URETHRAL PR,A<70	161	.05	149	.05
314 URETHRAL PR,A<18	156	.05	149	.05
315 OTH KID&URN PROC	88	.03	82	.03
316 RENAL FLR~DLYSIS	739	.22	648	.20
317 RENAL FLR,DLYSIS	13		7	
318 KID&UR NEOP,A|CC	294	.09	286	.09
319 KID&UR NEOP~A|CC	270	.08	301	.09
320 KID&UR INF,A|CC	825	.24	765	.23
321 KID&UR INF,A<70	1361	.40	1280	.39
322 KID&UR INF,A<18	1550	.45	1290	.39
323 URNRY STONES,A|C	214	.06	210	.06
324 URNRY STONES~A|C	1477	.43	1514	.46
325 KID&UR SG&SY,A|C	810	.24	705	.22
326 KID&UR S&S,A<70	1259	.37	1200	.37
327 KID&UR S&S,A<18	407	.12	352	.11
328 URTHRL STRCT,A|C	256	.07	249	.08
329 URTHRL STRC,A<70	211	.06	250	.08
330 URTHRL STRC,A<18	18	.01	15	
331 OTH KID&UR DX,AC	384	.11	340	.10
332 OTH KID&UR,A<70	687	.20	656	.20
333 OTH KID&UR,A<18	579	.17	681	.21
334 MJR PELVIC PR,CC	30	.01	20	.01
335 MJR PELVIC PR~CC	169	.05	119	.04
336 TRNSUR PRSTCT,AC	1206	.35	1300	.40
337 TRNSUR PRSTCT~AC	787	.23	846	.26
338 TESTES PR,MALIG	104	.03	116	.04
339 TSTS PR~MLG,A>17	685	.20	766	.23
340 TSTS PR~MLG,A<18	1933	.57	1810	.55
341 PENIS PROCS	209	.06	223	.07
342 CIRCUMCSION,A>17	359	.11	351	.11
343 CIRCUMCSION,A<18	1322	.39	1288	.39
344 OTH ML REPRO,MLG	11		13	
345 OTH ML REPRO~MLG	37	.01	45	.01
346 ML RPRO MLG,A|CC	393	.11	405	.12
347 ML RPRO MLG~A|CC	135	.04	141	.04
348 BNGN PRST HYP,AC	365	.11	358	.11
349 BNGN PRST HYP~AC	242	.07	240	.07
350 MALE REPRO INFLM	473	.14	448	.14
351 STERILIZATION,ML	392	.11	348	.11
352 OTH ML REPRO DX	742	.22	640	.20
353 PLVC EVISC,R HYS	46	.01	40	.01

(BIRTHS ARE EXCLUDED)

DRG		1987		1988	
		No. Patients	% of Total	No. Patients	% of Total
354	NON-RAD HYST,A|C	213	.06	222	.07
355	NON-RAD HYST~A|C	2745	.80	2809	.86
356	FEM RPR RCNST PR	664	.19	693	.21
357	UTRS&ADNEXA,MALG	64	.02	57	.02
358	UTRS&ADNEXA~MLG	1217	.36	1257	.38
359	TUBAL INTRRP~MLG	806	.24	592	.18
360	VGNA,CRVX&VLV PR	1276	.37	1276	.39
361	LAPSCPY&ENDSC,FE	984	.29	1168	.36
362	LAPRSCPC TBL INT	282	.08	406	.12
363	D&C,CON,R-I,MALG	324	.09	316	.10
364	D&C,CONZTN~MALIG	6062	1.77	6248	1.91
365	OTH FEM RPRO PR	275	.08	266	.08
366	FEM RPRO MLG,A|C	208	.06	176	.05
367	FEM RPRO MLG~A|C	313	.09	291	.09
368	FEM RPRO INFCTNS	222	.06	207	.06
369	MNSTRL&OTH F RPR	1600	.47	1427	.44
392	SPLENECTOMY,A>17	39	.01	34	.01
393	SPLENECTOMY,A<18	30	.01	18	.01
394	OTH OR PR,BLOOD	168	.05	176	.05
395	RED BLD CL,A>17	1672	.49	1515	.46
396	RED BLD CL,A<18	286	.08	330	.10
397	COAGULATION DSRD	375	.11	395	.12
398	RTCLEND&IMMN,A|C	168	.05	151	.05
399	RTCLEND&IMMN~A|C	439	.13	351	.11
400	LYMPH|LEUK,MJ PR	216	.06	218	.07
401	LYMPH|LEUK,MN,AC	96	.03	70	.02
402	LYMPH|LEUK,MN~AC	157	.05	145	.04
403	LYMPH|LEUK,A|CC	717	.21	759	.23
404	LYMPH|LEUK,A<70	925	.27	965	.30
405	LYMPH|LEUK,A<18	464	.14	566	.17
406	MYELO DIS,OR,CC	26	.01	36	.01
407	MYELO DIS,OR,~CC	26	.01	30	.01
408	MYELO DISRDR,CC	163	.05	150	.05
409	RADIOTHERAPY	251	.07	377	.12
410	CHEMOTHERAPY	3157	.92	3303	1.01
411	HIST MALG~ENDSCP	43	.01	36	.01
412	HIST MALG,ENDSCP	112	.03	168	.05
413	OTH MYELO DIS,AC	118	.03	115	.04
414	OTH MYELO DIS~AC	69	.02	74	.02
415	OR PR,INF&PAR DS	116	.03	107	.03
416	SEPTICEMIA,A>17	201	.06	222	.07
417	SEPTICEMIA,A<18	117	.03	132	.04
418	PSTOP&PSTTR INFC	489	.14	408	.12
419	FEVER UNKNWN,A|C	42	.01	71	.02
420	FEVER UNKN,A<70	90	.03	105	.03
421	VIRAL ILLNS,A>17	436	.13	429	.13
422	VRL ILL,FVR,A<18	1651	.48	1669	.51
423	OTH INF&PAR DIS	367	.11	366	.11
424	OR PR,DX1-MENTAL	18	.01	25	.01
425	PSYCHOSOC DYSFNC	394	.12	352	.11

(BIRTHS ARE EXCLUDED)

DRG	1987 No. Patients	1987 % of Total	1988 No. Patients	1988 % of Total
426 DEPRSV NEUROSES	599	.18	582	.18
427 NEUROSES~DEPRSV	53	.02	40	.01
428 PERS DIS&IMP CON	148	.04	168	.05
429 ORG DISTRB&M RET	344	.10	328	.10
430 PSYCHOSES	528	.15	531	.16
431 CHILDHD MNTL DIS	164	.05	199	.06
432 OTH DX=MNTL DSRD	52	.02	53	.02
433 SUBST-INDCD MNTL	74	.02	66	.02
434 DRUG DEPENDENCE	362	.11	281	.09
435 DRUG USE~DEPNDNC	425	.12	394	.12
439 SKIN GRAFTS,INJR	17		3	
440 WOUND DEBRD,INJR	307	.09	304	.09
441 HAND PROC,INJURY	64	.02	66	.02
442 OTH OR PR,INJ,AC	55	.02	65	.02
443 OTH OR PR,INJ~AC	283	.08	304	.09
444 MLTPL TRAUMA,A|C	285	.08	235	.07
445 MLTPL TRMA,A<70	1351	.40	1113	.34
446 MLTPL TRMA,A<18	834	.24	678	.21
447 ALLRGC REAC,A>17	42	.01	33	.01
448 ALLRGC READ,A<18	25	.01	44	.01
449 TOX EFF,DRGS,A|C	425	.12	382	.12
450 TOX EFF,DRG,A<70	2220	.65	2046	.63
451 TOX EFF,DRG,A<18	1847	.54	1607	.49
452 TRTMT CMPL,A|CC	98	.03	98	.03
453 TRTMT CMPL~A|CC	320	.09	359	.11
454 OTH INJ,TXC,A|C	86	.03	55	.02
455 OTH INJ,TXC~A|C	127	.04	176	.05
456 BURNS, TRANSFERD	99	.03	90	.03
457 EXTENSIVE BURNS	7		2	
458 NON-EXT BRN,GRFT	12		11	
459 NON-EXT BRN,DBRD	172	.05	149	.05
460 NON-EXT BRN~OR P	661	.19	521	.16
461 OR PR,DX=OTH CTC	538	.16	695	.21
462 REHABILITATION	100	.03	117	.04
463 SIGNS&SYMPTMS,CC	61	.02	67	.02
464 SIGNS&SYMPTMS~CC	627	.18	570	.17
465 AFTRCR,DX2=MALIG	51	.01	45	.01
466 AFTRCR,DX2=MALIG	645	.19	927	.28
467 OTH HLTH FACTORS	7705	2.25	7269	2.22
468 UNRELATED OR PRO	3593	1.05	3486	1.07
470 UNGROUPABLE	372	.11	420	.13

Appendix 4

Appendix 4 : DRGs Ranked in Order of Descending Frequency, 1984 - 1988

1984

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
001	391	NORMAL NEWBORNS	56943	11.3490	11.3490	4.9080
002	373	VAG DEL~COMPL DX	54905	10.9429	22.2919	5.8060
003	183	MSC DIG DIS,A<70	15216	3.0326	25.3245	4.1808
004	184	MSC DIG DIS,A<18	8884	1.7706	27.0951	3.9704
005	167	APPNDC~CMP DX~AC	7413	1.4774	28.5726	6.3418
006	467	OTH HLTH FACTORS	7254	1.4458	30.0184	3.9530
007	030	TR ST,CMA<1,A<18	6342	1.2640	31.2823	2.3811
008	270	OTH SKN PR~A|CC	6203	1.2363	32.5186	2.3955
009	243	MED BACK PROBS	6074	1.2106	33.7292	9.0878
010	088	CHRN PULM OBSTR	6000	1.1958	34.9251	12.9032
011	060	TNSECT,ADCT A<18	5985	1.1928	36.1179	4.0576
012	364	D&C,CONZTN~MALIG	5797	1.1554	37.2733	2.5570
013	029	TR ST,CMA<1,A<70	5392	1.0747	38.3479	2.6790
014	070	OM&URI, A<18	5296	1.0555	39.4034	3.8809
015	098	BRNCH&ASTH A<17	4861	0.9688	40.3723	5.0183
016	182	MSC DGSTV DIS,AC	4737	0.9441	41.3164	8.0745
017	371	CESAREAN,~CC	4175	0.8321	42.1485	11.7832
018	468	UNRELATED OR [illegible]RO	4079	0.8130	42.9614	13.9755
019	143	CHEST PAIN	4001	0.7974	43.7589	5.3572
020	014	SPEC CRBRVSC DIS	3955	0.7883	44.5471	22.3775
021	284	MNR SKIN DIS~A|C	3795	0.7564	45.3035	4.5223
022	122	CRC DIS,AMI&CV	3595	0.7165	46.0200	13.0673
023	127	HRT FLR&SHOCK	3581	0.7137	46.7337	13.9042
024	294	DIABETES AGE>35	3341	0.6659	47.3996	9.4274
025	254	OTH FX,SPR A<70	2944	0.5868	47.9863	5.3533
026	089	SMPL PNEU&PL A|C	2903	0.5786	48.5649	37.7523
027	119	VEIN LGTN&STRPNG	2824	0.5628	49.1277	4.9079
028	026	SZR&HD A<17,~CC	2798	0.5577	49.6854	4.4921
029	247	SGNS&SYMP,MSCLSK	2785	0.5551	50.2405	5.6370
030	025	SZR&HD A18-69~CC	2724	0.5429	50.7834	5.8146
031	039	LENS PROCS	2672	0.5325	51.3159	8.9854
032	140	ANGINA PECTORIS	2617	0.5216	51.8375	7.5300
033	410	CHEMOTHERAPY	2567	0.5116	52.3491	3.3849
034	047	OTH EYE DS,A>17~	2510	0.5003	52.8494	5.9928
035	134	HYPERTENSION	2469	0.4921	53.3415	8.3362
036	252	FX,SPRN,DIS A<18	2458	0.4899	53.8313	1.7421
037	178	UNCMP PTC LCR~AC	2378	0.4739	54.3053	3.9773
038	198	TOT CHLST~CDE~AC	2366	0.4716	54.7768	12.7916
039	450	TOX EFF,DRG,A<70	2361	0.4706	55.2474	2.9966
040	262	BRST BIOP&EXC~ML	2335	0.4654	55.7128	2.8582
041	082	RESP NEOPLASMS	2263	0.4510	56.1638	13.4339
042	422	VRL ILL,FVR,A<18	2229	0.4443	56.6081	4.3284
043	097	BRNCH&ASTH A<70	2221	0.4427	57.0507	7.3215
044	355	NON-RAD HYST~A|C	2211	0.4407	57.4914	12.6875
045	340	TSTS PR~MLG,A<18	2096	0.4177	57.9091	4.2915
046	451	TOX EFF,DRG,A<18	2090	0.4165	58.3257	1.8976
047	189	OTH DGST DX,A<70	2087	0.4159	58.7416	3.7714
048	055	MISC EAR,NS,THRT	2073	0.4132	59.1548	3.9923
049	395	RED BLD CL,A>17	2052	0.4090	59.5638	10.8436
050	162	ING&FML HRN,A<70	2048	0.4082	59.9719	7.6719
051	234	OTH MSCL&CONN~AC	2039	0.4064	60.3783	7.8210

1984

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
052	281	SKN TRMA,A<70	2033	0.4052	60.7835	3.2253
053	209	MJR JOINT PROCS	2009	0.4004	61.1839	24.2937
054	133	ATHRSCLROSIS~A|C	1986	0.3958	61.5797	6.0403
055	231	RMVL~HIP&FEM DEV	1972	0.3930	61.9728	5.4260
056	041	XTROC PR A<18	1955	0.3896	62.3624	2.7683
057	369	MNSTRL&OTH F RPR	1929	0.3844	62.7469	4.0005
058	073	OTH E,N,T A>17	1910	0.3806	63.1275	3.6010
059	187	DNTL EXTR&RESTOR	1897	0.3780	63.5056	2.0606
060	249	AFTERCARE,MSCLSK	1896	0.3778	63.8835	2.4868
061	091	SMPL PNEU&P A<18	1865	0.3717	64.2552	9.3094
062	321	KID&UR INF,A<70	1805	0.3597	64.6150	4.8643
063	256	OTH DX,MSCL&CONN	1779	0.3545	64.9695	6.4300
064	251	FX,SPRN,DIS A<70	1762	0.3511	65.3207	2.6470
065	445	MLTPL TRMA,A<70	1725	0.3438	65.6645	3.9606
066	324	URNRY STONES~A|C	1693	0.3374	66.0019	4.5428
067	326	KID&UR S&S,A<70	1693	0.3374	66.3393	4.1057
068	062	MYRINGOTOMY A<18	1653	0.3294	66.6688	1.6558
069	322	KID&UR INF,A<18	1650	0.3288	66.9976	4.9345
070	255	OTH FX,SPR A<18	1624	0.3236	67.3213	4.0480
071	102	OTHR RSP DX A<70	1546	0.3081	67.6294	9.9754
072	158	ANAL PROCS ~A|CC	1529	0.3047	67.9342	6.4559
073	074	OTH E,N,T A<18	1519	0.3027	68.2369	2.6754
074	282	SKN TRMA,A<18	1490	0.2969	68.5339	2.5403
075	069	OM&URI,A18-69~C	1459	0.2907	68.8247	4.0946
076	101	OTHR RSP DX A|CC	1426	0.2842	69.1089	17.1213
077	385	NEONTS,DIED|XFRD	1426	0.2842	69.3931	0.9130
078	210	HIP&FEMUR PR,A|C	1403	0.2796	69.6727	26.0128
079	175	GI HMRRHG~A|CC	1401	0.2792	69.9519	4.9764
080	343	CIRCUMCSION,A<18	1386	0.2762	70.2282	2.0339
081	028	TR ST,CMA<1,A&|C	1375	0.2740	70.5022	6.8785
082	229	HAND PR~GANGLION	1351	0.2692	70.7715	4.5374
083	130	PRPHL VSC DIS,AC	1339	0.2668	71.0384	19.2696
084	131	PRPHL VSC DIS~AC	1319	0.2628	71.3012	10.5686
085	139	ARRHYTH&CNDC~A|C	1319	0.2628	71.5641	5.9606
086	040	XTROC PR A>=18	1318	0.2626	71.8268	3.9325
087	278	CELLULITIS,A<70	1314	0.2618	72.0887	6.3265
088	236	FRAC OF HIP&PLVS	1307	0.2604	72.3492	14.2510
089	360	VGNA,CRVX&VLV PR	1295	0.2581	72.6073	6.6440
090	404	LYMPH|LEUK,A<70	1291	0.2573	72.8646	11.6917
091	138	ARRHYTH&CNDC,A|C	1271	0.2533	73.1179	10.3501
092	090	SMPL PNEU&P A<70	1265	0.2523	73.3702	22.6846
093	063	OTH E,N,T OR PR	1258	0.2507	73.6210	3.4499
094	012	DEGENR NRVS DIS	1250	0.2491	73.8701	20.9688
095	145	OTH CIRD DX,~CC	1246	0.2483	74.1184	7.9181
096	015	TRANS ISCHEM ATT	1240	0.2471	74.3656	9.3266
097	059	TNSECT,ADCT A>17	1221	0.2433	74.6089	5.5471
098	208	BLRY TR DIS~A|CC	1190	0.2371	74.8461	6.4824
099	190	OTH DGST DX,A<18	1187	0.2365	75.0827	3.5670
100	066	EPISTAXIS	1173	0.2337	75.3164	4.1006
101	163	HERNIA PROC,A<18	1168	0.2327	75.5492	3.2920
102	235	FRACTR OF FEMUR	1160	0.2311	75.7804	21.0043

1984

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
103	132	ATHRSCLROSIS,A|C	1137	0.2266	76.0070	11.1900
104	298	MISC MET DS,A<18	1129	0.2250	76.2321	9.9575
105	142	SYNCP&CLLPS,~A|C	1122	0.2236	76.4557	4.4483
106	358	UTRS&ADNEXA~MLG	1122	0.2236	76.6793	7.2469
107	446	MLTPL TRMA,A<18	1115	0.2222	76.9015	2.9471
108	390	NEON,OTH SIG PRB	1106	0.2204	77.1220	5.0398
109	336	TRNSUR PRSTCT,AC	1099	0.2190	77.3410	15.0073
110	123	CRC DIS,AMI,XPRD	1087	0.2166	77.5576	13.0589
111	058	T&A ~TNS,AD A<18	1064	0.2120	77.7697	3.5244
112	172	DGSTV MALIG,A|CC	1063	0.2118	77.9816	16.2380
113	470	UNGROUPABLE	1025	0.2044	78.1860	11.1854
114	225	FOOT PROCS	1015	0.2022	78.3883	11.0236
115	227	SOFT TISS PR~A|C	1014	0.2020	78.5904	6.5483
116	241	CONN TISS DIS~AC	1012	0.2016	78.7921	11.4723
117	325	KID&UR SG&SY,A|C	1009	0.2010	78.9932	8.3310
118	128	DP VN THRMBPHLEB	998	0.1989	79.1921	13.3096
119	266	SKN GRFT~ULCR~CC	995	0.1983	79.3904	8.8653
120	426	DEPRSV NEUROSES	968	0.1929	79.5834	13.1095
121	100	RSP SGN&SY A<70	958	0.1909	79.7743	5.4697
122	332	OTH KID&UR,A<70	948	0.1889	79.9632	5.3333
123	295	DIABETES AGE<36	946	0.1885	80.1518	7.6934
124	215	BACK&NECK PR~A|C	926	0.1845	80.3363	17.8715
125	361	LAPSCPY&ENDSC,FE	921	0.1835	80.5199	2.9349
126	316	RENAL FLR~DLYSIS	913	0.1819	80.7019	14.7317
127	320	KID&UR INF,A|CC	906	0.1805	80.8824	11.4249
128	179	INFLM BOWEL DIS	897	0.1787	81.0612	10.3099
129	301	ENDCRN DIS~A|CC	891	0.1775	81.2388	8.4332
130	460	NON-EXT BRN~OR P	855	0.1704	81.4092	9.9450
131	464	SIGNS&SYMPTMS~CC	855	0.1704	81.5796	7.6339
132	297	MISC MET DS,A<70	851	0.1696	81.7492	8.8731
133	372	VAG DEL,COMPL DX	848	0.1690	81.9182	9.3939
134	174	GI HMRRHG,A|CC	846	0.1686	82.0868	9.1454
135	403	LYMPH|LEUK,A|CC	836	0.1666	82.2535	13.7333
136	035	OTH NRVS DIS,~AC	818	0.1630	82.4165	8.5477
137	153	MNR BOWEL PR~A|C	818	0.1630	82.5795	6.5428
138	155	STM,ESO,DD A<70	810	0.1614	82.7410	14.8840
139	048	OTH EYE DIS,A<18	804	0.1602	82.9012	3.7027
140	186	DNTL DIS~XT,A<18	803	0.1600	83.0612	3.0872
141	222	KNEE PROCS~A|CC	797	0.1588	83.2201	6.4404
142	253	OTH FX,SPR A|CC	790	0.1574	83.3775	10.4911
143	337	TRNSUR PRSTCT~AC	789	0.1572	83.5348	11.3333
144	279	CELLULITIS,A<18	777	0.1548	83.6897	4.3359
145	173	DGSTV MALIG~A|CC	776	0.1546	83.8443	13.0838
146	283	MNR SKIN DIS,A|C	774	0.1542	83.9986	8.7455
147	185	DNTL DIS~XT,A>17	766	0.1526	84.1512	5.8851
148	096	BRNCH&ASTH A|CC	763	0.1520	84.3033	10.9908
149	305	KID,UR PR~MLG~AC	762	0.1518	84.4552	12.9055
150	121	CRC DIS,AMI&E,CC	745	0.1484	84.6037	16.1611
151	021	VIRAL MENINGITIS	741	0.1476	84.7514	6.2753
152	136	CRDC CNG&VV,A<70	740	0.1474	84.8988	7.0635
153	388	PREMTRTY~MJR PRB	723	0.1440	85.0429	3.6058

1984

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
154	188	OTH DGSTV DX,A|C	698	0.1391	85.1821	8.0645
155	245	BONE DISEASE~A|C	698	0.1391	85.3212	8.0072
156	268	SKN,SUBCT&BR PLS	698	0.1391	85.4603	13.5530
157	397	COAGULATION DSRD	698	0.1391	85.5994	5.9842
158	219	LWR XTRM PR,A<70	695	0.1385	85.7379	16.1698
159	352	OTH ML REPRO DX	692	0.1379	85.8758	3.4234
160	425	PSYCHOSOC DYSFNC	690	0.1375	86.0134	8.0768
161	020	NRV INF ~VRL MNG	688	0.1371	86.1505	12.5218
162	169	MOUTH PROCS~A|CC	688	0.1371	86.2876	4.4375
163	430	PSYCHOSES	686	0.1367	86.4243	16.0918
164	161	ING&FML HRN,A|CC	678	0.1351	86.5595	11.0737
165	206	OTH LIVER DIS~AC	677	0.1349	86.6944	10.1167
166	339	TSTS PR~MLG,A>17	677	0.1349	86.8293	5.8168
167	435	DRUG USE~DEPNDNC	673	0.1341	86.9634	8.4205
168	177	UNCMP PTC LCR,AC	672	0.1339	87.0974	9.4613
169	239	PATH FR&MSCL MLG	667	0.1329	87.2303	11.8711
170	071	LARYNGOTRCHEITS	647	0.1289	87.3593	3.4467
171	356	FEM RPR RCNST PR	643	0.1281	87.4874	10.2348
172	065	DYSEQUILIBRIUM	637	0.1269	87.6144	6.5243
173	359	TUBAL INTRRP~MLG	608	0.1211	87.7356	3.1941
174	141	SYNCP&CLLPS,A|CC	600	0.1195	87.8551	7.9850
175	013	MP SCLER&CRBL AT	597	0.1189	87.9741	16.7471
176	389	FULL TRM NN,PRBS	593	0.1181	88.0923	4.5481
177	148	MJR BOWEL PR,A|C	591	0.1177	88.2101	30.4907
178	207	BLRY TR DIS,A|CC	590	0.1175	88.3277	11.0898
179	024	SZR&HDACH A&|CC	589	0.1173	88.4451	9.3735
180	350	MALE REPRO INFLM	586	0.1167	88.5619	4.6672
181	211	HIP&FMUR PR,A<70	581	0.1157	88.6777	25.1824
182	269	OTH SKN PR A|CC	580	0.1155	88.7933	8.8000
183	149	MJR BOWEL PR~A|C	575	0.1146	88.9079	22.2957
184	250	FX,SPR ARM&FT,AC	571	0.1138	89.0217	5.2417
185	248	TNDNTS,MYSTS,BRS	557	0.1110	89.1327	6.4937
186	244	BONE DISEASE,A|C	554	0.1104	89.2431	14.8736
187	271	SKIN ULCERS	539	0.1074	89.3505	20.8887
188	296	MISC MET DIS,A|C	537	0.1070	89.4576	11.8752
189	333	OTH KID&UR,A<18	533	0.1062	89.5638	5.8612
190	421	VIRAL ILLNS,A>17	528	0.1052	89.6690	6.6098
191	273	MJR SKN DIS~A|CC	523	0.1042	89.7733	10.8432
192	461	OR PR,DX=OTH CTC	522	0.1040	89.8773	4.8448
193	290	THYROID PROCS	519	0.1034	89.9807	9.3218
194	311	TRNSURETH PR~A|C	516	0.1028	90.0836	4.7946
195	280	SKN,SUBCT TR,AC	515	0.1026	90.1862	5.8583
196	429	ORG DISTRB&M RET	515	0.1026	90.2889	21.5010
197	087	PLM EDEMA&RSP FL	514	0.1024	90.3913	15.3132
198	274	MLG BRST DIS,A|C	514	0.1024	90.4937	13.5272
199	064	ER,NS,THRT MALIG	513	0.1022	90.5960	17.1715
200	367	FEM RPRO MLG~A|C	503	0.1002	90.6962	12.2068
201	203	HPTOBL|PNC MALIG	500	0.0996	90.7959	14.9860
202	453	TRTMT CMPL~A|CC	495	0.0986	90.8945	4.7980
203	019	CRNL&PRPH ~A,CC	494	0.0984	90.9930	9.3644
204	466	AFTRCR,DX2=MALIG	489	0.0974	91.0905	4.6012

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
205	449	TOX EFF,DRGS,A|C	488	0.0972	91.1877	5.4795
206	224	UPR XTRM PR~A|CC	485	0.0966	91.2844	7.5814
207	405	LYMPH|LEUK,A<18	484	0.0964	91.3808	6.8326
208	078	PULMNRY EMBOLISM	483	0.0962	91.4771	17.0973
209	197	TOT CHLST~CDE,AC	478	0.0952	91.5724	21.0586
210	327	KID&UR S&S,A<18	474	0.0944	91.6668	5.1962
211	348	BNGN PRST HYP,AC	465	0.0926	91.7595	9.1591
212	418	PSTOP&PSTTR INFC	463	0.0922	91.8518	8.4471
213	434	DRUG DEPENDENCE	452	0.0900	91.9419	3.2367
214	300	ENDCRN DIS,A|CC	450	0.0896	92.0316	14.5867
215	399	RTCLEND&IMMN~A|C	449	0.0894	92.1211	4.6748
216	056	RHINOPLASTY	447	0.0890	92.2102	5.1991
217	107	CRNRY BYPS,~CCTH	443	0.0882	92.2984	9.5508
218	135	CRDC CNG&VLV,A|C	442	0.0880	92.3865	11.6267
219	342	CIRCUMCSION,A>17	438	0.0872	92.4738	3.5959
220	154	STM,ESO,DD PR,AC	437	0.0870	92.5609	23.9016
221	171	OTH DGSTV PR~A|C	435	0.0866	92.6476	6.6092
222	072	NSL TR & DEFORM	434	0.0864	92.7341	2.2166
223	240	CONN TISS DIS,AC	432	0.0860	92.8202	17.7431
224	042	INTROC PR,~R,I,L	428	0.0853	92.9055	10.3808
225	137	CRDC CNG&VV,A<18	426	0.0849	92.9904	6.9014
226	144	OTH CIRC DX,CC	416	0.0829	93.0733	13.6803
227	267	PRANL&PILONDL PR	413	0.0823	93.1557	8.5472
228	238	OSTEOMYELITIS	411	0.0819	93.2376	11.7445
229	443	OTH OR PR,INJ~AC	407	0.0811	93.3187	10.0713
230	095	PNEUMOTHRX ~A,CC	406	0.0809	93.3996	7.7266
231	258	TOT MAST MLG~A|C	404	0.0805	93.4801	14.0916
232	331	OTH KID&UR DX,AC	401	0.0799	93.5600	9.4190
233	346	ML RPRO MLG,A|CC	390	0.0777	93.6378	12.9154
234	129	CARDIAC ARREST	385	0.0767	93.7145	19.0260
235	310	TRNSURETH PR,A|C	383	0.0763	93.7908	8.1723
236	329	URTHRL STRC,A<70	381	0.0759	93.8668	3.3202
237	276	~MALIG BRST DIS	378	0.0753	93.9421	3.6931
238	230	RMVL,HIP&FEM DEV	374	0.0745	94.0167	12.3075
239	043	HYPHEMA	368	0.0733	94.0900	5.8777
240	204	PANC DIS ~MALIG	366	0.0729	94.1629	10.6148
241	318	KID&UR NEOP,A|CC	365	0.0727	94.2357	12.5945
242	444	MLTPL TRAUMA,A|C	364	0.0725	94.3082	7.7775
243	099	RESP SGN&SY A|CC	362	0.0721	94.3804	9.4945
244	116	PCMKR,~AMI|CHF	361	0.0719	94.4523	11.6510
245	053	SNS&MAST PR A>17	360	0.0717	94.5241	6.1306
246	001	CRNIOT A>=18 ~TR	359	0.0715	94.5956	26.1978
247	075	MJR CHEST PROCS	349	0.0695	94.6652	24.5244
248	165	APPNDC,CMP DX~AC	347	0.0691	94.7344	9.2709
249	277	CELLULITIS,A|CC	347	0.0691	94.8035	11.3746
250	328	URTHRL STRCT,A|C	333	0.0663	94.8699	5.0480
251	036	RETINAL PROCS	328	0.0653	94.9353	9.8415
252	011	NRVS NEOPL ~A,CC	327	0.0651	95.0004	16.3670
253	068	OM&URI, A&|CC	323	0.0643	95.0648	11.5944
254	093	INTRST LUNG ~A,C	316	0.0629	95.1278	8.1772
255	335	MJR PELVIC PR~CC	316	0.0629	95.1908	19.8703

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
256	319	KID&UR NEOP~A|CC	313	0.0623	95.2531	8.7125
257	181	GI OBSTRCTN~A|CC	312	0.0621	95.3153	7.5801
258	351	STERILIZATION,ML	309	0.0615	95.3769	1.0259
259	275	MLG BRST DIS~A|C	304	0.0605	95.4375	14.2105
260	323	URNRY STONES,A|C	302	0.0601	95.4977	7.4901
261	396	RED BLD CL,A<18	302	0.0601	95.5579	7.1623
262	440	WOUND DEBRD,INJR	301	0.0599	95.6179	7.1429
263	368	FEM RPRO INFCTNS	298	0.0593	95.6773	5.6141
264	462	REHABILITATION	298	0.0593	95.7367	16.4362
265	160	HRN~ING&FEM,A<70	289	0.0575	95.7943	9.1315
266	034	OTH NRV DIS,A&|C	287	0.0572	95.8515	14.3066
267	202	CIRRH&ALC HPTTIS	287	0.0572	95.9087	13.6202
268	120	OTHER CRC OR PR	286	0.0570	95.9657	12.7273
269	008	OTH NRV PR ~A,CC	284	0.0566	96.0223	9.0070
270	423	OTH INF&PAR DIS	278	0.0554	96.0777	10.0719
271	006	CARPL TUNNEL RLS	273	0.0544	96.1321	4.5201
272	366	FEM RPRO MLG,A|C	272	0.0542	96.1863	17.5110
273	349	BNGN PRST HYP~AC	268	0.0534	96.2397	4.8619
274	080	RSP INF&INL A<70	261	0.0520	96.2917	14.1456
275	045	NEUR EYE DISRDRS	254	0.0506	96.3424	7.1614
276	180	GI OBSTRCTN,A|CC	254	0.0506	96.3930	11.4094
277	370	CESAREAN, CC	244	0.0486	96.4416	14.8566
278	109	CRDTHR PR,~PUMP	243	0.0484	96.4900	21.0494
279	341	PENIS PROCS	238	0.0474	96.5375	8.6429
280	246	ARTHROPATHIES,NS	236	0.0470	96.5845	10.6737
281	111	MJR RCNST VSC,AC	233	0.0464	96.6309	19.6266
282	176	CMPL PEPTIC ULCR	233	0.0464	96.6774	10.0043
283	017	NONSP CBC DIS~CC	230	0.0458	96.7232	15.8304
284	105	CRDC VLV W/P~CCT	229	0.0456	96.7689	13.5328
285	365	OTH FEM RPRO PR	228	0.0454	96.8143	11.5263
286	212	HIP&FMUR PR,A<18	227	0.0452	96.8595	25.6784
287	112	MJR RCNST VSC~AC	225	0.0448	96.9044	17.6800
288	166	APPNDC~CMP DX,AC	224	0.0446	96.9490	12.3750
289	113	AMP CRC~UP LIMB	217	0.0432	96.9923	47.7604
290	409	RADIOTHERAPY	217	0.0432	97.0355	12.2258
291	157	ANAL PROCS A|CC	216	0.0430	97.0786	11.7685
292	217	SKIN GRAFT~HAND	215	0.0428	97.1214	12.5860
293	455	OTH INJ,TXC~A|C	212	0.0422	97.1637	3.0000
294	233	OTH MSCL&CONN,AC	211	0.0420	97.2057	21.0616
295	054	SNS&MAST PR A<18	208	0.0414	97.2472	5.0865
296	156	STM,ESO,DD A<18	207	0.0412	97.2885	13.6618
297	313	URETHRAL PR,A<70	207	0.0412	97.3297	5.3720
298	110	MJR RCSTR VSC,AC	205	0.0408	97.3706	27.4488
299	459	NON-EXT BRN,DBRD	204	0.0406	97.4112	32.0392
300	079	RSP INF&INFL A|C	203	0.0404	97.4517	20.7241
301	205	OTH LIVER DIS,AC	203	0.0404	97.4921	15.3054
302	394	OTH OR PR,BLOOD	201	0.0400	97.5322	5.2090
303	038	PRIM IRIS PROCS	197	0.0392	97.5715	9.3198
304	018	CRNL&PRPH A&|CC	196	0.0390	97.6105	12.7908
305	061	MYRINGOTOMY A>17	196	0.0390	97.6496	2.5561
306	242	SEPTIC ARTHRITIS	195	0.0388	97.6885	12.7026

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
307	299	INBORN MET ERROR	195	0.0388	97.7273	11.4718
308	354	NON-RAD HYST,A|C	190	0.0378	97.7652	17.1368
309	260	SUB MAST MLG~A|C	179	0.0356	97.8009	6.7039
310	416	SEPTICEMIA,A>17	178	0.0354	97.8363	51.2022
311	304	KID,UR PR~MLG,AC	177	0.0352	97.8716	18.1921
312	147	RECTAL RSCTN~A|C	175	0.0348	97.9065	25.6514
313	152	MNR BOWEL PR,A|C	175	0.0348	97.9414	15.5314
314	146	RECTAL RSCTN,A|C	174	0.0346	97.9761	29.4253
315	272	MJR SKN DIS,A|CC	173	0.0344	98.0105	16.7630
316	428	PERS DIS&IMP CON	172	0.0342	98.0448	22.8023
317	052	CLFT LIP&PLT REP	171	0.0340	98.0789	11.5848
318	413	OTH MYELO DIS,AC	170	0.0338	98.1128	16.5235
319	023	NONTR STPR&COMA	169	0.0336	98.1465	5.8402
320	261	BRST PR~MLG~BIOP	168	0.0334	98.1799	6.2560
321	220	LWR XTRM PR,A<18	167	0.0332	98.2132	9.1198
322	257	TOT MAST MLG,A|C	167	0.0332	98.2465	17.2156
323	363	D&C,CON,R-I,MALG	167	0.0332	98.2798	6.3234
324	044	ACUT MJR EYE INF	162	0.0322	98.3121	8.0926
325	218	LWR XTRM PR,A|CC	162	0.0322	98.3444	26.9753
326	077	OR RSP,~MJRCH,~C	158	0.0314	98.3759	12.8354
327	347	ML RPRO MLG~A|CC	156	0.0310	98.4070	10.9936
328	003	CRNIOT A<18	155	0.0308	98.4378	23.2323
329	433	SUBST-INDCD MNTL	153	0.0304	98.4683	3.7712
330	441	HAND PROC,INJURY	153	0.0304	98.4988	4.0000
331	408	MYELO DISRDR,CC	152	0.0302	98.5291	8.3289
332	094	PNEUMOTHRX A|CC	146	0.0290	98.5582	14.1370
333	086	PLRL EFFUSN A<70	145	0.0288	98.5871	10.4828
334	398	RTCLEND&IMMN,A|C	144	0.0287	98.6158	9.7917
335	085	PLRL EFFUSN A&|C	143	0.0285	98.6443	16.7343
336	303	KID,UR,BL PR,MLG	143	0.0285	98.6728	21.4615
337	417	SEPTICEMIA,A<18	142	0.0283	98.7011	12.3803
338	411	HIST MALG~ENDSCP	139	0.0277	98.7288	3.1583
339	415	OR PR,INF&PAR DS	139	0.0277	98.7565	17.8777
340	194	BLRY TR PR~CH~AC	138	0.0275	98.7840	16.0652
341	046	OTH EYE DS,A>17C	137	0.0273	98.8113	8.0511
342	402	LYMPH|LEUK,MN~AC	137	0.0273	98.8386	13.7153
343	009	SPINAL DIS&INJ	131	0.0261	98.8648	24.5038
344	092	INTRST LUNG A|CC	129	0.0257	98.8905	14.2248
345	452	TRTMT CMPL,A|CC	128	0.0255	98.9160	15.8828
346	193	BLRY TR PR~CH,AC	127	0.0253	98.9413	22.3701
347	431	CHILDHD MNTL DIS	122	0.0243	98.9656	11.6639
348	002	CRNIOT TR A>=18	121	0.0241	98.9897	17.1818
349	010	NRVS NEOPL A&|CC	121	0.0241	99.0138	27.3636
350	037	ORBITAL PROCS	120	0.0239	99.0378	10.8083
351	312	URETHRAL PR,A|CC	120	0.0239	99.0617	8.8917
352	414	OTH MYELO DIS~AC	120	0.0239	99.0856	15.5083
353	420	FEVER UNKN,A<70	115	0.0229	99.1085	10.1130
354	442	OTH OR PR,INJ,AC	112	0.0223	99.1308	29.4643
355	456	BURNS, TRANSFERD	111	0.0221	99.1530	13.6577
356	004	SPINAL PROCS	110	0.0219	99.1749	20.2091
357	050	SIALOADENECTOMY	105	0.0209	99.1958	7.7238

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
358	170	OTH DGSTV PR,A|C	103	0.0205	99.2163	24.4854
359	432	OTH DX-MNTL DSRD	103	0.0205	99.2369	10.6214
360	151	PRTNL ADHESLS~AC	100	0.0199	99.2568	12.6000
361	259	SUB MAST MLG,A|C	99	0.0197	99.2765	11.2929
362	032	CONCSN A18-69~CC	93	0.0185	99.2951	13.2043
363	159	HRNIA~ING&FEM,AC	84	0.0167	99.3118	17.0000
364	400	LYMPH|LEUK,MJ PR	84	0.0167	99.3285	21.8929
365	226	SOFT TISS PR,A|C	83	0.0165	99.3451	13.7590
366	237	SPRN,STRN,DIS HP	81	0.0161	99.3612	15.0741
367	315	OTH KID&URN PROC	81	0.0161	99.3774	14.6049
368	081	RSP INF&INL A<18	79	0.0157	99.3931	10.3038
369	114	UP LIMB&TOE AMP	78	0.0155	99.4087	33.8462
370	454	OTH INJ,TXC,A|C	77	0.0153	99.4240	7.9091
371	463	SIGNS&SYMPTMS,CC	77	0.0153	99.4394	10.9091
372	192	MNR PNC,LVR,SHNT	76	0.0151	99.4545	16.5526
373	007	OTH NRV PR A&|CC	75	0.0149	99.4694	27.0267
374	016	NONSP CBV DIS,CC	75	0.0149	99.4844	33.6800
375	057	T&A ~TNS,AD A>17	73	0.0145	99.4989	7.3151
376	168	MOUTH PROCS,A|CC	72	0.0143	99.5133	8.4444
377	401	LYMPH|LEUK,MN,AC	72	0.0143	99.5276	19.9028
378	076	OR RSP,~MJRCH,CC	69	0.0137	99.5414	19.7971
379	338	TESTES PR,MALIG	67	0.0133	99.5548	10.4627
380	447	ALLRGC REAC,A>17	67	0.0133	99.5681	4.6567
381	293	OTH E,N,M PR~A|C	63	0.0125	99.5807	4.8571
382	216	MUSCL&CONN BIOPS	62	0.0123	99.5930	18.7903
383	419	FEVER UNKNWN,A|C	57	0.0113	99.6044	12.8947
384	213	MUSCL&CN TIS AMP	56	0.0111	99.6155	34.2679
385	214	BACK&NECK PR,A|C	56	0.0111	99.6267	24.1607
386	223	UPR XTRM PR,A|CC	56	0.0111	99.6379	13.1786
387	306	PROSTATECTOMY,AC	56	0.0111	99.6490	17.8393
388	427	NEUROSES~DEPRSV	54	0.0107	99.6598	9.2222
389	448	ALLRGC READ,A<18	52	0.0103	99.6701	4.1346
390	126	ENDOCARDITIS	50	0.0099	99.6801	22.5200
391	314	URETHRAL PR,A<18	50	0.0099	99.6901	11.0000
392	117	PCMKR REP~PLSGN	49	0.0097	99.6998	9.7347
393	334	MJR PELVIC PR,CC	49	0.0097	99.7096	24.5918
394	412	HIST MALG,ENDSCP	49	0.0097	99.7194	2.5918
395	291	THYROGLOSSAL PR	48	0.0095	99.7289	4.4583
396	150	PRTNL ADHESLS,AC	47	0.0093	99.7383	22.0213
397	357	UTRS&ADNEXA,MALG	47	0.0093	99.7477	19.7021
398	033	CONCUSSION A<18	46	0.0091	99.7568	3.1739
399	164	APPNDC,CMP DX,AC	46	0.0091	99.7660	19.6522
400	201	OTH HPTBL/PNC PR	45	0.0089	99.7750	17.9111
401	264	SKN GRFT,ULCR~AC	44	0.0087	99.7838	27.9091
402	307	PROSTATECTOMY~AC	44	0.0087	99.7925	16.0455
403	387	PREMTRTY,MJR PRB	44	0.0087	99.8013	4.4318
404	265	SKN GRFT~ULCR,CC	43	0.0085	99.8099	13.6744
405	084	MJR CHST TR A<70	42	0.0083	99.8182	6.4286
406	309	MNR BLDR PR~A|CC	39	0.0077	99.8260	17.1026
407	392	SPLENECTOMY,A>17	39	0.0077	99.8338	28.2564
408	051	SALV GLND PR~SIA	38	0.0075	99.8414	7.0000

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
409	386	NEONTS,XTRM IMMT	38	0.0075	99.8489	3.8684
410	263	SKN GRFT,ULCR,AC	35	0.0069	99.8559	59.0571
411	353	PLVC EVISC,R HYS	35	0.0069	99.8629	24.2571
412	465	AFTRCR,DX2=MALIG	35	0.0069	99.8699	4.7143
413	308	MNR BLDR PR,A|CC	34	0.0067	99.8766	14.4118
414	191	MJR PNC,LVR,SHNT	33	0.0065	99.8832	27.9091
415	330	URTHRL STRC,A<18	33	0.0065	99.8898	3.2727
416	049	MJR HD&NECK PROC	32	0.0063	99.8962	26.1875
417	286	ADRNL&PIT PROCS	32	0.0063	99.903	23.5313
418	424	OR PR,DX1=MENTAL	31	0.0061	99.909	21.5806
419	115	PCMKR,AMI OR CHF	29	0.0057	99.914	19.8621
420	345	OTH ML REPRO~MLG	29	0.0057	99.920	9.2759
421	067	EPIGLOTTITIS	28	0.0055	99.926	5.9643
422	289	PARATHYROID PROC	27	0.0053	99.931	12.8148
423	005	XTRACRNL VASC PR	25	0.0049	99.936	31.6400
424	083	MJR CHST TR A&|C	25	0.0049	99.941	17.9200
425	199	HPTOBL DX PR,MLG	25	0.0049	99.946	24.7200
426	458	NON-EXT BRN,GRFT	23	0.0045	99.951	27.6087
427	200	HPTOBL DX PR~MLG	21	0.0041	99.955	19.2381
428	344	OTH ML REPRO,MLG	21	0.0041	99.959	14.7619
429	022	HYPRTNS ENCPHLOP	17	0.0033	99.963	19.3529
430	031	CONCUSSION A&|CC	17	0.0033	99.966	9.5294
431	195	TOT CHLST,CDE,AC	16	0.0031	99.969	18.6875
432	393	SPLENECTOMY,A<18	16	0.0031	99.972	11.2500
434	118	PULSE GEN REPL	14	0.0027	99.978	7.3571
435	362	LAPRSCPC TBL INT	14	0.0027	99.981	3.7857
436	406	MYELO DIS,OR,CC	13	0.0025	99.983	48.5385
437	221	KNEE PROCS,A|CC	12	0.0023	99.986	13.6667
438	292	OTH E,N,M PR,A|C	12	0.0023	99.988	17.2500
439	196	TOT CHLST,CDE~AC	11	0.0021	99.990	16.0909
440	407	MYELO DIS,OR,~CC	10	0.0019	99.992	20.2000
441	439	SKIN GRAFTS,INJR	8	0.0015	99.994	13.8750
442	285	END,NUTR,MET AMP	7	0.0013	99.995	41.4286
443	457	EXTENSIVE BURNS	6	0.0011	99.997	27.0000
444	287	SKN GRFTS,EN,N,M	5	0.0009	99.998	16.0000
445	228	HAND GANGLION PR	4	0.0007	99.998	3.2500
446	302	KIDNEY TRANSPLNT	4	0.0007	99.999	23.0000
447	317	RENAL FLR,DLYSIS	3	0.0005	100.000	19.0000
448	288	OBESITY OR PROCS	1	0.0001	100.000	35.0000

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
001	391	NORMAL NEWBORNS	57908	11.5607	11.5607	4.8766
002	373	VAG DEL~COMPL DX	56961	11.3716	22.9323	5.6504
003	183	MSC DIG DIS,A<70	15140	3.0225	25.9549	3.9638
004	184	MSC DIG DIS,A<18	8968	1.7904	27.7452	3.9345
005	088	CHRN PULM OBSTR	7034	1.4043	29.1495	12.3135
006	467	OTH HLTH FACTORS	6992	1.3959	30.5454	3.7018
007	167	APPNDC~CMP DX~AC	6858	1.3691	31.9145	6.0099
008	270	OTH SKN PR~A|CC	6489	1.2955	33.2100	2.1376
009	030	TR ST,CMA<1,A<18	6322	1.2621	34.4721	2.1438
010	098	BRNCH&ASTH A<17	5761	1.1501	35.6222	5.0696
011	364	D&C,CONZTN~MALIG	5758	1.1495	36.7717	2.4750
012	243	MED BACK PROBS	5719	1.1417	37.9135	8.8234
013	060	TNSECT,ADCT A<18	5486	1.0952	39.0087	3.8841
014	029	TR ST,CMA<1,A<70	5431	1.0842	40.0929	2.6647
015	070	OM&URI, A<18	5114	1.0210	41.1139	3.9990
016	182	MSC DGSTV DIS,AC	4965	0.9912	42.1051	7.6673
017	371	CESAREAN,~CC	4735	0.9453	43.0504	11.6163
018	143	CHEST PAIN	4288	0.8561	43.9064	5.1322
019	468	UNRELATED OR PRO	4037	0.8059	44.7124	12.7724
020	284	MNR SKIN DIS~A|C	3800	0.7586	45.4710	3.9205
021	014	SPEC CRBRVSC DIS	3709	0.7405	46.2114	23.5044
022	127	HRT FLR&SHOCK	3696	0.7379	46.9493	13.7903
023	122	CRC DIS,AMI&CV	3580	0.7147	47.6640	12.6589
024	247	SGNS&SYMP,MSCLSK	3292	0.6572	48.3212	5.2467
025	294	DIABETES AGE>35	3204	0.6396	48.9609	10.9226
026	089	SMPL PNEU&PL A|C	3110	0.6209	49.5818	26.9309
027	254	OTH FX,SPR A<70	3030	0.6049	50.1867	5.0693
028	026	SZR&HD A<17,~CC	2896	0.5782	50.7648	4.4593
029	140	ANGINA PECTORIS	2771	0.5532	51.3180	7.0148
030	119	VEIN LGTN&STRPNG	2770	0.5530	51.8710	4.7440
031	025	SZR&HD A18-69~CC	2658	0.5306	52.4017	5.2878
032	039	LENS PROCS	2464	0.4919	52.8936	8.3478
033	410	CHEMOTHERAPY	2426	0.4843	53.3779	3.9246
034	097	BRNCH&ASTH A<70	2417	0.4825	53.8604	7.1924
035	189	OTH DGST DX,A<70	2345	0.4682	54.3286	3.3160
036	262	BRST BIOP&EXC~ML	2330	0.4652	54.7937	2.5923
037	355	NON-RAD HYST~A|C	2277	0.4546	55.2483	11.9552
038	047	OTH EYE DS,A>17~	2236	0.4464	55.6947	5.6203
039	133	ATHRSCLROSIS~A|C	2217	0.4426	56.1373	5.9504
040	091	SMPL PNEU&P A<18	2207	0.4406	56.5779	7.9107
041	252	FX,SPRN,DIS A<18	2179	0.4350	57.0129	1.7536
042	450	TOX EFF,DRG,A<70	2178	0.4348	57.4477	2.9109
043	178	UNCMP PTC LCR~AC	2148	0.4288	57.8766	4.1355
044	234	OTH MSCL&CONN~AC	2133	0.4258	58.3024	7.6737
045	451	TOX EFF,DRG,A<18	2132	0.4256	58.7280	1.7256
046	134	HYPERTENSION	2118	0.4228	59.1509	7.6983
047	082	RESP NEOPLASMS	2116	0.4224	59.5733	13.5718
048	055	MISC EAR,NS,THRT	2106	0.4204	59.9937	3.9088
049	340	TSTS PR~MLG,A<18	2096	0.4184	60.4122	3.9165
050	198	TOT CHLST~CDE~AC	2095	0.4182	60.8304	12.1589
051	162	ING&FML HRN,A<70	2039	0.4071	61.2375	7.1506

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
052	281	SKN TRMA,A<70	2031	0.4055	61.6429	3.0487
053	395	RED BLD CL,A>17	2023	0.4038	62.0468	11.4503
054	369	MNSTRL&OTH F RPR	2022	0.4036	62.4505	3.8541
055	422	VRL ILL,FVR,A<18	2003	0.4000	62.8506	4.2496
056	231	RMVL~HIP&FEM DEV	1923	0.3839	63.2345	4.8268
057	251	FX,SPRN,DIS A<70	1871	0.3735	63.6080	2.6205
058	073	OTH E,N,T A>17	1869	0.3731	63.9811	3.4821
059	187	DNTL EXTR&RESTOR	1791	0.3575	64.3387	2.0095
060	102	OTHR RSP DX A<70	1734	0.3461	64.6848	6.2578
061	209	MJR JOINT PROCS	1730	0.3453	65.0302	24.1671
062	062	MYRINGOTOMY A<18	1709	0.3411	65.3714	1.6594
063	256	OTH DX,MSCL&CONN	1709	0.3411	65.7126	5.7162
064	445	MLTPL TRMA,A<70	1708	0.3409	66.0536	3.6235
065	321	KID&UR INF,A<70	1687	0.3367	66.3904	4.9235
066	324	URNRY STONES~A|C	1677	0.3347	66.7252	4.3918
067	322	KID&UR INF,A<18	1634	0.3262	67.0514	4.2417
068	255	OTH FX,SPR A<18	1627	0.3248	67.3762	3.4388
069	249	AFTERCARE,MSCLSK	1576	0.3146	67.6908	2.6764
070	041	XTROC PR A<18	1552	0.3098	68.0007	2.6740
071	158	ANAL PROCS ~A|CC	1548	0.3090	68.3097	5.7972
072	175	GI HMRRHG~A|CC	1531	0.3056	68.6153	4.5872
073	390	NEON,OTH SIG PRB	1523	0.3040	68.9194	4.7663
074	101	OTHR RSP DX A|CC	1483	0.2960	69.2155	12.1814
075	326	KID&UR S&S,A<70	1479	0.2952	69.5107	4.1217
076	282	SKN TRMA,A<18	1472	0.2938	69.8046	2.4389
077	074	OTH E,N,T A<18	1436	0.2866	70.0913	2.6727
078	130	PRPHL VSC DIS,AC	1421	0.2836	70.3750	14.3652
079	028	TR ST,CMA<1,A&|C	1387	0.2768	70.6519	6.2884
080	210	HIP&FEMUR PR,A|C	1381	0.2757	70.9276	25.2469
081	139	ARRHYTH&CNDC~A|C	1373	0.2741	71.2017	6.1835
082	229	HAND PR~GANGLION	1358	0.2711	71.4728	4.2172
083	385	NEONTS,DIED|XFRD	1353	0.2701	71.7429	0.9756
084	278	CELLULITIS,A<70	1352	0.2699	72.0128	5.9608
085	090	SMPL PNEU&P A<70	1351	0.2697	72.2825	13.2087
086	138	ARRHYTH&CNDC,A|C	1338	0.2671	72.5496	9.3401
087	236	FRAC OF HIP&PLVS	1334	0.2663	72.8159	12.8598
088	343	CIRCUMCSION,A<18	1332	0.2659	73.0819	1.9505
089	012	DEGENR NRVS DIS	1309	0.2613	73.3432	23.8594
090	190	OTH DGST DX,A<18	1298	0.2591	73.6023	3.7943
091	298	MISC MET DS,A<18	1293	0.2581	73.8605	9.9404
092	015	TRANS ISCHEM ATT	1271	0.2537	74.1142	8.6444
093	404	LYMPH|LEUK,A<70	1268	0.2531	74.3673	10.3060
094	063	OTH E,N,T OR PR	1258	0.2511	74.6185	3.1232
095	132	ATHRSCLROSIS,A|C	1248	0.2491	74.8676	11.2091
096	360	VGNA,CRVX&VLV PR	1230	0.2455	75.1132	6.3764
097	266	SKN GRFT~ULCR~CC	1218	0.2431	75.3564	6.4680
098	069	OM&URI,A18-69~C	1217	0.2429	75.5993	4.2794
099	145	OTH CIRD DX,~CC	1189	0.2373	75.8367	8.2380
100	066	EPISTAXIS	1179	0.2353	76.0721	4.3308
101	142	SYNCP&CLLPS,~A|C	1179	0.2353	76.3074	7.7846
102	131	PRPHL VSC DIS~AC	1163	0.2321	76.5396	10.3861

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
103	163	HERNIA PROC,A<18	1155	0.2305	76.7702	3.4450
104	059	TNSECT,ADCT A>17	1154	0.2303	77.0006	5.4896
105	225	FOOT PROCS	1129	0.2253	77.2260	9.6678
106	172	DGSTV MALIG,A|CC	1114	0.2223	77.4484	16.0700
107	470	UNGROUPABLE	1096	0.2190	77.6674	6.5885
108	358	UTRS&ADNEXA~MLG	1096	0.2188	77.8862	9.8786
109	336	TRNSUR PRSTCT,AC	1092	0.2180	78.1042	14.0046
110	325	KID&UR SG&SY,A|C	1079	0.2154	78.3196	8.1233
111	208	BLRY TR DIS~A|CC	1054	0.2104	78.5300	6.4810
112	361	LAPSCPY&ENDSC,FE	1038	0.2072	78.7372	2.7187
113	100	RSP SGN&SY A<70	1037	0.2070	78.9443	5.0473
114	040	XTROC PR A>=18	1008	0.2012	79.1455	4.1716
115	128	DP VN THRMBPHLEB	994	0.1984	79.3439	12.8099
116	295	DIABETES AGE<36	985	0.1966	79.5406	6.6822
117	316	RENAL FLR~DLYSIS	984	0.1964	79.7370	12.5843
118	058	T&A ~TNS,AD A<18	982	0.1960	79.9331	3.2719
119	235	FRACTR OF FEMUR	977	0.1950	80.1281	20.0041
120	123	CRC DIS,AMI,XPRD	968	0.1932	80.3214	15.8616
121	241	CONN TISS DIS~AC	963	0.1922	80.5136	12.2534
122	301	ENDCRN DIS~A|CC	942	0.1880	80.7017	7.9915
123	446	MLTPL TRMA,A<18	937	0.1870	80.8888	3.0245
124	035	OTH NRVS DIS,~AC	930	0.1856	81.0744	9.5441
125	227	SOFT TISS PR~A|C	912	0.1820	81.2565	5.6546
126	179	INFLM BOWEL DIS	897	0.1790	81.4356	9.1449
127	403	LYMPH|LEUK,A|CC	875	0.1746	81.6102	15.1486
128	320	KID&UR INF,A|CC	859	0.1714	81.7817	12.7509
129	174	GI HMRRHG,A|CC	841	0.1678	81.9496	9.3924
130	071	LARYNGOTRCHEITS	840	0.1676	82.1173	3.0798
131	305	KID,UR PR~MLG~AC	838	0.1672	82.2846	11.3437
132	332	OTH KID&UR,A<70	822	0.1641	82.4487	5.0049
133	464	SIGNS&SYMPTMS~CC	801	0.1599	82.6086	8.2297
134	389	FULL TRM NN,PRBS	798	0.1593	82.7680	3.9724
135	155	STM,ESO,DD A<70	788	0.1573	82.9253	15.3769
136	215	BACK&NECK PR~A|C	782	0.1561	83.0814	15.7442
137	426	DEPRSV NEUROSES	770	0.1537	83.2351	12.0779
138	297	MISC MET DS,A<70	765	0.1527	83.3878	7.3935
139	177	UNCMP PTC LCR,AC	759	0.1515	83.5394	9.4150
140	121	CRC DIS,AMI&E,CC	756	0.1509	83.6903	15.5794
141	337	TRNSUR PRSTCT~AC	754	0.1505	83.8408	10.6897
142	185	DNTL DIS~XT,A>17	753	0.1503	83.9911	5.9801
143	096	BRNCH&ASTH A|CC	745	0.1487	84.1399	10.7597
144	283	MNR SKIN DIS,A|C	745	0.1487	84.2886	9.9772
145	253	OTH FX,SPR A|CC	737	0.1471	84.4357	13.7544
146	239	PATH FR&MSCL MLG	733	0.1463	84.5821	10.3984
147	169	MOUTH PROCS~A|CC	720	0.1437	84.7258	4.4139
148	339	TSTS PR~MLG,A>17	716	0.1429	84.8688	5.5768
149	141	SYNCP&CLLPS,A|CC	715	0.1427	85.0115	7.4937
150	460	NON-EXT BRN~OR P	712	0.1421	85.1536	9.5955
151	279	CELLULITIS,A<18	711	0.1419	85.2956	4.4402
152	268	SKN,SUBCT&BR PLS	706	0.1409	85.4365	14.0071
153	430	PSYCHOSES	705	0.1407	85.5773	18.9121

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
154	186	DNTL DIS~XT,A<18	703	0.1403	85.7176	2.8122
155	161	ING&FML HRN,A|CC	698	0.1393	85.8570	10.6748
156	435	DRUG USE~DEPNDNC	698	0.1393	85.9963	8.1719
157	173	DGSTV MALIG~A|CC	697	0.1391	86.1355	12.3630
158	405	LYMPH|LEUK,A<18	697	0.1391	86.2746	6.6356
159	219	LWR XTRM PR,A<70	693	0.1383	86.4130	15.7489
160	359	TUBAL INTRRP~MLG	680	0.1357	86.5487	3.1603
161	388	PREMTRTY~MJR PRB	665	0.1327	86.6815	3.2015
162	188	OTH DGSTV DX,A|C	663	0.1323	86.8138	7.2760
163	065	DYSEQUILIBRIUM	661	0.1319	86.9458	6.1225
164	352	OTH ML REPRO DX	659	0.1315	87.0774	3.1791
165	153	MNR BOWEL PR~A|C	654	0.1305	87.2079	7.0734
166	397	COAGULATION DSRD	652	0.1301	87.3381	6.0322
167	136	CRDC CNG&VV,A<70	645	0.1287	87.4669	6.4775
168	269	OTH SKN PR A|CC	645	0.1287	87.5956	7.2248
169	148	MJR BOWEL PR,A|C	635	0.1267	87.7224	28.9008
170	245	BONE DISEASE~A|C	619	0.1235	87.8460	8.3619
171	021	VIRAL MENINGITIS	617	0.1231	87.9692	6.0032
172	356	FEM RPR RCNST PR	614	0.1225	88.0917	10.2590
173	421	VIRAL ILLNS,A>17	613	0.1223	88.2141	7.5791
174	149	MJR BOWEL PR~A|C	596	0.1189	88.3331	21.5252
175	222	KNEE PROCS~A|CC	595	0.1187	88.4519	5.2185
176	250	FX,SPR ARM&FT,AC	592	0.1181	88.5701	4.4375
177	425	PSYCHOSOC DYSFNC	592	0.1181	88.6883	7.8834
178	024	SZR&HDACH A&|CC	578	0.1153	88.8036	9.4619
179	020	NRV INF ~VRL MNG	575	0.1147	88.9184	11.8591
180	461	OR PR,DX=OTH CTC	571	0.1139	89.0324	5.2767
181	207	BLRY TR DIS,A|CC	570	0.1137	89.1462	10.9316
182	274	MLG BRST DIS,A|C	570	0.1137	89.2600	17.8246
183	048	OTH EYE DIS,A<18	568	0.1133	89.3734	4.0000
184	206	OTH LIVER DIS~AC	565	0.1127	89.4862	8.0549
185	013	MP SCLER&CRBL AT	555	0.1108	89.5970	18.6541
186	211	HIP&FMUR PR,A<70	551	0.1100	89.7070	22.5408
187	244	BONE DISEASE,A|C	546	0.1090	89.8160	14.6026
188	350	MALE REPRO INFLM	546	0.1090	89.9250	5.0861
189	466	AFTRCR,DX2=MALIG	543	0.1084	90.0334	4.4659
190	429	ORG DISTRB&M RET	536	0.1070	90.1404	28.6922
191	273	MJR SKN DIS~A|CC	526	0.1050	90.2454	10.8764
192	296	MISC MET DIS,A|C	519	0.1036	90.3490	11.3680
193	064	ER,NS,THRT MALIG	517	0.1032	90.4523	16.0251
194	019	CRNL&PRPH ~A,CC	514	0.1026	90.5549	10.2198
195	333	OTH KID&UR,A<18	514	0.1026	90.6575	5.6946
196	434	DRUG DEPENDENCE	507	0.1012	90.7587	3.1164
197	248	TNDNTS,MYSTS,BRS	504	0.1006	90.8593	8.6230
198	449	TOX EFF,DRGS,A|C	502	0.1002	90.9595	5.2291
199	280	SKN,SUBCT TR,AC	500	0.0998	91.0594	6.1980
200	367	FEM RPRO MLG~A|C	497	0.0992	91.1586	11.2837
201	078	PULMNRY EMBOLISM	487	0.0972	91.2558	15.2341
202	418	PSTOP&PSTTR INFC	487	0.0972	91.3530	7.5072
203	290	THYROID PROCS	486	0.0970	91.4501	8.5329
204	348	BNGN PRST HYP,AC	474	0.0946	91.5447	8.2764

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
205	271	SKIN ULCERS	471	0.0940	91.6387	21.3609
206	311	TRNSURETH PR~A|C	467	0.0932	91.7319	5.5396
207	137	CRDC CNG&VV,A<18	462	0.0922	91.8242	6.9978
208	203	HPTOBL|PNC MALIG	448	0.0894	91.9136	17.8996
209	135	CRDC CNG&VLV,A|C	447	0.0892	92.0029	11.2461
210	327	KID&UR S&S,A<18	447	0.0892	92.0921	5.0291
211	154	STM,ESO,DD PR,AC	440	0.0878	92.1799	24.5045
212	197	TOT CHLST~CDE,AC	438	0.0874	92.2674	20.2123
213	240	CONN TISS DIS,AC	436	0.0870	92.3544	17.6950
214	171	OTH DGSTV PR~A|C	435	0.0868	92.4413	6.3908
215	129	CARDIAC ARREST	432	0.0862	92.5275	13.2037
216	399	RTCLEND&IMMN~A|C	423	0.0844	92.6120	4.5059
217	087	PLM EDEMA&RSP FL	415	0.0828	92.6948	10.8120
218	267	PRANL&PILONDL PR	414	0.0826	92.7775	8.3019
219	072	NSL TR & DEFORM	411	0.0820	92.8595	2.0803
220	258	TOT MAST MLG~A|C	411	0.0820	92.9416	13.5109
221	144	OTH CIRC DX,CC	406	0.0810	93.0226	13.0369
222	453	TRTMT CMPL~A|CC	402	0.0802	93.1029	4.6443
223	342	CIRCUMCSION,A>17	399	0.0796	93.1825	3.4286
224	056	RHINOPLASTY	395	0.0788	93.2614	5.5570
225	099	RESP SGN&SY A|CC	393	0.0784	93.3398	8.3028
226	275	MLG BRST DIS~A|C	383	0.0764	93.4163	13.7050
227	318	KID&UR NEOP,A|CC	383	0.0764	93.4928	10.1880
228	001	CRNIOT A>=18 ~TR	380	0.0758	93.5686	20.7474
229	093	INTRST LUNG ~A,C	380	0.0758	93.6445	9.2605
230	165	APPNDC,CMP DX~AC	377	0.0752	93.7198	8.3952
231	319	KID&UR NEOP~A|CC	376	0.0750	93.7948	6.7048
232	276	~MALIG BRST DIS	373	0.0744	93.8693	3.6783
233	095	PNEUMOTHRX ~A,CC	372	0.0742	93.9436	7.7419
234	443	OTH OR PR,INJ~AC	366	0.0730	94.0166	9.6175
235	346	ML RPRO MLG,A|CC	363	0.0724	94.0891	12.5124
236	331	OTH KID&UR DX,AC	360	0.0718	94.1610	8.5722
237	444	MLTPL TRAUMA,A|C	359	0.0716	94.2326	7.3844
238	224	UPR XTRM PR~A|CC	356	0.0710	94.3037	6.9719
239	277	CELLULITIS,A|CC	356	0.0710	94.3748	12.4944
240	042	INTROC PR,~R,I,L	346	0.0690	94.4438	10.9306
241	008	OTH NRV PR ~A,CC	345	0.0688	94.5127	7.4174
242	208	BLRY TR DIS~A|CC	345	0.0688	94.5816	12.0029
243	011	NRVS NEOPL ~A,CC	341	0.0680	94.6497	11.8240
244	075	MJR CHEST PROCS	340	0.0678	94.7176	24.5971
245	053	SNS&MAST PR A>17	339	0.0676	94.7852	6.5634
246	300	ENDCRN DIS,A|CC	339	0.0676	94.8529	14.4779
247	423	OTH INF&PAR DIS	333	0.0664	94.9194	9.3844
248	204	PANC DIS ~MALIG	330	0.0658	94.9853	10.6212
249	440	WOUND DEBRD,INJR	328	0.0654	95.0507	6.4939
250	351	STERILIZATION,ML	326	0.0650	95.1158	1.0061
251	181	GI OBSTRCTN~A|CC	323	0.0644	95.1803	7.3437
252	310	TRNSURETH PR,A|C	321	0.0640	95.2444	8.3271
253	328	URTHRL STRCT,A|C	319	0.0636	95.3081	5.2727
254	160	HRN~ING&FEM,A<70	302	0.0602	95.3684	8.4536
255	217	SKIN GRAFT~HAND	301	0.0600	95.4285	12.5150

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
256	068	CM&URI, A&|CC	300	0.0598	95.4884	10.2967
257	116	PCMKR,~AMI|CHF	300	0.0598	95.5482	11.0000
258	036	RETINAL PROCS	297	0.0592	95.6075	11.2088
259	120	OTHER CRC OR PR	297	0.0592	95.6668	10.4175
260	034	OTH NRV DIS,A&|C	296	0.0590	95.7259	13.6318
261	107	CRNRY BYPS,~CCTH	295	0.0588	95.7848	9.2678
262	043	HYPHEMA	293	0.0584	95.8433	5.3276
263	396	RED BLD CL,A<18	288	0.0574	95.9008	7.8715
264	006	CARPL TUNNEL RLS	285	0.0568	95.9577	3.7228
265	335	MJR PELVIC PR~CC	285	0.0568	96.0146	20.1860
266	080	RSP INF&INL A<70	280	0.0558	96.0705	15.9571
267	329	URTHRL STRC,A<70	276	0.0551	96.1256	3.6377
268	368	FEM RPRO INFCTNS	276	0.0551	96.1807	5.7609
269	112	MJR RCNST VSC~AC	275	0.0549	96.2356	20.2945
270	230	RMVL,HIP&FEM DEV	273	0.0545	96.2901	10.5641
271	202	CIRRH&ALC HPTTIS	271	0.0541	96.3442	13.1218
272	349	BNGN PRST HYP~AC	268	0.0535	96.3977	4.6940
273	017	NONSP CBC DIS~CC	260	0.0519	96.4496	15.3654
274	110	MJR RCSTR VSC,AC	257	0.0513	96.5009	25.8911
275	045	NEUR EYE DISRDRS	247	0.0493	96.5502	6.5385
276	180	GI OBSTRCTN,A|CC	239	0.0477	96.5980	10.7866
277	366	FEM RPRO MLG,A|C	234	0.0467	96.6447	28.2393
278	341	PENIS PROCS	229	0.0457	96.6904	7.5633
279	272	MJR SKN DIS,A|CC	226	0.0451	96.7355	16.4558
280	157	ANAL PROCS A|CC	224	0.0447	96.7802	12.5982
281	233	OTH MSCL&CONN,AC	223	0.0445	96.8247	22.2960
282	246	ARTHROPATHIES,NS	221	0.0441	96.8689	10.2624
283	416	SEPTICEMIA,A>17	221	0.0441	96.9130	19.0543
284	113	AMP CRC~UP LIMB	219	0.0437	96.9567	41.2374
285	299	INBORN MET ERROR	218	0.0435	97.0002	9.4037
286	323	URNRY STONES,A|C	216	0.0431	97.0433	7.3426
287	455	OTH INJ,TXC~A|C	215	0.0429	97.0863	4.0884
288	018	CRNL&PRPH A&|CC	212	0.0423	97.1286	12.4528
289	111	MJR RCNST VSC,AC	209	0.0417	97.1703	21.7177
290	079	RSP INF&INFL A|C	208	0.0415	97.2118	23.0096
291	176	CMPL PEPTIC ULCR	208	0.0415	97.2534	11.6971
292	146	RECTAL RSCTN,A|C	197	0.0393	97.2927	29.2081
293	205	OTH LIVER DIS,AC	197	0.0393	97.3320	13.4924
294	212	HIP&FMUR PR,A<18	197	0.0393	97.3714	20.5482
295	365	OTH FEM RPRO PR	197	0.0393	97.4107	12.6447
296	109	CRDTHR PR,~PUMP	195	0.0389	97.4496	18.6308
297	394	OTH OR PR,BLOOD	195	0.0389	97.4885	5.6667
298	166	APPNDC~CMP DX,AC	191	0.0383	97.5269	10.4974
299	433	SUBST-INDCD MNTL	191	0.0381	97.5650	3.5236
300	413	OTH MYELO DIS,AC	190	0.0379	97.6029	17.3263
301	156	STM,ESO,DD A<18	189	0.0377	97.6407	12.8836
302	147	RECTAL RSCTN~A|C	187	0.0373	97.6780	24.4866
303	054	SNS&MAST PR A<18	184	0.0367	97.7147	4.5815
304	462	REHABILITATION	184	0.0367	97.7515	13.5870
305	023	NONTR STPR&COMA	182	0.0363	97.7878	5.4011
306	459	NON-EXT BRN,DBRD	182	0.0363	97.8241	30.9890

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
307	354	NON-RAD HYST,A|C	181	0.0361	97.8603	17.1602
308	038	PRIM IRIS PROCS	180	0.0359	97.8962	7.9333
309	009	SPINAL DIS&INJ	179	0.0357	97.9319	13.7542
310	313	URETHRAL PR,A<70	178	0.0355	97.9675	6.0000
311	218	LWR XTRM PR,A|CC	177	0.0353	98.0028	24.1243
312	260	SUB MAST MLG^A|C	177	0.0353	98.0381	7.2486
313	304	KID,UR PR^MLG,AC	169	0.0337	98.0719	18.1538
314	428	PERS DIS&IMP CON	169	0.0337	98.1056	22.7751
315	061	MYRINGOTOMY A>17	168	0.0335	98.1392	2.0833
316	152	MNR BOWEL PR,A|C	167	0.0333	98.1725	14.2096
317	257	TOT MAST MLG,A|C	163	0.0325	98.2050	17.1104
318	261	BRST PR^MLG^BIOP	161	0.0321	98.2372	4.7950
319	363	D&C,CON,R-I,MALG	158	0.0315	98.2687	8.4241
320	398	RTCLEND&IMMN,A|C	158	0.0315	98.3003	11.2532
321	052	CLFT LIP&PLT REP	154	0.0307	98.3310	11.9805
322	003	CRNIOT A<18	152	0.0303	98.3614	25.4868
323	085	PLRL EFFUSN A&|C	150	0.0299	98.3913	16.2467
324	431	CHILDHD MNTL DIS	150	0.0299	98.4213	7.7133
325	092	INTRST LUNG A|CC	149	0.0297	98.4510	13.6040
326	077	OR RSP,^MJRCH,^C	148	0.0295	98.4805	18.1216
327	347	ML RPRO MLG^A|CC	147	0.0293	98.5099	11.1701
328	220	LWR XTRM PR,A<18	146	0.0291	98.5390	9.7808
329	303	KID,UR,BL PR,MLG	144	0.0287	98.5678	22.3542
330	044	ACUT MJR EYE INF	139	0.0277	98.5955	9.3597
331	414	OTH MYELO DIS^AC	139	0.0277	98.6233	13.0288
332	046	OTH EYE DS,A>17C	137	0.0273	98.6506	6.1314
333	408	MYELO DISRDR,CC	137	0.0273	98.6780	9.6934
334	081	RSP INF&INL A<18	132	0.0263	98.7043	15.2576
335	242	SEPTIC ARTHRITIS	132	0.0263	98.7307	15.6591
336	417	SEPTICEMIA,A<18	128	0.0255	98.7562	10.9375
337	420	FEVER UNKN,A<70	127	0.0253	98.7816	9.0079
338	441	HAND PROC,INJURY	127	0.0253	98.8070	5.7480
339	010	NRVS NEOPL A&|CC	126	0.0251	98.8321	12.0159
340	002	CRNIOT TR A>=18	124	0.0247	98.8569	15.1129
341	086	PLRL EFFUSN A<70	123	0.0245	98.8814	12.3984
342	409	RADIOTHERAPY	123	0.0245	98.9060	13.1626
343	004	SPINAL PROCS	121	0.0241	98.9301	24.0248
344	415	OR PR,INF&PAR DS	118	0.0235	98.9537	15.7881
345	402	LYMPH|LEUK,MN^AC	115	0.0229	98.9767	11.7913
346	050	SIALOADENECTOMY	114	0.0227	98.9994	7.6316
347	094	PNEUMOTHRX A|CC	111	0.0221	99.0216	11.7027
348	193	BLRY TR PR^CH,AC	110	0.0219	99.0435	25.3091
349	454	OTH INJ,TXC,A|C	110	0.0219	99.0655	12.5727
350	032	CONCSN A18-69^CC	109	0.0217	99.0873	2.2844
351	037	ORBITAL PROCS	104	0.0207	99.1080	9.9904
352	151	PRTNL ADHESLS^AC	101	0.0201	99.1282	11.2475
353	312	URETHRAL PR,A|CC	101	0.0201	99.1483	9.8911
354	456	BURNS, TRANSFERD	101	0.0201	99.1685	13.9703
355	105	CRDC VLV W/P^CCT	97	0.0193	99.1879	11.3814
356	259	SUB MAST MLG,A|C	95	0.0189	99.2068	10.8632
357	194	BLRY TR PR^CH^AC	94	0.0187	99.2256	16.4468

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
358	338	TESTES PR,MALIG	92	0.0183	99.2440	12.7717
359	400	LYMPH|LEUK,MJ PR	92	0.0183	99.2623	23.4783
360	170	OTH DGSTV PR,A|C	91	0.0181	99.2805	21.2747
361	386	NEONTS,XTRM IMMT	91	0.0181	99.2987	2.7253
362	192	MNR PNC,LVR,SHNT	90	0.0179	99.3166	17.2778
363	401	LYMPH|LEUK,MN,AC	84	0.0167	99.3334	23.6548
364	452	TRTMT CMPL,A|CC	84	0.0167	99.3502	7.6190
365	442	OTH OR PR,INJ,AC	82	0.0164	99.3665	25.9390
366	114	UP LIMB&TOE AMP	80	0.0151	99.3825	23.9375
367	159	HRNIA~ING&FEM,AC	80	0.0151	99.3985	12.3875
368	237	SPRN,STRN,DIS HP	76	0.0156	99.4137	17.8816
369	168	MOUTH PROCS,A|CC	74	0.0143	99.4284	8.1351
370	314	URETHRAL PR,A<18	73	0.0147	99.4430	5.2740
371	226	SOFT TISS PR,A|C	72	0.0140	99.4574	11.6667
372	007	OTH NRV PR A&|CC	70	0.0137	99.4714	20.7000
373	033	CONCUSSION A<18	68	0.0135	99.4849	2.1471
374	306	PROSTATECTOMY,AC	68	0.0135	99.4985	15.3529
375	084	MJR CHST TR A<70	66	0.0132	99.5117	5.7273
376	357	UTRS&ADNEXA,MALG	66	0.0132	99.5249	21.0455
377	016	NONSP CBV DIS,CC	62	0.0126	99.5372	15.6129
378	315	OTH KID&URN PROC	62	0.0126	99.5496	16.4516
379	057	T&A ~TNS,AD A>17	60	0.0113	99.5616	4.4667
380	345	OTH ML REPRO~MLG	60	0.0113	99.5736	11.0667
381	463	SIGNS&SYMPTMS,CC	60	0.0113	99.5855	12.7833
382	126	ENDOCARDITIS	59	0.0117	99.5973	22.1356
383	293	OTH E,N,M PR~A|C	58	0.0111	99.6089	3.4138
384	387	PREMTRTY,MJR PRB	58	0.0111	99.6205	4.1724
385	432	OTH DX=MNTL DSRD	58	0.0111	99.6321	8.3448
386	201	OTH HPTBL/PNC PR	57	0.0114	99.6434	13.2105
387	309	MNR BLDR PR~A|CC	57	0.0114	99.6548	16.4561
388	076	OR RSP,~MJRCH,CC	56	0.0118	99.6660	20.2500
389	216	MUSCL&CONN BIOPS	55	0.0101	99.6770	13.0727
390	265	SKN GRFT~ULCR,CC	54	0.0105	99.6878	14.0000
391	051	SALV GLND PR~SIA	53	0.0109	99.6983	5.3774
392	412	HIST MALG,ENDSCP	51	0.0106	99.7085	2.3725
393	223	UPR XTRM PR,A|CC	50	0.0090	99.7185	12.9200
394	214	BACK&NECK PR,A|C	49	0.0093	99.7283	40.6735
395	447	ALLRGC REAC,A>17	49	0.0093	99.7381	4.3265
396	264	SKN GRFT,ULCR~AC	48	0.0097	99.7477	19.1042
397	334	MJR PELVIC PR,CC	48	0.0097	99.7572	31.5417
398	411	HIST MALG~ENDSCP	48	0.0097	99.7668	4.5208
399	448	ALLRGC READ,A<18	48	0.0097	99.7764	3.2708
400	164	APPNDC,CMP DX,AC	46	0.0094	99.7856	17.6957
401	362	LAPRSCPC TBL INT	46	0.0094	99.7948	3.4130
402	427	NEUROSES~DEPRSV	46	0.0094	99.8040	8.7609
403	213	MUSCL&CN TIS AMP	45	0.0088	99.8129	32.7556
404	291	THYROGLOSSAL PR	45	0.0088	99.8219	4.0000
405	263	SKN GRFT,ULCR,AC	42	0.0088	99.8303	42.7381
406	307	PROSTATECTOMY~AC	41	0.0082	99.8385	14.4390
407	150	PRTNL ADHESLS,AC	39	0.0079	99.8463	21.2308
408	419	FEVER UNKNWN,A|C	39	0.0079	99.8541	13.2564

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
409	286	ADRNL&PIT PROCS	38	0.0073	99.8617	21.5789
410	049	MJR HD&NECK PROC	37	0.0076	99.8690	37.0811
411	083	MJR CHST TR A&|C	36	0.0070	99.8762	9.9722
412	031	CONCUSSION A&|CC	34	0.0067	99.8830	5.3824
413	117	PCMKR REP~PLSGN	34	0.0067	99.8898	12.2647
414	191	MJR PNC,LVR,SHNT	34	0.0067	99.8966	30.9118
415	199	HPTOBL DX PR,MLG	33	0.0061	99.9032	26.9697
416	353	PLVC EVISC,R HYS	33	0.0061	99.9098	18.7273
417	392	SPLENECTOMY,A>17	33	0.0060	99.916	20.7576
418	424	OR PR,DX1=MENTAL	33	0.0060	99.923	26.6061
419	308	MNR BLDR PR,A|CC	32	0.0064	99.929	20.6250
420	370	CESAREAN, CC	30	0.0051	99.935	11.4000
421	200	HPTOBL DX PR~MLG	29	0.0055	99.941	16.5517
422	330	URTHRL STRC,A<18	28	0.0058	99.947	2.8929
423	393	SPLENECTOMY,A<18	27	0.0052	99.952	12.9630
424	465	AFTRCR,DX2=MALIG	27	0.0053	99.957	6.2593
425	289	PARATHYROID PROC	22	0.0043	99.962	17.6818
426	115	PCMKR,AMI OR CHF	19	0.0037	99.966	15.8947
427	067	EPIGLOTTIITIS	17	0.0033	99.969	7.5294
428	005	XTRACRNL VASC PR	16	0.0031	99.972	25.4375
429	458	NON-EXT BRN,GRFT	15	0.0029	99.975	26.1333
430	195	TOT CHLST,CDE,AC	13	0.0025	99.978	24.9231
431	344	OTH ML REPRO,MLG	13	0.0025	99.980	11.3077
432	457	EXTENSIVE BURNS	13	0.0025	99.983	28.6923
433	292	OTH E,N,M PR,A|C	11	0.0021	99.985	10.3636
434	407	MYELO DIS,OR,~CC	11	0.0021	99.987	20.8182
435	228	HAND GANGLION PR	7	0.0013	99.989	3.5714
436	406	MYELO DIS,OR,CC	7	0.0013	99.990	31.5714
437	439	SKIN GRAFTS,INJR	7	0.0013	99.992	9.1429
438	022	HYPRTNS ENCPHLOP	6	0.0011	99.993	7.5000
439	118	PULSE GEN REPL	6	0.0011	99.994	10.1667
440	196	TOT CHLST,CDE~AC	6	0.0011	99.995	17.8333
441	285	END,NUTR,MET AMP	5	0.0009	99.996	65.2000
442	302	KIDNEY TRANSPLNT	5	0.0009	99.997	13.2000
443	221	KNEE PROCS,A|CC	4	0.0007	99.998	30.5000
444	287	SKN GRFTS,EN,N,M	3	0.0005	99.999	25.3333
445	288	OBESITY OR PROCS	3	0.0005	99.999	36.0000
446	317	RENAL FLR,DLYSIS	2	0.0003	100.000	2.5000

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
001	391	NORMAL NEWBORNS	57036	11.5578	11.5578	4.7294
002	373	VAG DEL~COMPL DX	55635	11.2739	22.8317	5.5560
003	183	MSC DIG DIS,A<70	15038	3.0473	25.8791	3.6502
004	184	MSC DIG DIS,A<18	8886	1.8007	27.6797	3.7896
005	467	OTH HLTH FACTORS	7820	1.5847	29.2644	3.4322
006	270	OTH SKN PR~A|CC	7503	1.5204	30.7848	2.2989
007	088	CHRN PULM OBSTR	6995	1.4175	32.2023	12.5674
008	167	APPNDC~CMP DX~AC	6652	1.3480	33.5502	5.8161
009	364	D&C,CONZTN~MALIG	6186	1.2535	34.8038	2.3109
010	030	TR ST,CMA<1,A<18	5767	1.1686	35.9724	2.0546
011	098	BRNCH&ASTH A<17	5643	1.1435	37.1159	4.5098
012	243	MED BACK PROBS	5571	1.1289	38.2448	8.2504
013	371	CESAREAN,~CC	5068	1.0270	39.2718	10.9611
014	182	MSC DGSTV DIS,AC	4916	0.9962	40.2680	7.2026
015	143	CHEST PAIN	4847	0.9822	41.2502	5.0087
016	060	TNSECT,ADCT A<18	4800	0.9727	42.2228	3.7148
017	070	OM&URI, A<18	4753	0.9632	43.1860	3.9278
018	029	TR ST,CMA<1,A<70	4718	0.9561	44.1421	2.4466
019	468	UNRELATED OR PRO	3960	0.8025	44.9445	12.3396
020	284	MNR SKIN DIS~A|C	3773	0.7646	45.7091	3.5229
021	127	HRT FLR&SHOCK	3582	0.7259	46.4349	13.6558
022	014	SPEC CRBRVSC DIS	3578	0.7250	47.1600	22.0148
023	122	CRC DIS,AMI&CV	3551	0.7196	47.8796	12.6778
024	294	DIABETES AGE>35	3134	0.6351	48.5146	8.6899
025	140	ANGINA PECTORIS	2914	0.5905	49.1051	7.5350
026	089	SMPL PNEU&PL A|C	2886	0.5848	49.6900	19.2204
027	254	OTH FX,SPR A<70	2851	0.5777	50.2677	4.6913
028	025	SZR&HD A18-69~CC	2764	0.5601	50.8278	5.1447
029	355	NON-RAD HYST~A|C	2728	0.5528	51.3806	11.3185
030	119	VEIN LGTN&STRPNG	2722	0.5516	51.9322	4.3123
031	026	SZR&HD A<17,~CC	2705	0.5481	52.4803	4.3039
032	039	LENS PROCS	2622	0.5313	53.0116	7.7357
033	231	RMVL~HIP&FEM DEV	2572	0.5212	53.5328	4.1753
034	247	SGNS&SYMP,MSCLSK	2564	0.5196	54.0524	5.5577
035	410	CHEMOTHERAPY	2398	0.4859	54.5383	3.4545
036	189	OTH DGST DX,A<70	2395	0.4853	55.0237	2.8618
037	262	BRST BIOP&EXC~ML	2355	0.4772	55.5009	2.4510
038	062	MYRINGOTOMY A<18	2271	0.4602	55.9611	1.4267
039	450	TOX EFF,DRG,A<70	2255	0.4570	56.4180	2.8279
040	097	BRNCH&ASTH A<70	2246	0.4551	56.8732	7.4199
041	178	UNCMP PTC LCR~AC	2111	0.4278	57.3009	3.8295
042	252	FX,SPRN,DIS A<18	2081	0.4217	57.7226	1.6646
043	451	TOX EFF,DRG,A<18	2071	0.4197	58.1423	1.8378
044	082	RESP NEOPLASMS	2068	0.4191	58.5614	12.8322
045	198	TOT CHLST~CDE~AC	2066	0.4187	58.9800	12.0707
046	134	HYPERTENSION	2055	0.4164	59.3965	7.1835
047	340	TSTS PR~MLG,A<18	2052	0.4158	59.8123	3.4898
048	256	OTH DX,MSCL&CONN	2044	0.4142	60.2265	5.0318
049	047	OTH EYE DS,A>17~	2026	0.4106	60.6370	5.6436
050	125	CRC~AMI,CCT~CPLX	1994	0.4041	61.0411	2.7141
051	055	MISC EAR,NS,THRT	1982	0.4016	61.4427	3.7508

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
052	102	OTHR RSP DX A<70	1929	0.3909	61.8336	10.3976
053	162	ING&FML HRN,A<70	1877	0.3803	62.2140	6.6889
054	395	RED BLD CL,A>17	1844	0.3736	62.5876	9.5184
055	422	VRL ILL,FVR,A<18	1831	0.3710	62.9587	3.8280
056	369	MNSTRL&OTH F RPR	1813	0.3673	63.3261	3.3431
057	187	DNTL EXTR&RESTOR	1764	0.3574	63.6835	1.7528
058	209	MJR JOINT PROCS	1757	0.3560	64.0396	23.2891
059	251	FX,SPRN,DIS A<70	1753	0.3552	64.3948	2.5813
060	101	OTHR RSP DX A|CC	1712	0.3469	64.7417	12.7336
061	281	SKN TRMA,A<70	1709	0.3463	65.0880	3.0246
062	091	SMPL PNEU&P A<18	1701	0.3446	65.4327	9.5644
063	041	XTROC PR A<18	1698	0.3440	65.7768	2.4258
064	073	OTH E,N,T A>17	1675	0.3394	66.1162	3.4842
065	324	URNRY STONES~A|C	1662	0.3367	66.4530	4.3634
066	326	KID&UR S&S,A<70	1662	0.3367	66.7898	3.9176
067	322	KID&UR INF,A<18	1648	0.3339	67.1238	4.2700
068	321	KID&UR INF,A<70	1624	0.3290	67.4528	4.7611
069	158	ANAL PROCS ~A|CC	1610	0.3262	67.7791	5.5528
070	390	NEON,OTH SIG PRB	1580	0.3201	68.0993	4.8329
071	249	AFTERCARE,MSCLSK	1559	0.3159	68.4152	2.5773
072	445	MLTPL TRMA,A<70	1500	0.3039	68.7191	3.2267
073	072	NSL TR & DEFORM	1467	0.2972	69.0164	1.9836
074	255	OTH FX,SPR A<18	1462	0.2962	69.3127	3.3673
075	175	GI HMRRHG~A|CC	1445	0.2928	69.6055	3.9170
076	133	ATHRSCLROSIS~A|C	1443	0.2924	69.8979	7.8669
077	298	MISC MET DS,A<18	1414	0.2865	70.1844	8.5658
078	234	OTH MSCL&CONN~AC	1413	0.2863	70.4708	8.9349
079	343	CIRCUMCSION,A<18	1386	0.2808	70.7516	1.7489
080	360	VGNA,CRVX&VLV PR	1379	0.2794	71.0311	6.0334
081	139	ARRHYTH&CNDC~A|C	1373	0.2782	71.3093	5.7385
082	015	TRANS ISCHEM ATT	1369	0.2774	71.5867	8.2907
083	138	ARRHYTH&CNDC,A|C	1360	0.2755	71.8623	9.5794
084	012	DEGENR NRVS DIS	1338	0.2711	72.1334	21.9895
085	282	SKN TRMA,A<18	1315	0.2664	72.3999	2.4837
086	229	HAND PR~GANGLION	1312	0.2658	72.6658	4.0739
087	132	ATHRSCLROSIS,A|C	1308	0.2650	72.9308	11.2317
088	130	PRPHL VSC DIS,AC	1299	0.2632	73.1941	14.4188
089	236	FRAC OF HIP&PLVS	1257	0.2547	73.4488	11.7717
090	090	SMPL PNEU&P A<70	1252	0.2537	73.7025	11.8490
091	358	UTRS&ADNEXA~MLG	1244	0.2520	73.9546	6.5305
092	028	TR ST,CMA<1,A&|C	1229	0.2490	74.2036	4.8918
093	210	HIP&FEMUR PR,A|C	1227	0.2486	74.4523	24.3244
094	074	OTH E,N,T A<18	1225	0.2482	74.7005	2.6669
095	385	NEONTS,DIED|XFRD	1222	0.2476	74.9481	1.1637
096	190	OTH DGST DX,A<18	1215	0.2462	75.1943	3.8000
097	404	LYMPH|LEUK,A<70	1200	0.2431	75.4375	9.0275
098	336	TRNSUR PRSTCT,AC	1196	0.2423	75.6799	13.5151
099	278	CELLULITIS,A<70	1194	0.2419	75.9218	5.8727
100	163	HERNIA PROC,A<18	1193	0.2417	76.1636	2.6957
101	266	SKN GRFT~ULCR~CC	1178	0.2387	76.4023	5.9983
102	066	EPISTAXIS	1157	0.2344	76.6367	3.9179

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
103	059	TNSECT,ADCT A>17	1147	0.2324	76.8692	5.2380
104	040	XTROC PR A>=18	1128	0.2285	77.0977	3.4734
105	295	DIABETES AGE<36	1127	0.2283	77.3261	6.1473
106	131	PRPHL VSC DIS~AC	1081	0.2190	77.5452	9.3469
107	142	SYNCP&CLLPS,~A|C	1081	0.2190	77.7642	4.2303
108	100	RSP SGN&SY A<70	1078	0.2184	77.9827	5.1920
109	225	FOOT PROCS	1067	0.2162	78.1989	8.8922
110	361	LAPSCPY&ENDSC,FE	1057	0.2141	78.4131	2.6954
111	172	DGSTV MALIG,A|CC	1051	0.2129	78.6261	14.5737
112	069	OM&URI,A18-69~C	1031	0.2089	78.8350	4.2619
113	325	KID&UR SG&SY,A|C	1020	0.2066	79.0417	8.1931
114	227	SOFT TISS PR~A|C	1014	0.2054	79.2471	4.2682
115	128	DP VN THRMBPHLEB	990	0.2006	79.4478	12.5485
116	035	OTH NRVS DIS,~AC	979	0.1983	79.6461	9.1410
117	446	MLTPL TRMA,A<18	972	0.1969	79.8431	2.5957
118	123	CRC DIS,AMI,XPRD	968	0.1961	80.0393	7.9112
119	179	INFLM BOWEL DIS	950	0.1925	80.2318	8.6347
120	208	BLRY TR DIS~A|CC	950	0.1925	80.4243	6.1021
121	301	ENDCRN DIS~A|CC	927	0.1878	80.6121	7.4099
122	241	CONN TISS DIS~AC	925	0.1874	80.7996	12.2400
123	332	OTH KID&UR,A<70	894	0.1811	80.9807	5.3971
124	320	KID&UR INF,A|CC	890	0.1803	81.1611	18.1742
125	058	T&A ~TNS,AD A<18	887	0.1797	81.3408	3.0710
126	235	FRACTR OF FEMUR	886	0.1795	81.5204	18.8973
127	269	OTH SKN PR A|CC	877	0.1777	81.6981	8.1129
128	316	RENAL FLR~DLYSIS	867	0.1756	81.8738	13.5490
129	171	OTH DGSTV PR~A|C	842	0.1706	82.0444	8.4276
130	174	GI HMRRHG,A|CC	840	0.1702	82.2146	8.6619
131	337	TRNSUR PRSTCT~AC	824	0.1669	82.3816	10.2403
132	403	LYMPH|LEUK,A|CC	803	0.1627	82.5443	12.7061
133	389	FULL TRM NN,PRBS	784	0.1588	82.7032	4.2819
134	121	CRC DIS,AMI&E,CC	775	0.1570	82.8602	14.7187
135	177	UNCMP PTC LCR,AC	764	0.1548	83.0151	8.5524
136	339	TSTS PR~MLG,A>17	762	0.1544	83.1695	5.3451
137	161	ING&FML HRN,A|CC	751	0.1521	83.3216	10.8256
138	297	MISC MET DS,A<70	751	0.1521	83.4738	7.5619
139	215	BACK&NECK PR~A|C	746	0.1511	83.6250	16.3204
140	283	MNR SKIN DIS,A|C	742	0.1503	83.7754	7.9771
141	359	TUBAL INTRRP~MLG	731	0.1481	83.9235	3.0616
142	253	OTH FX,SPR A|CC	727	0.1473	84.0708	9.9010
143	356	FEM RPR RCNST PR	716	0.1450	84.2159	10.1117
144	352	OTH ML REPRO DX	709	0.1436	84.3596	3.2863
145	460	NON-EXT BRN~OR P	705	0.1428	84.5024	9.9135
146	426	DEPRSV NEUROSES	703	0.1424	84.6449	11.9232
147	071	LARYNGOTRCHEITS	699	0.1416	84.7865	3.1445
148	188	OTH DGSTV DX,A|C	698	0.1414	84.9280	7.3983
149	096	BRNCH&ASTH A|CC	695	0.1408	85.0688	11.2273
150	185	DNTL DIS~XT,A>17	693	0.1404	85.2092	5.4372
151	186	DNTL DIS~XT,A<18	691	0.1400	85.3493	2.9161
152	268	SKN,SUBCT&BR PLS	684	0.1386	85.4879	11.8085
153	155	STM,ESO,DD A<70	683	0.1384	85.6263	14.7233

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
154	020	NRV INF ~VRL MNG	678	0.1373	85.7637	12.0546
155	239	PATH FR&MSCL MLG	674	0.1365	85.9003	8.4154
156	279	CELLULITIS,A<18	674	0.1365	86.0368	4.4659
157	464	SIGNS&SYMPTMS~CC	665	0.1347	86.1716	6.5850
158	173	DGSTV MALIG~A|CC	662	0.1341	86.3057	10.8369
159	141	SYNCP&CLLPS,A|CC	661	0.1339	86.4397	7.0333
160	148	MJR BOWEL PR,A|C	660	0.1337	86.5734	25.6197
161	245	BONE DISEASE~A|C	659	0.1335	86.7070	7.6768
162	065	DYSEQUILIBRIUM	650	0.1317	86.8387	5.5492
163	430	PSYCHOSES	649	0.1315	86.9702	18.9522
164	305	KID,UR PR~MLG~AC	647	0.1311	87.1013	11.9165
165	222	KNEE PROCS~A|CC	632	0.1280	87.2294	8.0222
166	388	PREMTRTY~MJR PRB	627	0.1270	87.3564	3.7241
167	333	OTH KID&UR,A<18	619	0.1254	87.4819	5.0210
168	350	MALE REPRO INFLM	619	0.1254	87.6073	4.5751
169	169	MOUTH PROCS~A|CC	590	0.1195	87.7269	4.0678
170	153	MNR BOWEL PR~A|C	589	0.1193	87.8462	7.2954
171	250	FX,SPR ARM&FT,AC	584	0.1183	87.9646	4.3955
172	207	BLRY TR DIS,A|CC	580	0.1175	88.0821	10.9276
173	021	VIRAL MENINGITIS	578	0.1171	88.1992	5.6661
174	435	DRUG USE~DEPNDNC	576	0.1167	88.3159	8.5417
175	024	SZR&HDACH A&|CC	568	0.1151	88.4310	7.6884
176	013	MP SCLER&CRBL AT	557	0.1128	88.5439	12.5996
177	248	TNDNTS,MYSTS,BRS	553	0.1120	88.6560	14.1013
178	149	MJR BOWEL PR~A|C	542	0.1098	88.7658	21.0756
179	274	MLG BRST DIS,A|C	533	0.1080	88.8738	14.2702
180	421	VIRAL ILLNS,A>17	533	0.1080	88.9818	6.5872
181	206	OTH LIVER DIS~AC	527	0.1067	89.0886	8.0398
182	048	OTH EYE DIS,A<18	526	0.1065	89.1952	3.0532
183	145	OTH CIRD DX,~CC	526	0.1065	89.3018	9.1388
184	244	BONE DISEASE,A|C	522	0.1057	89.4076	13.5785
185	470	UNGROUPABLE	521	0.1055	89.5131	10.3589
186	397	COAGULATION DSRD	510	0.1033	89.6165	6.4412
187	466	AFTRCR,DX2=MALIG	510	0.1033	89.7198	3.5549
188	064	ER,NS,THRT MALIG	507	0.1027	89.8226	12.9408
189	273	MJR SKN DIS~A|CC	506	0.1025	89.9251	12.3913
190	093	INTRST LUNG ~A,C	497	0.1007	90.0258	8.3139
191	296	MISC MET DIS,A|C	495	0.1003	90.1261	11.7636
192	429	ORG DISTRB&M RET	495	0.1003	90.2264	19.5091
193	461	OR PR,DX=OTH CTC	491	0.0994	90.3259	4.2037
194	418	PSTOP&PSTTR INFC	486	0.0984	90.4244	8.0844
195	219	LWR XTRM PR,A<70	482	0.0976	90.5221	11.9979
196	425	PSYCHOSOC DYSFNC	481	0.0974	90.6196	6.8046
197	449	TOX EFF,DRGS,A|C	481	0.0974	90.7170	5.3992
198	290	THYROID PROCS	475	0.0962	90.8133	7.6758
199	056	RHINOPLASTY	473	0.0958	90.9091	4.6575
200	078	PULMNRY EMBOLISM	472	0.0956	91.0048	14.7055
201	280	SKN,SUBCT TR,AC	466	0.0944	91.0992	6.0773
202	129	CARDIAC ARREST	465	0.0942	91.1934	11.7978
203	211	HIP&FMUR PR,A<70	465	0.0942	91.2877	21.6839
204	327	KID&UR S&S,A<18	464	0.0940	91.3817	4.8470

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
205	197	TOT CHLST~CDE,AC	462	0.0936	91.4753	20.5606
206	311	TRNSURETH PR~A|C	454	0.0919	91.5673	5.5066
207	399	RTCLEND&IMMN~A|C	450	0.0911	91.6585	4.3044
208	434	DRUG DEPENDENCE	448	0.0907	91.7493	2.8638
209	019	CRNL&PRPH ~A,CC	447	0.0905	91.8399	9.6018
210	367	FEM RPRO MLG~A|C	444	0.0899	91.9298	9.0856
211	342	CIRCUMCSION,A>17	442	0.0895	92.0194	3.0882
212	348	BNGN PRST HYP,AC	439	0.0889	92.1084	9.3098
213	271	SKIN ULCERS	430	0.0871	92.1955	24.5721
214	001	CRNIOT A>=18 ~TR	427	0.0865	92.2820	21.4379
215	154	STM,ESO,DD PR,AC	425	0.0861	92.3681	24.8965
216	405	LYMPH|LEUK,A<18	424	0.0859	92.4541	6.6792
217	346	ML RPRO MLG,A|CC	421	0.0853	92.5394	12.2233
218	136	CRDC CNG&VV,A<70	415	0.0840	92.6235	7.7831
219	203	HPTOBL|PNC MALIG	407	0.0824	92.7059	15.1007
220	351	STERILIZATION,ML	404	0.0818	92.7878	1.0644
221	267	PRANL&PILONDL PR	400	0.0810	92.8689	8.1900
222	453	TRTMT CMPL~A|CC	394	0.0798	92.9487	4.9467
223	258	TOT MAST MLG~A|C	392	0.0794	93.0281	13.5230
224	135	CRDC CNG&VLV,A|C	383	0.0776	93.1058	11.7337
225	095	PNEUMOTHRX ~A,CC	380	0.0770	93.1828	7.5263
226	443	OTH OR PR,INJ~AC	379	0.0768	93.2596	8.1530
227	276	~MALIG BRST DIS	376	0.0761	93.3358	3.4654
228	165	APPNDC,CMP DX~AC	374	0.0757	93.4115	8.2059
229	318	KID&UR NEOP,A|CC	373	0.0755	93.4871	9.7346
230	204	PANC DIS ~MALIG	372	0.0753	93.5625	11.6371
231	331	OTH KID&UR DX,AC	366	0.0741	93.6367	8.8415
232	099	RESP SGN&SY A|CC	361	0.0731	93.7098	7.7285
233	011	NRVS NEOPL ~A,CC	359	0.0727	93.7826	10.6825
234	063	OTH E,N,T OR PR	359	0.0727	93.8553	11.4485
235	240	CONN TISS DIS,AC	359	0.0727	93.9281	17.6100
236	423	OTH INF&PAR DIS	355	0.0719	94.0000	8.8930
237	042	INTROC PR,~R,I,L	344	0.0697	94.0697	10.7587
238	053	SNS&MAST PR A>17	344	0.0697	94.1394	5.6715
239	275	MLG BRST DIS~A|C	344	0.0697	94.2091	9.6483
240	444	MLTPL TRAUMA,A|C	336	0.0680	94.2772	8.3423
241	363	D&C,CON,R-I,MALG	335	0.0678	94.3451	11.9731
242	075	MJR CHEST PROCS	331	0.0670	94.4122	23.4139
243	238	OSTEOMYELITIS	324	0.0656	94.4778	11.2377
244	365	OTH FEM RPRO PR	315	0.0638	94.5417	11.4603
245	170	OTH DGSTV PR,A|C	313	0.0634	94.6051	21.2492
246	277	CELLULITIS,A|CC	307	0.0622	94.6673	12.2215
247	006	CARPL TUNNEL RLS	300	0.0607	94.7281	3.6833
248	116	PCMKR,~AMI|CHF	295	0.0597	94.7879	9.7492
249	300	ENDCRN DIS,A|CC	295	0.0597	94.8477	14.8915
250	112	MJR RCNST VSC~AC	292	0.0591	94.9068	14.6678
251	310	TRNSURETH PR,A|C	292	0.0591	94.9660	7.3973
252	107	CRNRY BYPS,~CCTH	288	0.0583	95.0244	13.8021
253	068	OM&URI, A&|CC	284	0.0575	95.0819	8.6620
254	120	OTHER CRC OR PR	280	0.0567	95.1386	9.9571
255	137	CRDC CNG&VV,A<18	280	0.0567	95.1954	7.7250

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
256	224	UPR XTRM PR~A|CC	280	0.0567	95.2521	6.5143
257	160	HRN~ING&FEM,A<70	279	0.0565	95.3087	7.7742
258	230	RMVL,HIP&FEM DEV	275	0.0557	95.3644	9.2691
259	319	KID&UR NEOP~A|CC	274	0.0555	95.4199	6.2263
260	396	RED BLD CL,A<18	274	0.0555	95.4754	6.6642
261	202	CIRRH&ALC HPTTIS	271	0.0549	95.5304	14.5904
262	045	NEUR EYE DISRDRS	269	0.0545	95.5849	5.8810
263	328	URTHRL STRCT,A|C	269	0.0545	95.6394	6.1115
264	329	URTHRL STRC,A<70	268	0.0543	95.6937	3.2127
265	017	NONSP CBC DIS~CC	263	0.0532	95.7470	14.6654
266	036	RETINAL PROCS	263	0.0532	95.8003	10.7643
267	043	HYPHEMA	263	0.0532	95.8536	5.1407
268	110	MJR RCSTR VSC,AC	261	0.0528	95.9065	26.5594
269	181	GI OBSTRCTN~A|CC	255	0.0516	95.9581	5.8863
270	368	FEM RPRO INFCTNS	255	0.0516	96.0098	4.7255
271	349	BNGN PRST HYP~AC	251	0.0508	96.0607	4.4582
272	144	OTH CIRC DX,CC	247	0.0500	96.1107	12.2065
273	008	OTH NRV PR ~A,CC	238	0.0482	96.1589	12.0336
274	180	GI OBSTRCTN,A|CC	236	0.0478	96.2068	9.5847
275	034	OTH NRV DIS,A&|C	235	0.0476	96.2544	12.7362
276	054	SNS&MAST PR A<18	235	0.0476	96.3020	4.1191
277	157	ANAL PROCS A|CC	234	0.0474	96.3494	10.7009
278	409	RADIOTHERAPY	232	0.0470	96.3964	11.4828
279	341	PENIS PROCS	231	0.0468	96.4432	8.7056
280	113	AMP CRC~UP LIMB	230	0.0466	96.4899	53.2522
281	440	WOUND DEBRD,INJR	230	0.0466	96.5365	5.7304
282	323	URNRY STONES,A|C	229	0.0464	96.5829	6.7424
283	400	LYMPH|LEUK,MJ PR	229	0.0464	96.6293	16.7904
284	032	CONCSN A18-69~CC	226	0.0457	96.6751	2.3850
285	217	SKIN GRAFT~HAND	225	0.0455	96.7207	10.5067
286	156	STM,ESO,DD A<18	223	0.0451	96.7659	14.5157
287	176	CMPL PEPTIC ULCR	223	0.0451	96.8110	7.0135
288	299	INBORN MET ERROR	221	0.0447	96.8558	10.9321
289	111	MJR RCNST VSC,AC	220	0.0445	96.9004	18.9909
290	335	MJR PELVIC PR~CC	220	0.0445	96.9450	19.4091
291	080	RSP INF&INL A<70	218	0.0441	96.9892	15.1055
292	044	ACUT MJR EYE INF	217	0.0439	97.0331	7.7051
293	246	ARTHROPATHIES,NS	217	0.0439	97.0771	9.1521
294	260	SUB MAST MLG~A|C	209	0.0423	97.1195	6.3923
295	003	CRNIOT A<18	208	0.0421	97.1616	22.4712
296	146	RECTAL RSCTN,A|C	203	0.0411	97.2027	28.9360
297	394	OTH OR PR,BLOOD	203	0.0411	97.2439	4.9606
298	408	MYELO DISRDR,CC	201	0.0407	97.2846	6.9005
299	455	OTH INJ,TXC~A|C	201	0.0407	97.3253	5.1592
300	462	REHABILITATION	201	0.0407	97.3661	8.0299
301	416	SEPTICEMIA,A>17	196	0.0397	97.4058	19.1480
302	061	MYRINGOTOMY A>17	189	0.0382	97.4441	2.1270
303	354	NON-RAD HYST,A|C	189	0.0382	97.4824	16.8995
304	079	RSP INF&INFL A|C	188	0.0380	97.5205	20.1596
305	459	NON-EXT BRN,DBRD	187	0.0378	97.5584	38.6684
306	347	ML RPRO MLG~A|CC	186	0.0376	97.5961	8.2366

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
307	314	URETHRAL PR,A<18	185	0.0374	97.6336	5.3351
308	431	CHILDHD MNTL DIS	185	0.0374	97.6710	6.6378
309	152	MNR BOWEL PR,A|C	183	0.0370	97.7081	13.5956
310	272	MJR SKN DIS,A|CC	181	0.0366	97.7448	16.3260
311	362	LAPRSCPC TBL INT	181	0.0366	97.7815	2.4751
312	366	FEM RPRO MLG,A|C	181	0.0366	97.8182	13.4309
313	038	PRIM IRIS PROCS	179	0.0362	97.8544	7.6145
314	205	OTH LIVER DIS,AC	179	0.0362	97.8907	14.5028
315	018	CRNL&PRPH A&|CC	178	0.0360	97.9268	14.2416
316	023	NONTR STPR&COMA	176	0.0356	97.9624	7.2159
317	092	INTRST LUNG A|CC	176	0.0356	97.9981	11.7784
318	233	OTH MSCL&CONN,AC	176	0.0356	98.0338	25.5341
319	313	URETHRAL PR,A<70	174	0.0352	98.0690	7.4885
320	261	BRST PR~MLG~BIOP	173	0.0350	98.1041	5.3410
321	109	CRDTHR PR,~PUMP	172	0.0348	98.1389	19.2151
322	052	CLFT LIP&PLT REP	169	0.0342	98.1732	11.1893
323	257	TOT MAST MLG,A|C	165	0.0334	98.2066	16.5212
324	147	RECTAL RSCTN~A|C	164	0.0332	98.2399	23.3659
325	166	APPNDC~CMP DX,AC	164	0.0332	98.2731	12.4268
326	212	HIP&FMUR PR,A<18	164	0.0332	98.3063	18.3780
327	413	OTH MYELO DIS,AC	158	0.0320	98.3383	14.6203
328	402	LYMPH|LEUK,MN~AC	157	0.0318	98.3702	12.6497
329	428	PERS DIS&IMP CON	156	0.0316	98.4018	23.0513
330	414	OTH MYELO DIS~AC	155	0.0314	98.4332	11.8581
331	077	OR RSP,~MJRCH,~C	153	0.0310	98.4642	14.3464
332	087	PLM EDEMA&RSP FL	149	0.0301	98.4944	10.8188
333	194	BLRY TR PR~CH~AC	140	0.0283	98.5227	15.0000
334	151	PRTNL ADHESLS~AC	139	0.0281	98.5509	11.0504
335	193	BLRY TR PR~CH,AC	134	0.0271	98.5781	21.7687
336	303	KID,UR,BL PR,MLG	134	0.0271	98.6052	23.6642
337	002	CRNIOT TR A>=18	131	0.0265	98.6318	13.7786
338	085	PLRL EFFUSN A&|C	131	0.0265	98.6583	15.0840
339	009	SPINAL DIS&INJ	130	0.0263	98.6847	7.8385
340	242	SEPTIC ARTHRITIS	130	0.0263	98.7110	15.1846
341	398	RTCLEND&IMMN,A|C	130	0.0263	98.7373	6.5385
342	417	SEPTICEMIA,A<18	126	0.0255	98.7629	10.7778
343	454	OTH INJ,TXC,A|C	126	0.0255	98.7884	12.3333
344	033	CONCUSSION A<18	124	0.0251	98.8135	2.4758
345	086	PLRL EFFUSN A<70	123	0.0249	98.8385	9.4472
346	046	OTH EYE DS,A>17C	114	0.0231	98.8616	25.2632
347	094	PNEUMOTHRX A|CC	114	0.0231	98.8847	12.7719
348	312	URETHRAL PR,A|CC	114	0.0231	98.9078	8.3509
349	415	OR PR,INF&PAR DS	114	0.0231	98.9309	13.9386
350	304	KID,UR PR~MLG,AC	113	0.0228	98.9538	24.7522
351	338	TESTES PR,MALIG	113	0.0228	98.9767	10.3717
352	050	SIALOADENECTOMY	110	0.0222	98.9990	7.4545
353	004	SPINAL PROCS	108	0.0218	99.0208	25.0093
354	105	CRDC VLV W/P~CCT	108	0.0218	99.0427	16.9259
355	220	LWR XTRM PR,A<18	108	0.0218	99.0646	8.4167
356	433	SUBST-INDCD MNTL	107	0.0216	99.0863	2.5981
357	456	BURNS, TRANSFERD	107	0.0216	99.1080	14.5234

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
358	259	SUB MAST MLG,A|C	106	0.0214	99.1295	10.5849
359	401	LYMPH|LEUK,MN,AC	95	0.0192	99.1487	17.5158
360	420	FEVER UNKN,A<70	92	0.0186	99.1673	6.3370
361	218	LWR XTRM PR,A|CC	90	0.0182	99.1856	20.9667
362	221	KNEE PROCS,A|CC	88	0.0178	99.2034	28.8636
363	159	HRNIA~ING&FEM,AC	87	0.0176	99.2210	15.6207
364	386	NEONTS,XTRM IMMT	84	0.0170	99.2381	6.6071
365	168	MOUTH PROCS,A|CC	82	0.0163	99.2547	9.0122
366	226	SOFT TISS PR,A|C	82	0.0162	99.2713	9.3902
367	432	OTH DX=MNTL DSRD	82	0.0166	99.2879	10.9512
368	442	OTH OR PR,INJ,AC	82	0.0166	99.3045	23.8415
369	016	NONSP CBV DIS,CC	79	0.0160	99.3205	16.0506
370	441	HAND PROC,INJURY	79	0.0160	99.3366	4.2025
371	037	ORBITAL PROCS	78	0.0158	99.3524	9.1667
372	452	TRTMT CMPL,A|CC	78	0.0158	99.3682	10.3590
373	411	HIST MALG~ENDSCP	7	0.0154	99.3836	3.8947
374	315	OTH KID&URN PROC	5	0.0151	99.3988	17.7600
375	357	UTRS&ADNEXA,MALG	75	0.0151	99.4140	15.7067
376	010	NRVS NEOPL A&|CC	72	0.0145	99.4286	18.2639
377	463	SIGNS&SYMPTMS,CC	71	0.0143	99.4429	11.3521
378	309	MNR BLDR PR~A|CC	69	0.0139	99.4569	14.5942
379	005	XTRACRNL VASC PR	68	0.0137	99.4707	17.5147
380	412	HIST MALG,ENDSCP	68	0.0137	99.4845	2.0588
381	200	HPTOBL DX PR~MLG	66	0.0133	99.4979	21.5606
382	114	UP LIMB&TOE AMP	62	0.0125	99.5104	25.3548
383	150	PRTNL ADHESLS,AC	62	0.0125	99.5230	18.1290
384	020	NRV INF ~VRL MNG	62	0.0125	99.5355	14.3871
385	047	OTH EYE DS,A>17~	62	0.0125	99.5481	5.2419
386	099	RESP SGN&SY A|CC	61	0.0123	99.5605	24.2295
387	291	THYROGLOSSAL PR	61	0.0123	99.5728	4.1967
388	124	CRC~AMI,CCT&CPLX	60	0.0121	99.5850	5.6500
389	306	PROSTATECTOMY,AC	59	0.0119	99.5969	16.0169
390	126	ENDOCARDITIS	58	0.0117	99.6087	23.9483
391	192	MNR PNC,LVR,SHNT	58	0.0117	99.6205	18.6207
392	427	NEUROSES~DEPRSV	57	0.0115	99.6320	11.9123
393	237	SPRN,STRN,DIS HP	56	0.0113	99.6434	17.0179
394	345	OTH ML REPRO~MLG	56	0.0113	99.6547	10.0357
395	265	SKN GRFT~ULCR,CC	54	0.0109	99.6656	12.141
396	076	OR RSP,~MJRCH,CC	53	0.0107	99.6764	17.770
397	419	FEVER UNKNWN,A|C	53	0.0107	99.6871	11.302
398	084	MJR CHST TR A<70	52	0.0105	99.6977	45962
399	216	MUSCL&CONN BIOPS	51	0.0103	99.7080	1.4902
400	223	UPR XTRM PR,A|CC	49	0.0099	99.7179	10.1429
401	007	OTH NRV PR A&|CC	48	0.0097	99.7277	21.1250
402	057	T&A ~TNS,AD A>17	47	0.0095	99.7372	5.1915
403	081	RSP INF&INL A<18	47	0.0095	99.7467	17.4043
404	214	BACK&NECK PR,A|C	47	0.0095	99.7562	24.0638
405	264	SKN GRFT,ULCR~AC	47	0.0095	99.7657	23.2979
406	387	PREMTRTY,MJR PRB	47	0.0095	99.7753	4.4255
407	031	CONCUSSION A&|CC	44	0.0089	99.7842	3.2045
408	353	PLVC EVISC,R HYS	42	0.0085	99.7927	20.4762

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
409	392	SPLENECTOMY,A>17	42	0.0085	99.8012	25.8095
410	051	SALV GLND PR~SIA	40	0.0081	99.8093	5.8250
411	164	APPNDC,CMP DX,AC	39	0.0079	99.8172	16.3846
412	448	ALLRGC READ,A<18	39	0.0079	99.8251	2.0513
413	307	PROSTATECTOMY~AC	38	0.0077	99.8328	12.7632
414	370	CESAREAN, CC	38	0.0077	99.8405	12.2105
415	191	MJR PNC,LVR,SHNT	37	0.0074	99.8480	24.9189
416	263	SKN GRFT,ULCR,AC	37	0.0074	99.8555	34.5405
417	286	ADRNL&PIT PROCS	37	0.0074	99.8630	19.2703
418	049	MJR HD&NECK PROC	36	0.0072	99.8700	34.9167
419	117	PCMKR REP~PLSGN	36	0.0072	99.8780	6.8611
420	407	MYELO DIS,OR,~CC	36	0.0072	99.8850	8.4167
421	067	EPIGLOTTITIS	34	0.0068	99.8920	4.7941
422	213	MUSCL&CN TIS AMP	33	0.0066	99.8980	27.2121
423	293	OTH E,N,M PR~A|C	32	0.0064	99.9050	6.1250
424	308	MNR BLDR PR,A|CC	32	0.0064	99.9110	14.0313
425	424	OR PR,DX1=MENTAL	31	0.0062	99.9180	39.6452
426	083	MJR CHST TR A&|C	30	0.0060	99.9240	18.0333
427	334	MJR PELVIC PR,CC	30	0.0060	99.9300	26.0000
428	317	RENAL FLR,DLYSIS	29	0.0058	99.9360	2.5172
429	406	MYELO DIS,OR,CC	28	0.0056	99.9410	18.4286
430	465	AFTRCR,DX2=MALIG	28	0.0056	99.9470	4.9643
431	115	PCMKR,AMI OR CHF	27	0.0054	99.9530	12.8519
432	289	PARATHYROID PROC	25	0.0050	99.9580	16.2400
433	344	OTH ML REPRO,MLG	24	0.0048	99.9630	19.9583
434	330	URTHRL STRC,A<18	22	0.0044	99.9670	3.9091
435	292	OTH E,N,M PR,A|C	19	0.0038	99.9710	20.0000
436	288	OBESITY OR PROCS	16	0.0032	99.9740	10.1875
437	195	TOT CHLST,CDE,AC	15	0.0030	99.9770	19.6667
439	393	SPLENECTOMY,A<18	13	0.0026	99.9830	12.0000
440	285	END,NUTR,MET AMP	11	0.0022	99.9850	50.5455
441	302	KIDNEY TRANSPLNT	11	0.0022	99.9870	12.1818
442	106	CRNRY BYPS W/CCT	9	0.0018	99.9890	24.8889
443	439	SKIN GRAFTS,INJR	9	0.0018	99.9910	4.3333
444	458	NON-EXT BRN,GRFT	9	0.0018	99.9930	33.4444
445	022	HYPRTNS ENCPHLOP	8	0.0016	99.9940	14.8750
446	457	EXTENSIVE BURNS	7	0.0014	99.9960	39.1429
447	196	TOT CHLST,CDE~AC	6	0.0012	99.9970	14.6667
448	228	HAND GANGLION PR	6	0.0012	99.9980	1.5000
449	118	PULSE GEN REPL	5	0.0010	99.9990	5.0000
450	103	HEART TRANSPLANT	2	0.0004	99.9990	34.0000
451	104	CRDC VLV W/P,CCT	2	0.0004	100.0000	26.5000
452	287	SKN GRFTS,EN,N,M	1	0.0002	100.0000	13.0000

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(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
1	183	MSC DIG DIS,A<70	14205	4.16	4.16	3.30
2	184	MSC DIG DIS,A<18	8954	2.62	6.78	3.61
3	467	OTH HLTH FACTORS	7705	2.25	9.03	2.69
4	270	OTH SKN PR~A|CC	6497	1.90	10.93	1.93
5	167	APPNDC~CMP DX~AC	6133	1.79	12.72	5.27
6	364	D&C,CONZTN~MALIG	6062	1.77	14.49	2.06
7	098	BRNCH&ASTH A<17	5999	1.76	16.25	4.45
8	088	CHRN PULM OBSTR	5773	1.69	17.94	11.76
9	030	TR ST,CMA<1,A<18	5482	1.60	19.54	1.83
10	243	MED BACK PROBS	4997	1.46	21.00	7.44
11	143	CHEST PAIN	4655	1.36	22.36	4.72
12	070	OM&URI, A<18	4581	1.34	23.70	3.55
13	182	MSC DGSTV DIS,AC	4578	1.34	25.04	6.32
14	029	TR ST,CMA<1,A<70	4333	1.27	26.31	2.34
15	060	TNSECT,ADCT A<18	3995	1.17	27.48	3.48
16	468	UNRELATED OR PRO	3593	1.05	28.53	11.15
17	014	SPEC CRBRVSC DIS	3366	0.98	29.51	20.89
18	122	CRC DIS,AMI&CV	3225	0.94	30.45	11.60
19	410	CHEMOTHERAPY	3157	0.92	31.37	2.92
20	127	HRT FLR&SHOCK	3141	0.92	32.29	12.54
21	284	MNR SKIN DIS~A|C	3072	0.90	33.19	3.30
22	039	LENS PROCS	3050	0.89	34.08	6.14
23	294	DIABETES AGE>35	2900	0.85	34.93	7.35
24	355	NON-RAD HYST~A|C	2745	0.80	35.73	10.75
25	140	ANGINA PECTORIS	2727	0.80	36.53	7.31
26	026	SZR&HD A<17,~CC	2676	0.78	37.31	4.06
27	254	OTH FX,SPR A<70	2524	0.74	38.05	4.46
28	247	SGNS&SYMP,MSCLSK	2443	0.71	38.76	4.83
29	119	VEIN LGTN&STRPNG	2425	0.71	39.47	3.94
30	025	SZR&HD A18-69~CC	2399	0.70	40.17	4.59
31	089	SMPL PNEU&PL A|C	2381	0.70	40.87	19.91
32	262	BRST BIOP&EXC~ML	2256	0.66	41.53	2.14
33	450	TOX EFF,DRG,A<70	2220	0.65	42.18	2.66
34	189	OTH DGST DX,A<70	2152	0.63	42.81	2.68
35	231	RMVL~HIP&FEM DEV	2120	0.62	43.43	3.66
36	097	BRNCH&ASTH A<70	2094	0.61	44.04	6.78
37	252	FX,SPRN,DIS A<18	2054	0.60	44.64	1.51
38	062	MYRINGOTOMY A<18	1991	0.58	45.22	1.28
39	340	TSTS PR~MLG,A<18	1933	0.57	45.79	2.93
40	178	UNCMP PTC LCR~AC	1915	0.56	46.35	3.37
41	198	TOT CHLST~CDE~AC	1913	0.56	46.91	11.36
42	162	ING&FML HRN,A<70	1907	0.56	47.47	5.94
43	451	TOX EFF,DRG,A<18	1847	0.54	48.01	1.69
44	134	HYPERTENSION	1836	0.54	48.55	7.10
45	082	RESP NEOPLASMS	1797	0.53	49.08	12.28
46	251	FX,SPRN,DIS A<70	1730	0.51	49.59	2.04
47	041	XTROC PR A<18	1721	0.50	50.09	2.07
48	256	OTH DX,MSCL&CONN	1694	0.50	50.59	4.79
49	125	CRC~AMI,CCT~CPLX	1683	0.49	51.08	2.93
50	395	RED BLD CL,A>17	1672	0.49	51.57	8.22

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(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
51	422	VRL ILL,FVR,A<18	1651	0.48	52.05	3.37
52	187	DNTL EXTR&RESTOR	1619	0.47	52.52	1.78
53	102	OTHR RSP DX A<70	1616	0.47	52.99	5.86
54	369	MNSTRL&OTH F RPR	1600	0.47	53.46	3.30
55	047	OTH EYE DS,A>17~	1599	0.47	53.93	4.93
56	091	SMPL PNEU&P A<18	1588	0.46	54.39	8.11
57	055	MISC EAR,NS,THRT	1570	0.46	54.85	3.37
58	281	SKN TRMA,A<70	1551	0.45	55.30	2.85
59	322	KID&UR INF,A<18	1550	0.45	55.75	4.54
60	073	OTH E,N,T A>17	1497	0.44	56.19	3.30
61	158	ANAL PROCS ~A|CC	1477	0.43	56.62	5.29
62	324	URNRY STONES~A|C	1477	0.43	57.05	4.13
63	255	OTH FX,SPR A<18	1449	0.42	57.47	3.27
64	138	ARRHYTH&CNDC,A|C	1435	0.42	57.89	8.44
65	209	MJR JOINT PROCS	1412	0.41	58.30	23.26
66	101	OTHR RSP DX A|CC	1400	0.41	58.71	23.58
67	321	KID&UR INF,A<70	1361	0.40	59.11	8.18
68	445	MLTPL TRMA,A<70	1351	0.40	59.51	3.30
69	249	AFTERCARE,MSCLSK	1332	0.39	59.90	2.97
70	282	SKN TRMA,A<18	1323	0.39	60.29	2.18
71	343	CIRCUMCSION,A<18	1322	0.39	60.68	1.54
72	139	ARRHYTH&CNDC~A|C	1297	0.38	61.06	5.32
73	040	XTROC PR A>=18	1290	0.38	61.44	2.76
74	360	VGNA,CRVX&VLV PR	1276	0.37	61.81	5.10
75	133	ATHRSCLROSIS~A|C	1275	0.37	62.18	7.06
76	072	NSL TR & DEFORM	1272	0.37	62.55	1.92
77	326	KID&UR S&S,A<70	1259	0.37	62.92	3.54
78	175	GI HMRRHG~A|CC	1230	0.36	63.28	3.96
79	298	MISC MET DS,A<18	1230	0.36	63.64	8.70
80	229	HAND PR~GANGLION	1228	0.36	64.00	3.88
81	210	HIP&FEMUR PR,A|C	1219	0.36	64.36	24.84
82	266	SKN GRFT~ULCR~CC	1219	0.36	64.72	4.79
83	358	UTRS&ADNEXA~MLG	1217	0.36	65.08	6.26
84	336	TRNSUR PRSTCT,AC	1206	0.35	65.43	13.29
85	074	OTH E,N,T A<18	1172	0.34	65.77	2.39
86	295	DIABETES AGE<36	1160	0.34	66.11	5.90
87	012	DEGENR NRVS DIS	1151	0.34	66.45	20.05
88	015	TRANS ISCHEM ATT	1150	0.34	66.79	7.86
89	028	TR ST,CMA<1,A&|C	1148	0.34	67.13	5.97
90	236	FRAC OF HIP&PLVS	1145	0.34	67.47	10.59
91	132	ATHRSCLROSIS,A|C	1144	0.33	67.80	10.59
92	190	OTH DGST DX,A<18	1144	0.33	68.13	3.76
93	163	HERNIA PROC,A<18	1137	0.33	68.46	2.17
94	130	PRPHL VSC DIS,AC	1129	0.33	68.79	12.11
95	234	OTH MSCL&CONN~AC	1114	0.33	69.12	8.37
96	066	EPISTAXIS	1057	0.31	69.43	3.58
97	278	CELLULITIS,A<70	1047	0.31	69.74	5.31
98	090	SMPL PNEU&P A<70	1034	0.30	70.04	12.06
99	171	OTH DGSTV PR~A|C	1029	0.30	70.34	6.89
100	131	PRPHL VSC DIS~AC	987	0.29	70.63	8.67

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(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
101	361	LAPSCPY&ENDSC,FE	984	0.29	70.92	2.38
102	172	DGSTV MALIG,A|CC	971	0.28	71.20	16.23
103	225	FOOT PROCS	971	0.28	71.48	8.08
104	059	TNSECT,ADCT A>17	938	0.27	71.75	4.64
105	208	BLRY TR DIS~A|CC	934	0.27	72.02	5.68
106	227	SOFT TISS PR~A|C	932	0.27	72.29	4.23
107	179	INFLM BOWEL DIS	927	0.27	72.56	7.49
108	123	CRC DIS,AMI,XPRD	925	0.27	72.83	7.66
109	404	LYMPH|LEUK,A<70	925	0.27	73.10	8.99
110	142	SYNCP&CLLPS,~A|C	924	0.27	73.37	3.77
111	100	RSP SGN&SY A<70	918	0.27	73.64	4.37
112	058	T&A ~TNS,AD A<18	915	0.27	73.91	3.03
113	128	DP VN THRMBPHLEB	909	0.27	74.18	11.29
114	269	OTH SKN PR A|CC	891	0.26	74.44	7.11
115	241	CONN TISS DIS~AC	879	0.26	74.70	10.90
116	446	MLTPL TRMA,A<18	834	0.24	74.94	2.66
117	069	OM&URI,A18-69~C	826	0.24	75.18	3.86
118	320	KID&UR INF,A|CC	825	0.24	75.42	15.82
119	325	KID&UR SG&SY,A|C	810	0.24	75.66	7.37
120	359	TUBAL INTRRP~MLG	806	0.24	75.90	3.17
121	337	TRNSUR PRSTCT~AC	787	0.23	76.13	10.25
122	235	FRACTR OF FEMUR	761	0.22	76.35	16.83
123	301	ENDCRN DIS~A|CC	752	0.22	76.57	6.80
124	121	CRC DIS,AMI&E,CC	747	0.22	76.79	15.56
125	161	ING&FML HRN,A|CC	742	0.22	77.01	9.20
126	352	OTH ML REPRO DX	742	0.22	77.23	2.67
127	316	RENAL FLR~DLYSIS	739	0.22	77.45	12.85
128	035	OTH NRVS DIS,~AC	732	0.21	77.66	7.11
129	403	LYMPH|LEUK,A|CC	717	0.21	77.87	12.13
130	177	UNCMP PTC LCR,AC	714	0.21	78.08	7.74
131	215	BACK&NECK PR~A|C	710	0.21	78.29	14.25
132	174	GI HMRRHG,A|CC	699	0.20	78.49	8.20
133	071	LARYNGOTRCHEITS	697	0.20	78.69	2.91
134	305	KID,UR PR~MLG~AC	697	0.20	78.89	9.65
135	332	OTH KID&UR,A<70	687	0.20	79.09	5.21
136	339	TSTS PR~MLG,A>17	685	0.20	79.29	4.75
137	356	FEM RPR RCNST PR	664	0.19	79.48	9.53
138	460	NON-EXT BRN~OR P	661	0.19	79.67	9.62
139	466	AFTRCR,DX2=MALIG	645	0.19	79.86	5.73
140	186	DNTL DIS~XT,A<18	638	0.19	80.05	2.53
141	297	MISC MET DS,A<70	636	0.19	80.24	8.32
142	188	OTH DGSTV DX,A|C	635	0.19	80.43	6.40
143	253	OTH FX,SPR A|CC	628	0.18	80.61	9.14
144	464	SIGNS&SYMPTMS~CC	627	0.18	80.79	6.28
145	173	DGSTV MALIG~A|CC	623	0.18	80.97	9.94
146	148	MJR BOWEL PR,A|C	616	0.18	81.15	27.14
147	153	MNR BOWEL PR~A|C	616	0.18	81.33	6.04
148	155	STM,ESO,DD A<70	616	0.18	81.51	13.97
149	239	PATH FR&MSCL MLG	616	0.18	81.69	9.52
150	245	BONE DISEASE~A|C	612	0.18	81.87	6.33

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
151	169	MOUTH PROCS~A|CC	607	0.18	82.05	4.02
152	268	SKN,SUBCT&BR PLS	603	0.18	82.23	11.91
153	426	DEPRSV NEUROSES	599	0.18	82.41	12.79
154	283	MNR SKIN DIS,A|C	597	0.17	82.58	7.36
155	141	SYNCP&CLLPS,A|CC	594	0.17	82.75	6.30
156	185	DNTL DIS~XT,A>17	588	0.17	82.92	4.69
157	250	FX,SPR ARM&FT,AC	588	0.17	83.09	4.20
158	096	BRNCH&ASTH A|CC	584	0.17	83.26	10.22
159	207	BLRY TR DIS,A|CC	583	0.17	83.43	11.51
160	333	OTH KID&UR,A<18	579	0.17	83.60	4.36
161	149	MJR BOWEL PR~A|C	574	0.17	83.77	20.40
162	024	SZR&HDACH A&|CC	570	0.17	83.94	8.64
163	020	NRV INF ~VRL MNG	559	0.16	84.10	11.67
164	222	KNEE PROCS~A|CC	545	0.16	84.26	7.14
165	279	CELLULITIS,A<18	542	0.16	84.42	4.17
166	461	OR PR,DX=OTH CTC	538	0.16	84.58	3.69
167	430	PSYCHOSES	528	0.15	84.73	20.23
168	244	BONE DISEASE,A|C	520	0.15	84.88	10.93
169	013	MP SCLER&CRBL AT	516	0.15	85.03	14.48
170	274	MLG BRST DIS,A|C	512	0.15	85.18	15.19
171	065	DYSEQUILIBRIUM	511	0.15	85.33	5.45
172	064	ER,NS,THRT MALIG	507	0.15	85.48	13.34
173	145	OTH CIRD DX,~CC	503	0.15	85.63	8.94
174	418	PSTOP&PSTTR INFC	489	0.14	85.77	7.12
175	053	SNS&MAST PR A>17	476	0.14	85.91	4.79
176	048	OTH EYE DIS,A<18	475	0.14	86.05	3.21
177	350	MALE REPRO INFLM	473	0.14	86.19	4.25
178	165	APPNDC,CMP DX~AC	466	0.14	86.33	7.18
179	248	TNDNTS,MYSTS,BRS	464	0.14	86.47	4.63
180	405	LYMPH|LEUK,A<18	464	0.14	86.61	6.42
181	219	LWR XTRM PR,A<70	458	0.13	86.74	11.39
182	206	OTH LIVER DIS~AC	456	0.13	86.87	7.50
183	021	VIRAL MENINGITIS	445	0.13	87.00	6.02
184	296	MISC MET DIS,A|C	440	0.13	87.13	10.72
185	399	RTCLEND&IMMN~A|C	439	0.13	87.26	4.23
186	042	INTROC PR,~R,I,L	438	0.13	87.39	7.84
187	290	THYROID PROCS	437	0.13	87.52	7.56
188	421	VIRAL ILLNS,A>17	436	0.13	87.65	6.69
189	019	CRNL&PRPH ~A,CC	434	0.13	87.78	9.46
190	078	PULMNRY EMBOLISM	431	0.13	87.91	17.42
191	280	SKN,SUBCT TR,AC	426	0.12	88.03	5.40
192	197	TOT CHLST~CDE,AC	425	0.12	88.15	17.49
193	435	DRUG USE~DEPNDNC	425	0.12	88.27	7.67
194	449	TOX EFF,DRGS,A|C	425	0.12	88.39	5.93
195	056	RHINOPLASTY	424	0.12	88.51	4.17
196	327	KID&UR S&S,A<18	407	0.12	88.63	4.82
197	211	HIP&FMUR PR,A<70	398	0.12	88.75	20.51
198	154	STM,ESO,DD PR,AC	397	0.12	88.87	23.68
199	425	PSYCHOSOC DYSFNC	394	0.12	88.99	6.57
200	346	ML RPRO MLG,A|CC	393	0.11	89.10	11.05

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
201	351	STERILIZATION,ML	392	0.11	89.21	1.01
202	093	INTRST LUNG ~A,C	384	0.11	89.32	8.99
203	331	OTH KID&UR DX,AC	384	0.11	89.43	7.76
204	397	COAGULATION DSRD	375	0.11	89.54	7.35
205	470	UNGROUPABLE	372	0.11	89.65	12.65
206	001	CRNIOT A>=18 ~TR	371	0.11	89.76	23.63
207	311	TRNSURETH PR~A|C	371	0.11	89.87	5.13
208	054	SNS&MAST PR A<18	369	0.11	89.98	3.44
209	423	OTH INF&PAR DIS	367	0.11	90.09	7.04
210	203	HPTOBL|PNC MALIG	366	0.11	90.20	12.61
211	348	BNGN PRST HYP,AC	365	0.11	90.31	7.37
212	240	CONN TISS DIS,AC	362	0.11	90.42	15.13
213	434	DRUG DEPENDENCE	362	0.11	90.53	2.56
214	342	CIRCUMCSION,A>17	359	0.11	90.64	2.77
215	273	MJR SKN DIS~A|CC	357	0.10	90.74	9.89
216	271	SKIN ULCERS	354	0.10	90.84	20.17
217	095	PNEUMOTHRX ~A,CC	353	0.10	90.94	7.39
218	204	PANC DIS ~MALIG	352	0.10	91.04	10.84
219	258	TOT MAST MLG~A|C	352	0.10	91.14	12.51
220	135	CRDC CNG&VLV,A|C	351	0.10	91.24	10.06
221	011	NRVS NEOPL ~A,CC	344	0.10	91.34	10.95
222	429	ORG DISTRB&M RET	344	0.10	91.44	23.31
223	224	UPR XTRM PR~A|CC	338	0.10	91.54	5.27
224	276	~MALIG BRST DIS	337	0.10	91.64	3.20
225	129	CARDIAC ARREST	336	0.10	91.74	10.22
226	363	D&C,CON,R-I,MALG	324	0.09	91.83	11.49
227	267	PRANL&PILONDL PR	323	0.09	91.92	7.09
228	453	TRTMT CMPL~A|CC	320	0.09	92.01	5.04
229	367	FEM RPRO MLG~A|C	313	0.09	92.10	7.30
230	160	HRN~ING&FEM,A<70	309	0.09	92.19	7.96
231	099	RESP SGN&SY A|CC	307	0.09	92.28	7.51
232	440	WOUND DEBRD,INJR	307	0.09	92.37	5.86
233	136	CRDC CNG&VV,A<70	304	0.09	92.46	7.36
234	300	ENDCRN DIS,A|CC	295	0.09	92.55	11.83
235	318	KID&UR NEOP,A|CC	294	0.09	92.64	11.64
236	181	GI OBSTRCTN~A|CC	293	0.09	92.73	5.58
237	202	CIRRH&ALC HPTTIS	293	0.09	92.82	12.51
238	396	RED BLD CL,A<18	286	0.08	92.90	5.09
239	063	OTH E,N,T OR PR	285	0.08	92.98	10.94
240	075	MJR CHEST PROCS	285	0.08	93.06	20.01
241	277	CELLULITIS,A|CC	285	0.08	93.14	9.95
242	444	MLTPL TRAUMA,A|C	285	0.08	93.22	7.28
243	006	CARPL TUNNEL RLS	284	0.08	93.30	3.20
244	238	OSTEOMYELITIS	284	0.08	93.38	10.16
245	443	OTH OR PR,INJ~AC	283	0.08	93.46	8.92
246	362	LAPRSCPC TBL INT	282	0.08	93.54	1.86
247	365	OTH FEM RPRO PR	275	0.08	93.62	9.18
248	170	OTH DGSTV PR,A|C	273	0.08	93.70	20.46
249	319	KID&UR NEOP~A|CC	270	0.08	93.78	6.73
250	116	PCMKR,~AMI|CHF	267	0.08	93.86	8.41

1987
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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
251	036	RETINAL PROCS	260	0.08	93.94	8.69
252	107	CRNRY BYPS,~CCTH	259	0.08	94.02	14.09
253	008	OTH NRV PR ~A,CC	256	0.07	94.09	8.28
254	310	TRNSURETH PR,A|C	256	0.07	94.16	7.14
255	328	URTHRL STRCT,A|C	256	0.07	94.23	4.24
256	275	MLG BRST DIS~A|C	255	0.07	94.30	10.76
257	120	OTHER CRC OR PR	254	0.07	94.37	9.77
258	299	INBORN MET ERROR	254	0.07	94.44	13.49
259	409	RADIOTHERAPY	251	0.07	94.51	10.39
260	217	SKIN GRAFT~HAND	246	0.07	94.58	11.12
261	349	BNGN PRST HYP~AC	242	0.07	94.65	4.05
262	144	OTH CIRC DX,CC	238	0.07	94.72	12.64
263	230	RMVL,HIP&FEM DEV	237	0.07	94.79	8.20
264	137	CRDC CNG&VV,A<18	233	0.07	94.86	8.82
265	260	SUB MAST MLG~A|C	232	0.07	94.93	6.44
266	112	MJR RCNST VSC~AC	230	0.07	95.00	15.04
267	110	MJR RCSTR VSC,AC	227	0.07	95.07	23.67
268	156	STM,ESO,DD A<18	226	0.07	95.14	12.46
269	368	FEM RPRO INFCTNS	222	0.06	95.20	4.24
270	400	LYMPH|LEUK,MJ PR	216	0.06	95.26	16.25
271	323	URNRY STONES,A|C	214	0.06	95.32	6.33
272	354	NON-RAD HYST,A|C	213	0.06	95.38	15.58
273	061	MYRINGOTOMY A>17	212	0.06	95.44	1.97
274	080	RSP INF&INL A<70	211	0.06	95.50	13.26
275	180	GI OBSTRCTN,A|CC	211	0.06	95.56	9.14
276	329	URTHRL STRC,A<70	211	0.06	95.62	3.40
277	341	PENIS PROCS	209	0.06	95.68	6.74
278	366	FEM RPRO MLG,A|C	208	0.06	95.74	11.87
279	034	OTH NRV DIS,A&|C	207	0.06	95.80	15.38
280	043	HYPHEMA	205	0.06	95.86	4.51
281	212	HIP&FMUR PR,A<18	205	0.06	95.92	15.55
282	416	SEPTICEMIA,A>17	201	0.06	95.98	20.19
283	113	AMP CRC~UP LIMB	200	0.06	96.04	42.07
284	157	ANAL PROCS A|CC	200	0.06	96.10	10.39
285	044	ACUT MJR EYE INF	199	0.06	96.16	6.24
286	045	NEUR EYE DISRDRS	199	0.06	96.22	5.83
287	257	TOT MAST MLG,A|C	197	0.06	96.28	15.00
288	079	RSP INF&INFL A|C	195	0.06	96.34	21.09
289	003	CRNIOT A<18	187	0.05	96.39	23.11
290	111	MJR RCNST VSC,AC	187	0.05	96.44	20.16
291	052	CLFT LIP&PLT REP	181	0.05	96.49	10.56
292	205	OTH LIVER DIS,AC	180	0.05	96.54	13.01
293	018	CRNL&PRPH A&|CC	179	0.05	96.59	11.49
294	147	RECTAL RSCTN~A|C	179	0.05	96.64	21.29
295	176	CMPL PEPTIC ULCR	179	0.05	96.69	7.54
296	017	NONSP CBC DIS~CC	177	0.05	96.74	12.63
297	068	OM&URI, A&|CC	177	0.05	96.79	13.05
298	459	NON-EXT BRN,DBRD	172	0.05	96.84	28.70
299	335	MJR PELVIC PR~CC	169	0.05	96.89	17.16
300	394	OTH OR PR,BLOOD	168	0.05	96.94	5.38

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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
301	398	RTCLEND&IMMN,A|C	168	0.05	96.99	9.30
302	146	RECTAL RSCTN,A|C	167	0.05	97.04	27.51
303	246	ARTHROPATHIES,NS	164	0.05	97.09	9.48
304	431	CHILDHD MNTL DIS	164	0.05	97.14	4.57
305	166	APPNDC~CMP DX,AC	163	0.05	97.19	10.17
306	272	MJR SKN DIS,A|CC	163	0.05	97.24	13.73
307	408	MYELO DISRDR,CC	163	0.05	97.29	7.56
308	152	MNR BOWEL PR,A|C	161	0.05	97.34	14.36
309	313	URETHRAL PR,A<70	161	0.05	97.39	7.21
310	402	LYMPH|LEUK,MN~AC	157	0.05	97.44	11.94
311	314	URETHRAL PR,A<18	156	0.05	97.49	4.29
312	038	PRIM IRIS PROCS	153	0.04	97.53	6.81
313	092	INTRST LUNG A|CC	152	0.04	97.57	12.08
314	151	PRTNL ADHESLS~AC	149	0.04	97.61	10.16
315	428	PERS DIS&IMP CON	148	0.04	97.65	24.57
316	085	PLRL EFFUSN A&|C	146	0.04	97.69	12.13
317	109	CRDTHR PR,~PUMP	145	0.04	97.73	21.55
318	261	BRST PR~MLG~BIOP	141	0.04	97.77	4.55
319	347	ML RPRO MLG~A|CC	135	0.04	97.81	9.88
320	233	OTH MSCL&CONN,AC	132	0.04	97.85	23.64
321	094	PNEUMOTHRX A|CC	131	0.04	97.89	12.03
322	077	OR RSP,~MJRCH,~C	129	0.04	97.93	13.61
323	193	BLRY TR PR~CH,AC	129	0.04	97.97	18.98
324	455	OTH INJ,TXC~A|C	127	0.04	98.01	4.23
325	087	PLM EDEMA&RSP FL	126	0.04	98.05	12.28
326	259	SUB MAST MLG,A|C	126	0.04	98.09	8.77
327	304	KID,UR PR~MLG,AC	122	0.04	98.13	16.62
328	194	BLRY TR PR~CH~AC	119	0.03	98.16	14.39
329	023	NONTR STPR&COMA	118	0.03	98.19	4.54
330	242	SEPTIC ARTHRITIS	118	0.03	98.22	14.79
331	413	OTH MYELO DIS,AC	118	0.03	98.25	14.22
332	002	CRNIOT TR A>=18	117	0.03	98.28	14.10
333	417	SEPTICEMIA,A<18	117	0.03	98.31	9.91
334	415	OR PR,INF&PAR DS	116	0.03	98.34	13.42
335	032	CONCSN A18-69~CC	115	0.03	98.37	2.18
336	412	HIST MALG,ENDSCP	112	0.03	98.40	1.96
337	086	PLRL EFFUSN A<70	106	0.03	98.43	10.50
338	303	KID,UR,BL PR,MLG	104	0.03	98.46	21.57
339	338	TESTES PR,MALIG	104	0.03	98.49	11.65
340	462	REHABILITATION	100	0.03	98.52	7.84
341	009	SPINAL DIS&INJ	99	0.03	98.55	6.47
342	456	BURNS, TRANSFERD	99	0.03	98.58	13.63
343	220	LWR XTRM PR,A<18	98	0.03	98.61	9.66
344	452	TRTMT CMPL,A|CC	98	0.03	98.64	9.41
345	401	LYMPH|LEUK,MN,AC	96	0.03	98.67	15.08
346	010	NRVS NEOPL A&|CC	93	0.03	98.70	15.76
347	420	FEVER UNKN,A<70	90	0.03	98.73	9.02
348	046	OTH EYE DS,A>17C	89	0.03	98.76	7.64
349	315	OTH KID&URN PROC	88	0.03	98.79	17.09
350	312	URETHRAL PR,A|CC	87	0.03	98.82	8.52

1987
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Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
351	454	OTH INJ,TXC,A|C	86	0.03	98.85	11.63
352	168	MOUTH PROCS,A|CC	82	0.02	98.87	8.99
353	218	LWR XTRM PR,A|CC	82	0.02	98.89	18.02
354	050	SIALOADENECTOMY	79	0.02	98.91	6.13
355	159	HRNIA~ING&FEM,AC	79	0.02	98.93	12.03
356	105	CRDC VLV W/P~CCT	78	0.02	98.95	17.53
357	004	SPINAL PROCS	75	0.02	98.97	23.59
358	226	SOFT TISS PR,A|C	75	0.02	98.99	13.27
359	433	SUBST-INDCD MNTL	74	0.02	99.01	1.73
360	033	CONCUSSION A<18	73	0.02	99.03	1.78
361	199	HPTOBL DX PR,MLG	69	0.02	99.05	22.20
362	414	OTH MYELO DIS~AC	69	0.02	99.07	9.13
363	037	ORBITAL PROCS	66	0.02	99.09	7.15
364	057	T&A ~TNS,AD A>17	66	0.02	99.11	4.50
365	221	KNEE PROCS,A|CC	66	0.02	99.13	25.53
366	150	PRTNL ADHESLS,AC	65	0.02	99.15	20.17
367	192	MNR PNC,LVR,SHNT	64	0.02	99.17	15.92
368	357	UTRS&ADNEXA,MALG	64	0.02	99.19	16.45
369	441	HAND PROC,INJURY	64	0.02	99.21	5.06
370	463	SIGNS&SYMPTMS,CC	61	0.02	99.23	9.15
371	076	OR RSP,~MJRCH,CC	58	0.02	99.25	17.38
372	306	PROSTATECTOMY,AC	58	0.02	99.27	12.14
373	124	CRC~AMI,CCT&CPLX	56	0.02	99.29	5.02
374	201	OTH HPTBL/PNC PR	56	0.02	99.31	7.13
375	005	XTRACRNL VASC PR	55	0.02	99.33	22.05
376	007	OTH NRV PR A&|CC	55	0.02	99.35	20.67
377	442	OTH OR PR,INJ,AC	55	0.02	99.37	23.85
378	016	NONSP CBV DIS,CC	54	0.02	99.39	12.20
379	200	HPTOBL DX PR~MLG	54	0.02	99.41	20.26
380	216	MUSCL&CONN BIOPS	53	0.02	99.43	10.75
381	427	NEUROSES~DEPRSV	53	0.02	99.45	13.06
382	084	MJR CHST TR A<70	52	0.02	99.47	4.42
383	309	MNR BLDR PR~A|CC	52	0.02	99.49	10.21
384	432	OTH DX-MNTL DSRD	52	0.02	99.51	5.48
385	114	UP LIMB&TOE AMP	51	0.01	99.52	28.08
386	465	AFTRCR,DX2-MALIG	51	0.01	99.53	9.20
387	291	THYROGLOSSAL PR	50	0.01	99.54	4.32
388	223	UPR XTRM PR,A|CC	48	0.01	99.55	15.13
389	353	PLVC EVISC,R HYS	46	0.01	99.56	16.98
390	126	ENDOCARDITIS	44	0.01	99.57	22.93
391	293	OTH E,N,M PR~A|C	44	0.01	99.58	6.39
392	237	SPRN,STRN,DIS HP	43	0.01	99.59	14.81
393	411	HIST MALG~ENDSCP	43	0.01	99.60	2.53
394	419	FEVER UNKNWN,A|C	42	0.01	99.61	11.45
395	447	ALLRGC REAC,A>17	42	0.01	99.62	4.98
396	265	SKN GRFT~ULCR,CC	41	0.01	99.63	11.29
397	191	MJR PNC,LVR,SHNT	39	0.01	99.64	37.79
398	392	SPLENECTOMY,A>17	39	0.01	99.65	20.38
399	214	BACK&NECK PR,A|C	38	0.01	99.66	31.00
400	307	PROSTATECTOMY~AC	38	0.01	99.67	8.84

1987
(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
401	308	MNR BLDR PR,A|CC	38	0.01	99.68	10.24
402	345	OTH ML REPRO~MLG	37	0.01	99.69	9.97
403	049	MJR HD&NECK PROC	35	0.01	99.70	32.06
404	081	RSP INF&INL A<18	35	0.01	99.71	17.40
405	264	SKN GRFT,ULCR~AC	35	0.01	99.72	15.23
406	031	CONCUSSION A&|CC	34	0.01	99.73	4.09
407	213	MUSCL&CN TIS AMP	34	0.01	99.74	22.18
408	051	SALV GLND PR~SIA	33	0.01	99.75	4.30
409	083	MJR CHST TR A&|C	33	0.01	99.76	11.27
410	067	EPIGLOTTIITIS	32	0.01	99.77	4.31
411	164	APPNDC,CMP DX,AC	32	0.01	99.78	17.13
412	263	SKN GRFT,ULCR,AC	31	0.01	99.79	31.16
413	286	ADRNL&PIT PROCS	30	0.01	99.80	17.43
414	334	MJR PELVIC PR,CC	30	0.01	99.81	25.07
415	393	SPLENECTOMY,A<18	30	0.01	99.82	12.87
416	117	PCMKR REP~PLSGN	28	0.01	99.83	6.93
417	115	PCMKR,AMI OR CHF	26	0.01	99.84	12.88
418	406	MYELO DIS,OR,CC	26	0.01	99.85	25.88
419	407	MYELO DIS,OR,~CC	26	0.01	99.86	13.46
420	448	ALLRGC READ,A<18	25	0.01	99.87	1.84
421	289	PARATHYROID PROC	20	0.01	99.88	15.40
422	330	URTHRL STRC,A<18	18	0.01	99.89	3.44
423	424	OR PR,DX1=MENTAL	18	0.01	99.90	38.06
424	439	SKIN GRAFTS,INJR	17	0.00	99.90	3.24
425	288	OBESITY OR PROCS	14	0.00	99.90	11.00
426	104	CRDC VLV W/P,CCT	13	0.00	99.90	15.54
427	106	CRNRY BYPS W/CCT	13	0.00	99.90	24.00
428	195	TOT CHLST,CDE,AC	13	0.00	99.90	15.77
429	317	RENAL FLR,DLYSIS	13	0.00	99.90	1.00
430	458	NON-EXT BRN,GRFT	12	0.00	99.90	30.25
431	344	OTH ML REPRO,MLG	11	0.00	99.90	19.82
432	292	OTH E,N,M PR,A|C	8	0.00	99.90	9.88
433	302	KIDNEY TRANSPLNT	8	0.00	99.90	11.00
434	022	HYPRTNS ENCPHLOP	7	0.00	99.90	5.86
435	196	TOT CHLST,CDE~AC	7	0.00	99.90	14.86
436	457	EXTENSIVE BURNS	7	0.00	99.90	22.00
437	285	END,NUTR,MET AMP	5	0.00	99.90	32.80
438	287	SKN GRFTS,EN,N,M	3	0.00	99.90	48.00
439	118	PULSE GEN REPL	2	0.00	99.90	2.50
441	228	HAND GANGLION PR	1	0.00	99.90	1.00

1988
(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
1	183	MSC DIG DIS,A<70	13727	4.20	4.20	6.15
2	184	MSC DIG DIS,A<18	8276	2.53	6.73	4.99
3	467	OTH HLTH FACTORS	7269	2.22	8.95	5.78
4	364	D&C,CONZTN~MALIG	6248	1.91	10.86	5.06
5	098	BRNCH&ASTH A<17	6132	1.88	12.74	4.83
6	270	OTH SKN PR~A|CC	6027	1.84	14.58	5.33
7	167	APPNDC~CMP DX~AC	5285	1.62	16.20	4.95
8	088	CHRN PULM OBSTR	5221	1.60	17.80	7.37
9	143	CHEST PAIN	4984	1.53	19.33	6.46
10	182	MSC DGSTV DIS,AC	4722	1.45	20.78	6.64
11	070	OM&URI, A<18	4615	1.41	22.19	4.92
12	030	TR ST,CMA<1,A<18	4562	1.40	23.59	5.00
13	243	MED BACK PROBS	4480	1.37	24.96	7.21
14	029	TR ST,CMA<1,A<70	3878	1.19	26.15	7.38
15	060	TNSECT,ADCT A<18	3844	1.18	27.33	5.12
16	468	UNRELATED OR PRO	3486	1.07	28.40	6.75
17	039	LENS PROCS	3484	1.07	29.47	5.74
18	122	CRC DIS,AMI&CV	3331	1.02	30.49	6.61
19	410	CHEMOTHERAPY	3303	1.01	31.50	8.22
20	014	SPEC CRBRVSC DIS	3301	1.01	32.51	7.61
21	127	HRT FLR&SHOCK	3012	0.92	33.43	7.76
22	355	NON-RAD HYST~A|C	2809	0.86	34.29	6.24
23	294	DIABETES AGE>35	2779	0.85	35.14	6.40
24	026	SZR&HD A<17,~CC	2726	0.83	35.97	4.84
25	140	ANGINA PECTORIS	2663	0.82	36.79	7.05
26	284	MNR SKIN DIS~A|C	2642	0.81	37.60	6.02
27	119	VEIN LGTN&STRPNG	2576	0.79	38.39	6.59
28	247	SGNS&SYMP,MSCLSK	2329	0.71	39.10	6.91
29	189	OTH DGST DX,A<70	2303	0.70	39.80	6.26
30	254	OTH FX,SPR A<70	2262	0.69	40.49	6.81
31	089	SMPL PNEU&PL A|C	2226	0.68	41.17	8.60
32	025	SZR&HD A18-69~CC	2212	0.68	41.85	7.22
33	262	BRST BIOP&EXC~ML	2115	0.65	42.50	6.27
34	450	TOX EFF,DRG,A<70	2046	0.63	43.13	6.61
35	062	MYRINGOTOMY A<18	2028	0.62	43.75	5.59
36	097	BRNCH&ASTH A<70	1972	0.60	44.35	6.80
37	162	ING&FML HRN,A<70	1888	0.58	44.93	6.68
38	082	RESP NEOPLASMS	1879	0.58	45.51	8.16
39	198	TOT CHLST~CDE~AC	1867	0.57	46.08	7.11
40	178	UNCMP PTC LCR~AC	1819	0.56	46.64	6.86
41	231	RMVL~HIP&FEM DEV	1811	0.55	47.19	8.84
42	340	TSTS PR~MLG,A<18	1810	0.55	47.74	5.03
43	252	FX,SPRN,DIS A<18	1795	0.55	48.29	4.94
44	134	HYPERTENSION	1763	0.54	48.83	6.24
45	041	XTROC PR A<18	1718	0.53	49.36	4.36
46	256	OTH DX,MSCL&CONN	1679	0.51	49.87	6.43
47	422	VRL ILL,FVR,A<18	1669	0.51	50.38	4.86
48	091	SMPL PNEU&P A<18	1653	0.51	50.89	5.08
49	451	TOX EFF,DRG,A<18	1607	0.49	51.38	5.36
50	055	MISC EAR,NS,THRT	1538	0.47	51.85	5.46

1988
(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
51	395	RED BLD CL,A>17	1515	0.46	52.31	7.95
52	324	URNRY STONES~A|C	1514	0.46	52.77	5.75
53	125	CRC~AMI,CCT~CPLX	1507	0.46	53.23	8.04
54	073	OTH E,N,T A>17	1500	0.46	53.69	5.59
55	102	OTHR RSP DX A<70	1468	0.45	54.14	5.51
56	369	MNSTRL&OTH F RPR	1427	0.44	54.58	6.00
57	047	OTH EYE DS,A>17~	1409	0.43	55.01	5.27
58	209	MJR JOINT PROCS	1404	0.43	55.44	11.82
59	040	XTROC PR A>=18	1371	0.42	55.86	4.21
60	281	SKN TRMA,A<70	1346	0.41	56.27	5.38
61	187	DNTL EXTR&RESTOR	1333	0.41	56.68	4.78
62	138	ARRHYTH&CNDC,A|C	1332	0.41	57.09	7.70
63	072	NSL TR & DEFORM	1325	0.41	57.50	6.59
64	251	FX,SPRN,DIS A<70	1318	0.40	57.90	5.80
65	101	OTHR RSP DX A|CC	1311	0.40	58.30	7.37
66	336	TRNSUR PRSTCT,AC	1300	0.40	58.70	6.87
67	158	ANAL PROCS ~A|CC	1292	0.40	59.10	8.19
68	322	KID&UR INF,A<18	1290	0.39	59.49	4.85
69	343	CIRCUMCSION,A<18	1288	0.39	59.88	4.68
70	321	KID&UR INF,A<70	1280	0.39	60.27	6.28
71	360	VGNA,CRVX&VLV PR	1276	0.39	60.66	6.12
72	266	SKN GRFT~ULCR~CC	1275	0.39	61.05	5.59
73	358	UTRS&ADNEXA~MLG	1257	0.38	61.43	5.70
74	282	SKN TRMA,A<18	1243	0.38	61.81	4.49
75	326	KID&UR S&S,A<70	1200	0.37	62.18	5.95
76	229	HAND PR~GANGLION	1192	0.36	62.54	6.47
77	015	TRANS ISCHEM ATT	1191	0.36	62.90	6.65
78	255	OTH FX,SPR A<18	1191	0.36	63.26	4.94
79	074	OTH E,N,T A<18	1169	0.36	63.62	5.81
80	361	LAPSCPY&ENDSC,FE	1168	0.36	63.98	5.87
81	139	ARRHYTH&CNDC~A|C	1163	0.36	64.34	6.35
82	175	GI HMRRHG~A|CC	1129	0.35	64.69	6.01
83	445	MLTPL TRMA,A<70	1113	0.34	65.03	5.74
84	163	HERNIA PROC,A<18	1098	0.34	65.37	4.80
85	298	MISC MET DS,A<18	1069	0.33	65.70	5.14
86	028	TR ST,CMA<1,A&|C	1062	0.33	66.03	6.35
87	234	OTH MSCL&CONN~AC	1062	0.33	66.36	8.38
88	133	ATHRSCLROSIS~A|C	1055	0.32	66.68	6.76
89	236	FRAC OF HIP&PLVS	1048	0.32	67.00	6.87
90	172	DGSTV MALIG,A|CC	1046	0.32	67.32	7.93
91	210	HIP&FEMUR PR,A|C	1035	0.32	67.64	8.35
92	012	DEGENR NRVS DIS	1004	0.31	67.95	7.33
93	278	CELLULITIS,A<70	980	0.30	68.25	6.54
94	066	EPISTAXIS	972	0.30	68.55	5.25
95	404	LYMPH|LEUK,A<70	965	0.30	68.85	8.78
96	179	INFLM BOWEL DIS	959	0.29	69.14	7.64
97	190	OTH DGST DX,A<18	943	0.29	69.43	4.63
98	090	SMPL PNEU&P A<70	930	0.28	69.71	8.39
99	466	AFTRCR,DX2=MALIG	927	0.28	69.99	7.30
100	058	T&A ~TNS,AD A<18	923	0.28	70.27	4.76

1988
(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
101	225	FOOT PROCS	923	0.28	70.55	7.49
102	227	SOFT TISS PR~A|C	916	0.28	70.83	5.84
103	130	PRPHL VSC DIS,AC	915	0.28	71.11	6.98
104	132	ATHRSCLROSIS,A|C	914	0.28	71.39	7.32
105	295	DIABETES AGE<36	898	0.27	71.66	5.84
106	142	SYNCP&CLLPS,~A|C	894	0.27	71.93	5.84
107	069	OM&URI,A18-69~C	891	0.27	72.20	5.54
108	100	RSP SGN&SY A<70	891	0.27	72.47	6.19
109	171	OTH DGSTV PR~A|C	863	0.26	72.73	5.59
110	208	BLRY TR DIS~A|CC	854	0.26	72.99	5.81
111	337	TRNSUR PRSTCT~AC	846	0.26	73.25	6.99
112	128	DP VN THRMBPHLEB	820	0.25	73.50	6.39
113	059	TNSECT,ADCT A>17	807	0.25	73.75	6.35
114	269	OTH SKN PR A|CC	800	0.24	73.99	7.05
115	241	CONN TISS DIS~AC	795	0.24	74.23	7.53
116	123	CRC DIS,AMI,XPRD	794	0.24	74.47	6.10
117	035	OTH NRVS DIS,~AC	776	0.24	74.71	5.66
118	215	BACK&NECK PR~A|C	771	0.24	74.95	8.79
119	339	TSTS PR~MLG,A>17	766	0.23	75.18	6.25
120	320	KID&UR INF,A|CC	765	0.23	75.41	8.17
121	403	LYMPH|LEUK,A|CC	759	0.23	75.64	7.89
122	131	PRPHL VSC DIS~AC	745	0.23	75.87	6.97
123	161	ING&FML HRN,A|CC	722	0.22	76.09	6.39
124	121	CRC DIS,AMI&E,CC	716	0.22	76.31	6.82
125	174	GI HMRRHG,A|CC	716	0.22	76.53	5.91
126	249	AFTERCARE,MSCLSK	707	0.22	76.75	6.92
127	325	KID&UR SG&SY,A|C	705	0.22	76.97	6.79
128	305	KID,UR PR~MLG~AC	699	0.21	77.18	6.40
129	461	OR PR,DX-OTH CTC	695	0.21	77.39	6.53
130	356	FEM RPR RCNST PR	693	0.21	77.60	5.74
131	301	ENDCRN DIS~A|CC	688	0.21	77.81	6.52
132	333	OTH KID&UR,A<18	681	0.21	78.02	5.14
133	446	MLTPL TRMA,A<18	678	0.21	78.23	5.04
134	239	PATH FR&MSCL MLG	676	0.21	78.44	8.75
135	153	MNR BOWEL PR~A|C	671	0.21	78.65	6.64
136	332	OTH KID&UR,A<70	656	0.20	78.85	7.64
137	316	RENAL FLR~DLYSIS	648	0.20	79.05	8.15
138	155	STM,ESO,DD A<70	643	0.20	79.25	7.66
139	352	OTH ML REPRO DX	640	0.20	79.45	4.62
140	173	DGSTV MALIG~A|CC	627	0.19	79.64	8.25
141	177	UNCMP PTC LCR,AC	624	0.19	79.83	7.02
142	096	BRNCH&ASTH A|CC	623	0.19	80.02	6.48
143	148	MJR BOWEL PR,A|C	618	0.19	80.21	7.78
144	065	DYSEQUILIBRIUM	615	0.19	80.40	5.63
145	245	BONE DISEASE~A|C	615	0.19	80.59	7.39
146	141	SYNCP&CLLPS,A|CC	596	0.18	80.77	6.58
147	188	OTH DGSTV DX,A|C	596	0.18	80.95	6.67
148	359	TUBAL INTRRP~MLG	592	0.18	81.13	3.79
149	235	FRACTR OF FEMUR	590	0.18	81.31	7.42
150	107	CRNRY BYPS,~CCTH	584	0.18	81.49	7.88

1988
(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
151	186	DNTL DIS~XT,A<18	582	0.18	81.67	4.58
152	426	DEPRSV NEUROSES	582	0.18	81.85	7.54
153	464	SIGNS&SYMPTMS~CC	570	0.17	82.02	6.21
154	250	FX,SPR ARM&FT,AC	569	0.17	82.19	5.62
155	405	LYMPH|LEUK,A<18	566	0.17	82.36	4.92
156	253	OTH FX,SPR A|CC	565	0.17	82.53	7.04
157	048	OTH EYE DIS,A<18	554	0.17	82.70	4.32
158	274	MLG BRST DIS,A|C	550	0.17	82.87	9.10
159	430	PSYCHOSES	531	0.16	83.03	8.10
160	297	MISC MET DS,A<70	530	0.16	83.19	5.68
161	185	DNTL DIS~XT,A>17	524	0.16	83.35	6.58
162	460	NON-EXT BRN~OR P	521	0.16	83.51	4.93
163	207	BLRY TR DIS,A|CC	517	0.16	83.67	6.58
164	283	MNR SKIN DIS,A|C	517	0.16	83.83	7.27
165	024	SZR&HDACH A&|CC	512	0.16	83.99	7.24
166	149	MJR BOWEL PR~A|C	505	0.15	84.14	8.43
167	071	LARYNGOTRCHEITS	504	0.15	84.29	4.62
168	268	SKN,SUBCT&BR PLS	500	0.15	84.44	7.44
169	279	CELLULITIS,A<18	500	0.15	84.59	4.15
170	248	TNDNTS,MYSTS,BRS	487	0.15	84.74	6.94
171	042	INTROC PR,~R,I,L	482	0.15	84.89	5.56
172	013	MP SCLER&CRBL AT	468	0.14	85.03	7.53
173	244	BONE DISEASE,A|C	465	0.14	85.17	9.05
174	064	ER,NS,THRT MALIG	457	0.14	85.31	9.95
175	019	CRNL&PRPH ~A,CC	455	0.14	85.45	6.54
176	219	LWR XTRM PR,A<70	455	0.14	85.59	8.95
177	145	OTH CIRD DX,~CC	449	0.14	85.73	6.20
178	350	MALE REPRO INFLM	448	0.14	85.87	5.52
179	296	MISC MET DIS,A|C	446	0.14	86.01	6.24
180	311	TRNSURETH PR~A|C	446	0.14	86.15	6.93
181	290	THYROID PROCS	444	0.14	86.29	7.46
182	165	APPNDC,CMP DX~AC	430	0.13	86.42	5.49
183	421	VIRAL ILLNS,A>17	429	0.13	86.55	5.66
184	020	NRV INF ~VRL MNG	428	0.13	86.68	5.37
185	222	KNEE PROCS~A|CC	427	0.13	86.81	8.37
186	470	UNGROUPABLE	420	0.13	86.94	6.29
187	273	MJR SKN DIS~A|CC	415	0.13	87.07	6.66
188	154	STM,ESO,DD PR,AC	410	0.13	87.20	8.06
189	418	PSTOP&PSTTR INFC	408	0.12	87.32	7.68
190	206	OTH LIVER DIS~AC	407	0.12	87.44	5.50
191	362	LAPRSCPC TBL INT	406	0.12	87.56	5.18
192	346	ML RPRO MLG,A|CC	405	0.12	87.68	10.09
193	197	TOT CHLST~CDE,AC	403	0.12	87.80	7.78
194	078	PULMNRY EMBOLISM	395	0.12	87.92	7.16
195	397	COAGULATION DSRD	395	0.12	88.04	5.43
196	435	DRUG USE~DEPNDNC	394	0.12	88.16	6.85
197	137	CRDC CNG&VV,A<18	390	0.12	88.28	5.73
198	203	HPTOBL|PNC MALIG	390	0.12	88.40	9.30
199	056	RHINOPLASTY	385	0.12	88.52	6.70
200	449	TOX EFF,DRGS,A|C	382	0.12	88.64	6.74

1988
(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
201	211	HIP&FMUR PR,A<70	377	0.12	88.76	8.71
202	409	RADIOTHERAPY	377	0.12	88.88	8.16
203	011	NRVS NEOPL ~A,CC	372	0.11	88.99	7.31
204	423	OTH INF&PAR DIS	366	0.11	89.10	6.09
205	280	SKN,SUBCT TR,AC	360	0.11	89.21	5.53
206	453	TRTMT CMPL~A|CC	359	0.11	89.32	6.51
207	001	CRNIOT A>=18 ~TR	358	0.11	89.43	8.63
208	348	BNGN PRST HYP,AC	358	0.11	89.54	5.98
209	054	SNS&MAST PR A<18	352	0.11	89.65	5.51
210	327	KID&UR S&S,A<18	352	0.11	89.76	6.14
211	425	PSYCHOSOC DYSFNC	352	0.11	89.87	5.77
212	267	PRANL&PILONDL PR	351	0.11	89.98	6.24
213	342	CIRCUMCSION,A>17	351	0.11	90.09	6.50
214	399	RTCLEND&IMMN~A|C	351	0.11	90.20	5.56
215	204	PANC DIS ~MALIG	349	0.11	90.31	7.71
216	351	STERILIZATION,ML	348	0.11	90.42	5.48
217	129	CARDIAC ARREST	346	0.11	90.53	7.29
218	310	TRNSURETH PR,A|C	346	0.11	90.64	7.28
219	331	OTH KID&UR DX,AC	340	0.10	90.74	7.70
220	021	VIRAL MENINGITIS	334	0.10	90.84	4.59
221	053	SNS&MAST PR A>17	333	0.10	90.94	5.18
222	095	PNEUMOTHRX ~A,CC	331	0.10	91.04	7.27
223	271	SKIN ULCERS	331	0.10	91.14	7.27
224	258	TOT MAST MLG~A|C	330	0.10	91.24	8.72
225	396	RED BLD CL,A<18	330	0.10	91.34	4.51
226	429	ORG DISTRB&M RET	328	0.10	91.44	6.26
227	224	UPR XTRM PR~A|CC	321	0.10	91.54	6.79
228	238	OSTEOMYELITIS	318	0.10	91.64	6.07
229	363	D&C,CON,R-I,MALG	316	0.10	91.74	7.39
230	075	MJR CHEST PROCS	315	0.10	91.84	9.02
231	093	INTRST LUNG ~A,C	315	0.10	91.94	7.26
232	240	CONN TISS DIS,AC	315	0.10	92.04	7.58
233	169	MOUTH PROCS~A|CC	314	0.10	92.14	4.79
234	440	WOUND DEBRD,INJR	304	0.09	92.23	5.09
235	443	OTH OR PR,INJ~AC	304	0.09	92.32	6.87
236	036	RETINAL PROCS	301	0.09	92.41	5.43
237	319	KID&UR NEOP~A|CC	301	0.09	92.50	5.76
238	099	RESP SGN&SY A|CC	299	0.09	92.59	5.88
239	181	GI OBSTRCTN~A|CC	299	0.09	92.68	6.03
240	160	HRN~ING&FEM,A<70	294	0.09	92.77	6.19
241	367	FEM RPRO MLG~A|C	291	0.09	92.86	9.21
242	136	CRDC CNG&VV,A<70	290	0.09	92.95	7.21
243	318	KID&UR NEOP,A|CC	286	0.09	93.04	7.94
244	135	CRDC CNG&VLV,A|C	282	0.09	93.13	6.92
245	112	MJR RCNST VSC~AC	281	0.09	93.22	7.94
246	434	DRUG DEPENDENCE	281	0.09	93.31	6.16
247	063	OTH E,N,T OR PR	280	0.09	93.40	7.53
248	275	MLG BRST DIS~A|C	268	0.08	93.48	9.41
249	116	PCMKR,~AMI|CHF	266	0.08	93.56	7.62
250	365	OTH FEM RPRO PR	266	0.08	93.64	5.62

1988
(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
251	277	CELLULITIS,A|CC	264	0.08	93.72	6.72
252	217	SKIN GRAFT~HAND	262	0.08	93.80	5.91
253	276	~MALIG BRST DIS	260	0.08	93.88	7.32
254	006	CARPL TUNNEL RLS	259	0.08	93.96	9.35
255	300	ENDCRN DIS,A|CC	258	0.08	94.04	10.93
256	202	CIRRH&ALC HPTTIS	256	0.08	94.12	8.15
257	329	URTHRL STRC,A<70	250	0.08	94.20	6.18
258	156	STM,ESO,DD A<18	249	0.08	94.28	4.94
259	328	URTHRL STRCT,A|C	249	0.08	94.36	6.58
260	299	INBORN MET ERROR	241	0.07	94.43	6.90
261	146	RECTAL RSCTN,A|C	240	0.07	94.50	7.56
262	260	SUB MAST MLG~A|C	240	0.07	94.57	7.62
263	349	BNGN PRST HYP~AC	240	0.07	94.64	5.59
264	120	OTHER CRC OR PR	238	0.07	94.71	6.25
265	144	OTH CIRC DX,CC	235	0.07	94.78	8.06
266	444	MLTPL TRAUMA,A|C	235	0.07	94.85	6.78
267	157	ANAL PROCS A|CC	230	0.07	94.92	7.03
268	180	GI OBSTRCTN,A|CC	226	0.07	94.99	6.81
269	110	MJR RCSTR VSC,AC	225	0.07	95.06	9.87
270	230	RMVL,HIP&FEM DEV	223	0.07	95.13	7.12
271	341	PENIS PROCS	223	0.07	95.20	5.28
272	018	CRNL&PRPH A&|CC	222	0.07	95.27	9.47
273	354	NON-RAD HYST,A|C	222	0.07	95.34	6.65
274	416	SEPTICEMIA,A>17	222	0.07	95.41	6.73
275	043	HYPHEMA	221	0.07	95.48	4.92
276	170	OTH DGSTV PR,A|C	218	0.07	95.55	7.00
277	400	LYMPH|LEUK,MJ PR	218	0.07	95.62	6.06
278	038	PRIM IRIS PROCS	212	0.06	95.68	4.79
279	323	URNRY STONES,A|C	210	0.06	95.74	6.26
280	368	FEM RPRO INFCTNS	207	0.06	95.80	5.82
281	176	CMPL PEPTIC ULCR	200	0.06	95.86	6.86
282	431	CHILDHD MNTL DIS	199	0.06	95.92	4.19
283	113	AMP CRC~UP LIMB	190	0.06	95.98	10.06
284	152	MNR BOWEL PR,A|C	186	0.06	96.04	6.63
285	068	OM&URI, A&|CC	185	0.06	96.10	5.99
286	034	OTH NRV DIS,A&|C	184	0.06	96.16	6.29
287	079	RSP INF&INFL A|C	176	0.05	96.21	7.23
288	366	FEM RPRO MLG,A|C	176	0.05	96.26	7.82
289	394	OTH OR PR,BLOOD	176	0.05	96.31	5.84
290	455	OTH INJ,TXC~A|C	176	0.05	96.36	6.19
291	017	NONSP CBC DIS~CC	175	0.05	96.41	7.06
292	044	ACUT MJR EYE INF	174	0.05	96.46	4.92
293	212	HIP&FMUR PR,A<18	172	0.05	96.51	7.08
294	045	NEUR EYE DISRDRS	171	0.05	96.56	4.66
295	257	TOT MAST MLG,A|C	171	0.05	96.61	7.42
296	272	MJR SKN DIS,A|CC	170	0.05	96.66	7.47
297	061	MYRINGOTOMY A>17	169	0.05	96.71	5.06
298	111	MJR RCNST VSC,AC	168	0.05	96.76	8.39
299	412	HIST MALG,ENDSCP	168	0.05	96.81	6.45
300	428	PERS DIS&IMP CON	168	0.05	96.86	7.45

1988
(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
301	233	OTH MSCL&CONN,AC	167	0.05	96.91	8.23
302	008	OTH NRV PR ~A,CC	166	0.05	96.96	6.14
303	147	RECTAL RSCTN~A|C	165	0.05	97.01	7.71
304	003	CRNIOT A<18	163	0.05	97.06	6.58
305	085	PLRL EFFUSN A&|C	160	0.05	97.11	6.56
306	080	RSP INF&INL A<70	156	0.05	97.16	7.51
307	105	CRDC VLV W/P~CCT	155	0.05	97.21	8.94
308	023	NONTR STPR&COMA	154	0.05	97.26	5.10
309	193	BLRY TR PR~CH,AC	154	0.05	97.31	7.03
310	205	OTH LIVER DIS,AC	154	0.05	97.36	6.86
311	398	RTCLEND&IMMN,A|C	151	0.05	97.41	7.58
312	408	MYELO DISRDR,CC	150	0.05	97.46	7.32
313	313	URETHRAL PR,A<70	149	0.05	97.51	8.79
314	314	URETHRAL PR,A<18	149	0.05	97.56	4.31
315	459	NON-EXT BRN,DBRD	149	0.05	97.61	7.47
316	151	PRTNL ADHESLS~AC	148	0.05	97.66	5.62
317	402	LYMPH|LEUK,MN~AC	145	0.04	97.70	7.76
318	052	CLFT LIP&PLT REP	144	0.04	97.74	4.35
319	166	APPNDC~CMP DX,AC	142	0.04	97.78	5.60
320	303	KID,UR,BL PR,MLG	142	0.04	97.82	8.30
321	246	ARTHROPATHIES,NS	141	0.04	97.86	8.09
322	347	ML RPRO MLG~A|CC	141	0.04	97.90	6.82
323	092	INTRST LUNG A|CC	139	0.04	97.94	10.30
324	010	NRVS NEOPL A&|CC	137	0.04	97.98	7.23
325	261	BRST PR~MLG~BIOP	136	0.04	98.02	6.10
326	304	KID,UR PR~MLG,AC	134	0.04	98.06	6.43
327	417	SEPTICEMIA,A<18	132	0.04	98.10	4.40
328	087	PLM EDEMA&RSP FL	131	0.04	98.14	6.66
329	259	SUB MAST MLG,A|C	130	0.04	98.18	7.00
330	109	CRDTHR PR,~PUMP	124	0.04	98.22	5.87
331	335	MJR PELVIC PR~CC	119	0.04	98.26	6.91
332	312	URETHRAL PR,A|CC	117	0.04	98.30	7.79
333	462	REHABILITATION	117	0.04	98.34	15.47
334	077	OR RSP,~MJRCH,~C	116	0.04	98.38	7.89
335	338	TESTES PR,MALIG	116	0.04	98.42	7.67
336	413	OTH MYELO DIS,AC	115	0.04	98.46	8.15
337	242	SEPTIC ARTHRITIS	113	0.03	98.49	7.59
338	194	BLRY TR PR~CH~AC	110	0.03	98.52	8.28
339	415	OR PR,INF&PAR DS	107	0.03	98.55	8.39
340	086	PLRL EFFUSN A<70	106	0.03	98.58	5.68
341	420	FEVER UNKN,A<70	105	0.03	98.61	4.69
342	220	LWR XTRM PR,A<18	102	0.03	98.64	6.50
343	094	PNEUMOTHRX A|CC	101	0.03	98.67	6.50
344	452	TRTMT CMPL,A|CC	98	0.03	98.70	9.03
345	192	MNR PNC,LVR,SHNT	94	0.03	98.73	8.70
346	032	CONCSN A18-69~CC	91	0.03	98.76	4.41
347	050	SIALOADENECTOMY	91	0.03	98.79	5.32
348	456	BURNS, TRANSFERD	90	0.03	98.82	5.96
349	002	CRNIOT TR A>=18	87	0.03	98.85	5.56
350	037	ORBITAL PROCS	87	0.03	98.88	4.08

1988
(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
351	046	OTH EYE DS,A>17C	85	0.03	98.91	4.79
352	221	KNEE PROCS,A|CC	84	0.03	98.94	9.88
353	159	HRNIA~ING&FEM,AC	82	0.03	98.97	8.16
354	315	OTH KID&URN PROC	82	0.03	99.00	7.77
355	033	CONCUSSION A<18	80	0.02	99.02	3.65
356	005	XTRACRNL VASC PR	76	0.02	99.04	8.39
357	306	PROSTATECTOMY,AC	76	0.02	99.06	8.84
358	218	LWR XTRM PR,A|CC	75	0.02	99.08	8.76
359	009	SPINAL DIS&INJ	74	0.02	99.10	6.24
360	414	OTH MYELO DIS~AC	74	0.02	99.12	6.05
361	114	UP LIMB&TOE AMP	71	0.02	99.14	8.92
362	419	FEVER UNKNWN,A|C	71	0.02	99.16	6.94
363	401	LYMPH|LEUK,MN,AC	70	0.02	99.18	8.91
364	463	SIGNS&SYMPTMS,CC	67	0.02	99.20	7.00
365	226	SOFT TISS PR,A|C	66	0.02	99.22	8.02
366	433	SUBST~INDCD MNTL	66	0.02	99.24	6.17
367	441	HAND PROC,INJURY	66	0.02	99.26	5.18
368	150	PRTNL ADHESLS,AC	65	0.02	99.28	8.18
369	442	OTH OR PR,INJ,AC	65	0.02	99.30	9.66
370	057	T&A ~TNS,AD A>17	62	0.02	99.32	4.82
371	084	MJR CHST TR A<70	60	0.02	99.34	6.38
372	016	NONSP CBV DIS,CC	59	0.02	99.36	6.63
373	309	MNR BLDR PR~A|CC	59	0.02	99.38	8.95
374	124	CRC~AMI,CCT&CPLX	57	0.02	99.40	5.75
375	357	UTRS&ADNEXA,MALG	57	0.02	99.42	7.00
376	199	HPTOBL DX PR,MLG	55	0.02	99.44	5.25
377	454	OTH INJ,TXC,A|C	55	0.02	99.46	5.85
378	168	MOUTH PROCS,A|CC	54	0.02	99.48	7.72
379	216	MUSCL&CONN BIOPS	53	0.02	99.50	5.23
380	432	OTH DX-MNTL DSRD	53	0.02	99.52	7.74
381	004	SPINAL PROCS	50	0.02	99.54	11.74
382	200	HPTOBL DX PR~MLG	50	0.02	99.56	6.28
383	307	PROSTATECTOMY~AC	48	0.01	99.57	6.60
384	201	OTH HPTBL/PNC PR	47	0.01	99.58	8.13
385	293	OTH E,N,M PR~A|C	46	0.01	99.59	8.00
386	308	MNR BLDR PR,A|CC	46	0.01	99.60	6.22
387	049	MJR HD&NECK PROC	45	0.01	99.61	6.58
388	051	SALV GLND PR~SIA	45	0.01	99.62	6.67
389	237	SPRN,STRN,DIS HP	45	0.01	99.63	9.11
390	345	OTH ML REPRO~MLG	45	0.01	99.64	4.29
391	465	AFTRCR,DX2=MALIG	45	0.01	99.65	7.80
392	448	ALLRGC READ,A<18	44	0.01	99.66	4.95
393	067	EPIGLOTTIITIS	43	0.01	99.67	5.84
394	076	OR RSP,~MJRCH,CC	43	0.01	99.68	5.93
395	007	OTH NRV PR A&|CC	42	0.01	99.69	8.12
396	223	UPR XTRM PR,A|CC	42	0.01	99.70	6.95
397	265	SKN GRFT~ULCR,CC	42	0.01	99.71	6.69
398	264	SKN GRFT,ULCR~AC	40	0.01	99.72	8.38
399	353	PLVC EVISC,R HYS	40	0.01	99.73	6.25
400	427	NEUROSES~DEPRSV	40	0.01	99.74	4.77

1988
(BIRTHS ARE EXCLUDED FROM THIS DATA)

Order	DRG		Frequency	Percent	Cumulative Percent	Mean Length of Stay
401	286	ADRNL&PIT PROCS	38	0.01	99.75	8.05
402	126	ENDOCARDITIS	37	0.01	99.76	15.89
403	191	MJR PNC,LVR,SHNT	37	0.01	99.77	6.81
404	031	CONCUSSION A&|CC	36	0.01	99.78	6.56
405	214	BACK&NECK PR,A|C	36	0.01	99.79	8.22
406	406	MYELO DIS,OR,CC	36	0.01	99.80	8.56
407	411	HIST MALG~ENDSCP	36	0.01	99.81	5.00
408	289	PARATHYROID PROC	35	0.01	99.82	8.74
409	081	RSP INF&INL A<18	34	0.01	99.83	6.09
410	291	THYROGLOSSAL PR	34	0.01	99.84	5.62
411	392	SPLENECTOMY,A>17	34	0.01	99.85	9.65
412	447	ALLRGC REAC,A>17	33	0.01	99.86	8.39
413	115	PCMKR,AMI OR CHF	32	0.01	99.87	5.59
414	407	MYELO DIS,OR,~CC	30	0.01	99.88	15.97
415	164	APPNDC,CMP DX,AC	29	0.01	99.89	5.79
416	263	SKN GRFT,ULCR,AC	26	0.01	99.90	5.04
417	213	MUSCL&CN TIS AMP	25	0.01	99.91	7.28
418	424	OR PR,DX1=MENTAL	25	0.01	99.92	5.64
419	106	CRNRY BYPS W/CCT	22	0.01	99.93	7.55
420	117	PCMKR REP~PLSGN	21	0.01	99.94	5.62
421	334	MJR PELVIC PR,CC	20	0.01	99.95	3.35
422	083	MJR CHST TR A&|C	19	0.01	99.96	4.58
423	393	SPLENECTOMY,A<18	18	0.01	99.97	7.00
424	330	URTHRL STRC,A<18	15	0.00	99.97	3.53
425	292	OTH E,N,M PR,A|C	13	0.00	99.97	6.62
426	344	OTH ML REPRO,MLG	13	0.00	99.97	6.38
427	288	OBESITY OR PROCS	12	0.00	99.97	8.08
428	458	NON-EXT BRN,GRFT	11	0.00	99.97	4.36
429	195	TOT CHLST,CDE,AC	10	0.00	99.97	4.00
430	118	PULSE GEN REPL	8	0.00	99.97	5.38
431	196	TOT CHLST,CDE~AC	7	0.00	99.97	12.57
432	317	RENAL FLR,DLYSIS	7	0.00	99.97	5.14
433	285	END,NUTR,MET AMP	6	0.00	99.97	9.33
434	302	KIDNEY TRANSPLNT	6	0.00	99.97	9.17
435	022	HYPRTNS ENCPHLOP	5	0.00	99.97	9.40
437	104	CRDC VLV W/P,CCT	4	0.00	99.97	4.75
438	287	SKN GRFTS,EN,N,M	4	0.00	99.97	5.75
439	228	HAND GANGLION PR	3	0.00	99.97	28.33
440	439	SKIN GRAFTS,INJR	3	0.00	99.97	1.33
441	103	HEART TRANSPLANT	2	0.00	99.97	4.00
442	457	EXTENSIVE BURNS	2	0.00	99.97	1.50

Appendix 5

Appendix 5 : DRG Ranked in Order of Descending Frequency for Selected Voluntary and Health Board Hospitals, 1988

Category : Health Board

Order	DRG	DRG Name	No. of Cases	% of Cases	% so Far	Average LOS
1	183	MSC DIG DIS,A<70	2,362	3.24	3.24	5.57
2	184	MSC DIG DIS,A<18	2,253	3.10	6.34	5.08
3	098	BRNCH&ASTH A<17	1,834	2.52	8.86	5.04
4	070	OM&URI, A<18	1,362	1.87	10.73	4.99
5	039	LENS PROCS	1,350	1.85	12.59	5.87
6	167	APPNDC~CMP DX~AC	1,330	1.83	14.41	4.79
7	467	OTH HLTH FACTORS	1,319	1.81	16.22	5.89
8	088	CHRN PULM OBSTR	1,195	1.64	17.87	6.25
9	060	TNSECT,ADCT A<18	1,195	1.64	19.51	5.06
10	364	D&C,CONZTN~MALIG	1,067	1.47	20.97	5.52
11	182	MSC DGSTV DIS,AC	1,005	1.38	22.35	6.77
12	030	TR ST,CMA<1,A<18	920	1.26	23.62	4.81
13	143	CHEST PAIN	916	1.26	24.88	5.77
14	270	OTH SKN PR~A|CC	911	1.25	26.13	5.13
15	029	TR ST,CMA<1,A<70	872	1.20	27.33	5.05
16	026	SZR&HD A<17,~CC	866	1.19	28.52	5.32
17	014	SPEC CRBRVSC DIS	739	1.02	29.53	6.74
18	294	DIABETES AGE>35	717	0.99	30.52	6.13
19	122	CRC DIS,AMI&CV	706	0.97	31.49	6.15
20	243	MED BACK PROBS	676	0.93	32.41	5.53
21	127	HRT FLR&SHOCK	662	0.91	33.32	6.45
22	119	VEIN LGTN&STRPNG	660	0.91	34.23	5.35
23	025	SZR&HD A18-69~CC	639	0.88	35.11	6.00
24	262	BRST BIOP&EXC~ML	627	0.86	35.97	5.77
25	125	CRC~AMI,CCT~CPLX	586	0.81	36.78	4.76
26	072	NSL TR & DEFORM	585	0.80	37.58	4.29
27	355	NON-RAD HYST~A|C	564	0.77	38.35	6.17
28	073	OTH E,N,T A>17	541	0.74	39.10	4.89
29	410	CHEMOTHERAPY	509	0.70	39.80	7.13
30	140	ANGINA PECTORIS	497	0.68	40.48	5.57
31	451	TOX EFF,DRG,A<18	470	0.65	41.12	4.81
32	284	MNR SKIN DIS~A|C	467	0.64	41.77	5.72
33	097	BRNCH&ASTH A<70	453	0.62	42.39	5.77
34	422	VRL ILL,FVR,A<18	440	0.60	42.99	4.60
35	091	SMPL PNEU&P A<18	433	0.59	43.59	5.80
36	047	OTH EYE DS,A>17~	431	0.59	44.18	5.13
37	450	TOX EFF,DRG,A<70	427	0.59	44.77	5.79
38	189	OTH DGST DX,A<70	421	0.58	45.34	6.41
39	266	SKN GRFT~ULCR~CC	418	0.57	45.92	5.26
40	082	RESP NEOPLASMS	416	0.57	46.49	6.22
41	134	HYPERTENSION	415	0.57	47.06	5.65
42	336	TRNSUR PRSTCT,AC	404	0.56	47.62	6.37
43	198	TOT CHLST~CDE~AC	401	0.55	48.17	6.82
44	089	SMPL PNEU&PL A|C	401	0.55	48.72	7.61
45	340	TSTS PR~MLG,A<18	401	0.55	49.27	6.29
46	041	XTROC PR A<18	395	0.54	49.81	4.68
47	066	EPISTAXIS	385	0.53	50.34	4.94
48	162	ING&FML HRN,A<70	385	0.53	50.87	6.29

Category : Voluntary

Order	DRG	DRG Name	No. of Cases	% of Cases	% so Far	Average LOS
1	183	MSC DIG DIS,A<70	3,402	4.97	4.97	8.03
2	243	MED BACK PROBS	1,507	2.20	7.17	6.91
3	410	CHEMOTHERAPY	1,500	2.19	9.35	8.58
4	467	OTH HLTH FACTORS	1,486	2.17	11.52	9.49
5	088	CHRN PULM OBSTR	1,278	1.87	13.39	8.55
6	182	MSC DGSTV DIS,AC	1,050	1.53	14.92	7.41
7	014	SPEC CRBRVSC DIS	1,007	1.47	16.39	8.18
8	143	CHEST PAIN	971	1.42	17.81	7.02
9	270	OTH SKN PR~A|CC	943	1.38	19.19	6.92
10	029	TR ST,CMA<1,A<70	912	1.33	20.52	10.60
11	125	CRC~AMI,CCT~CPLX	906	1.32	21.84	10.16
12	127	HRT FLR&SHOCK	895	1.31	23.15	9.85
13	122	CRC DIS,AMI&CV	815	1.19	24.34	7.07
14	060	TNSECT,ADCT A<18	788	1.15	25.49	7.15
15	167	APPNDC~CMP DX~AC	786	1.15	26.63	4.94
16	140	ANGINA PECTORIS	742	1.08	27.72	7.64
17	189	OTH DGST DX,A<70	685	1.00	28.72	8.02
18	364	D&C,CONZTN~MALIG	661	0.96	29.68	7.97
19	178	UNCMP PTC LCR~AC	658	0.96	30.64	8.51
20	039	LENS PROCS	654	0.95	31.60	8.59
21	262	BRST BIOP&EXC~ML	628	0.92	32.51	7.70
22	025	SZR&HD A18-69~CC	624	0.91	33.42	9.95
23	082	RESP NEOPLASMS	605	0.88	34.31	8.98
24	336	TRNSUR PRSTCT,AC	586	0.86	35.16	7.47
25	450	TOX EFF,DRG,A<70	560	0.82	35.98	7.31
26	089	SMPL PNEU&PL A|C	550	0.80	36.78	10.32
27	324	URNRY STONES~A|C	524	0.76	37.55	6.99
28	055	MISC EAR,NS,THRT	513	0.75	38.30	7.15
29	097	BRNCH&ASTH A<70	493	0.72	39.01	7.86
30	254	OTH FX,SPR A<70	490	0.72	39.73	6.73
31	119	VEIN LGTN&STRPNG	489	0.71	40.44	10.11
32	231	RMVL~HIP&FEM DEV	470	0.69	41.13	9.65
33	355	NON-RAD HYST~A|C	464	0.68	41.81	9.45
34	107	CRNRY BYPS,~CCTH	453	0.66	42.47	7.08
35	062	MYRINGOTOMY A<18	445	0.65	43.12	9.19
36	073	OTH E,N,T A>17	437	0.64	43.76	7.91
37	284	MNR SKIN DIS~A|C	434	0.63	44.39	7.86
38	162	ING&FML HRN,A<70	431	0.63	45.02	8.38
39	215	BACK&NECK PR~A|C	427	0.62	45.64	8.79
40	337	TRNSUR PRSTCT~AC	424	0.62	46.26	7.49
41	158	ANAL PROCS ~A|CC	420	0.61	46.87	12.91
42	210	HIP&FEMUR PR,A|C	402	0.59	47.46	8.24
43	247	SGNS&SYMP,MSCLSK	394	0.58	48.04	6.77
44	198	TOT CHLST~CDE~AC	390	0.57	48.60	9.45
45	326	KID&UR S&S,A<70	385	0.56	49.17	7.98
46	466	AFTRCR,DX2=MALIG	384	0.56	49.73	8.19
47	294	DIABETES AGE>35	370	0.54	50.27	8.12
48	321	KID&UR INF,A<70	362	0.53	50.80	7.28

Appendix 6 : TRIMMED AND UNTRIMMED DATA, 1984
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
1	359	338	5.85	26.20	22.02	0.88	0.59
2	121	115	4.96	17.18	14.14	1.06	0.79
3	155	142	8.39	23.23	17.65	1.00	0.77
4	110	103	6.36	20.21	16.25	1.01	0.75
5	25	22	12.00	31.64	23.73	0.81	0.58
6	273	247	9.52	4.52	3.32	1.01	0.53
7	75	67	10.67	27.03	17.15	1.24	0.80
8	284	272	4.23	9.01	7.11	1.36	0.73
9	131	121	7.63	24.50	5.32	8.27	0.85
10	121	110	9.09	27.36	14.15	2.42	0.70
11	327	294	10.09	16.37	8.99	2.00	0.93
12	1250	1148	8.16	20.97	12.08	4.18	0.78
13	597	558	6.53	16.75	11.27	2.05	0.72
14	3955	3619	8.50	22.38	13.18	2.65	0.87
15	1240	1168	5.81	9.33	7.47	1.42	0.64
16	75	67	10.67	33.68	14.33	2.36	0.74
17	230	211	8.26	15.83	11.07	1.83	0.71
18	196	185	5.61	12.79	9.42	1.35	0.72
19	494	459	7.09	9.36	6.75	1.35	0.83
20	688	643	6.54	12.52	9.76	1.30	0.59
21	741	709	4.32	6.28	5.33	1.04	0.64
22	17	15	11.76	19.35	12.47	1.12	0.78
23	169	157	7.10	5.84	4.18	1.41	0.69
24	589	561	4.75	9.37	6.93	2.18	0.74
25	2724	2552	6.31	5.81	4.59	1.19	0.74
26	2798	2537	9.33	4.49	3.22	1.22	0.65
28	1375	1250	9.09	6.88	3.29	5.93	0.89
29	5392	5016	6.97	2.68	1.81	2.18	0.68
30	6342	5609	11.56	2.38	1.45	6.92	0.45
31	17	17	0.00	9.53	9.53	1.01	1.01
32	93	88	5.38	13.20	1.99	7.91	0.68
33	46	43	6.52	3.17	2.63	0.95	0.83
34	287	267	6.97	14.31	9.08	2.04	0.82
35	818	770	5.87	8.55	5.99	2.09	0.84
36	328	321	2.13	9.84	9.18	0.72	0.55
37	120	115	4.17	10.81	8.88	1.18	0.70
38	197	192	2.54	9.32	8.72	0.72	0.64
39	2672	2518	5.76	8.99	7.94	0.89	0.38
40	1318	1244	5.61	3.93	3.09	1.13	0.77
41	1955	1697	13.20	2.77	2.23	0.82	0.40
42	428	402	6.07	10.38	8.84	0.81	0.65
43	368	348	5.43	5.88	5.07	0.77	0.52
44	162	152	6.17	8.09	6.61	0.93	0.68
45	254	248	2.36	7.16	6.67	0.80	0.71
46	137	130	5.11	8.05	6.62	1.07	0.79
47	2510	2391	4.74	5.99	4.94	1.09	0.77
48	804	730	9.20	3.70	2.47	1.64	0.78
49	32	31	3.13	26.19	23.58	0.84	0.70
50	105	99	5.71	7.72	6.86	0.67	0.57
51	38	36	5.26	7.00	4.97	1.54	0.75
52	171	162	5.26	11.58	10.59	0.58	0.34
53	360	334	7.22	6.13	5.07	0.77	0.43

TRIMMED AND UNTRIMMED DATA, 1984 2
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
54	208	190	8.65	5.09	4.15	0.75	0.54
55	2073	1993	3.86	3.99	3.56	0.83	0.56
56	447	439	1.79	5.20	5.09	0.33	0.30
57	73	66	9.59	7.32	5.03	1.14	0.48
58	1064	993	6.67	3.52	3.22	0.50	0.30
59	1221	1214	0.57	5.55	5.47	0.35	0.28
60	5985	5923	1.04	4.06	3.96	0.51	0.36
61	196	185	5.61	2.56	2.09	0.98	0.52
62	1653	1568	5.14	1.66	1.44	1.06	0.42
63	1258	1126	10.49	3.45	2.04	2.22	0.61
64	513	479	6.63	17.17	12.54	1.56	1.05
65	637	591	7.22	6.52	5.04	1.20	0.65
66	1173	1088	7.25	4.10	3.21	1.03	0.67
67	28	28	0.00	5.96	5.96	0.43	0.43
68	323	302	6.50	11.59	8.69	1.19	0.79
69	1459	1394	4.46	4.09	3.36	1.15	0.73
70	5296	4992	5.74	3.88	3.19	1.11	0.65
71	647	624	3.55	3.45	3.03	0.94	0.78
72	434	412	5.07	2.22	1.82	1.01	0.73
73	1910	1796	5.97	3.60	2.85	1.29	0.64
74	1519	1256	17.31	2.68	1.45	2.07	0.45
75	349	324	7.16	24.52	19.91	0.95	0.51
76	69	63	8.70	19.80	15.86	0.86	0.57
77	158	149	5.70	12.84	11.03	0.82	0.64
78	483	456	5.59	17.10	13.55	1.54	0.67
79	203	194	4.43	20.72	17.34	1.09	0.85
80	261	244	6.51	14.15	10.30	1.28	0.81
81	79	76	3.80	10.30	8.93	0.96	0.73
82	2263	2169	4.15	13.43	11.42	1.08	0.80
83	25	23	8.00	17.92	10.87	1.46	0.87
84	42	39	7.14	6.43	4.97	1.09	0.86
85	143	139	2.80	16.73	14.88	0.94	0.75
86	145	144	0.69	10.48	10.21	0.83	0.80
87	514	474	7.78	15.31	8.88	2.28	0.83
88	6000	5579	7.02	12.90	10.26	1.44	0.60
89	2903	2632	9.34	37.75	13.26	5.22	0.68
90	1265	1210	4.35	22.68	8.97	11.32	0.61
91	1865	1748	6.27	9.31	6.75	4.32	0.60
92	129	123	4.65	14.22	11.52	1.22	0.75
93	316	296	6.33	8.18	6.47	1.08	0.77
94	146	140	4.11	14.14	12.57	0.77	0.57
95	406	372	8.37	7.73	6.23	0.86	0.60
96	763	732	4.06	10.99	9.52	0.97	0.60
97	2221	2099	5.49	7.32	6.13	0.94	0.63
98	4861	4611	5.14	5.02	4.16	1.09	0.65
99	362	341	5.80	9.49	7.59	1.06	0.73
100	958	906	5.43	5.47	4.29	1.35	0.85
101	1426	1321	7.36	17.12	9.33	5.69	0.64
102	1546	1431	7.44	9.98	5.31	13.14	0.67
105	229	216	5.68	13.53	11.37	0.85	0.59
107	443	408	7.90	9.55	7.50	0.91	0.50
109	243	225	7.41	21.05	16.70	1.01	0.52

TRIMMED AND UNTRIMMED DATA, 1984 3
FREQUENCY,LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
110	205	191	6.83	27.45	23.21	0.77	0.57
111	233	220	5.58	19.63	17.55	0.62	0.45
112	225	215	4.44	17.68	15.30	0.89	0.68
113	217	205	5.53	47.76	38.55	1.11	0.66
114	78	76	2.56	33.85	30.42	0.92	0.66
115	29	29	0.00	19.86	19.86	0.50	0.50
116	361	343	4.99	11.65	10.15	0.76	0.55
117	49	47	4.08	9.73	8.30	0.93	0.68
118	14	14	0.00	7.36	7.36	0.64	0.64
119	2824	2672	5.38	4.91	4.05	1.12	0.51
120	286	252	11.89	12.73	5.74	1.83	1.18
121	745	710	4.70	16.16	14.52	0.67	0.52
122	3595	3347	6.90	13.07	11.34	0.81	0.45
123	1087	992	8.74	13.06	5.21	5.30	1.06
126	50	50	0.00	22.52	22.52	0.94	0.94
127	3581	3331	6.98	13.90	10.63	1.62	0.66
128	998	947	5.11	13.31	11.33	0.94	0.56
129	385	357	7.27	19.03	6.34	8.60	1.06
130	1339	1234	7.84	19.27	11.62	4.78	0.96
131	1319	1204	8.72	10.57	6.67	1.60	0.95
132	1137	1073	5.63	11.19	9.18	1.02	0.67
133	1986	1900	4.33	6.04	5.05	1.11	0.88
134	2469	2327	5.75	8.34	6.74	1.23	0.69
135	442	419	5.20	11.63	9.61	0.97	0.72
136	740	707	4.46	7.06	6.05	0.98	0.83
137	426	367	13.85	6.90	3.24	1.80	0.86
138	1271	1191	6.29	10.35	7.96	2.18	0.67
139	1319	1264	4.17	5.96	5.13	0.94	0.74
140	2617	2512	4.01	7.53	6.46	1.11	0.69
141	600	561	6.50	7.98	5.97	1.50	0.72
142	1122	1073	4.37	4.45	3.70	1.10	0.81
143	4001	3788	5.32	5.36	4.41	1.02	0.73
144	416	390	6.25	13.68	9.93	1.87	0.59
145	1246	1182	5.14	7.92	6.71	0.88	0.65
146	174	160	8.05	29.43	25.88	0.54	0.37
147	175	165	5.71	25.65	23.27	0.54	0.42
148	591	558	5.58	30.49	26.23	0.85	0.55
149	575	547	4.87	22.30	19.69	0.73	0.56
150	47	44	6.38	22.02	18.36	0.82	0.56
151	100	93	7.00	12.60	11.08	0.58	0.42
152	175	163	6.86	15.53	12.53	0.96	0.63
153	818	780	4.65	6.54	5.18	1.30	0.95
154	437	420	3.89	23.90	21.68	0.70	0.55
155	810	771	4.81	14.88	13.14	0.78	0.57
156	207	192	7.25	13.66	9.15	2.32	0.59
157	216	200	7.41	11.77	9.13	1.05	0.74
158	1529	1456	4.77	6.46	5.36	1.01	0.70
159	84	74	11.90	17.00	12.99	0.77	0.44
160	289	275	4.84	9.13	8.15	0.73	0.49
161	678	638	5.90	11.07	9.60	0.70	0.42
162	2048	1986	3.03	7.67	7.08	1.14	0.37
163	1168	1097	6.08	3.29	2.65	1.08	0.71

TRIMMED AND UNTRIMMED DATA, 1984 4
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
164	46	42	8.70	19.65	15.48	0.88	0.49
165	347	318	8.36	9.27	7.90	0.62	0.35
166	224	213	4.91	12.38	10.85	0.72	0.49
167	7413	7038	5.06	6.34	5.87	0.48	0.29
168	72	72	0.00	8.44	8.44	0.78	0.78
169	688	630	8.43	4.44	3.52	0.91	0.61
170	103	98	4.85	24.49	20.73	0.89	0.62
171	435	406	6.67	6.61	4.88	1.22	0.78
172	1063	1008	5.17	16.24	12.75	1.38	0.83
173	776	741	4.51	13.08	10.35	1.51	0.96
174	846	811	4.14	9.15	7.99	0.90	0.72
175	1401	1336	4.64	4.98	4.04	1.14	0.87
176	233	217	6.87	10.00	7.31	1.22	0.84
177	672	646	3.87	9.46	7.98	1.17	0.81
178	2378	2211	7.02	3.98	2.94	1.28	0.94
179	897	837	6.69	10.31	7.32	1.53	0.97
180	254	244	3.94	11.41	9.86	0.95	0.73
181	312	295	5.45	7.58	6.09	1.08	0.73
182	4737	4480	5.43	8.07	6.45	1.22	0.79
183	15216	14270	6.22	4.18	3.22	1.39	0.81
184	8884	8100	8.82	3.97	2.72	1.74	0.66
185	766	693	9.53	5.89	3.53	1.57	0.83
186	803	749	6.72	3.09	2.39	1.09	0.75
187	1897	1748	7.85	2.06	1.62	1.31	0.45
188	698	650	6.88	8.06	5.68	1.46	0.98
189	2087	1883	9.77	3.77	2.39	2.47	0.79
190	1187	1082	8.85	3.57	2.44	1.33	0.73
191	33	33	0.00	27.91	27.91	0.58	0.58
192	76	72	5.26	16.55	13.85	1.01	0.88
193	127	123	3.15	22.37	20.06	0.85	0.66
194	138	135	2.17	16.07	15.29	0.83	0.81
195	16	16	0.00	18.69	18.69	0.36	0.36
196	11	11	0.00	16.09	16.09	0.28	0.28
197	478	458	4.18	21.06	19.00	0.67	0.49
198	2366	2215	6.38	12.79	11.68	0.45	0.28
199	25	25	0.00	24.72	24.72	0.44	0.44
200	21	21	0.00	19.24	19.24	0.67	0.67
201	45	44	2.22	17.91	16.66	0.92	0.86
202	287	272	5.23	13.62	11.50	0.95	0.76
203	500	478	4.40	14.99	12.79	0.97	0.77
204	366	350	4.37	10.61	9.03	0.95	0.67
205	203	189	6.90	15.31	11.95	1.07	0.81
206	677	629	7.09	10.12	6.97	2.20	0.78
207	590	562	4.75	11.09	9.57	0.88	0.64
208	1190	1112	6.55	6.48	5.32	0.92	0.66
209	2009	1847	8.06	24.29	21.61	0.58	0.25
210	1403	1293	7.84	26.01	20.11	1.19	0.57
211	581	528	9.12	25.18	18.90	0.97	0.59
212	227	211	7.05	25.68	18.92	1.19	0.86
213	56	53	5.36	34.27	24.17	1.54	0.98
214	56	55	1.79	24.16	22.71	0.71	0.59
215	926	870	6.05	17.87	15.21	0.78	0.49

TRIMMED AND UNTRIMMED DATA, 1984 5
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
216	62	55	11.29	18.79	11.89	1.18	0.90
217	215	193	10.23	12.59	7.64	1.43	0.97
218	162	151	6.79	26.98	23.44	0.69	0.58
219	695	655	5.76	16.17	13.22	1.01	0.70
220	167	156	6.59	9.12	6.90	1.19	0.75
221	12	12	0.00	13.67	13.67	0.49	0.49
222	797	765	4.02	6.44	5.73	0.85	0.55
223	56	51	8.93	13.18	10.04	0.97	0.76
224	485	442	8.87	7.58	5.26	1.34	0.62
225	1015	955	5.91	11.02	8.99	1.06	0.66
226	83	75	9.64	13.76	9.56	1.10	0.79
227	1014	897	11.54	6.55	3.62	1.68	0.76
228	4	4	0.00	3.25	3.25	0.99	0.99
229	1351	1223	9.47	4.54	3.18	1.25	0.64
230	374	341	8.82	12.31	8.69	1.18	0.73
231	1972	1816	7.91	5.43	3.55	1.77	0.78
233	211	195	7.58	21.06	15.44	1.18	0.78
234	2039	1892	7.21	7.82	5.30	1.70	0.83
235	1160	1115	3.88	21.00	17.56	1.23	0.99
236	1307	1179	9.79	14.25	8.63	1.52	1.00
237	81	81	0.00	15.07	15.07	0.99	0.99
238	411	392	4.62	11.74	9.89	1.04	0.75
239	667	624	6.45	11.87	8.54	1.71	0.94
240	432	407	5.79	17.74	14.31	1.01	0.68
241	1012	970	4.15	11.47	9.81	0.99	0.72
242	195	189	3.08	12.70	11.53	0.88	0.79
243	6074	5765	5.09	9.09	7.48	1.09	0.80
244	554	524	5.42	14.87	11.27	1.43	0.74
245	698	656	6.02	8.01	6.35	1.22	0.81
246	236	220	6.78	10.67	8.35	1.07	0.77
247	2785	2583	7.25	5.64	4.23	1.20	0.78
248	557	523	6.10	6.49	4.94	1.21	0.95
249	1896	1646	13.19	2.49	1.21	2.21	0.42
250	571	518	9.28	5.24	3.01	1.60	0.96
251	1762	1528	13.28	2.65	1.54	1.44	0.55
252	2458	2248	8.54	1.74	1.31	1.05	0.43
253	790	715	9.49	10.49	6.28	1.56	0.97
254	2944	2695	8.46	5.35	3.43	1.68	0.88
255	1624	1469	9.54	4.05	2.59	1.55	0.73
256	1779	1640	7.81	6.43	3.90	2.22	0.93
257	167	151	9.58	17.22	14.56	0.60	0.32
258	404	382	5.45	14.09	13.18	0.40	0.29
259	99	92	7.07	11.29	8.58	1.09	0.62
260	179	177	1.12	6.70	6.49	0.83	0.80
261	168	160	4.76	6.26	5.55	0.77	0.64
262	2335	2181	6.60	2.86	2.32	0.94	0.53
263	35	33	5.71	59.06	48.55	1.02	0.89
264	44	42	4.55	27.91	24.12	0.97	0.87
265	43	41	4.65	13.67	11.88	0.99	0.93
266	995	938	5.73	8.87	6.85	1.23	0.99
267	413	390	5.57	8.55	6.98	1.02	0.57
268	698	653	6.45	13.55	10.48	1.17	0.85

TRIMMED AND UNTRIMMED DATA, 1984 6
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
269	580	525	9.48	8.80	4.45	1.94	1.12
270	6203	5377	13.32	2.40	1.37	2.08	0.45
271	539	508	5.75	20.89	16.17	1.25	0.80
272	173	166	4.05	16.76	15.04	0.82	0.73
273	523	505	3.44	10.84	9.55	0.94	0.77
274	514	501	2.53	13.53	12.21	1.01	0.81
275	304	297	2.30	14.21	12.86	0.98	0.82
276	378	346	8.47	3.69	2.71	1.17	0.70
277	347	325	6.34	11.37	9.14	1.01	0.79
278	1314	1247	5.10	6.33	5.03	1.19	0.78
279	777	758	2.45	4.34	3.86	0.99	0.72
280	515	475	7.77	5.86	3.83	1.49	0.97
281	2033	1800	11.46	3.23	1.98	1.59	0.69
282	1490	1368	8.19	2.54	1.83	1.27	0.71
283	774	714	7.75	8.75	6.32	1.38	0.80
284	3795	3296	13.15	4.52	2.36	1.64	0.79
285	7	7	0.00	41.43	41.43	0.67	0.67
286	32	32	0.00	23.53	23.53	0.65	0.65
287	5	5	0.00	16.00	16.00	0.68	0.68
288	1	1	0.00	35.00	35.00	.	.
289	27	25	7.41	12.81	11.68	0.47	0.40
290	519	476	8.29	9.32	7.54	0.96	0.39
291	48	46	4.17	4.46	4.17	0.52	0.46
292	12	12	0.00	17.25	17.25	0.99	0.99
293	63	53	15.87	4.86	1.72	1.94	0.87
294	3341	3189	4.55	9.43	7.58	1.47	0.80
295	946	911	3.70	7.69	6.57	1.11	0.77
296	537	503	6.33	11.88	9.28	1.10	0.70
297	851	801	5.88	8.87	6.57	1.70	0.80
298	1129	1028	8.95	9.96	6.35	1.71	0.91
299	195	182	6.67	11.47	7.60	1.84	0.94
300	450	423	6.00	14.59	11.42	1.20	0.80
301	891	829	6.96	8.43	6.17	1.34	0.79
302	4	4	0.00	23.00	23.00	0.95	0.95
303	143	139	2.80	21.46	20.39	0.56	0.50
304	177	168	5.08	18.19	15.30	0.95	0.68
305	762	735	3.54	12.91	11.50	0.88	0.60
306	56	51	8.93	17.84	14.55	0.72	0.50
307	44	41	6.82	16.05	13.90	0.70	0.58
308	34	33	2.94	14.41	12.73	1.00	0.84
309	39	39	0.00	17.10	17.10	0.74	0.74
310	383	362	5.48	8.17	6.32	1.34	0.73
311	516	493	4.46	4.79	3.96	1.10	0.66
312	120	111	7.50	8.89	7.05	0.95	0.69
313	207	190	8.21	5.37	3.96	1.06	0.74
314	50	48	4.00	11.00	8.96	1.08	0.72
315	81	76	6.17	14.60	11.09	1.28	1.08
316	913	857	6.13	14.73	8.98	4.22	0.94
317	3	3	0.00	19.00	19.00	0.98	0.98
318	365	341	6.58	12.59	9.64	1.27	0.97
319	313	285	8.95	8.71	5.49	1.44	1.04
320	906	831	8.28	11.42	8.33	1.15	0.67

TRIMMED AND UNTRIMMED DATA, 1984
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
321	1805	1688	6.48	4.86	3.78	1.13	0.72
322	1650	1545	6.36	4.93	3.77	1.33	0.74
323	302	287	4.97	7.49	6.24	1.05	0.78
324	1693	1616	4.55	4.54	3.81	1.03	0.68
325	1009	958	5.05	8.33	6.62	1.27	0.80
326	1693	1594	5.85	4.11	3.08	1.34	0.77
327	474	434	8.44	5.20	3.57	1.33	0.76
328	333	307	7.81	5.05	3.44	1.42	0.88
329	381	354	7.09	3.32	2.61	1.03	0.68
330	33	33	0.00	3.27	3.27	0.78	0.78
331	401	367	8.48	9.42	6.63	1.25	0.91
332	948	857	9.60	5.33	3.63	1.25	0.76
333	533	485	9.01	5.86	3.71	1.54	0.82
334	49	47	4.08	24.59	23.38	0.43	0.38
335	316	308	2.53	19.87	19.00	0.53	0.47
336	1099	1032	6.10	15.01	12.65	1.03	0.44
337	789	730	7.48	11.33	9.94	0.55	0.36
338	67	64	4.48	10.46	9.14	0.75	0.55
339	677	644	4.87	5.82	5.13	0.70	0.51
340	2096	2075	1.00	4.29	4.17	0.63	0.55
341	238	236	0.84	8.64	8.26	0.90	0.77
342	438	409	6.62	3.60	3.03	0.90	0.47
343	1386	1247	10.03	2.03	1.67	0.70	0.43
344	21	20	4.76	14.76	12.20	0.99	0.73
345	29	27	6.90	9.28	6.74	1.24	0.94
346	390	368	5.64	12.92	10.89	0.92	0.77
347	156	146	6.41	10.99	8.47	1.18	0.95
348	465	435	6.45	9.16	7.02	1.16	0.89
349	268	244	8.96	4.86	3.54	1.06	0.74
350	586	561	4.27	4.67	3.95	1.02	0.77
351	309	304	1.62	1.03	1.00	0.25	0.00
352	692	642	7.23	3.42	2.59	1.14	0.73
353	35	34	2.86	24.26	22.71	0.67	0.61
354	190	179	5.79	17.14	15.54	0.49	0.34
355	2211	2096	5.20	12.69	11.73	0.72	0.24
356	643	610	5.13	10.23	9.45	0.52	0.42
357	47	47	0.00	19.70	19.70	0.51	0.51
358	1122	1098	2.14	7.25	6.75	0.80	0.69
359	608	500	17.76	3.19	2.65	0.69	0.22
360	1295	1278	1.31	6.64	6.24	1.01	0.88
361	921	841	8.69	2.93	2.38	0.82	0.29
362	14	14	0.00	3.79	3.79	0.48	0.48
363	167	154	7.78	6.32	4.62	1.12	0.64
364	5797	5396	6.92	2.56	2.11	1.06	0.35
365	228	217	4.82	11.53	10.27	0.68	0.50
366	272	258	5.15	17.51	14.38	1.04	0.81
367	503	445	11.53	12.21	7.57	1.75	0.93
368	298	283	5.03	5.61	4.55	1.15	0.68
369	1929	1707	11.51	4.00	2.54	1.48	0.70
370	244	226	7.38	14.86	11.44	1.05	0.80
371	4175	3753	10.11	11.78	9.16	1.04	0.43
372	848	747	11.91	9.39	7.21	0.77	0.40

TRIMMED AND UNTRIMMED DATA, 1984 8
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
373	54905	51864	5.54	5.81	4.94	1.31	0.33
385	1426	1095	23.21	0.91	0.00	2.72	.
386	38	30	21.05	3.87	0.00	2.76	.
387	44	38	13.64	4.43	1.45	1.86	2.06
388	723	691	4.43	3.61	2.72	1.59	1.39
389	593	579	2.36	4.55	4.07	1.03	0.80
390	1106	1035	6.42	5.04	4.43	0.73	0.55
391	56943	54974	3.46	4.91	4.59	0.79	0.39
392	39	37	5.13	28.26	17.65	2.09	0.67
393	16	14	12.50	11.25	9.36	0.57	0.40
394	201	184	8.46	5.21	3.49	1.29	0.80
395	2052	1961	4.43	10.84	8.94	1.23	0.80
396	302	280	7.28	7.16	5.13	1.33	0.84
397	698	639	8.45	5.98	3.78	1.55	1.02
398	144	135	6.25	9.79	7.21	1.34	0.99
399	449	424	5.57	4.67	3.60	1.29	0.86
400	84	81	3.57	21.89	20.22	0.70	0.63
401	72	65	9.72	19.90	14.77	0.96	0.72
402	137	130	5.11	13.72	10.70	1.19	0.84
403	836	792	5.26	13.73	11.26	1.09	0.84
404	1291	1192	7.67	11.69	8.08	1.55	0.99
405	484	426	11.98	6.83	3.22	1.90	1.06
406	13	12	7.69	48.54	36.58	1.01	0.68
407	10	10	0.00	20.20	20.20	0.50	0.50
408	152	139	8.55	8.33	5.77	1.24	1.01
409	217	208	4.15	12.23	10.59	0.97	0.80
410	2567	2347	8.57	3.38	2.25	1.47	0.82
411	139	122	12.23	3.16	1.95	1.27	0.41
412	49	46	6.12	2.59	1.98	1.08	0.56
413	170	163	4.12	16.52	14.36	0.95	0.81
414	120	115	4.17	15.51	13.69	0.88	0.77
415	139	126	9.35	17.88	11.12	1.42	0.83
416	178	160	10.11	51.20	13.44	5.17	0.69
417	142	129	9.15	12.38	9.48	0.97	0.50
418	463	433	6.48	8.45	6.12	1.66	0.76
419	57	52	8.77	12.89	8.81	1.40	0.69
420	115	109	5.22	10.11	7.84	1.31	0.67
421	528	487	7.77	6.61	5.36	0.86	0.64
422	2229	2078	6.77	4.33	3.33	2.04	0.63
423	278	254	8.63	10.07	6.95	1.23	0.81
424	31	31	0.00	21.58	21.58	0.65	0.65
425	690	644	6.67	8.08	6.52	0.98	0.77
426	968	912	5.79	13.11	10.81	0.98	0.71
427	54	52	3.70	9.22	8.29	0.82	0.72
428	172	164	4.65	22.80	19.48	0.99	0.88
429	515	471	8.54	21.50	11.48	2.08	0.86
430	686	639	6.85	16.09	12.22	1.23	0.77
431	122	104	14.75	11.66	6.35	1.29	0.87
432	103	99	3.88	10.62	9.16	0.92	0.69
433	153	141	7.84	3.77	2.16	3.28	0.93
434	452	400	11.50	3.24	1.68	2.48	0.76
435	673	639	5.05	8.42	7.06	1.00	0.76

TRIMMED AND UNTRIMMED DATA, 1984 9
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
439	8	8	0.00	13.88	13.88	0.88	0.88
440	301	267	11.30	7.14	3.59	1.87	1.02
441	153	144	5.88	4.00	3.10	1.14	0.76
442	112	108	3.57	29.46	25.42	1.09	0.90
443	407	373	8.35	10.07	6.86	1.38	1.11
444	364	328	9.89	7.78	4.82	1.44	0.86
445	1725	1568	9.10	3.96	2.53	2.59	0.75
446	1115	1020	8.52	2.95	2.08	1.24	0.67
447	67	63	5.97	4.66	3.52	1.25	0.84
448	52	51	1.92	4.13	3.49	1.30	0.78
449	488	458	6.15	5.48	4.03	1.37	0.94
450	2361	2142	9.28	3.00	1.99	1.44	0.68
451	2090	1889	9.62	1.90	1.29	1.59	0.45
452	128	124	3.13	15.88	13.03	1.35	0.95
453	495	451	8.89	4.80	3.11	1.44	0.70
454	77	72	6.49	7.91	5.25	1.52	1.09
455	212	193	8.96	3.00	1.86	1.58	0.65
456	111	102	8.11	13.66	8.37	1.63	1.09
457	6	6	0.00	27.00	27.00	1.02	1.02
458	23	22	4.35	27.61	23.23	0.95	0.70
459	204	197	3.43	32.04	29.01	0.83	0.69
460	855	802	6.20	9.95	7.03	1.84	0.89
461	522	452	13.41	4.84	2.41	1.90	0.71
462	298	270	9.40	16.44	7.60	4.59	0.76
463	77	74	3.90	10.91	9.24	1.10	0.90
464	855	786	8.07	7.63	5.39	1.31	0.81
465	35	29	17.14	4.71	2.45	1.16	0.66
466	489	431	11.86	4.60	2.21	1.94	0.80
467	7254	6496	10.45	3.95	1.76	10.30	0.66
468	4079	3752	8.02	13.98	9.05	1.64	0.96
470	1025	947	7.61	11.19	8.08	1.34	0.71
471	15	14	6.67	60.07	52.86	0.52	0.26

TRIMMED AND UNTRIMMED DATA, 1985 1
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
1	380	349	8.16	20.75	16.43	0.93	0.57
2	124	114	8.06	15.11	10.25	1.76	0.73
3	152	129	15.13	25.49	12.93	1.44	0.66
4	121	115	4.96	24.02	19.96	1.01	0.79
5	16	15	6.25	25.44	23.20	0.55	0.47
6	285	270	5.26	3.72	3.16	0.85	0.47
7	70	64	8.57	20.70	14.59	1.34	0.95
8	345	331	4.06	7.42	6.07	1.22	0.84
9	179	164	8.38	13.75	5.13	6.49	0.91
10	126	121	3.97	12.02	10.68	0.87	0.77
11	341	310	9.09	11.82	7.94	1.28	0.91
12	1309	1205	7.94	23.86	12.70	4.27	0.78
13	555	522	5.95	18.65	10.89	5.12	0.71
14	3709	3397	8.41	23.50	13.66	3.58	0.85
15	1271	1196	5.90	8.64	7.03	1.26	0.65
16	62	58	6.45	15.61	10.55	1.50	0.71
17	260	241	7.31	15.37	9.05	3.16	0.69
18	212	192	9.43	12.45	7.89	1.34	0.83
19	514	475	7.59	10.22	6.40	1.83	0.85
20	575	549	4.52	11.86	9.72	1.27	0.61
21	617	591	4.21	6.00	5.24	0.86	0.62
22	6	6	0.00	7.50	7.50	0.50	0.50
23	182	179	1.65	5.40	4.80	1.25	0.80
24	578	538	6.92	9.46	6.67	1.76	0.75
25	2658	2500	5.94	5.29	4.18	1.12	0.75
26	2896	2650	8.49	4.46	3.23	1.62	0.66
28	1387	1244	10.31	6.29	2.83	4.32	0.89
29	5431	4571	15.84	2.66	1.42	2.34	0.47
30	6322	5607	11.31	2.14	1.42	1.71	0.45
31	34	30	11.76	5.38	3.37	1.24	0.97
32	109	96	11.93	2.28	1.63	1.01	0.43
33	68	64	5.88	2.15	1.83	0.78	0.60
34	296	270	8.78	13.63	9.49	1.30	0.73
35	930	863	7.20	9.54	6.53	1.54	0.85
36	297	279	6.06	11.21	9.92	0.66	0.53
37	104	92	11.54	9.99	7.08	0.98	0.61
38	180	174	3.33	7.93	7.36	0.66	0.56
39	2464	2273	7.75	8.35	7.08	1.36	0.33
40	1008	941	6.65	4.17	3.24	1.10	0.80
41	1552	1391	10.37	2.67	2.16	0.92	0.41
42	346	335	3.18	10.93	9.80	0.84	0.67
43	293	278	5.12	5.33	4.61	0.78	0.44
44	139	132	5.04	9.36	8.02	0.89	0.70
45	247	233	5.67	6.54	5.37	0.96	0.69
46	137	128	6.57	6.13	4.76	1.10	0.81
47	2236	2082	6.89	5.62	4.40	1.09	0.75
48	568	522	8.10	4.00	2.43	3.99	0.80
49	37	34	8.11	37.08	19.91	1.82	0.73
50	114	108	5.26	7.63	6.41	0.98	0.47
51	53	51	3.77	5.38	4.43	1.24	0.94
52	154	146	5.19	11.98	11.21	0.43	0.34
53	339	326	3.83	6.56	5.08	3.04	0.49

TRIMMED AND UNTRIMMED DATA, 1985
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

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DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
54	184	178	3.26	4.58	4.06	0.91	0.68
55	2106	2033	3.47	3.91	3.52	0.80	0.55
56	395	387	2.03	5.56	4.90	1.47	0.36
57	60	57	5.00	4.47	3.91	0.70	0.44
58	982	943	3.97	3.27	3.08	0.53	0.32
59	1154	1145	0.78	5.49	5.29	0.87	0.31
60	5486	4815	12.23	3.88	3.46	0.45	0.26
61	168	152	9.52	2.08	1.69	0.75	0.39
62	1709	1644	3.80	1.66	1.36	2.52	0.43
63	1258	1151	8.51	3.12	1.94	2.14	0.60
64	517	486	6.00	16.03	12.54	1.31	1.01
65	661	637	3.63	6.12	5.05	1.36	0.73
66	1179	1083	8.14	4.33	3.29	1.19	0.65
67	17	16	5.88	7.53	5.75	1.07	0.60
68	300	281	6.33	10.30	8.58	0.87	0.64
69	1217	1171	3.78	4.28	3.73	0.92	0.68
70	5114	4793	6.28	4.00	3.21	1.23	0.67
71	840	797	5.12	3.08	2.58	0.95	0.70
72	411	355	13.63	2.08	1.37	1.03	0.49
73	1869	1773	5.14	3.48	2.83	1.07	0.63
74	1436	1209	15.81	2.67	1.38	2.96	0.47
75	340	321	5.59	24.60	20.67	0.93	0.56
76	56	53	5.36	20.25	17.57	0.86	0.76
77	148	139	6.08	18.12	12.51	1.95	0.70
78	487	447	8.21	15.23	12.15	0.88	0.61
79	208	196	5.77	23.01	17.46	1.49	0.82
80	280	267	4.64	15.96	12.78	1.18	0.85
81	132	122	7.58	15.26	10.20	1.47	0.81
82	2116	2032	3.97	13.57	11.43	1.31	0.81
83	36	32	11.11	9.97	7.06	1.02	0.86
84	66	64	3.03	5.73	4.67	1.38	0.71
85	150	141	6.00	16.25	13.65	0.88	0.70
86	123	117	4.88	12.40	9.91	1.35	0.80
87	415	387	6.75	10.81	8.61	1.00	0.78
88	7034	6621	5.87	12.31	9.97	1.36	0.59
89	3110	2858	8.10	26.93	12.12	4.77	0.66
90	1351	1271	5.92	13.21	8.95	6.60	0.60
91	2207	2096	5.03	7.91	6.73	0.89	0.61
92	149	140	6.04	13.60	10.79	1.07	0.72
93	380	351	7.63	9.26	7.02	1.08	0.76
94	111	107	3.60	11.70	10.62	0.80	0.65
95	372	350	5.91	7.74	6.52	0.81	0.58
96	745	695	6.71	10.76	8.95	0.84	0.57
97	2417	2308	4.51	7.19	6.14	0.97	0.63
98	5761	5426	5.81	5.07	4.03	1.21	0.66
99	393	367	6.62	8.30	6.58	1.04	0.71
100	1037	986	4.92	5.05	4.16	1.05	0.85
101	1483	1400	5.60	12.18	8.86	2.79	0.62
102	1734	1638	5.54	6.26	5.14	1.01	0.73
105	97	93	4.12	11.38	10.39	0.64	0.53
107	295	268	9.15	9.27	7.09	0.87	0.44
109	195	180	7.69	18.63	14.50	1.03	0.52

TRIMMED AND UNTRIMMED DATA, 1985 3
FREQUENCY,LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
110	257	242	5.84	25.89	21.94	0.82	0.61
111	209	195	6.70	21.72	17.97	0.88	0.47
112	275	258	6.18	20.29	14.89	1.49	0.72
113	219	201	8.22	41.24	33.50	0.81	0.54
114	80	76	5.00	23.94	20.78	0.85	0.71
115	19	18	5.26	15.89	11.78	1.23	0.67
116	300	286	4.67	11.00	9.66	0.75	0.55
117	34	32	5.88	12.26	7.22	1.94	0.61
118	6	6	0.00	10.17	10.17	0.59	0.59
119	2770	2525	8.84	4.74	3.69	1.10	0.45
120	297	262	11.78	10.42	4.66	1.86	1.15
121	756	709	6.22	15.58	13.66	0.67	0.51
122	3580	3353	6.34	12.66	11.10	0.67	0.46
123	968	886	8.47	15.86	4.85	6.94	1.02
126	59	59	0.00	22.14	22.14	0.96	0.96
127	3696	3464	6.28	13.79	10.55	2.70	0.66
128	994	944	5.03	12.81	11.07	0.99	0.54
129	432	391	9.49	13.20	5.92	4.83	1.12
130	1421	1319	7.18	14.37	10.35	1.28	0.89
131	1163	1075	7.57	10.39	6.69	2.58	0.93
132	1248	1182	5.29	11.21	9.16	1.10	0.69
133	2217	2156	2.75	5.95	5.27	1.08	0.90
134	2118	2005	5.34	7.70	6.22	1.10	0.72
135	447	416	6.94	11.25	8.69	1.41	0.78
136	645	619	4.03	6.48	5.42	1.12	0.89
137	462	400	13.42	7.00	3.14	1.92	0.82
138	1338	1275	4.71	9.34	7.88	1.03	0.68
139	1373	1312	4.44	6.18	5.06	1.16	0.73
140	2771	2646	4.51	7.01	6.01	0.92	0.67
141	715	665	6.99	7.49	5.80	1.11	0.73
142	1179	1115	5.43	7.78	3.81	13.68	0.73
143	4288	4094	4.52	5.13	4.34	1.02	0.73
144	406	370	8.87	13.04	10.04	0.92	0.67
145	1189	1117	6.06	8.24	6.75	0.97	0.66
146	197	188	4.57	29.21	26.12	0.73	0.53
147	187	180	3.74	24.49	22.78	0.51	0.39
148	635	592	6.77	28.90	24.21	0.81	0.52
149	596	555	6.88	21.53	17.92	1.03	0.52
150	39	36	7.69	21.23	18.17	0.68	0.54
151	101	92	8.91	11.25	9.53	0.66	0.51
152	167	161	3.59	14.21	12.52	0.93	0.77
153	654	625	4.43	7.07	5.72	1.28	0.97
154	440	416	5.45	24.50	21.82	0.66	0.54
155	788	737	6.47	15.38	12.67	1.15	0.51
156	189	174	7.94	12.88	9.89	1.17	0.53
157	224	210	6.25	12.60	9.55	1.30	0.81
158	1548	1501	3.04	5.80	5.07	1.01	0.73
159	80	77	3.75	12.39	11.21	0.67	0.48
160	302	291	3.64	8.45	7.47	1.05	0.49
161	698	635	9.03	10.67	8.89	0.67	0.39
162	2039	1919	5.89	7.15	6.44	0.56	0.35
163	1155	1089	5.71	3.45	2.49	2.21	0.76

TRIMMED AND UNTRIMMED DATA, 1985
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
164	46	43	6.52	17.70	14.12	0.89	0.43
165	377	341	9.55	8.40	7.22	0.56	0.32
166	191	183	4.19	10.50	9.61	0.59	0.46
167	6858	6545	4.56	6.01	5.59	0.50	0.30
168	74	69	6.76	8.14	6.25	1.09	0.78
169	720	668	7.22	4.41	3.38	1.28	0.57
170	91	87	4.40	21.27	18.00	1.03	0.73
171	435	388	10.80	6.39	4.06	1.29	0.78
172	1114	1066	4.31	16.07	12.81	1.69	0.83
173	697	658	5.60	12.36	9.63	1.20	0.94
174	841	804	4.40	9.39	7.61	1.25	0.78
175	1531	1452	5.16	4.59	3.50	2.28	0.86
176	208	195	6.25	11.70	6.62	2.40	0.79
177	759	729	3.95	9.42	7.55	1.73	0.79
178	2148	2041	4.98	4.14	3.27	1.34	0.94
179	897	844	5.91	9.14	7.09	1.23	0.97
180	239	219	8.37	10.79	8.48	0.91	0.68
181	323	310	4.02	7.34	6.27	1.01	0.79
182	4965	4715	5.04	7.67	6.24	1.14	0.82
183	15140	14260	5.81	3.96	3.07	1.26	0.83
184	8968	8186	8.72	3.93	2.69	1.44	0.66
185	753	706	6.24	5.98	4.05	1.57	0.85
186	703	643	8.53	2.81	2.05	1.19	0.73
187	1791	1628	9.10	2.01	1.58	1.11	0.45
188	663	615	7.24	7.28	4.96	1.39	0.97
189	2345	2031	13.39	3.32	1.90	1.40	0.70
190	1298	1181	9.01	3.79	2.46	1.75	0.71
191	34	32	5.88	30.91	27.38	0.71	0.63
192	90	87	3.33	17.28	15.13	1.03	0.90
193	110	107	2.73	25.31	23.46	0.72	0.60
194	94	92	2.13	16.45	13.76	1.44	0.76
195	13	13	0.00	24.92	24.92	0.46	0.46
196	6	6	0.00	17.83	17.83	0.29	0.29
197	438	420	4.11	20.21	18.45	0.61	0.46
198	2095	1979	5.54	12.16	11.17	0.46	0.30
199	33	31	6.06	26.97	23.03	0.71	0.41
200	29	27	6.90	16.55	12.85	1.06	0.82
201	57	55	3.51	13.21	11.76	1.08	1.04
202	271	259	4.43	13.12	10.94	1.06	0.80
203	448	429	4.24	17.90	11.90	4.46	0.81
204	330	310	6.06	10.62	8.71	0.93	0.61
205	197	190	3.55	13.49	11.63	1.01	0.78
206	565	527	6.73	8.05	6.29	1.10	0.74
207	570	539	5.44	10.93	9.36	0.83	0.64
208	1054	990	6.07	6.48	5.24	1.03	0.67
209	1730	1591	8.03	24.17	21.65	0.59	0.24
210	1381	1282	7.17	25.25	20.51	0.99	0.52
211	551	506	8.17	22.54	17.65	0.95	0.57
212	197	182	7.61	20.55	15.99	1.01	0.73
213	45	43	4.44	32.76	26.70	1.12	0.88
214	49	47	4.08	40.67	25.09	2.12	0.75
215	782	744	4.86	15.74	14.10	0.65	0.49

TRIMMED AND UNTRIMMED DATA, 1985 5
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
216	55	49	10.91	13.07	8.08	1.29	0.88
217	301	263	12.62	12.51	5.80	1.73	1.09
218	177	167	5.65	24.12	20.48	0.80	0.52
219	693	661	4.62	15.75	13.31	0.97	0.71
220	146	135	7.53	9.78	6.48	1.44	0.74
221	4	4	0.00	30.50	30.50	0.97	0.97
222	595	582	2.18	5.22	4.93	0.69	0.61
223	50	47	6.00	12.92	10.26	1.03	0.72
224	356	329	7.58	6.97	4.95	1.28	0.63
225	1129	1069	5.31	9.67	8.05	0.94	0.66
226	72	71	1.39	11.67	11.23	0.89	0.87
227	912	820	10.09	5.65	3.70	1.37	0.75
228	7	7	0.00	3.57	3.57	0.64	0.64
229	1358	1251	7.88	4.22	3.20	1.12	0.64
230	273	244	10.62	10.56	6.80	1.36	0.57
231	1923	1785	7.18	4.83	3.31	1.67	0.74
233	223	210	5.83	22.30	18.10	1.00	0.76
234	2133	1987	6.84	7.67	5.25	1.63	0.82
235	977	926	5.22	20.00	15.71	1.29	1.00
236	1334	1235	7.42	12.86	8.89	1.35	0.96
237	76	73	3.95	17.88	15.81	1.01	0.95
238	345	329	4.64	12.00	9.91	1.23	0.79
239	733	688	6.14	10.40	7.57	1.76	0.96
240	436	412	5.50	17.69	13.72	1.43	0.66
241	963	909	5.61	12.25	9.53	1.75	0.72
242	132	127	3.79	15.66	12.88	1.16	0.82
243	5719	5525	3.39	8.82	7.71	1.06	0.82
244	546	512	6.23	14.60	11.04	1.33	0.68
245	619	587	5.17	8.36	6.77	1.23	0.85
246	221	200	9.50	10.26	6.96	1.33	0.68
247	3292	3016	8.38	5.25	3.79	1.20	0.74
248	504	478	5.16	8.62	4.47	7.33	0.87
249	1576	1349	14.40	2.68	1.25	1.84	0.43
250	592	517	12.67	4.44	2.11	2.02	0.76
251	1871	1555	16.89	2.62	1.41	1.63	0.47
252	2179	2031	6.79	1.75	1.32	1.41	0.43
253	737	679	7.87	13.75	7.34	4.22	1.01
254	3030	2798	7.66	5.07	3.28	1.65	0.86
255	1627	1510	7.19	3.44	2.46	1.40	0.72
256	1709	1526	10.71	5.72	3.32	1.57	0.90
257	163	155	4.91	17.11	15.60	0.56	0.43
258	411	386	6.08	13.51	12.41	0.43	0.30
259	95	89	6.32	10.86	8.98	0.88	0.69
260	177	172	2.82	7.25	6.61	0.87	0.76
261	161	154	4.35	4.80	4.36	0.73	0.66
262	2330	2214	4.98	2.59	2.18	0.92	0.54
263	42	38	9.52	42.74	23.66	1.67	0.79
264	48	46	4.17	19.10	16.24	1.06	0.93
265	54	48	11.11	14.00	8.35	1.29	0.94
266	1218	1144	6.08	6.47	4.64	1.43	1.07
267	414	402	2.90	8.30	7.56	0.83	0.61
268	706	661	6.37	14.01	10.63	1.25	0.88

TRIMMED AND UNTRIMMED DATA, 1985 6
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
269	645	587	8.99	7.22	4.03	1.80	1.09
270	6489	5793	10.73	2.14	1.30	2.76	0.45
271	471	435	7.64	21.36	14.70	1.62	0.82
272	226	214	5.31	16.46	13.82	0.93	0.69
273	526	509	3.23	10.88	9.62	0.94	0.76
274	570	546	4.21	17.82	13.68	1.71	0.77
275	383	378	1.31	13.70	12.84	1.02	0.89
276	373	354	5.09	3.68	2.95	1.14	0.76
277	356	332	6.74	12.49	9.97	1.00	0.74
278	1352	1262	6.66	5.96	4.37	2.50	0.73
279	711	673	5.34	4.44	3.70	0.94	0.71
280	500	465	7.00	6.20	4.15	1.60	0.96
281	2031	1827	10.04	3.05	2.02	1.64	0.69
282	1472	1225	16.78	2.44	1.38	1.66	0.47
283	745	690	7.38	9.98	6.91	1.78	0.84
284	3800	3357	11.66	3.92	2.14	2.18	0.83
285	5	5	0.00	65.20	65.20	0.72	0.72
286	38	35	7.89	21.58	18.26	0.73	0.57
287	3	3	0.00	25.33	25.33	0.26	0.26
288	3	3	0.00	36.00	36.00	0.46	0.46
289	22	22	0.00	17.68	17.68	0.75	0.75
290	486	446	8.23	8.53	7.16	0.67	0.39
291	45	41	8.89	4.00	3.49	0.52	0.39
292	11	10	9.09	10.36	6.80	1.37	1.21
293	58	53	8.62	3.41	2.32	1.28	0.94
294	3204	3070	4.18	10.92	7.62	8.25	0.82
295	985	948	3.76	6.68	5.61	1.32	0.84
296	519	485	6.55	11.37	9.01	1.03	0.76
297	765	730	4.58	7.39	6.16	1.07	0.84
298	1293	1191	7.89	9.94	6.58	1.53	0.89
299	218	201	7.80	9.40	6.05	2.20	0.94
300	339	317	6.49	14.48	11.68	0.96	0.76
301	942	883	6.26	7.99	6.15	1.16	0.85
302	5	5	0.00	13.20	13.20	0.51	0.51
303	144	139	3.47	22.35	21.20	0.50	0.44
304	169	157	7.10	18.15	14.41	0.99	0.72
305	838	814	2.86	11.34	9.90	1.17	0.73
306	68	67	1.47	15.35	14.88	0.62	0.58
307	41	37	9.76	14.44	11.22	0.85	0.56
308	32	32	0.00	20.63	20.63	0.84	0.84
309	57	55	3.51	16.46	13.73	1.11	0.82
310	321	298	7.17	8.33	6.37	1.18	0.77
311	467	424	9.21	5.54	3.73	1.39	0.68
312	101	92	8.91	9.89	7.17	1.07	0.67
313	178	163	8.43	6.00	4.55	1.04	0.66
314	73	63	13.70	5.27	3.19	1.16	1.00
315	62	61	1.61	16.45	15.21	0.94	0.80
316	984	918	6.71	12.58	9.20	1.33	0.94
317	2	2	0.00	2.50	2.50	0.85	0.85
318	383	361	5.74	10.19	8.29	1.07	0.91
319	376	330	12.23	6.70	3.50	1.58	0.90
320	859	811	5.59	12.75	8.35	4.21	0.68

TRIMMED AND UNTRIMMED DATA, 1985 7
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
321	1687	1573	6.76	4.92	3.82	1.07	0.72
322	1634	1529	6.43	4.24	3.29	1.15	0.78
323	216	203	6.02	7.34	5.91	1.03	0.74
324	1677	1613	3.82	4.39	3.81	0.95	0.68
325	1079	1012	6.21	8.12	5.93	2.54	0.83
326	1479	1383	6.49	4.12	3.18	1.15	0.77
327	447	392	12.30	5.03	2.97	1.42	0.68
328	319	290	9.09	5.27	3.41	1.40	0.85
329	276	254	7.97	3.64	2.42	1.54	0.77
330	28	24	14.29	2.89	2.08	0.86	0.40
331	360	344	4.44	8.57	6.97	1.19	0.88
332	822	757	7.91	5.00	3.62	1.18	0.83
333	514	463	9.92	5.69	3.28	2.07	0.91
334	48	46	4.17	31.54	28.54	0.61	0.41
335	285	270	5.26	20.19	17.97	0.61	0.39
336	1092	1014	7.14	14.00	11.81	0.73	0.46
337	754	715	5.17	10.69	9.68	0.55	0.39
338	92	90	2.17	12.77	12.11	0.72	0.66
339	716	660	7.82	5.58	4.46	1.10	0.48
340	2096	2041	2.62	3.92	3.64	1.04	0.57
341	229	225	1.75	7.56	7.13	0.93	0.88
342	399	378	5.26	3.43	2.73	1.18	0.60
343	1332	1227	7.88	1.95	1.58	1.02	0.44
344	13	13	0.00	11.31	11.31	0.56	0.56
345	60	59	1.67	11.07	10.20	0.89	0.72
346	363	340	6.34	12.51	9.83	1.07	0.75
347	147	139	5.44	11.17	8.95	1.08	0.85
348	474	438	7.59	8.28	6.17	1.20	0.78
349	268	247	7.84	4.69	3.59	1.01	0.79
350	546	511	6.41	5.09	3.88	1.32	0.72
351	326	324	0.61	1.01	1.00	0.08	0.00
352	659	592	10.17	3.18	2.07	1.32	0.67
353	33	30	9.09	18.73	14.43	0.79	0.37
354	181	171	5.52	17.16	15.36	0.57	0.39
355	2277	2154	5.40	11.96	11.11	0.40	0.25
356	614	582	5.21	10.26	9.53	0.48	0.39
357	66	64	3.03	21.05	19.91	0.63	0.59
358	1096	1065	2.83	6.59	6.08	0.78	0.68
359	680	611	10.15	3.16	2.66	0.63	0.25
360	1230	1202	2.28	6.38	5.82	1.00	0.88
361	1038	969	6.65	2.72	2.29	0.76	0.28
362	46	43	6.52	3.41	2.93	0.76	0.65
363	158	136	13.92	8.42	4.26	1.39	0.76
364	5758	4428	23.10	2.47	1.78	0.98	0.23
365	197	191	3.05	12.64	11.45	0.85	0.68
366	234	220	5.98	28.24	12.59	6.58	0.84
367	497	451	9.26	11.28	7.77	1.24	1.06
368	276	265	3.99	5.76	4.82	1.08	0.70
369	2022	1784	11.77	3.85	2.50	1.37	0.71
370	30	28	6.67	11.40	8.46	1.27	0.85
371	4735	4256	10.12	11.62	9.02	0.94	0.42
373	56961	53946	5.29	5.65	4.85	1.40	0.32

TRIMMED AND UNTRIMMED DATA, 1985 8
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
385	1353	1043	22.91	0.98	0.00	4.23	.
386	91	74	18.68	2.73	0.00	3.43	.
387	58	56	3.45	4.17	2.79	2.05	1.43
388	665	631	5.11	3.20	2.31	1.66	1.49
389	798	783	1.88	3.97	3.56	1.17	0.91
390	1523	1477	3.02	4.77	4.44	0.77	0.60
391	57908	50703	12.44	4.88	4.18	3.21	0.33
392	33	32	3.03	20.76	17.38	1.03	0.52
393	27	24	11.11	12.96	10.50	0.62	0.35
394	195	179	8.21	5.67	3.40	2.07	0.86
395	2023	1920	5.09	11.45	8.67	2.47	0.81
396	288	268	6.94	7.87	5.55	1.41	0.88
397	652	611	6.29	6.03	4.41	1.45	1.02
398	158	144	8.86	11.25	7.36	1.36	0.93
399	423	383	9.46	4.51	2.87	1.43	0.90
400	92	87	5.43	23.48	18.16	1.17	0.62
401	84	79	5.95	23.65	16.06	1.82	0.76
402	115	110	4.35	11.79	9.55	1.15	0.81
403	875	830	5.14	15.15	11.85	1.42	0.88
404	1268	1172	7.57	10.31	6.77	1.78	1.11
405	697	618	11.33	6.64	3.35	1.72	1.00
406	7	7	0.00	31.57	31.57	0.73	0.73
407	11	11	0.00	20.82	20.82	0.70	0.70
408	137	129	5.84	9.69	5.95	2.33	1.04
409	123	118	4.07	13.16	11.42	1.03	0.93
410	2426	2180	10.14	3.92	2.36	1.62	0.78
411	48	41	14.58	4.52	1.49	2.39	0.64
412	51	48	5.88	2.37	1.88	1.03	0.69
413	190	182	4.21	17.33	14.53	1.10	0.83
414	139	131	5.76	13.03	10.53	1.11	0.99
415	118	106	10.17	15.79	10.05	1.27	0.86
416	221	200	9.50	19.05	13.19	1.19	0.80
417	128	120	6.25	10.94	8.89	0.94	0.54
418	487	468	3.90	7.51	6.28	1.10	0.78
419	39	36	7.69	13.26	10.94	0.78	0.59
420	127	120	5.51	9.01	7.49	0.93	0.73
421	613	585	4.57	7.58	5.94	2.14	0.68
422	2003	1857	7.29	4.25	3.37	1.00	0.63
423	333	307	7.81	9.38	6.74	1.19	0.80
424	33	30	9.09	26.61	18.00	1.20	0.81
425	592	559	5.57	7.88	6.19	1.22	0.80
426	770	726	5.71	12.08	10.01	0.95	0.72
427	46	43	6.52	8.76	6.67	1.19	0.81
428	169	163	3.55	22.78	20.20	1.03	0.94
429	536	488	8.96	28.69	10.18	5.65	0.85
430	705	652	7.52	18.91	11.46	4.19	0.88
431	150	135	10.00	7.71	5.07	1.25	0.73
432	58	55	5.17	8.34	7.05	0.96	0.83
433	191	179	6.28	3.52	2.75	1.16	1.01
434	507	455	10.26	3.12	1.69	2.59	0.69
435	698	670	4.01	8.17	6.85	1.19	0.74
439	7	6	14.29	9.14	4.00	1.51	0.59

TRIMMED AND UNTRIMMED DATA, 1985 9
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
440	328	300	8.54	6.49	4.02	1.63	0.99
441	127	112	11.81	5.75	3.32	1.38	0.76
442	82	76	7.32	25.94	20.13	1.09	0.94
443	366	329	10.11	9.62	5.26	1.70	1.00
444	359	336	6.41	7.38	5.59	1.19	0.87
445	1708	1579	7.55	3.62	2.48	2.76	0.75
446	937	876	6.51	3.02	2.29	1.19	0.78
447	49	46	6.12	4.33	2.48	2.18	0.64
448	48	45	6.25	3.27	2.07	1.60	0.63
449	502	453	9.76	5.23	3.34	1.33	0.90
450	2178	2002	8.08	2.91	1.95	1.82	0.67
451	2132	1961	8.02	1.73	1.31	1.25	0.45
452	84	78	7.14	7.62	5.76	1.05	0.71
453	402	374	6.97	4.64	3.23	1.89	0.71
454	110	100	9.09	12.57	8.41	1.37	0.81
455	215	189	12.09	4.09	2.01	1.64	0.82
456	101	88	12.87	13.97	6.38	1.63	1.17
457	13	12	7.69	28.69	18.92	1.46	1.24
458	15	15	0.00	26.13	26.13	0.64	0.64
459	182	174	4.40	30.99	26.39	0.96	0.71
460	712	668	6.18	9.60	7.32	1.29	0.83
461	571	483	15.41	5.28	2.26	3.27	0.73
462	184	164	10.87	13.59	7.98	1.36	0.79
463	60	58	3.33	12.78	11.60	0.88	0.81
464	801	736	8.11	8.23	5.71	1.58	0.79
465	27	24	11.11	6.26	4.42	1.07	0.74
466	543	484	10.87	4.47	2.17	4.07	0.83
467	6992	6255	10.54	3.70	1.78	3.41	0.66
468	4037	3697	8.42	12.77	8.08	1.87	0.98
470	1096	1031	5.93	9.88	7.62	1.39	0.72
471	2	2	0.00	48.00	48.00	0.06	0.06

TRIMMED AND UNTRIMMED DATA, 1986 1
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
1	427	394	7.73	21.44	16.96	0.90	0.55
2	131	121	7.63	13.78	9.32	1.49	0.75
3	208	183	12.02	22.47	13.51	1.31	0.76
4	108	103	4.63	25.01	21.64	0.90	0.68
5	68	63	7.35	17.51	14.48	0.76	0.54
6	300	277	7.67	3.68	2.87	1.15	0.49
7	48	43	10.42	21.13	14.47	1.22	0.84
8	238	204	14.29	12.03	5.57	2.59	0.94
9	130	118	9.23	7.84	4.68	1.71	0.79
10	72	60	16.67	18.26	9.65	1.22	0.86
11	359	329	8.36	10.68	6.59	1.76	0.90
12	1338	1228	8.22	21.99	11.38	4.84	0.77
13	557	524	5.92	12.60	9.34	2.01	0.74
14	3578	3290	8.05	22.01	13.23	2.74	0.86
15	1369	1292	5.62	8.29	6.48	1.60	0.66
16	79	69	12.66	16.05	9.45	1.23	0.76
17	263	242	7.98	14.67	9.50	2.29	0.67
18	178	161	9.55	14.24	8.88	1.51	0.74
19	447	409	8.50	9.60	5.94	1.87	0.86
20	678	629	7.23	12.05	9.24	1.12	0.59
21	578	544	5.88	5.67	4.71	0.90	0.59
22	8	7	12.50	14.88	11.71	0.74	0.60
23	176	162	7.95	7.22	4.67	1.49	0.80
24	568	537	5.46	7.69	6.34	0.98	0.73
25	2764	2624	5.07	5.14	4.20	1.11	0.78
26	2705	2474	8.54	4.30	3.10	1.29	0.65
28	1229	1112	9.52	4.89	2.77	1.89	0.91
29	4718	4007	15.07	2.45	1.39	1.81	0.46
30	5767	5180	10.18	2.05	1.39	1.85	0.44
31	44	39	11.36	3.20	2.18	1.05	0.72
32	226	214	5.31	2.38	1.81	1.30	0.63
33	124	98	20.97	2.48	1.38	1.41	0.42
34	235	219	6.81	12.74	8.70	1.77	0.72
35	979	920	6.03	9.14	5.73	2.13	0.86
36	263	248	5.70	10.76	9.36	0.72	0.45
37	78	74	5.13	9.17	8.00	0.82	0.70
38	179	166	7.26	7.61	6.49	0.74	0.53
39	2622	2410	8.09	7.74	6.68	1.08	0.33
40	1128	964	14.54	3.47	1.98	1.38	0.64
41	1698	1605	5.48	2.43	2.14	0.86	0.39
42	344	331	3.78	10.76	9.56	0.82	0.64
43	263	243	7.60	5.14	4.33	0.72	0.50
44	217	197	9.22	7.71	5.73	1.01	0.69
45	269	248	7.81	5.88	4.45	1.11	0.75
46	114	106	7.02	25.26	6.98	6.99	0.80
47	2026	1903	6.07	5.64	4.25	1.90	0.78
48	526	496	5.70	3.05	2.41	1.20	0.79
49	36	34	5.56	34.92	32.00	0.56	0.49
50	110	105	4.55	7.45	6.63	0.73	0.52
51	40	39	2.50	5.82	5.31	0.95	0.86
52	169	163	3.55	11.19	10.63	0.41	0.30
53	344	333	3.20	5.67	5.01	0.94	0.52

TRIMMED AND UNTRIMMED DATA, 1986 2
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
54	235	205	12.77	4.12	2.91	1.08	0.54
55	1982	1926	2.83	3.75	3.32	1.54	0.59
56	473	469	0.85	4.66	4.59	0.40	0.38
57	47	44	6.38	5.19	4.16	0.91	0.36
58	887	883	0.45	3.07	3.05	0.35	0.33
59	1147	1132	1.31	5.24	5.10	0.46	0.30
60	4800	4358	9.21	3.71	3.39	0.42	0.27
61	189	168	11.11	2.13	1.60	0.94	0.42
62	2271	2219	2.29	1.43	1.30	0.97	0.42
63	359	301	16.16	11.45	5.53	1.28	0.85
64	507	467	7.89	12.94	9.60	1.18	1.03
65	650	625	3.85	5.55	4.98	0.80	0.66
66	1157	1072	7.35	3.92	3.10	0.99	0.65
67	34	33	2.94	4.79	4.55	0.73	0.71
68	284	273	3.87	8.66	7.56	0.92	0.71
69	1031	966	6.30	4.26	3.60	0.83	0.59
70	4753	4458	6.21	3.93	3.08	1.25	0.65
71	699	659	5.72	3.14	2.60	0.95	0.70
72	1467	1313	10.50	1.98	1.42	1.51	0.46
73	1675	1565	6.57	3.48	2.84	0.95	0.57
74	1225	1150	6.12	2.67	1.83	2.28	0.69
75	331	313	5.44	23.41	19.67	1.12	0.54
76	53	50	5.66	17.72	15.06	0.78	0.55
77	153	150	1.96	14.35	11.55	2.17	0.75
78	472	445	5.72	14.71	12.62	0.79	0.60
79	188	175	6.91	20.16	15.70	1.05	0.82
80	218	203	6.88	15.11	12.03	1.02	0.78
81	47	44	6.38	17.40	11.48	1.52	1.16
82	2068	1997	3.43	12.83	11.15	1.04	0.80
83	30	27	10.00	18.03	8.93	1.73	0.75
84	52	50	3.85	4.60	4.08	0.83	0.68
85	131	125	4.58	15.08	13.13	0.86	0.63
86	123	120	2.44	9.45	8.54	0.98	0.82
87	149	140	6.04	10.82	8.61	1.06	0.69
88	6995	6503	7.03	12.57	9.56	2.80	0.59
89	2886	2710	6.10	19.22	12.27	4.51	0.66
90	1252	1170	6.55	11.85	8.19	4.12	0.60
91	1701	1601	5.88	9.56	6.32	7.87	0.63
92	176	161	8.52	11.78	8.61	1.07	0.62
93	497	461	7.24	8.31	6.38	1.16	0.67
94	114	107	6.14	12.77	10.93	0.76	0.58
95	380	361	5.00	7.53	6.55	0.83	0.65
96	695	657	5.47	11.23	9.08	1.46	0.58
97	2246	2127	5.30	7.42	6.08	1.39	0.65
98	5643	5213	7.62	4.51	3.44	1.29	0.61
99	361	342	5.26	7.73	6.42	1.04	0.74
100	1078	1031	4.36	5.19	4.18	1.44	0.86
101	1712	1608	6.07	12.73	9.17	3.52	0.62
102	1929	1809	6.22	10.40	5.28	12.23	0.67
103	2	2	0.00	34.00	34.00	0.33	0.33
104	2	2	0.00	26.50	26.50	0.67	0.67
105	108	96	11.11	16.93	12.51	0.97	0.46

TRIMMED AND UNTRIMMED DATA, 1986 3
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
106	9	9	0.00	24.89	24.89	0.41	0.41
107	288	272	5.56	13.80	11.79	0.76	0.45
109	172	158	8.14	19.22	15.44	0.90	0.51
110	261	245	6.13	26.56	22.58	0.81	0.62
111	220	205	6.82	18.99	16.80	0.60	0.46
112	292	270	7.53	14.67	11.60	0.98	0.76
113	230	221	3.91	53.25	40.31	2.30	0.68
114	62	60	3.23	25.35	22.83	0.79	0.61
115	27	25	7.41	12.85	11.68	0.47	0.38
116	295	279	5.42	9.75	8.39	0.87	0.55
117	36	35	2.78	6.86	6.51	0.53	0.46
118	5	4	20.00	5.00	3.50	0.73	0.49
119	2722	2585	5.03	4.31	3.62	0.98	0.49
120	280	246	12.14	9.96	4.23	1.90	1.19
121	775	733	5.42	14.72	12.92	0.71	0.49
122	3551	3354	5.55	12.68	11.11	0.93	0.46
123	968	896	7.44	7.91	5.00	2.10	1.02
124	60	52	13.33	5.65	3.27	1.30	1.02
125	1994	1729	13.29	2.71	1.55	1.65	0.41
126	58	58	0.00	23.95	23.95	0.85	0.85
127	3582	3332	6.98	13.66	10.45	1.41	0.65
128	990	947	4.34	12.55	11.12	0.80	0.59
129	465	432	7.10	11.80	7.77	1.61	1.11
130	1299	1199	7.70	14.42	9.49	2.19	0.85
131	1081	983	9.07	9.35	6.19	1.48	0.92
132	1308	1227	6.19	11.23	9.07	1.05	0.68
133	1443	1381	4.30	7.87	6.75	1.01	0.67
134	2055	1949	5.16	7.18	5.92	1.45	0.73
135	383	352	8.09	11.73	9.01	1.01	0.62
136	415	390	6.02	7.78	6.28	1.01	0.74
137	280	267	4.64	7.72	5.94	1.38	0.99
138	1360	1295	4.78	9.58	7.87	1.26	0.69
139	1373	1288	6.19	5.74	4.62	1.02	0.71
140	2914	2711	6.97	7.54	6.28	0.81	0.58
141	661	622	5.90	7.03	5.67	1.04	0.72
142	1081	1047	3.15	4.23	3.73	0.98	0.76
143	4847	4586	5.38	5.01	4.08	2.29	0.68
144	247	235	4.86	12.21	10.61	0.85	0.69
145	526	485	7.79	9.14	6.85	1.12	0.77
146	203	194	4.43	28.94	26.40	0.60	0.47
147	164	154	6.10	23.37	20.72	0.65	0.37
148	660	631	4.39	25.62	22.95	0.78	0.50
149	542	508	6.27	21.08	18.24	0.71	0.54
150	62	59	4.84	18.13	16.47	0.61	0.51
151	139	129	7.19	11.05	9.08	0.83	0.58
152	183	176	3.83	13.60	12.23	0.85	0.77
153	589	557	5.43	7.30	5.46	1.49	1.03
154	425	405	4.71	24.90	21.43	0.93	0.59
155	683	630	7.76	14.72	12.24	0.77	0.55
156	223	202	9.42	14.52	8.93	1.88	0.52
157	234	227	2.99	10.70	9.33	1.10	0.84
158	1610	1529	5.03	5.55	4.64	0.97	0.70

TRIMMED AND UNTRIMMED DATA, 1986 4
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
159	87	79	9.20	15.62	11.76	1.16	0.47
160	279	267	4.30	7.77	6.95	0.72	0.55
161	751	688	8.39	10.83	8.82	0.82	0.41
162	1877	1787	4.79	6.69	6.18	0.49	0.36
163	1193	1102	7.63	2.70	2.08	1.19	0.66
164	39	37	5.13	16.38	15.14	0.56	0.49
165	374	354	5.35	8.21	7.36	0.56	0.36
166	164	157	4.27	12.43	11.26	0.66	0.49
167	6652	6440	3.19	5.82	5.48	0.48	0.31
168	82	77	6.10	9.01	6.79	1.25	0.94
169	590	533	9.66	4.07	2.86	1.13	0.61
170	313	299	4.47	21.25	19.17	0.73	0.58
171	842	784	6.89	8.43	6.21	1.27	0.92
172	1051	999	4.95	14.57	11.66	1.31	0.82
173	662	627	5.29	10.84	8.37	1.33	0.99
174	840	809	3.69	8.66	7.36	1.11	0.77
175	1445	1362	5.74	3.92	3.04	1.37	0.85
176	223	216	3.14	7.01	5.97	1.22	0.97
177	764	729	4.58	8.55	6.88	1.79	0.83
178	2111	1975	6.44	3.83	2.92	1.26	0.92
179	950	894	5.89	8.63	6.38	1.37	0.96
180	236	225	4.66	9.58	8.31	0.88	0.71
181	255	244	4.31	5.89	4.87	1.15	0.80
182	4916	4600	6.43	7.20	5.64	1.14	0.81
183	15038	14312	4.83	3.65	2.93	1.21	0.83
184	8886	8127	8.54	3.79	2.65	1.32	0.67
185	693	641	7.50	5.44	3.56	1.51	0.81
186	691	651	5.79	2.92	2.30	1.15	0.82
187	1764	1673	5.16	1.75	1.51	1.03	0.45
188	698	646	7.45	7.40	4.84	2.25	0.97
189	2395	2159	9.85	2.86	1.83	1.48	0.72
190	1215	1110	8.64	3.80	2.35	1.83	0.74
191	37	35	5.41	24.92	22.26	0.68	0.58
192	58	54	6.90	18.62	15.28	0.86	0.62
193	134	131	2.24	21.77	20.70	0.67	0.62
194	140	138	1.43	15.00	14.27	0.84	0.77
195	15	14	6.67	19.67	17.71	0.50	0.38
196	6	6	0.00	14.67	14.67	0.21	0.21
197	462	430	6.93	20.56	17.77	0.65	0.42
198	2066	1956	5.32	12.07	11.17	0.45	0.30
199	61	58	4.92	24.23	21.66	0.64	0.49
200	66	61	7.58	21.56	16.25	1.05	0.75
201	62	60	3.23	14.39	12.63	1.06	0.95
202	271	250	7.75	14.59	11.16	1.19	0.83
203	407	385	5.41	15.10	11.61	1.54	0.79
204	372	352	5.38	11.64	9.50	1.02	0.64
205	179	170	5.03	14.50	11.79	1.08	0.78
206	527	499	5.31	8.04	6.40	1.17	0.81
207	580	530	8.62	10.93	8.31	1.05	0.61
208	950	922	2.95	6.10	5.49	0.89	0.69
209	1757	1626	7.46	23.29	20.95	0.58	0.24
210	1227	1132	7.74	24.32	19.34	1.01	0.55

TRIMMED AND UNTRIMMED DATA, 1986 5
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
211	465	430	7.53	21.68	16.83	1.02	0.62
212	164	156	4.88	18.38	14.50	1.28	0.82
213	33	31	6.06	27.21	21.42	1.13	0.95
214	47	46	2.13	24.06	23.20	0.59	0.56
215	746	710	4.83	16.32	13.86	1.18	0.49
216	51	46	9.80	11.49	7.78	1.14	0.86
217	225	199	11.56	10.51	5.75	1.53	1.02
218	90	82	8.89	20.97	15.00	1.17	0.80
219	482	447	7.26	12.00	9.16	1.21	0.67
220	108	99	8.33	8.42	6.25	1.08	0.69
221	88	82	6.82	28.86	25.18	0.62	0.45
222	632	550	12.97	8.02	4.99	1.19	0.87
223	49	47	4.08	10.14	9.23	0.70	0.62
224	280	252	10.00	6.51	4.15	1.51	0.61
225	1067	1002	6.09	8.89	7.21	1.00	0.67
226	82	79	3.66	9.39	7.97	1.01	0.71
227	1014	958	5.52	4.27	3.10	1.74	0.76
228	6	6	0.00	1.50	1.50	0.37	0.37
229	1312	1208	7.93	4.07	3.15	1.00	0.66
230	275	242	12.00	9.27	5.61	1.65	0.58
231	2572	2345	8.83	4.18	2.61	1.75	0.68
233	176	156	11.36	25.53	14.62	2.17	0.61
234	1413	1289	8.78	8.93	6.20	1.29	0.71
235	886	841	5.08	18.90	15.06	1.24	1.03
236	1257	1158	7.88	11.77	7.61	1.67	0.99
237	56	56	0.00	17.02	17.02	1.08	1.08
238	324	308	4.94	11.24	9.34	1.01	0.78
239	674	632	6.23	8.42	6.28	1.37	0.97
240	359	333	7.24	17.61	13.67	1.05	0.62
241	925	871	5.84	12.24	9.74	1.19	0.68
242	130	118	9.23	15.18	11.65	0.93	0.70
243	5571	5329	4.34	8.25	7.01	1.16	0.83
244	522	491	5.94	13.58	10.45	1.24	0.68
245	659	620	5.92	7.68	6.10	1.11	0.82
246	217	205	5.53	9.15	7.62	0.95	0.74
247	2564	2346	8.50	5.56	3.74	1.93	0.75
248	553	510	7.78	14.10	4.22	12.81	0.89
249	1559	1384	11.23	2.58	1.21	2.71	0.41
250	584	509	12.84	4.40	2.21	1.77	0.81
251	1753	1478	15.69	2.58	1.38	3.58	0.46
252	2081	1945	6.54	1.66	1.29	1.29	0.43
253	727	667	8.25	9.90	6.36	1.59	1.01
254	2851	2599	8.84	4.69	3.00	1.65	0.84
255	1462	1355	7.32	3.37	2.36	1.50	0.76
256	2044	1835	10.23	5.03	2.99	1.57	0.87
257	165	154	6.67	16.52	14.29	0.66	0.36
258	392	376	4.08	13.52	12.75	0.42	0.33
259	106	100	5.66	10.58	8.88	0.94	0.69
260	209	204	2.39	6.39	5.94	0.84	0.76
261	173	162	6.36	5.34	4.38	0.91	0.67
262	2355	2256	4.20	2.45	2.11	0.92	0.57
263	37	34	8.11	34.54	23.91	1.34	0.91

TRIMMED AND UNTRIMMED DATA, 1986 6
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
264	47	43	8.51	23.30	14.81	1.38	0.98
265	54	51	5.56	12.15	9.47	1.24	1.03
266	1178	1089	7.56	6.00	4.09	1.38	1.06
267	400	381	4.75	8.19	7.21	0.80	0.54
268	684	643	5.99	11.81	9.02	1.23	0.88
269	877	816	6.96	8.11	5.77	1.38	1.10
270	7503	6717	10.48	2.30	1.25	4.05	0.43
271	430	408	5.12	24.57	19.50	1.37	0.85
272	181	172	4.97	16.33	12.72	1.24	0.79
273	506	491	2.96	12.39	10.53	1.56	0.75
274	533	499	6.38	14.27	10.17	1.94	0.83
275	344	330	4.07	9.65	7.76	1.35	1.12
276	376	356	5.32	3.47	2.73	1.26	0.68
277	307	288	6.19	12.22	9.52	1.25	0.75
278	1194	1103	7.62	5.87	4.58	1.01	0.73
279	674	618	8.31	4.47	3.32	1.16	0.65
280	466	435	6.65	6.08	4.42	1.34	0.94
281	1709	1544	9.65	3.02	2.06	1.53	0.68
282	1315	1233	6.24	2.48	1.82	1.41	0.70
283	742	681	8.22	7.98	5.41	1.50	0.85
284	3773	3256	13.70	3.52	1.79	1.72	0.72
285	11	10	9.09	50.55	44.30	0.57	0.48
286	37	35	5.41	19.27	17.26	0.62	0.50
287	1	1	0.00	13.00	13.00	.	.
288	16	16	0.00	10.19	10.19	0.79	0.79
289	25	22	12.00	16.24	12.23	0.78	0.48
290	475	444	6.53	7.68	6.77	0.58	0.39
291	61	61	0.00	4.20	4.20	0.54	0.54
292	19	18	5.26	20.00	17.50	0.89	0.83
293	32	30	6.25	6.13	4.90	1.17	1.13
294	3134	2961	5.52	8.69	6.77	1.34	0.83
295	1127	1094	2.93	6.15	5.19	1.38	0.92
296	495	466	5.86	11.76	8.85	1.59	0.75
297	751	724	3.60	7.56	6.49	1.13	0.79
298	1414	1314	7.07	8.57	5.99	1.44	0.93
299	221	205	7.24	10.93	7.67	1.38	0.97
300	295	273	7.46	14.89	10.68	1.45	0.73
301	927	858	7.44	7.41	5.60	1.12	0.81
302	11	9	18.18	12.18	10.33	0.37	0.19
303	134	128	4.48	23.66	21.21	0.66	0.46
304	113	104	7.96	24.75	18.27	1.16	0.58
305	647	618	4.48	11.92	10.45	0.83	0.67
306	59	56	5.08	16.02	13.64	0.81	0.51
307	38	35	7.89	12.76	9.74	1.03	0.71
308	32	32	0.00	14.03	14.03	0.71	0.71
309	69	68	1.45	14.59	14.04	0.84	0.82
310	292	281	3.77	7.40	6.42	1.00	0.76
311	454	426	6.17	5.51	4.12	1.37	0.75
312	114	105	7.89	8.35	6.24	1.18	0.54
313	174	158	9.20	7.49	5.54	1.01	0.77
314	185	172	7.03	5.34	3.87	1.28	0.97
315	75	74	1.33	17.76	17.01	0.82	0.77

TRIMMED AND UNTRIMMED DATA, 1986 7
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
316	867	806	7.04	13.55	9.82	1.47	0.86
317	29	25	13.79	2.52	1.00	2.48	0.00
318	373	349	6.43	9.73	7.50	1.17	0.95
319	274	243	11.31	6.23	3.17	1.62	0.88
320	890	826	7.19	18.17	8.17	7.88	0.71
321	1624	1523	6.22	4.76	3.76	1.06	0.73
322	1648	1555	5.64	4.27	3.39	1.15	0.75
323	229	219	4.37	6.74	5.78	0.95	0.75
324	1662	1537	7.52	4.36	3.52	0.93	0.61
325	1020	961	5.78	8.19	6.17	1.46	0.84
326	1662	1574	5.29	3.92	3.05	1.26	0.79
327	464	418	9.91	4.85	3.07	1.40	0.80
328	269	245	8.92	6.11	3.87	1.60	0.89
329	268	238	11.19	3.21	2.03	1.40	0.66
330	22	18	18.18	3.91	1.67	1.41	0.62
331	366	337	7.92	8.84	5.88	1.45	0.84
332	894	822	8.05	5.40	3.48	1.52	0.87
333	619	541	12.60	5.02	2.44	3.27	0.75
334	30	29	3.33	26.00	24.45	0.55	0.48
335	220	212	3.64	19.41	18.35	0.48	0.42
336	1196	1113	6.94	13.52	11.63	0.66	0.44
337	824	774	6.07	10.24	9.16	0.55	0.37
338	113	100	11.50	10.37	8.14	0.72	0.41
339	762	707	7.22	5.35	4.29	0.99	0.50
340	2052	1884	8.19	3.49	2.97	0.71	0.55
341	231	225	2.60	8.71	7.78	1.03	0.86
342	442	379	14.25	3.09	2.28	0.88	0.42
343	1386	1305	5.84	1.75	1.51	0.73	0.44
344	24	23	4.17	19.96	18.04	0.72	0.61
345	56	52	7.14	10.04	8.02	1.01	0.87
346	421	404	4.04	12.22	10.27	1.10	0.76
347	186	170	8.60	8.24	6.04	1.08	0.85
348	439	411	6.38	9.31	6.53	2.25	0.81
349	251	234	6.77	4.46	3.51	1.01	0.77
350	619	594	4.04	4.58	3.75	1.19	0.77
351	404	402	0.50	1.06	1.00	1.08	0.00
352	709	660	6.91	3.29	2.47	1.19	0.73
353	42	39	7.14	20.48	16.87	0.82	0.59
354	189	179	5.29	16.90	15.45	0.52	0.40
355	2728	2619	4.00	11.32	10.78	0.35	0.25
356	716	684	4.47	10.11	9.28	0.58	0.40
357	75	70	6.67	15.71	13.51	0.72	0.58
358	1244	1215	2.33	6.53	6.05	0.82	0.69
359	731	667	8.76	3.06	2.63	0.56	0.25
360	1379	1354	1.81	6.03	5.55	1.03	0.89
361	1057	968	8.42	2.70	2.18	0.75	0.33
362	181	136	24.86	2.48	1.98	0.46	0.07
363	335	290	13.43	11.97	7.38	1.14	0.92
364	6186	4969	19.67	2.31	1.73	0.83	0.26
365	315	284	9.84	11.46	8.60	0.93	0.62
366	181	171	5.52	13.43	11.39	0.89	0.74
367	444	391	11.94	9.09	4.26	2.47	0.93

TRIMMED AND UNTRIMMED DATA, 1986 8
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
368	255	243	4.71	4.73	3.81	1.42	0.69
369	1813	1694	6.56	3.34	2.51	1.37	0.71
370	38	34	10.53	12.21	9.65	0.82	0.67
371	5068	4397	13.24	10.96	8.37	0.87	0.41
373	55635	52862	4.98	5.56	4.75	1.77	0.31
385	1222	971	20.54	1.16	0.00	4.08	.
386	84	73	13.10	6.61	1.19	2.71	2.12
387	47	44	6.38	4.43	2.84	1.60	1.26
388	627	586	6.54	3.72	2.30	1.82	1.61
389	784	764	2.55	4.28	3.71	1.28	0.90
390	1580	1513	4.24	4.83	4.21	1.01	0.60
391	57036	50524	11.42	4.73	4.12	0.87	0.32
392	42	39	7.14	25.81	17.23	1.59	0.59
393	13	12	7.69	12.00	9.25	0.86	0.30
394	203	187	7.88	4.96	3.25	1.48	0.88
395	1844	1733	6.02	9.52	7.52	1.16	0.78
396	274	260	5.11	6.66	4.98	1.49	0.88
397	510	477	6.47	6.44	4.53	1.57	0.93
398	130	121	6.92	6.54	4.92	1.19	0.96
399	450	397	11.78	4.30	2.31	1.73	0.82
400	229	216	5.68	16.79	12.66	1.69	0.87
401	95	91	4.21	17.52	15.93	0.73	0.66
402	157	143	8.92	12.65	9.38	1.07	0.92
403	803	752	6.35	12.71	9.17	1.78	0.93
404	1200	1107	7.75	9.03	6.06	1.74	1.04
405	424	372	12.26	6.68	2.72	2.26	0.96
406	28	25	10.71	18.43	14.64	0.71	0.49
407	36	35	2.78	8.42	7.54	1.22	1.18
408	201	182	9.45	6.90	4.34	1.39	1.03
409	232	217	6.47	11.48	9.18	1.03	0.87
410	2398	2104	12.26	3.45	1.97	1.59	0.68
411	76	61	19.74	3.89	1.69	1.54	0.64
412	68	63	7.35	2.06	1.56	1.08	0.44
413	158	151	4.43	14.62	12.58	0.98	0.83
414	155	145	6.45	11.86	7.30	2.69	0.91
415	114	100	12.28	13.94	7.48	1.60	0.88
416	196	181	7.65	19.15	12.78	1.76	0.75
417	126	120	4.76	10.78	9.06	0.88	0.54
418	486	445	8.44	8.08	6.06	1.05	0.78
419	53	49	7.55	11.83	8.84	1.09	0.57
420	92	86	6.52	6.34	5.17	0.97	0.67
421	533	493	7.50	6.59	5.06	1.08	0.66
422	1831	1737	5.13	3.83	3.13	1.14	0.63
423	355	325	8.45	8.89	5.92	1.47	0.88
424	31	27	12.90	39.65	17.15	1.66	1.22
425	481	451	6.24	6.80	5.32	1.17	0.79
426	703	672	4.41	11.92	10.36	0.91	0.77
427	57	53	7.02	11.91	8.94	1.20	0.72
428	156	153	1.92	23.05	21.75	0.96	0.93
429	495	449	9.29	19.51	9.61	2.66	0.88
430	649	587	9.55	18.95	10.68	2.75	0.79
431	185	167	9.73	6.64	3.96	1.69	0.76

TRIMMED AND UNTRIMMED DATA, 1986 9
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
432	82	74	9.76	10.95	7.35	1.19	0.91
433	107	100	6.54	2.60	1.92	1.26	0.76
434	448	398	11.16	2.86	1.64	1.51	0.71
435	576	544	5.56	8.54	7.15	0.94	0.73
439	9	8	11.11	4.33	2.75	1.19	0.80
440	230	200	13.04	5.73	2.77	1.67	0.81
441	79	77	2.53	4.20	3.87	0.89	0.80
442	82	78	4.88	23.84	19.62	1.11	0.96
443	379	340	10.29	8.15	4.75	1.50	1.00
444	336	312	7.14	8.34	5.76	1.50	0.83
445	1500	1400	6.67	3.23	2.38	1.29	0.76
446	972	908	6.58	2.60	1.94	1.23	0.68
447	62	58	6.45	5.24	3.16	2.38	0.81
448	39	35	10.26	2.05	1.60	0.81	0.48
449	481	435	9.56	5.40	3.34	1.45	0.91
450	2255	2071	8.16	2.83	1.96	1.46	0.68
451	2071	1885	8.98	1.84	1.28	1.37	0.44
452	78	68	12.82	10.36	6.10	1.26	0.81
453	394	368	6.60	4.95	3.47	1.46	0.80
454	126	112	11.11	12.33	7.05	1.58	0.95
455	201	181	9.95	5.16	2.74	1.84	0.94
456	107	96	10.28	14.52	9.38	1.26	0.97
457	7	5	28.57	39.14	5.60	1.55	1.45
458	9	9	0.00	33.44	33.44	0.48	0.48
459	187	176	5.88	38.67	31.60	1.09	0.66
460	705	660	6.38	9.91	7.72	1.12	0.83
461	491	437	11.00	4.20	2.35	1.63	0.82
462	201	187	6.97	8.03	6.12	1.09	0.72
463	71	68	4.23	11.35	8.66	1.56	0.73
464	665	621	6.62	6.58	4.84	1.26	0.80
465	28	27	3.57	4.96	3.70	1.46	0.78
466	510	437	14.31	3.55	1.58	2.13	0.70
467	7820	6469	17.28	3.43	1.44	8.34	0.46
468	3960	3651	7.80	12.34	8.07	1.73	0.98
470	521	486	6.72	10.36	7.21	1.87	0.90
471	14	13	7.14	81.36	63.77	0.85	0.37

TRIMMED AND UNTRIMMED DATA, 1987 1
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
1	371	342	7.82	23.63	15.67	1.56	0.63
2	117	105	10.26	14.10	9.33	1.27	0.70
3	187	164	12.30	23.11	13.54	1.37	0.81
4	75	65	13.33	23.59	16.74	0.84	0.42
5	55	51	7.27	22.05	15.69	1.31	0.62
6	284	270	4.93	3.20	2.73	0.86	0.53
7	55	52	5.45	20.67	16.06	1.26	1.00
8	256	229	10.55	8.28	4.90	1.49	0.92
9	99	94	5.05	6.47	5.18	1.20	0.99
10	93	87	6.45	15.76	11.75	1.19	0.90
11	344	305	11.34	10.95	6.32	1.54	1.04
12	1151	1059	7.99	20.05	12.10	2.02	0.81
13	516	483	6.40	14.48	9.86	2.14	0.73
14	3366	3102	7.84	20.89	12.96	2.70	0.86
15	1150	1089	5.30	7.86	6.48	1.05	0.67
16	54	52	3.70	12.20	10.31	0.99	0.64
17	177	168	5.08	12.63	9.94	1.16	0.81
18	179	168	6.15	11.49	8.35	1.35	0.93
19	434	399	8.06	9.46	5.15	2.61	0.87
20	559	524	6.26	11.67	9.25	1.09	0.64
21	445	411	7.64	6.02	4.75	0.98	0.61
22	7	6	14.29	5.86	4.00	0.95	0.71
23	118	112	5.08	4.54	3.71	1.12	0.87
24	570	538	5.61	8.64	6.14	1.85	0.75
25	2399	2258	5.88	4.59	3.63	1.14	0.76
26	2676	2483	7.21	4.06	3.04	1.17	0.67
28	1148	1013	11.76	5.97	2.83	3.40	0.87
29	4333	3758	13.27	2.34	1.37	2.05	0.46
30	5482	5065	7.61	1.83	1.37	2.04	0.44
31	34	29	14.71	4.09	2.24	1.26	0.64
32	115	101	12.17	2.18	1.37	1.49	0.49
33	73	68	6.85	1.78	1.43	0.91	0.41
34	207	192	7.25	15.38	8.13	2.57	0.94
35	732	675	7.79	7.11	4.71	1.69	0.84
36	260	254	2.31	8.69	8.29	0.54	0.47
37	66	61	7.58	7.15	5.95	0.76	0.59
38	153	143	6.54	6.81	5.81	0.74	0.56
39	3050	2866	6.03	6.14	5.38	0.73	0.40
40	1290	1162	9.92	2.76	1.79	1.28	0.68
41	1721	1584	7.96	2.07	1.79	0.65	0.36
42	438	408	6.85	7.84	6.62	0.79	0.54
43	205	201	1.95	4.51	4.30	0.62	0.55
44	199	179	10.05	6.24	4.61	1.05	0.65
45	199	183	8.04	5.83	4.39	1.07	0.75
46	89	83	6.74	7.64	5.08	1.45	0.93
47	1599	1494	6.57	4.93	3.85	1.09	0.73
48	475	442	6.95	3.21	2.33	1.54	0.78
49	35	34	2.86	32.06	30.62	0.58	0.55
50	79	75	5.06	6.13	5.57	0.62	0.53
51	33	30	9.09	4.30	3.27	1.00	0.88
52	181	174	3.87	10.56	10.01	0.41	0.33
53	476	453	4.83	4.79	4.21	0.78	0.47

TRIMMED AND UNTRIMMED DATA, 1987 2
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
54	369	347	5.96	3.44	2.98	0.73	0.50
55	1570	1487	5.29	3.37	2.90	1.11	0.57
56	424	413	2.59	4.17	4.00	0.45	0.39
57	66	61	7.58	4.50	3.61	0.94	0.44
58	915	809	11.58	3.03	2.70	0.41	0.29
59	938	818	12.79	4.64	4.21	0.36	0.27
60	3995	3755	6.01	3.48	3.26	0.39	0.29
61	212	194	8.49	1.97	1.51	1.09	0.43
62	1991	1634	17.93	1.28	1.00	0.92	0.00
63	285	240	15.79	10.94	4.65	1.50	0.94
64	507	478	5.72	13.34	10.55	1.23	1.01
65	511	481	5.87	5.45	4.49	0.98	0.70
66	1057	979	7.38	3.58	2.82	0.97	0.68
67	32	31	3.13	4.31	3.81	0.90	0.71
68	177	165	6.78	13.05	6.81	4.47	0.68
69	826	782	5.33	3.86	3.29	0.89	0.59
70	4581	4453	2.79	3.55	3.06	1.37	0.72
71	697	670	3.87	2.91	2.49	1.01	0.65
72	1272	1154	9.28	1.92	1.38	1.76	0.47
73	1497	1408	5.95	3.30	2.75	0.94	0.57
74	1172	980	16.38	2.39	1.38	1.66	0.47
75	285	271	4.91	20.01	17.34	0.82	0.53
76	58	57	1.72	17.38	16.37	0.86	0.79
77	129	125	3.10	13.61	12.55	0.77	0.69
78	431	406	5.80	17.42	12.27	2.66	0.60
79	195	189	3.08	21.09	16.99	1.42	1.00
80	211	206	2.37	13.26	11.98	1.02	0.91
81	35	32	8.57	17.40	9.41	2.22	0.65
82	1797	1728	3.84	12.28	10.42	1.27	0.83
83	33	31	6.06	11.27	8.71	1.09	0.65
84	52	51	1.92	4.42	4.24	0.65	0.60
85	146	143	2.05	12.13	11.14	0.92	0.71
86	106	99	6.60	10.50	8.63	0.94	0.79
87	126	121	3.97	12.28	9.71	1.43	0.68
88	5773	5383	6.76	11.76	9.33	1.32	0.60
89	2381	2207	7.31	19.91	11.08	6.10	0.65
90	1034	970	6.19	12.06	7.92	6.57	0.60
91	1588	1517	4.47	8.11	6.02	4.56	0.63
92	152	146	3.95	12.08	10.64	0.93	0.70
93	384	363	5.47	8.99	6.17	3.32	0.73
94	131	124	5.34	12.03	10.40	0.83	0.63
95	353	333	5.67	7.39	6.20	0.89	0.61
96	584	559	4.28	10.22	8.63	1.06	0.60
97	2094	2008	4.11	6.78	5.89	0.92	0.66
98	5999	5778	3.68	4.45	3.79	1.18	0.69
99	307	291	5.21	7.51	6.07	1.05	0.75
100	918	880	4.14	4.37	3.65	1.09	0.78
101	1400	1319	5.79	23.58	8.54	10.73	0.61
102	1616	1554	3.84	5.86	5.01	1.06	0.72
104	13	13	0.00	15.54	15.54	0.81	0.81
105	78	73	6.41	17.53	14.66	0.81	0.46
106	13	12	7.69	24.00	21.92	0.43	0.33

TRIMMED AND UNTRIMMED DATA, 1987 3
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
107	259	247	4.63	14.09	12.75	0.61	0.44
109	145	133	8.28	21.55	15.14	1.43	0.56
110	227	214	5.73	23.67	20.83	0.69	0.54
111	187	177	5.35	20.16	17.40	0.85	0.51
112	230	216	6.09	15.04	11.35	1.36	0.76
113	200	191	4.50	42.07	36.26	0.99	0.64
114	51	46	9.80	28.08	20.43	1.05	0.69
115	26	23	11.54	12.88	9.61	0.87	0.64
116	267	247	7.49	8.41	6.52	1.03	0.70
117	28	26	7.14	6.93	5.38	1.02	0.65
118	2	2	0.00	2.50	2.50	0.85	0.85
119	2425	2254	7.05	3.94	3.24	0.90	0.46
120	254	225	11.42	9.77	4.24	2.70	1.34
121	747	699	6.43	15.56	13.37	0.79	0.48
122	3225	3038	5.80	11.60	10.23	0.68	0.44
123	925	850	8.11	7.66	4.95	1.85	1.03
124	56	51	8.93	5.02	3.59	1.12	0.89
125	1683	1398	16.93	2.93	1.61	2.11	0.40
126	44	43	2.27	22.93	21.56	0.86	0.82
127	3141	2930	6.72	12.54	9.81	1.20	0.65
128	909	865	4.84	11.29	9.91	0.83	0.58
129	336	308	8.33	10.22	6.47	1.61	1.05
130	1129	1062	5.93	12.11	9.02	1.35	0.94
131	987	890	9.83	8.67	5.29	1.62	0.97
132	1144	1065	6.91	10.59	8.41	0.99	0.66
133	1275	1242	2.59	7.06	6.42	0.88	0.75
134	1836	1747	4.85	7.10	5.37	2.68	0.76
135	351	334	4.84	10.06	8.46	0.94	0.68
136	304	293	3.62	7.36	6.38	0.98	0.78
137	233	218	6.44	8.82	5.16	2.96	0.96
138	1435	1366	4.81	8.44	7.19	0.93	0.66
139	1297	1230	5.17	5.32	4.40	1.03	0.73
140	2727	2612	4.22	7.31	6.37	0.89	0.61
141	594	561	5.56	6.30	5.05	1.08	0.75
142	924	891	3.57	3.77	3.28	0.97	0.74
143	4655	4412	5.22	4.72	3.96	0.95	0.68
144	238	231	2.94	12.64	10.76	1.43	0.71
145	503	466	7.36	8.94	6.60	1.18	0.79
146	167	160	4.19	27.51	25.34	0.56	0.45
147	179	173	3.35	21.29	19.96	0.54	0.43
148	616	577	6.33	27.14	22.10	1.05	0.53
149	574	534	6.97	20.40	16.60	1.17	0.51
150	65	64	1.54	20.17	19.75	0.39	0.36
151	149	141	5.37	10.16	9.06	0.68	0.56
152	161	154	4.35	14.36	11.41	1.16	0.71
153	616	593	3.73	6.04	4.98	1.24	1.00
154	397	372	6.30	23.68	19.90	0.87	0.58
155	616	562	8.77	13.97	11.39	0.78	0.54
156	226	203	10.18	12.46	7.78	1.56	0.44
157	200	188	6.00	10.39	7.56	1.86	0.88
158	1477	1399	5.28	5.29	4.25	1.14	0.75
159	79	73	7.59	12.03	9.85	0.84	0.59

TRIMMED AND UNTRIMMED DATA, 1987
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
160	309	301	2.59	7.96	6.40	2.67	0.53
161	742	680	8.36	9.20	7.57	0.80	0.44
162	1907	1829	4.09	5.94	5.53	0.51	0.39
163	1137	1099	3.34	2.17	1.91	0.93	0.65
164	32	29	9.38	17.13	15.00	0.55	0.45
165	466	434	6.87	7.18	6.37	0.54	0.33
166	163	153	6.13	10.17	8.65	0.79	0.54
167	6133	5912	3.60	5.27	4.98	0.43	0.31
168	82	77	6.10	8.99	7.14	1.01	0.74
169	607	581	4.28	4.02	3.31	1.13	0.71
170	273	263	3.66	20.46	18.56	0.76	0.64
171	1029	963	6.41	6.89	5.27	1.23	0.84
172	971	922	5.05	16.23	10.13	7.04	0.93
173	623	578	7.22	9.94	6.91	1.44	0.96
174	699	654	6.44	8.20	6.32	1.43	0.74
175	1230	1165	5.28	3.96	2.99	1.52	0.86
176	179	171	4.47	7.54	6.23	1.11	0.91
177	714	678	5.04	7.74	6.42	1.04	0.78
178	1915	1745	8.88	3.37	2.38	1.26	0.86
179	927	876	5.50	7.49	5.86	1.23	0.99
180	211	200	5.21	9.14	7.74	0.90	0.71
181	293	275	6.14	5.58	4.28	1.22	0.70
182	4578	4376	4.41	6.32	5.20	1.20	0.85
183	14205	13150	7.43	3.30	2.43	1.56	0.77
184	8954	8551	4.50	3.61	2.79	1.45	0.78
185	588	541	7.99	4.69	3.08	1.42	0.77
186	636	586	8.15	2.53	1.87	1.07	0.70
187	1619	1530	5.50	1.78	1.54	0.80	0.42
188	635	590	7.09	6.40	4.28	1.56	0.97
189	2152	1964	8.74	2.68	1.74	1.43	0.71
190	1144	1005	12.15	3.76	2.05	2.26	0.63
191	39	31	20.51	37.79	23.55	0.95	0.36
192	64	63	1.56	15.92	15.29	0.73	0.69
193	129	126	2.33	18.98	17.88	0.66	0.58
194	119	114	4.20	14.39	11.99	1.16	0.95
195	13	13	0.00	15.77	15.77	0.27	0.27
196	7	6	14.29	14.86	12.67	0.46	0.31
197	425	403	5.18	17.49	15.91	0.56	0.44
198	1913	1793	6.27	11.36	10.33	0.46	0.30
199	69	65	5.80	22.20	18.15	0.93	0.68
200	54	50	7.41	20.26	14.64	1.23	0.68
201	56	45	19.64	7.13	3.11	1.32	0.65
202	293	272	7.17	12.51	9.52	1.15	0.84
203	366	348	4.92	12.61	10.48	0.99	0.75
204	352	332	5.68	10.84	7.93	2.25	0.65
205	180	163	9.44	13.01	9.40	1.12	0.70
206	456	427	6.36	7.50	5.72	1.23	0.76
207	583	551	5.49	11.51	8.23	3.86	0.62
208	934	906	3.00	5.68	5.03	1.11	0.69
209	1412	1297	8.14	23.26	20.63	0.61	0.25
210	1219	1118	8.29	24.84	17.99	2.38	0.59
211	398	357	10.30	20.51	15.26	0.90	0.52

TRIMMED AND UNTRIMMED DATA, 1987 5
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
212	205	188	8.29	15.55	11.62	1.02	0.56
213	34	31	8.82	22.18	17.94	0.88	0.80
214	38	35	7.89	31.00	25.09	0.84	0.63
215	710	662	6.76	14.25	12.39	0.68	0.50
216	53	49	7.55	10.75	7.45	1.49	0.85
217	246	212	13.82	11.12	4.76	1.80	0.95
218	82	76	7.32	18.02	14.13	0.98	0.71
219	458	432	5.68	11.39	8.67	1.25	0.69
220	98	88	10.20	9.66	6.39	1.19	0.67
221	66	62	6.06	25.53	24.00	0.36	0.30
222	545	450	17.43	7.14	3.28	1.46	0.77
223	48	45	6.25	15.13	9.04	1.81	0.80
224	338	313	7.40	5.27	4.09	1.02	0.58
225	971	918	5.46	8.08	6.67	0.99	0.68
226	75	68	9.33	13.27	8.04	1.49	0.93
227	932	868	6.87	4.23	3.02	1.29	0.77
228	1	1	0.00	1.00	1.00	.	.
229	1228	1108	9.77	3.88	2.76	1.15	0.59
230	237	211	10.97	8.20	4.69	2.93	0.56
231	2120	1963	7.41	3.66	2.48	1.73	0.72
233	132	120	9.09	23.64	15.62	1.45	0.79
234	1114	1013	9.07	8.37	5.68	1.30	0.71
235	761	748	1.71	16.83	13.81	2.20	1.23
236	1145	1093	4.54	10.59	8.37	1.32	0.97
237	43	42	2.33	14.81	13.86	0.98	0.96
238	284	267	5.99	10.16	8.30	1.03	0.88
239	616	579	6.01	9.52	7.17	1.34	0.97
240	362	345	4.70	15.13	12.54	1.07	0.76
241	879	854	2.84	10.90	9.40	1.20	0.76
242	118	107	9.32	14.79	9.65	1.26	0.75
243	4997	4802	3.90	7.44	6.34	1.12	0.89
244	520	503	3.27	10.93	9.70	0.94	0.79
245	612	584	4.58	6.33	5.15	1.16	0.94
246	164	158	3.66	9.48	8.20	0.97	0.75
247	2443	2157	11.71	4.83	3.04	3.24	0.70
248	464	439	5.39	4.63	3.69	1.12	0.81
249	1332	1125	15.54	2.97	1.26	2.18	0.42
250	588	514	12.59	4.20	1.75	3.25	0.68
251	1730	1532	11.45	2.04	1.34	1.39	0.45
252	2054	1958	4.67	1.51	1.27	1.04	0.43
253	628	600	4.46	9.14	6.38	1.89	1.06
254	2524	2333	7.57	4.46	2.97	1.65	0.84
255	1449	1307	9.80	3.27	2.11	1.74	0.67
256	1694	1583	6.55	4.79	3.13	2.51	0.89
257	197	185	6.09	15.00	12.78	0.72	0.38
258	352	331	5.97	12.51	11.47	0.46	0.33
259	126	121	3.97	8.77	7.78	0.81	0.66
260	232	225	3.02	6.44	5.72	1.01	0.89
261	141	136	3.55	4.55	4.13	0.76	0.64
262	2256	2178	3.46	2.14	1.89	0.86	0.60
263	31	27	12.90	31.16	16.30	1.58	0.75
264	35	33	5.71	15.23	12.36	1.15	1.07

TRIMMED AND UNTRIMMED DATA, 1987 6
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
265	41	35	14.63	11.29	5.17	1.48	1.01
266	1219	1082	11.24	4.79	2.63	1.55	0.95
267	323	312	3.41	7.09	6.39	0.78	0.62
268	603	560	7.13	11.91	9.09	1.13	0.83
269	891	840	5.72	7.11	5.21	1.59	1.13
270	6497	5923	8.83	1.93	1.22	2.22	0.42
271	354	335	5.37	20.17	15.99	1.13	0.83
272	163	157	3.68	13.73	12.12	0.91	0.77
273	357	353	1.12	9.89	9.48	0.90	0.85
274	512	490	4.30	15.19	12.10	1.51	0.83
275	255	249	2.35	10.76	9.69	1.06	0.90
276	337	316	6.23	3.20	2.58	1.00	0.73
277	285	269	5.61	9.95	8.28	0.93	0.70
278	1047	984	6.02	5.31	4.23	1.07	0.72
279	542	516	4.80	4.17	3.52	0.99	0.73
280	426	391	8.22	5.40	3.46	2.19	0.90
281	1551	1408	9.22	2.85	2.01	1.18	0.67
282	1323	1144	13.53	2.18	1.36	1.30	0.46
283	597	538	9.88	7.36	4.74	1.29	0.86
284	3072	2791	9.15	3.30	1.98	1.66	0.87
285	5	5	0.00	32.80	32.80	0.62	0.62
286	30	29	3.33	17.43	16.00	0.76	0.59
287	3	2	33.33	48.00	26.00	0.82	0.54
288	14	14	0.00	11.00	11.00	0.74	0.74
289	20	17	15.00	15.40	11.47	0.73	0.46
290	437	396	9.38	7.56	6.33	0.70	0.36
291	50	44	12.00	4.32	3.36	0.72	0.51
292	8	8	0.00	9.88	9.88	0.89	0.89
293	44	37	15.91	6.39	2.03	1.95	0.85
294	2900	2767	4.59	7.35	5.95	1.33	0.89
295	1160	1108	4.48	5.90	4.58	2.14	0.93
296	440	419	4.77	10.72	9.17	0.95	0.74
297	636	600	5.66	8.32	6.34	1.36	0.83
298	1230	1159	5.77	8.70	6.13	2.27	0.92
299	254	223	12.20	13.49	5.28	2.12	1.06
300	295	279	5.42	11.83	9.81	1.00	0.78
301	752	705	6.25	6.80	5.12	1.22	0.86
302	8	8	0.00	11.00	11.00	0.31	0.31
303	104	97	6.73	21.57	19.29	0.54	0.41
304	122	119	2.46	16.62	15.63	0.75	0.69
305	697	674	3.30	9.65	8.48	1.00	0.75
306	58	55	5.17	12.14	10.62	0.76	0.60
307	38	36	5.26	8.84	7.75	0.72	0.56
308	38	36	5.26	10.24	8.83	0.97	0.92
309	52	46	11.54	10.21	7.50	0.89	0.65
310	256	242	5.47	7.14	5.81	1.03	0.72
311	371	343	7.55	5.13	4.02	0.97	0.64
312	87	78	10.34	8.52	6.47	0.85	0.52
313	161	152	5.59	7.21	5.68	1.10	0.69
314	156	128	17.95	4.29	2.21	1.15	0.73
315	88	87	1.14	17.09	16.45	0.96	0.93
316	739	696	5.82	12.85	9.25	1.79	0.92

TRIMMED AND UNTRIMMED DATA, 1987
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
317	13	13	0.00	1.00	1.00	0.00	0.00
318	294	274	6.80	11.64	8.08	1.57	0.93
319	270	244	9.63	6.73	3.93	1.52	0.96
320	825	781	5.33	15.82	8.86	4.73	0.70
321	1361	1289	5.29	8.18	3.56	16.77	0.74
322	1550	1468	5.29	4.54	3.48	1.39	0.80
323	214	203	5.14	6.33	5.35	0.95	0.69
324	1477	1376	6.84	4.13	3.36	0.98	0.63
325	810	767	5.31	7.37	5.18	2.94	0.80
326	1259	1156	8.18	3.54	2.56	1.18	0.72
327	407	373	8.35	4.82	3.50	1.24	0.90
328	256	238	7.03	4.24	2.80	1.55	0.88
329	211	198	6.16	3.40	2.40	1.34	0.72
330	18	15	16.67	3.44	1.27	1.91	0.47
331	384	355	7.55	7.76	5.80	1.13	0.86
332	687	651	5.24	5.21	3.88	1.56	0.86
333	579	496	14.34	4.36	2.14	1.53	0.79
334	30	28	6.67	25.07	22.29	0.54	0.38
335	169	162	4.14	17.16	15.89	0.57	0.47
336	1206	1113	7.71	13.29	11.14	0.76	0.43
337	787	732	6.99	10.25	8.89	0.64	0.38
338	104	96	7.69	11.65	9.77	0.79	0.65
339	685	649	5.26	4.75	4.17	0.71	0.51
340	1933	1893	2.07	2.93	2.77	0.72	0.63
341	209	201	3.83	6.74	5.84	1.02	0.87
342	359	338	5.85	2.77	2.35	0.82	0.57
343	1322	1280	3.18	1.54	1.42	0.62	0.43
344	11	9	18.18	19.82	13.67	0.85	0.58
345	37	34	8.11	9.97	5.85	1.55	0.82
346	393	380	3.31	11.05	9.69	0.98	0.78
347	135	120	11.11	9.88	6.27	1.32	0.85
348	365	338	7.40	7.37	5.40	1.19	0.81
349	242	225	7.02	4.05	3.13	1.04	0.81
350	473	450	4.86	4.25	3.50	1.03	0.77
351	392	389	0.77	1.01	1.00	0.09	0.00
352	742	686	7.55	2.67	2.01	1.12	0.66
353	46	41	10.87	16.98	13.27	0.73	0.42
354	213	198	7.04	15.58	13.07	0.81	0.36
355	2745	2594	5.50	10.75	10.15	0.34	0.23
356	664	639	3.77	9.53	8.89	0.54	0.43
357	64	56	12.50	16.45	12.43	0.81	0.48
358	1217	1195	1.81	6.26	5.91	0.79	0.70
359	806	702	12.90	3.17	2.55	0.63	0.27
360	1276	1238	2.98	5.10	4.49	1.09	0.94
361	984	929	5.59	2.38	2.08	0.65	0.35
362	282	275	2.48	1.86	1.79	0.39	0.33
363	324	279	13.89	11.49	6.72	1.18	0.85
364	6062	5617	7.34	2.06	1.75	0.72	0.34
365	275	263	4.36	9.18	8.14	0.81	0.59
366	208	190	8.65	11.87	7.96	1.33	0.94
367	313	290	7.35	7.30	5.35	1.26	0.96
368	222	205	7.66	4.24	3.13	1.11	0.65

TRIMMED AND UNTRIMMED DATA, 1987 8
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
369	1600	1486	7.13	3.30	2.43	1.26	0.75
392	39	36	7.69	20.38	16.31	0.82	0.50
393	30	25	16.67	12.87	9.64	0.62	0.31
394	168	157	6.55	5.38	3.90	1.29	0.97
395	1672	1594	4.67	8.22	6.77	1.21	0.84
396	286	270	5.59	5.09	3.83	1.36	0.93
397	375	348	7.20	7.35	5.45	1.11	0.77
398	168	160	4.76	9.30	6.67	1.67	1.04
399	439	386	12.07	4.23	2.30	1.59	0.83
400	216	208	3.70	16.25	14.01	1.04	0.85
401	96	92	4.17	15.08	13.41	0.87	0.78
402	157	147	6.37	11.94	8.07	2.17	0.83
403	717	669	6.69	12.13	8.98	1.34	0.91
404	925	851	8.00	8.99	6.03	1.80	0.96
405	464	405	12.72	6.42	2.43	2.08	1.08
406	26	24	7.69	25.88	17.67	1.34	1.10
407	26	25	3.85	13.46	10.88	1.24	0.96
408	163	150	7.98	7.56	4.60	1.89	1.01
409	251	243	3.19	10.39	9.22	1.02	0.90
410	3157	2913	7.73	2.92	1.91	2.72	0.63
411	43	40	6.98	2.53	1.90	1.09	0.76
412	112	104	7.14	1.96	1.43	1.11	0.41
413	118	111	5.93	14.22	11.55	0.99	0.79
414	69	64	7.25	9.13	6.33	1.34	0.92
415	116	106	8.62	13.42	9.39	1.26	0.93
416	201	187	6.97	20.19	11.60	2.72	0.79
417	117	110	5.98	9.91	8.10	0.91	0.54
418	489	461	5.73	7.12	5.69	1.22	0.75
419	42	39	7.14	11.45	9.69	0.81	0.72
420	90	87	3.33	9.02	8.20	0.83	0.73
421	436	410	5.96	6.69	4.96	2.10	0.66
422	1651	1535	7.03	3.37	2.71	0.95	0.59
423	367	352	4.09	7.04	5.73	1.21	0.88
424	18	16	11.11	38.06	12.50	2.41	0.62
425	394	368	6.60	6.57	4.82	1.30	0.80
426	599	578	3.51	12.79	11.40	0.92	0.79
427	53	51	3.77	13.06	11.92	0.85	0.81
428	148	146	1.35	24.57	23.62	0.90	0.88
429	344	319	7.27	23.31	11.64	4.29	0.91
430	528	491	7.01	20.23	12.14	2.95	0.87
431	164	146	10.98	4.57	3.02	1.23	0.65
432	52	50	3.85	5.48	4.60	1.10	0.88
433	74	56	24.32	1.73	1.00	1.10	0.00
434	362	296	18.23	2.56	1.26	1.54	0.46
435	425	405	4.71	7.67	6.35	1.08	0.84
439	17	16	5.88	3.24	2.50	1.01	0.51
440	307	269	12.38	5.86	2.57	3.31	0.87
441	64	58	9.38	5.06	3.31	1.39	0.73
442	55	50	9.09	23.85	15.46	1.30	0.82
443	283	251	11.31	8.92	4.23	1.91	0.98
444	285	269	5.61	7.28	5.13	1.56	0.92
445	1351	1239	8.29	3.30	2.26	1.35	0.76

TRIMMED AND UNTRIMMED DATA, 1987 9
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
446	834	769	7.79	2.66	1.93	1.56	0.71
447	42	38	9.52	4.98	3.47	1.08	0.75
448	25	23	8.00	1.84	1.65	0.54	0.47
449	425	373	12.24	5.93	3.08	1.66	0.92
450	2220	2065	6.98	2.66	1.91	1.33	0.68
451	1847	1700	7.96	1.69	1.28	1.11	0.44
452	98	88	10.20	9.41	6.32	1.15	0.71
453	320	298	6.88	5.04	3.67	1.28	0.75
454	86	82	4.65	11.63	9.40	1.15	0.93
455	127	109	14.17	4.23	1.70	2.12	0.64
456	99	90	9.09	13.63	8.31	1.47	1.08
457	7	5	28.57	22.00	2.80	1.82	0.77
458	12	11	8.33	30.25	16.64	1.63	0.89
459	172	165	4.07	28.70	25.98	0.77	0.68
460	661	630	4.69	9.62	7.86	1.17	0.83
461	538	461	14.31	3.69	1.92	1.55	0.66
462	100	87	13.00	7.84	4.21	2.17	0.63
463	61	58	4.92	9.15	8.22	0.72	0.65
464	627	594	5.26	6.28	4.86	1.50	0.79
465	51	46	9.80	9.20	6.59	1.15	1.07
466	645	595	7.75	5.73	3.58	2.06	1.07
467	7705	6529	15.26	2.69	1.39	2.96	0.46
468	3593	3228	10.16	11.15	6.46	1.69	0.98
470	372	339	8.87	12.65	4.93	7.97	0.87
471	2	2	0.00	54.50	54.50	0.06	0.06

TRIMMED AND UNTRIMMED DATA, 1988
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

1

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
1	358	342	4.47	8.63	7.08	1.14	0.87
2	87	79	9.20	5.56	4.25	0.96	0.82
3	163	149	8.59	6.58	4.60	1.19	0.83
4	50	47	6.00	11.74	8.96	1.20	0.89
5	76	73	3.95	8.39	7.08	1.08	0.90
6	259	240	7.34	9.35	6.49	1.42	0.96
7	42	37	11.90	8.12	3.95	1.71	0.94
8	166	145	12.65	6.14	3.47	1.33	0.85
9	74	70	5.41	6.24	5.09	1.08	0.93
10	137	126	8.03	7.23	4.72	1.86	0.81
11	372	338	9.14	7.31	4.76	1.53	0.90
12	1004	949	5.48	7.33	5.26	1.63	0.90
13	468	443	5.34	7.53	5.73	1.51	0.88
14	3301	3089	6.42	7.61	5.18	2.66	0.83
15	1191	1133	4.87	6.65	5.12	1.33	0.91
16	59	55	6.78	6.63	5.35	1.01	0.89
17	175	164	6.29	7.06	5.27	1.25	0.93
18	222	205	7.66	9.47	5.56	2.78	0.93
19	455	427	6.15	6.54	4.63	1.71	0.94
20	428	401	6.31	5.37	4.11	1.24	0.78
21	334	318	4.79	4.59	3.68	1.16	0.75
22	5	5	0.00	9.40	9.40	0.88	0.88
23	154	148	3.90	5.10	4.25	1.13	0.89
24	512	473	7.62	7.24	4.50	2.27	0.93
25	2212	2034	8.05	7.22	4.30	5.37	0.87
26	2726	2550	6.46	4.84	3.39	1.99	0.87
28	1062	966	9.04	6.35	3.98	1.69	0.93
29	3878	3567	8.02	7.38	3.78	8.02	0.94
30	4562	4112	9.86	5.00	2.86	2.25	0.88
31	36	31	13.89	6.56	2.52	2.50	0.59
32	91	82	9.89	4.41	2.72	1.42	0.93
33	80	76	5.00	3.65	2.78	1.29	0.76
34	184	174	5.43	6.29	5.08	1.10	0.91
35	776	729	6.06	5.66	4.10	1.49	0.89
36	301	272	9.63	5.43	3.64	1.37	0.68
37	87	82	5.75	4.08	3.23	1.08	0.80
38	212	200	5.66	4.79	3.78	1.10	0.74
39	3484	3204	8.04	5.74	3.96	1.82	0.69
40	1371	1282	6.49	4.21	3.05	1.38	0.81
41	1718	1525	11.23	4.36	2.52	1.83	0.71
42	482	454	5.81	5.56	4.31	1.18	0.83
43	221	213	3.62	4.92	3.83	1.61	0.74
44	174	163	6.32	4.92	3.77	1.16	0.75
45	171	162	5.26	4.66	3.78	1.09	0.79
46	85	81	4.71	4.79	3.89	1.10	0.80
47	1409	1310	7.03	5.27	3.54	2.42	0.83
48	554	514	7.22	4.32	3.05	1.32	0.85
49	45	40	11.11	6.58	4.47	1.14	1.04
50	91	86	5.49	5.32	4.44	1.00	0.88
51	45	37	17.78	6.67	3.00	1.32	0.84
52	144	125	13.19	4.35	2.58	1.46	0.73
53	333	308	7.51	5.18	3.68	1.38	0.76

TRIMMED AND UNTRIMMED DATA, 1988 2
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
54	352	324	7.95	5.51	3.01	2.24	0.79
55	1538	1415	8.00	5.46	3.38	2.09	0.84
56	385	347	9.87	6.70	3.54	1.93	0.74
57	62	55	11.29	4.82	3.09	1.16	0.63
58	923	852	7.69	4.76	2.98	1.95	0.74
59	807	729	9.67	6.35	3.99	1.54	0.75
60	3844	3382	12.02	5.12	2.98	1.71	0.66
61	169	154	8.88	5.06	3.47	1.23	0.87
62	2028	1798	11.34	5.59	2.79	2.73	0.89
63	280	264	5.71	7.53	4.77	3.10	0.91
64	457	421	7.88	9.95	7.06	1.24	0.98
65	615	559	9.11	5.63	3.75	1.41	0.79
66	972	900	7.41	5.25	3.64	1.53	0.84
67	43	41	4.65	5.84	4.10	1.48	0.73
68	185	176	4.86	5.99	4.92	1.09	0.85
69	891	816	8.42	5.54	3.45	1.68	0.83
70	4615	4292	7.00	4.92	3.24	2.09	0.88
71	504	473	6.15	4.62	3.30	1.44	0.81
72	1325	1200	9.43	6.59	3.11	7.92	0.82
73	1500	1362	9.20	5.59	3.50	1.51	0.82
74	1169	1073	8.21	5.81	2.97	6.60	0.89
75	315	300	4.76	9.02	7.03	1.29	0.90
76	43	39	9.30	5.93	4.18	1.14	0.78
77	116	113	2.59	7.89	6.97	1.13	0.88
78	395	373	5.57	7.16	5.62	1.19	0.84
79	176	164	6.82	7.23	4.99	1.56	0.87
80	156	150	3.85	7.51	6.60	0.98	0.84
81	34	32	5.88	6.09	4.25	1.40	0.80
82	1879	1732	7.82	8.16	5.67	1.52	0.91
83	19	19	0.00	4.58	4.58	0.93	0.93
84	60	57	5.00	6.38	3.86	2.49	0.72
85	160	149	6.88	6.56	4.95	1.20	0.87
86	106	103	2.83	5.68	5.14	0.98	0.89
87	131	122	6.87	6.66	4.84	1.19	0.75
88	5221	4858	6.95	7.37	5.06	2.24	0.85
89	2226	2098	5.75	8.60	5.75	3.01	0.85
90	930	873	6.13	8.39	4.85	7.16	0.81
91	1653	1555	5.93	5.08	3.59	1.88	0.81
92	139	130	6.47	10.30	6.33	1.83	0.86
93	315	294	6.67	7.26	4.97	1.62	0.95
94	101	95	5.94	6.50	5.05	1.11	0.81
95	331	310	6.34	7.27	4.88	2.28	0.80
96	623	576	7.54	6.48	4.49	1.45	0.88
97	1972	1808	8.32	6.80	4.59	1.66	0.87
98	6132	5723	6.67	4.83	3.35	1.76	0.84
99	299	277	7.36	5.88	4.34	1.17	0.84
100	891	824	7.52	6.19	4.18	1.47	0.89
101	1311	1226	6.48	7.37	4.94	2.00	0.88
102	1468	1379	6.06	5.51	4.01	1.48	0.87
103	2	2	0.00	4.00	4.00	1.06	1.06
104	4	3	25.00	4.75	2.33	1.04	0.49
105	155	148	4.52	8.94	7.30	1.11	0.77

TRIMMED AND UNTRIMMED DATA, 1988 3
FREQUENCY,LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
106	22	22	0.00	7.55	7.55	0.80	0.80
107	584	555	4.97	7.88	6.25	1.14	0.79
109	124	112	9.68	5.87	3.15	1.73	0.96
110	225	213	5.33	9.87	6.93	1.60	0.97
111	168	165	1.79	8.39	7.73	0.97	0.83
112	281	259	7.83	7.94	4.96	1.62	0.97
113	190	168	11.58	10.06	5.00	2.43	0.87
114	71	63	11.27	8.92	6.38	0.99	0.82
115	32	31	3.13	5.59	4.19	1.58	0.96
116	266	254	4.51	7.62	4.26	4.01	0.86
117	21	20	4.76	5.62	4.90	1.04	1.01
118	8	8	0.00	5.38	5.38	0.93	0.93
119	2576	2362	8.31	6.59	4.10	2.97	0.92
120	238	222	6.72	6.25	4.15	1.73	0.85
121	716	675	5.73	6.82	5.28	1.27	0.77
122	3331	3120	6.33	6.61	4.97	1.53	0.76
123	794	750	5.54	6.10	4.62	1.29	0.86
124	57	51	10.53	5.75	3.57	1.30	0.76
125	1507	1366	9.36	8.04	3.78	8.05	0.99
126	37	34	8.11	15.89	5.00	3.56	0.70
127	3012	2794	7.24	7.76	5.15	3.53	0.85
128	820	768	6.34	6.39	4.92	1.18	0.82
129	346	321	7.23	7.29	4.99	1.50	0.84
130	915	868	5.14	6.98	5.04	1.79	0.95
131	745	691	7.25	6.97	4.79	1.78	0.90
132	914	867	5.14	7.32	5.48	1.40	0.90
133	1055	980	7.11	6.76	4.79	1.37	0.87
134	1763	1642	6.86	6.24	4.52	1.37	0.87
135	282	260	7.80	6.92	4.71	1.39	0.82
136	290	268	7.59	7.21	5.13	1.38	0.92
137	390	360	7.69	5.73	3.69	1.57	0.95
138	1332	1237	7.13	7.70	4.68	4.08	0.84
139	1163	1071	7.91	6.35	4.26	1.48	0.86
140	2663	2480	6.87	7.05	4.96	1.53	0.87
141	596	565	5.20	6.58	4.94	1.42	0.90
142	894	841	5.93	5.84	4.32	1.37	0.88
143	4984	4697	5.76	6.46	4.61	1.79	0.88
144	235	215	8.51	8.06	5.20	1.53	0.95
145	449	421	6.24	6.20	4.56	1.38	0.92
146	240	224	6.67	7.56	5.51	1.27	0.84
147	165	151	8.48	7.71	5.71	1.10	0.91
148	618	584	5.50	7.78	6.07	1.22	0.82
149	505	464	8.12	8.43	5.17	2.42	0.87
150	65	62	4.62	8.18	6.61	1.11	0.85
151	148	142	4.05	5.62	4.88	0.95	0.81
152	186	173	6.99	6.63	4.93	1.18	0.79
153	671	617	8.05	6.64	4.38	1.47	0.94
154	410	383	6.59	8.06	6.00	1.37	0.87
155	643	596	7.31	7.66	5.27	1.68	0.79
156	249	239	4.02	4.94	3.87	1.40	0.78
157	230	211	8.26	7.03	4.77	1.43	0.88
158	1292	1190	7.89	8.19	4.43	7.76	0.88

TRIMMED AND UNTRIMMED DATA, 1988 4
FREQUENCY,LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
159	82	74	9.76	8.16	5.41	1.21	0.80
160	294	278	5.44	6.19	4.79	1.24	0.82
161	722	675	6.51	6.39	4.66	1.45	0.83
162	1888	1756	6.99	6.68	4.73	1.49	0.85
163	1098	1026	6.56	4.80	3.37	1.49	0.90
164	29	28	3.45	5.79	5.21	0.94	0.87
165	430	393	8.60	5.49	3.55	1.57	0.73
166	142	133	6.34	5.60	4.05	1.41	0.87
167	5285	4830	8.61	4.95	3.21	2.55	0.74
168	54	50	7.41	7.72	5.82	1.09	0.85
169	314	286	8.92	4.79	3.25	1.24	0.87
170	218	201	7.80	7.00	5.30	1.06	0.82
171	863	808	6.37	5.59	4.15	1.27	0.90
172	1046	957	8.51	7.93	4.76	2.53	0.91
173	627	585	6.70	8.25	5.57	1.71	0.94
174	716	667	6.84	5.91	4.12	1.40	0.87
175	1129	1041	7.79	6.01	3.98	1.55	0.90
176	200	190	5.00	6.86	5.01	1.57	0.97
177	624	583	6.57	7.02	4.92	1.54	0.94
178	1819	1687	7.26	6.86	4.48	2.22	0.95
179	959	881	8.13	7.64	4.68	2.94	0.89
180	226	207	8.41	6.81	4.52	1.36	0.87
181	299	280	6.35	6.03	4.10	1.52	0.85
182	4722	4423	6.33	6.64	4.73	1.77	0.89
183	13727	12665	7.74	6.15	4.04	1.82	0.93
184	8276	7677	7.24	4.99	3.44	1.47	0.86
185	524	466	11.07	6.58	3.96	1.38	0.83
186	582	526	9.62	4.58	2.90	1.47	0.85
187	1333	1201	9.90	4.78	2.84	1.49	0.88
188	596	552	7.38	6.67	4.60	1.49	0.91
189	2303	2124	7.77	6.26	4.18	1.85	0.91
190	943	863	8.48	4.63	2.95	1.74	0.83
191	37	34	8.11	6.81	4.85	1.25	1.11
192	94	89	5.32	8.70	6.60	1.26	0.84
193	154	144	6.49	7.03	5.52	1.07	0.82
194	110	107	2.73	8.28	7.44	1.05	0.92
195	10	10	0.00	4.00	4.00	0.69	0.69
196	7	5	28.57	12.57	5.00	1.06	0.79
197	403	371	7.94	7.78	5.44	1.41	0.85
198	1867	1759	5.78	7.11	5.32	1.35	0.82
199	55	49	10.91	5.25	3.35	1.35	0.83
200	50	45	10.00	6.28	3.89	1.49	0.95
201	47	46	2.13	8.13	7.41	0.97	0.85
202	256	237	7.42	8.15	5.46	1.50	0.87
203	390	358	8.21	9.30	5.97	1.56	0.96
204	349	321	8.02	7.71	4.94	1.74	0.75
205	154	147	4.55	6.86	5.42	1.28	0.95
206	407	382	6.14	5.50	4.08	1.34	0.83
207	517	479	7.35	6.58	4.72	1.33	0.83
208	854	800	6.32	5.81	4.10	1.55	0.88
209	1404	1343	4.34	11.82	9.41	1.28	0.82
210	1035	985	4.83	8.35	6.87	1.12	0.84

TRIMMED AND UNTRIMMED DATA, 1988
FREQUENCY,LENGTH OF STAY AND COEFFICIENT OF VARIATION

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DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
211	377	358	5.04	8.71	7.18	1.06	0.80
212	172	159	7.56	7.08	4.87	1.41	0.86
213	25	23	8.00	7.28	5.30	1.19	0.67
214	36	33	8.33	8.22	5.67	1.29	1.08
215	771	720	6.61	8.79	6.55	1.35	0.89
216	53	46	13.21	5.23	3.09	1.22	0.93
217	262	244	6.87	5.91	4.07	1.51	0.93
218	75	73	2.67	8.76	7.89	1.02	0.92
219	455	424	6.81	8.95	6.30	1.66	0.90
220	102	89	12.75	6.50	3.51	1.50	0.84
221	84	82	2.38	9.88	9.11	0.91	0.82
222	427	413	3.28	8.37	7.30	1.10	0.96
223	42	39	7.14	6.95	5.23	1.18	1.03
224	321	287	10.59	6.79	3.72	2.24	0.90
225	923	816	11.59	7.49	4.45	1.63	0.87
226	66	60	9.09	8.02	5.40	1.20	0.86
227	916	843	7.97	5.84	3.95	1.41	0.94
228	3	3	0.00	28.33	28.33	0.90	0.90
229	1192	1083	9.14	6.47	3.67	2.31	0.95
230	223	211	5.38	7.12	5.47	1.40	1.00
231	1811	1676	7.45	8.84	6.03	2.09	1.00
233	167	153	8.38	8.23	6.08	1.10	0.87
234	1062	986	7.16	8.38	5.99	1.38	0.97
235	590	586	0.68	7.42	7.02	1.25	1.13
236	1048	1018	2.86	6.87	5.94	1.19	0.98
237	45	42	6.67	9.11	5.07	2.42	1.03
238	318	296	6.92	6.07	4.23	1.43	0.86
239	676	604	10.65	8.75	5.24	1.48	0.99
240	315	310	1.59	7.58	6.81	1.20	0.99
241	795	781	1.76	7.53	6.41	1.56	1.08
242	113	103	8.85	7.59	4.71	1.55	0.82
243	4480	4129	7.83	7.21	4.97	1.41	0.90
244	465	447	3.87	9.05	7.23	1.42	0.94
245	615	583	5.20	7.39	5.91	1.19	1.02
246	141	132	6.38	8.09	4.74	2.02	1.00
247	2329	2097	9.96	6.91	4.41	1.37	0.97
248	487	459	5.75	6.94	5.21	1.36	0.97
249	707	659	6.79	6.92	4.86	1.38	1.07
250	569	530	6.85	5.62	3.74	1.78	0.93
251	1318	1209	8.27	5.80	3.69	1.58	0.98
252	1795	1609	10.36	4.94	2.76	1.71	0.90
253	565	544	3.72	7.04	5.51	1.42	0.98
254	2262	2125	6.06	6.81	4.90	1.50	1.00
255	1191	1079	9.40	4.94	2.94	1.68	0.86
256	1679	1595	5.00	6.43	4.47	1.98	1.11
257	171	161	5.85	7.42	5.46	1.45	0.84
258	330	305	7.58	8.72	6.10	1.72	0.75
259	130	121	6.92	7.00	4.38	2.04	0.78
260	240	225	6.25	7.62	4.40	4.11	0.89
261	136	127	6.62	6.10	4.26	1.39	0.88
262	2115	1946	7.99	6.27	3.83	1.88	0.96
263	26	25	3.85	5.04	4.04	1.26	0.97

TRIMMED AND UNTRIMMED DATA, 1988 6
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
264	40	38	5.00	8.38	7.11	0.97	0.83
265	42	38	9.52	6.69	4.74	1.19	0.71
266	1275	1182	7.29	5.59	3.86	1.46	0.97
267	351	320	8.83	6.24	4.26	1.27	0.85
268	500	460	8.00	7.44	5.22	1.26	0.99
269	800	728	9.00	7.05	4.61	1.36	0.92
270	6027	5619	6.77	5.33	3.69	1.46	0.99
271	331	313	5.44	7.27	5.50	1.35	0.91
272	170	162	4.71	7.47	6.13	1.14	0.97
273	415	400	3.61	6.66	5.50	1.25	0.89
274	550	510	7.27	9.10	6.39	1.57	0.85
275	268	250	6.72	9.41	6.80	1.43	0.98
276	260	239	8.08	7.32	4.84	1.50	1.02
277	264	244	7.58	6.72	4.81	1.27	0.84
278	980	909	7.24	6.54	4.20	3.16	0.89
279	500	468	6.40	4.15	2.91	1.54	0.83
280	360	340	5.56	5.53	4.23	1.29	0.90
281	1346	1220	9.36	5.38	3.37	1.47	0.89
282	1243	1140	8.29	4.49	2.82	1.78	0.86
283	517	471	8.90	7.27	4.91	1.26	0.87
284	2642	2452	7.19	6.02	3.95	1.92	0.92
285	6	6	0.00	9.33	9.33	0.75	0.75
286	38	37	2.63	8.05	6.76	1.30	1.01
287	4	4	0.00	5.75	5.75	0.81	0.81
288	12	11	8.33	8.08	6.64	0.80	0.64
289	35	33	5.71	8.74	7.30	0.96	0.83
290	444	406	8.56	7.46	4.85	1.66	0.80
291	34	32	5.88	5.62	4.78	0.89	0.78
292	13	12	7.69	6.62	5.08	0.98	0.70
293	46	43	6.52	8.00	5.16	1.74	0.98
294	2779	2609	6.12	6.40	4.72	1.43	0.87
295	898	822	8.46	5.84	4.22	1.20	0.80
296	446	420	5.83	6.24	4.82	1.18	0.78
297	530	510	3.77	5.68	4.84	1.07	0.87
298	1069	985	7.86	5.14	3.51	1.41	0.86
299	241	225	6.64	6.90	4.35	1.74	0.99
300	258	238	7.75	10.93	5.21	5.05	0.91
301	688	635	7.70	6.52	4.43	1.43	0.93
302	6	6	0.00	9.17	9.17	1.22	1.22
303	142	133	6.34	8.30	6.23	1.24	0.84
304	134	128	4.48	6.43	5.37	1.07	0.83
305	699	673	3.72	6.40	5.42	1.15	0.91
306	76	66	13.16	8.84	4.14	2.17	0.76
307	48	42	12.50	6.60	4.00	1.28	0.80
308	46	45	2.17	6.22	5.36	1.14	0.76
309	59	56	5.08	8.95	6.79	1.36	0.85
310	346	318	8.09	7.28	4.98	1.63	0.81
311	446	419	6.05	6.93	5.31	1.35	0.85
312	117	106	9.40	7.79	5.19	1.26	0.78
313	149	138	7.38	8.79	6.43	1.19	0.85
314	149	137	8.05	4.31	2.78	1.47	0.88
315	82	72	12.20	7.77	4.64	1.28	0.84

TRIMMED AND UNTRIMMED DATA, 1988
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
316	648	603	6.94	8.15	5.80	1.40	0.87
317	7	7	0.00	5.14	5.14	0.65	0.65
318	286	271	5.24	7.94	6.39	1.09	0.85
319	301	279	7.31	5.76	3.99	1.35	0.96
320	765	710	7.19	8.17	5.54	1.53	0.90
321	1280	1192	6.88	6.28	4.36	1.56	0.90
322	1290	1189	7.83	4.85	3.29	1.41	0.88
323	210	190	9.52	6.26	3.94	1.45	0.81
324	1514	1410	6.87	5.75	4.15	1.27	0.87
325	705	651	7.66	6.79	4.72	1.34	0.90
326	1200	1115	7.08	5.95	4.05	1.65	0.91
327	352	315	10.51	6.14	3.25	2.48	0.87
328	249	236	5.22	6.58	5.05	1.32	0.97
329	250	236	5.60	6.18	4.75	1.39	0.92
330	15	15	0.00	3.53	3.53	0.80	0.80
331	340	313	7.94	7.70	5.03	1.61	0.98
332	656	614	6.40	7.64	5.40	1.45	0.94
333	681	614	9.84	5.14	2.98	1.70	0.86
334	20	19	5.00	3.35	3.05	0.76	0.73
335	119	113	5.04	6.91	5.56	1.20	0.86
336	1300	1217	6.38	6.87	5.13	1.31	0.78
337	846	784	7.33	6.99	5.17	1.21	0.77
338	116	109	6.03	7.67	5.66	1.31	0.92
339	766	724	5.48	6.25	4.60	1.44	0.92
340	1810	1651	8.78	5.03	3.20	1.55	0.88
341	223	201	9.87	5.28	3.33	1.38	0.89
342	351	334	4.84	6.50	4.73	1.83	0.95
343	1288	1198	6.99	4.68	3.30	1.40	0.91
344	13	11	15.38	6.38	2.82	1.57	0.44
345	45	38	15.56	4.29	2.13	1.51	0.72
346	405	375	7.41	10.09	5.57	4.16	0.87
347	141	134	4.96	6.82	5.44	1.22	0.94
348	358	327	8.66	5.98	4.12	1.29	0.83
349	240	228	5.00	5.59	4.45	1.41	0.88
350	448	421	6.03	5.52	4.33	1.13	0.88
351	348	309	11.21	5.48	2.89	2.05	1.03
352	640	587	8.28	4.62	3.13	1.43	0.82
353	40	39	2.50	6.25	5.77	0.93	0.87
354	222	206	7.21	6.65	4.67	1.46	0.91
355	2809	2678	4.66	6.24	4.72	2.05	0.86
356	693	655	5.48	5.74	4.20	1.53	0.87
357	57	56	1.75	7.00	5.79	1.49	0.88
358	1257	1189	5.41	5.70	4.45	1.22	0.85
359	592	486	17.91	3.79	2.09	1.22	0.51
360	1276	1213	4.94	6.12	4.33	2.50	0.93
361	1168	1064	8.90	5.87	3.14	4.27	0.92
362	406	366	9.85	5.18	3.34	1.34	0.91
363	316	291	7.91	7.39	5.35	1.17	0.83
364	6248	5773	7.60	5.06	3.47	1.58	0.89
365	266	250	6.02	5.62	4.37	1.16	0.88
366	176	169	3.98	7.82	6.47	1.18	0.98
367	291	272	6.53	9.21	6.74	1.25	0.95

TRIMMED AND UNTRIMMED DATA, 1988 8
FREQUENCY, LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
368	207	196	5.31	5.82	3.82	2.18	0.84
369	1427	1329	6.87	6.00	4.01	1.65	0.92
392	34	34	0.00	9.65	9.65	0.67	0.67
393	18	17	5.56	7.00	6.18	0.79	0.72
394	176	165	6.25	5.84	4.18	1.46	0.90
395	1515	1423	6.07	7.95	4.92	6.55	0.85
396	330	312	5.45	4.51	3.46	1.38	0.85
397	395	363	8.10	5.43	3.61	1.54	0.80
398	151	135	10.60	7.58	4.88	1.25	0.83
399	351	322	8.26	5.56	3.73	1.37	0.85
400	218	206	5.50	6.06	4.67	1.19	0.83
401	70	64	8.57	8.91	5.56	1.42	1.02
402	145	135	6.90	7.76	5.27	1.41	0.94
403	759	701	7.64	7.89	5.71	1.24	0.87
404	965	865	10.36	8.78	5.39	1.45	0.93
405	566	503	11.13	4.92	2.74	1.55	0.92
406	36	33	8.33	8.56	6.64	1.07	1.02
407	30	27	10.00	15.97	4.85	3.21	0.86
408	150	137	8.67	7.32	4.76	1.40	0.95
409	377	350	7.16	8.16	6.07	1.22	0.87
410	3303	3074	6.93	8.22	5.29	2.73	0.99
411	36	34	5.56	5.00	3.79	1.28	1.00
412	168	159	5.36	6.45	4.51	1.73	0.95
413	115	109	5.22	8.15	6.31	1.36	0.88
414	74	68	8.11	6.05	4.47	1.11	0.85
415	107	102	4.67	8.39	6.09	1.54	0.86
416	222	206	7.21	6.73	5.05	1.18	0.90
417	132	126	4.55	4.40	3.45	1.37	0.75
418	408	374	8.33	7.68	4.82	2.26	0.87
419	71	68	4.23	6.94	5.87	0.97	0.75
420	105	101	3.81	4.69	4.03	0.98	0.79
421	429	383	10.72	5.66	3.63	1.42	0.76
422	1669	1529	8.39	4.86	2.97	2.15	0.82
423	366	341	6.83	6.09	4.40	1.51	0.88
424	25	23	8.00	5.64	4.00	1.20	0.90
425	352	325	7.67	5.77	4.10	1.24	0.83
426	582	554	4.81	7.54	5.86	1.35	0.88
427	40	39	2.50	4.77	4.28	0.89	0.69
428	168	159	5.36	7.45	6.04	1.06	0.85
429	328	315	3.96	6.26	4.99	1.36	0.95
430	531	501	5.65	8.10	5.88	1.62	0.85
431	199	184	7.54	4.19	2.93	1.25	0.77
432	53	51	3.77	7.74	5.20	2.21	1.04
433	66	60	9.09	6.17	4.02	1.29	0.80
434	281	272	3.20	6.16	5.14	1.24	0.93
435	394	369	6.35	6.85	5.15	1.25	0.86
439	3	2	33.33	1.33	1.00	0.43	0.00
440	304	271	10.86	5.09	3.03	1.54	0.79
441	66	59	10.61	5.18	3.08	1.47	0.80
442	65	60	7.69	9.66	5.98	1.50	0.86
443	304	273	10.20	6.87	4.10	1.86	0.86
444	235	215	8.51	6.78	4.17	1.79	0.87

TRIMMED AND UNTRIMMED DATA, 1988 9
FREQUENCY,LENGTH OF STAY AND COEFFICIENT OF VARIATION

DIAGNOSIS RELATED GROUP	UNTRIMMED FREQUENCY	TRIMMED FREQUENCY	PERCENT OF OBS. TRIMMED	UNTRIMMED LENGTH OF STAY	TRIMMED LENGTH OF STAY	UNTRIMMED CV	TRIMMED CV
445	1113	1036	6.92	5.74	4.01	1.49	0.91
446	678	619	8.70	5.04	3.08	2.27	0.85
447	33	29	12.12	8.39	3.45	2.65	0.77
448	44	38	13.64	4.95	2.71	1.26	0.80
449	382	357	6.54	6.74	4.54	1.93	0.90
450	2046	1898	7.23	6.61	4.28	2.20	0.95
451	1607	1483	7.72	5.36	3.24	3.63	0.90
452	98	89	9.18	9.03	5.93	1.35	0.86
453	359	340	5.29	6.51	4.99	1.32	0.97
454	55	53	3.64	5.85	4.74	1.19	0.83
455	176	157	10.80	6.19	3.22	1.75	0.91
456	90	85	5.56	5.96	4.49	1.26	0.83
457	2	2	0.00	1.50	1.50	0.47	0.47
458	11	10	9.09	4.36	3.30	1.09	1.02
459	149	142	4.70	7.47	6.26	1.07	0.94
460	521	489	6.14	4.93	3.81	1.17	0.82
461	695	637	8.35	6.53	4.26	1.72	0.88
462	117	110	5.98	15.47	8.53	2.89	0.92
463	67	64	4.48	7.00	5.28	1.43	0.88
464	570	533	6.49	6.21	4.32	1.68	0.87
465	45	41	8.89	7.80	5.10	1.37	0.96
466	927	873	5.83	7.30	5.36	1.56	1.08
467	7269	6606	9.12	5.78	3.27	3.94	0.93
468	3486	3236	7.17	6.75	4.51	1.71	0.91
470	420	394	6.19	6.29	4.55	1.48	0.87
471	5	5	0.00	9.60	9.60	0.72	0.72

APPENDIX 7: *THE DRG COST FINDING PROCESS IN PILOT HOSPITALS*

Figure A7.1 *Definition of Initial and Final Cost Centres from the General Ledger*

Hospital A

A. INITIAL COST CENTRES

SUPPORT SERVICES
Administration
Accounting
Nursing Education
Nursing Administration
Data Processing
Communication
Photocopy
Laundry
Building
Maintenance
Energy
Supplies
Central Sterile Supply
Staff Residence
Staff Lounge
Libraries
Catering
General Patient Related
General Non-Patient Related

GENERAL SERVICES
Admissions
Medical Records
Patient Meals
Physicians
Medical Social Worker
Mortuary

CLINICAL SERVICES (Nursing)
Medical Female
Medical Male
Surgical Female
Surgical Male
Paediatric

CLINICAL SERVICES (Other Wages and Salaries)
Medical Female
Medical Male
Surgical Female
Surgical Male
Paediatric

Figure A7.1 Contd.

Hospital A

A. INITIAL COST CENTRES CONTD.

CLINICAL SERVICES (Others)
Medical Female
Medical Male
Surgical Female
Surgical Male
Paediatric

ANCILLIARY SERVICES
Operating Theatre
Laboratory
Radiology
Pharmacy
ECG
Physiotherapy
Intensive Care Unit
Coronary Care Unit

NON-INPATIENT SERVICES
Accident and Emergency

B. FINAL COST CENTRES

GENERAL SERVICES
Admissions
Medical Records
Patient Meals
Physicians
Medical Social Worker
Mortuary

CLINICAL SERVICES (Nursing)
Medical Female
Medical Male
Surgical Female
Surgical Male
Paediatric

CLINICAL SERVICES (Other Wages and Salaries)
Medical Female
Medical Male
Surgical Female
Surgical Male
Paediatric

Figure A7.1 Contd.

Hospital A

A. INITIAL COST CENTRES CONTD.

CLINICAL SERVICES (Others)
Medical Female
Medical Male
Surgical Female
Surgical Male
Paediatric

ANCILLIARY SERVICES
Operating Theatre
Laboratory
Radiology
Pharmacy
ECG
Physiotherapy
Intensive Care Unit
Coronary Care Unit

Figure A7.2: Statistics for the Allocation of Service Cost to Final Cost Centres

Hospital A

SUPPORT SERVICE	ALLOCATION STATISTIC
Administration	Total Expense
Accounting	Total Expense
Nursing Education	Nursing Staff FTE*
Nursing Administration	Nursing Staff FTE*
Data Processing	Weighted Number of Screens
Communication	Weighted Number of Phones
Photocopying	Service Use
Laundry	Bed-Days
Building	Floor Area
Maintenance	Floor Area
Energy	Floor Area
Supplies	Non-Pay Expenses
Central Sterile Supply	Service Use
Staff Residence	Staff FTE
Staff Lounge	Staff FTE
Libraries	Staff FTE
Catering	Staff FTE
General Patient Related	Bed-days
General Non-Patient Related	Floor Area

*FTE: Full-time Equivalent

Figure A7.3: *Inpatient Fractions for Final Cost Centres*

Hospital C

COST CENTRE	
Kitchen	1.0
Laundry	1.0
Patient Rooms	1.0
Nursing	0.9
Physician	0.8
NCHD*	0.8
Laboratory	0.4
Radiology	0.2
Pharmacy	0.9
Accident and Emergency	0.0

*NCHD: Non-consultant Hospital Doctor

Figure A7.4: *Statistics for the Allocation of Final Cost Centre Cost to Patients in DRGs*

Hospital B

COST CENTRE	ALLOCATION STATISTIC
GENERAL SERVICES	
Admissions	Number of admissions
Medical Records	1 + [LOS/7]
Mortuary	Numbers of Patients Discharged Dead
Patient Meals	Diet-specific days
CLINICAL SERVICES	
Other Wages and Salaries	weighted days
ANCILLARY SERVICES	
Operating Theatre	(or charge weight)x (number of patients)
Laboratory	(lab charge weight)x (number of patients)
Radiology	(radiology charge weight)x (number of patients)
Pharmacy	(drug charge weight)x (number of patients)
Therapy	(therapy charge weight)x (number of patients)
Intensive Care Unit	(ICU day weight)x (number of patients)

Appendix 8 : Average Cost (1984 and 1988) and Cost Weight By DRG for Pilot Hospitals (Ireland)

DRG		Ave.Cost 1984 £	Ave.Cost 1988* £	Cost Weight
004	SPINAL PROCS	2958.00	3573.26	4.626
006	CARPL TUNNEL RLS	289.89	350.19	.453
007	OTH NRV PR A&|CC	5678.00	6859.02	8.880
008	OTH NRV PR ~A,CC	704.00	850.43	1.101
009	SPINAL DIS&INJ	619.12	747.90	.968
010	NRVS NEOPL A&|CC	1866.75	2255.03	2.920
011	NRVS NEOPL ~A,CC	530.18	640.46	.829
012	DEGENR NRVS DIS	1289.27	1557.44	2.016
013	MP SCLER&CRBL AT	1223.30	1477.75	1.913
014	SPEC CRBRVSC DIS	2246.31	2713.55	3.513
015	TRANS ISCHEM ATT	882.64	1066.23	1.380
016	NONSP CBV DIS,CC	911.55	1101.15	1.426
017	NONSP CBC DIS~CC	947.68	1144.80	1.482
018	CRNL&PRPH A&|CC	817.92	988.04	1.279
019	CRNL&PRPH ~A,CC	404.53	488.67	.633
020	NRV INF ~VRL MNG	1145.26	1383.47	1.791
021	VIRAL MENINGITIS	752.44	908.95	1.177
022	HYPRTNS ENCPHLOP	489.00	590.71	.765
023	NONTR STPR&COMA	1205.56	1456.31	1.886
024	SZR&HDACH A&|CC	698.99	844.39	1.093
025	SZR&HD A18-69~CC	363.98	439.69	.569
026	SZR&HD A<17,~CC	250.86	303.04	.392
028	TR ST,CMA<1,A&|C	781.16	943.64	1.222
029	TR ST,CMA<1,A<70	408.81	493.84	.639
030	TR ST,CMA<1,A<18	208.48	251.84	.326
031	CONCSN A>69,&/CC	939.00	1134.31	1.469
032	CONCSN A18-69~CC	291.69	352.36	.456
033	CONCUSSION A<18	264.94	320.05	.414
034	OTH NRV DIS,A&|C	2028.69	2450.66	3.173
035	OTH NRVS DIS,~AC	648.45	783.33	1.014
036	RETINAL PROC	2157.29	2606.01	3.374
037	ORBITAL PROC	1858.00	2244.46	2.906
038	PRIM IRIS PROCS	2159.50	2608.68	3.377
039	LENS PROCS	1438.66	1737.90	2.250
040	XTROC PR A>=18	474.98	573.77	.743
041	XTROC PR A<18	501.13	605.37	.784
042	INTROC PR,~R,I,L	1865.89	2254.00	2.918
043	HYPHEMA	521.36	629.80	.815
044	ACUT MJR EYE INF	792.65	957.53	1.240
045	NEUR EYE DISRDRS	509.50	615.48	.797
046	OTH EYE DS,A>17C	728.36	879.86	1.139
047	OTH EYE DS,A>17~	391.11	472.47	.612
048	OTH EYE DIS,A<18	375.84	454.01	.588
049	MJR HD&NECK PROC	5398.00	6520.78	8.443
050	SIALOADENECTOMY	764.19	923.14	1.195
051	SALV GLND PR~SIA	709.01	856.48	1.109
053	SNS&MAST PR A>17	840.38	1015.18	1.314
054	SNS&MAST PR A<18	628.32	759.01	.983

DRG		Ave.Cost 1984 £	Ave.Cost 1988* £	Cost Weight
055	MISC EAR,NS,THRT	613.42	741.01	.959
056	RHINOPLASTY	541.19	653.76	.846
057	T&A ~TNS,AD A>17	489.13	590.87	.765
058	T&A ~TNS,AD A<18	421.89	509.64	.660
059	TNSECT,ADCT A>17	501.37	605.66	.784
060	TNSECT,ADCT A<18	389.66	470.72	.609
061	MYRINGOTOMY A>17	428.45	517.57	.670
062	MYRINGOTOMY A<18	249.44	301.32	.390
063	OTH E,N,T OR PR,	1049.99	1268.39	1.642
064	ER,NS,THRT MALIG	1223.15	1477.56	1.913
065	DYSEQUILIBRIUM	610.35	737.30	.955
066	EPISTAXIS	368.25	444.85	.576
067	EPIGLOTTIITIS	523.00	631.78	.818
068	OM&URI, A&|CC	604.13	729.79	.945
069	OM&URI,A18-69~C	263.71	318.56	.412
070	OM&URI, A<18	218.89	264.42	.342
071	LARYNGOTRCHEITS	160.25	193.58	.251
072	NSL TR & DEFORM	245.92	297.07	.385
073	OTH E,N,T A>17	312.87	377.95	.489
074	OTH E,N,T A<18	245.88	297.02	.385
077	OR RSP,~MJRCH,~C	1121.01	1354.17	1.753
078	PULMNRY EMBOLISM	1586.80	1916.85	2.482
079	RSP INF&INFL A|C	1951.45	2357.35	3.052
081	RSP INF&INL A<18	1366.47	1650.69	2.137
082	RESP NEOPLASMS	1454.97	1757.61	2.276
083	MJR CHST TR A&|C	2416.00	2918.53	3.779
084	MJR CHST TR A<70	336.34	406.30	.526
085	PLRL EFFUSN A&|C	1517.26	1832.85	2.373
086	PLRL EFFUSN A<70	776.19	937.64	1.214
087	PLM EDEMA&RSP FL	1215.88	1468.79	1.902
088	CHRN PULM OBSTR	1133.35	1369.08	1.773
089	SMPL PNEU&PL A|C	1733.75	2094.38	2.712
090	SMPL PNEU&P A<70	837.34	1011.51	1.310
091	SMPL PNEU&P A<18	454.26	548.75	.710
092	INTRST LUNG A|CC	1249.67	1509.60	1.955
093	INTRST LUNG ~A,C	757.64	915.23	1.185
094	PNEUMOTHRX A|CC	1420.20	1715.61	2.221
095	PNEUMOTHRX ~A,CC	585.99	707.87	.916
096	BRNCH&ASTH A|CC	770.23	930.44	1.205
097	BRNCH&ASTH A<70	484.55	585.34	.758
098	BRNCH&ASTH A<17	256.75	310.15	.402
099	RESP SGN&SY A|CC	506.74	612.15	.793
100	RSP SGN&SY A<70	584.01	705.48	.913
101	OTHR RSP DX A|CC	869.55	1050.41	1.360
102	OTHR RSP DX A<70	601.29	726.36	.940
109	CRDTHR PR,~PUMP	2088.06	2522.38	3.266
111	MJR RCNST VSC<70	3794.00	4583.15	5.934
112	MJR RCNST VSC~AC	1614.45	1950.26	2.525

DRG	Ave.Cost 1984 £	Ave.Cost 1988* £	Cost Weight
113 AMP CRC~UP LIMB	5275.35	6372.62	8.251
114 UP LIMB&TOE AMP	3770.99	4555.36	5.898
119 VEIN LGTN&STRPNG	727.78	879.16	1.138
120 OTHER CRC OR PR	1925.07	2325.49	3.011
121 CRC DIS,AMI&E,CC	2397.47	2896.14	3.750
122 CRC DIS,AMI&CV	1511.31	1825.66	2.364
123 CRC DIS,AMI,XPRD	1549.68	1872.01	2.424
126 ENDOCARDITIS	1831.66	2212.65	2.865
127 HRT FLR&SHOCK	1328.43	1604.75	2.078
128 DP VN THRMBPHLEB	1089.05	1315.58	1.703
129 CARDIAC ARREST	2280.55	2754.91	3.567
130 PRPHL VSC DIS,AC	1240.37	1498.37	1.940
131 PRPHL VSC DIS~AC	1068.70	1290.99	1.671
132 ATHRSCLROSIS,A|C	1032.94	1247.79	1.616
133 ATHRSCLROSIS~A|C	770.63	930.93	1.205
134 HYPERTENSION	624.64	754.57	.977
135 CRDC CNG&VLV,A|C	1140.58	1377.82	1.784
136 CRDC CNG&VV,A<70	665.73	804.20	1.041
137 CRDC CNG&VV,A<18	462.83	559.10	.724
138 ARRHYTH&CNDC,A|C	1054.46	1273.79	1.649
139 ARRHYTH&CNDC~A|C	649.55	784.66	1.016
140 ANGINA PECTORIS	857.72	1036.13	1.341
141 SYNCP&CLLPS,A|CC	538.36	650.34	.842
142 SYNCP&CLLPS,~A|C	397.57	480.27	.622
143 CHEST PAIN	418.46	505.50	.654
144 OTH CIRC DX,CC	1007.30	1216.82	1.575
145 OTH CIRD DX,~CC	504.76	609.75	.789
146 RECTAL RSCTN,A|C	4524.18	5465.21	7.076
147 RECTAL RSCTN~A|C	2623.67	3169.39	4.103
148 MJR BOWEL PR,A|C	4366.39	5274.59	6.829
149 MJR BOWEL PR~A|C	2833.72	3423.14	4.432
150 PRTNL ADHESLS,AC	2891.75	3493.23	4.523
151 PRTNL ADHESLS~AC	1479.13	1786.79	2.313
152 MNR BOWEL PR,A|C	1551.80	1874.58	2.427
153 MNR BOWEL PR~A|C	1179.85	1425.25	1.845
154 STM,ESO,DD PR,AC	3476.22	4199.27	5.437
155 STM,ESO,DD A<70	1640.73	1982.00	2.566
156 STM,ESO,DD A<18	1139.00	1375.91	1.781
157 ANAL PROCS A|CC	1248.75	1508.49	1.953
158 ANAL PROCS ~A|CC	566.16	683.92	.885
159 HRNIA~ING&FEM,AC	1415.85	1710.35	2.214
160 HRN~ING&FEM,A<70	678.43	819.54	1.061
161 ING&FML HRN,A|CC	1070.58	1293.27	1.674
162 ING&FML HRN,A<70	594.28	717.89	.929
163 HERNIA PROC,A<18	268.98	324.92	.421
164 APPNDC,CMP DX,AC	2102.67	2540.02	3.289
165 APPNDC,CMP DX~AC	1269.14	1533.12	1.985
166 APPNDC~CMP DX,AC	1323.42	1598.69	2.070

Appendix 8 : Average Cost (1984 and 1988) and Cost Weight By DRG for Pilot Hospitals (Ireland)

DRG	Ave.Cost 1984 £	Ave.Cost 1988* £	Cost Weight
167 APPNDC~CMP DX~AC	609.98	736.85	.954
168 MOUTH PROCS,A|CC	1397.00	1687.58	2.185
169 MOUTH PROCS~A|CC	583.60	704.98	.913
170 OTH DGSTV PR,A|C	3196.76	3861.68	5.000
171 OTH DGSTV PR~A|C	791.12	955.68	1.237
172 DGSTV MALIG,A|CC	1264.46	1527.47	1.978
173 DGSTV MALIG~A|CC	1078.15	1302.40	1.686
174 GI HMRRHG,A|CC	1086.94	1313.03	1.700
175 GI HMRRHG~A|CC	654.76	790.95	1.024
176 CMPL PEPTIC ULCR	703.09	849.33	1.100
177 UNCMP PTC LCR,AC	628.51	759.24	.983
178 UNCMP PTC LCR~AC	384.29	464.22	.601
179 INFLM BOWEL DIS	924.61	1116.93	1.446
180 GI OBSTRCTN,A|CC	948.33	1145.59	1.483
181 GI OBSTRCTN~A|CC	574.48	693.97	.898
182 MSC DGSTV DIS,AC	614.95	742.85	.962
183 MSC DIG DIS,A<70	338.90	409.39	.530
184 MSC DIG DIS,A<18	267.93	323.66	.419
185 DNTL DIS~XT,A>17	460.86	556.71	.721
186 DNTL DIS~XT,A<18	351.34	424.42	.550
187 DNTL EXTR&RESTOR	115.36	139.35	.180
188 OTH DGSTV DX,A|C	572.33	691.37	.895
189 OTH DGST DX,A<70	262.52	317.12	.411
190 OTH DGST DX,A<18	236.92	286.20	.371
191 MJR PAN,LIV,SHNT	4071.00	4917.77	6.367
192 MIN PAN,LIV,SHNT	3524.00	4256.99	5.512
193 BLRY TR PR~CH,AC	3974.62	4801.34	6.216
194 BLRY TR PR~CH~AC	2221.37	2683.41	3.474
195 TOT CHLST,CDE,AC	3726.00	4501.01	5.828
196 TOT CHLST,CDE~AC	2094.00	2529.55	3.275
197 TOT CHLST~CDE,AC	2027.62	2449.36	3.171
198 TOT CHLST~CDE~AC	1177.14	1421.98	1.841
199 HPTOBL DX PR,MLG	3337.30	4031.45	5.220
200 HPTOBL DX PR~MLG	1893.56	2287.41	2.962
201 OTH HPTBL/PNC PR	3619.00	4371.75	5.660
202 CIRRH&ALC HPTTIS	1124.65	1358.58	1.759
203 HPTOBL|PNC MALIG	1424.16	1720.39	2.227
204 PANC DIS ~MALIG	782.88	945.71	1.224
205 OTH LIVER DIS,AC	1280.31	1546.61	2.002
206 OTH LIVER DIS~AC	550.98	665.58	.862
207 BLRY TR DIS,A|CC	784.45	947.62	1.227
208 BLRY TR DIS~A|CC	448.05	541.25	.701
209 MJR JOINT PROCS,	4205.89	5080.72	6.578
210 HIP&FMUR PR,A|C,	3613.89	4365.58	5.652
211 HIP&FMUR PR,A<70	3135.24	3787.38	4.904
212 HIP&FMUR PR,A<18	2972.88	3591.23	4.650
213 MUSCL&CN TIS AMP	2451.00	2960.81	3.833
215 BACK&NECK PR~A|C	1825.69	2205.43	2.855

DRG		Ave.Cost 1984 £	Ave.Cost 1988* £	Cost Weight
216	MUSCL&CONN BIOPS	2022.75	2443.48	3.164
217	SKIN GRAFT~HAND,	1548.77	1870.91	2.422
218	LWR XTRM PR,A|CC	3171.92	3831.68	4.961
219	LWR XTRM PR,A<70	2053.46	2480.58	3.212
220	LWR XTRM PR,A<18	876.50	1058.81	1.371
221	KNEE PROCS,A|CC	2223.50	2685.99	3.478
222	KNEE PROCS~A|CC	881.84	1065.26	1.379
223	UPR XTRM PR,A|CC	2047.80	2473.74	3.203
224	UPR XTRM PR~A|CC	979.66	1183.42	1.532
225	FOOT PROCS	1088.63	1315.06	1.703
226	SOFT TISS PR,A|C	1296.04	1565.61	2.027
227	SOFT TISS PR~A|C	660.14	797.45	1.032
229	HAND PR~GANGLION	641.08	774.43	1.003
230	RMVL,HIP&FEM DEV	872.65	1054.16	1.365
231	RMVL~HIP&FEM DEV	650.90	786.28	1.018
233	OTH MSCL&CONN,AC	1962.52	2370.72	3.069
234	OTH MSCL&CONN~AC	1010.22	1220.35	1.580
235	FRACTR OF FEMUR	2104.84	2542.64	3.292
236	FRAC OF HIP&PLVS	1289.52	1557.74	2.017
237	SPRN,STRN,DIS HP	1295.95	1565.51	2.027
238	OSTEOMYELITIS	1049.64	1267.96	1.642
239	PATH FR&MSCL MLG	885.16	1069.27	1.384
240	CONN TISS DIS,AC	1460.66	1764.48	2.284
241	CONN TISS DIS~AC	681.18	822.86	1.065
242	SEPTIC ARTHRITIS	1425.46	1721.95	2.229
243	MED BACK PROBS	533.71	644.72	.835
244	BONE DISEASE,A|C	991.57	1197.82	1.551
245	BONE DISEASE~A|C	412.25	498.00	.645
246	ARTHROPATHIES,NS	485.31	586.25	.759
247	SGNS&SYMP,MSCLSK	345.45	417.31	.540
248	TNDNTS,MYSTS,BRS	394.47	476.52	.617
249	AFTERCORE,MSCLSK	251.28	303.55	.393
250	FX,SPR ARM&FT,AC	425.77	514.33	.666
251	FX,SPRN,DIS A<70	337.76	408.01	.528
252	FX,SPRN,DIS A<18	194.01	234.37	.303
253	OTH FX,SPR A|CC	639.33	772.31	1.000
254	OTH FX,SPR A<70	426.62	515.35	.667
255	OTH FX,SPR A<18	347.96	420.34	.544
256	OTH DX,MSCL&CONN	374.60	452.52	.586
257	TOT MAST MLG,A|C	1607.55	1941.92	2.514
258	TOT MAST MLG~A|C	1338.22	1616.57	2.093
259	SUB MAST MLG,A|C	915.76	1106.23	1.432
260	SUB MAST MLG~A|C	453.90	548.32	.710
261	BRST PR~MLG~BIOP	873.05	1054.64	1.365
262	BRST BIOP&EXC~ML	364.19	439.94	.570
264	SKN GRFT,ULCR~CC	1144.00	1381.95	1.789
265	SKN GRFT~ULCR,CC	2772.50	3349.18	4.336
266	SKN GRFT~ULCR~CC	844.10	1019.67	1.320

DRG		Ave.Cost 1984 £	Ave.Cost 1988* £	Cost Weight
267	PRANL&PILONDL PR	617.25	745.63	.965
268	SKN,SUBCT&BR PLS	999.96	1207.95	1.564
269	OTH SKN PR A|CC	896.69	1083.20	1.402
270	OTH SKN PR~A|CC	294.80	356.12	.461
271	SKIN ULCERS	1481.31	1789.42	2.317
272	MJR SKN DIS,A|CC	776.32	937.79	1.214
273	MJR SKN DIS~A|CC	477.17	576.42	.746
274	MLG BRST DIS,A|C	2198.00	2655.18	3.438
275	MLG BRST DIS~A|C	1812.36	2189.33	2.835
276	~MALIG BRST DIS	349.91	422.69	.547
277	CELLULITIS,A|CC	840.24	1015.00	1.314
278	CELLULITIS,A<70	607.76	734.18	.951
279	CELLULITIS,A<18	386.60	467.01	.605
280	SKN,SUBCT TR,AC	434.25	524.57	.679
281	SKN TRMA,A<70	304.08	367.33	.476
282	SKN TRMA,A<18	271.31	327.74	.424
283	MNR SKIN DIS,A|C	840.70	1015.57	1.315
284	MNR SKIN DIS~A|C	308.94	373.20	.483
289	PARATHYROID PROC	1438.00	1737.10	2.249
290	THYROID PROCS	1010.68	1220.90	1.581
291	THYROGLOSSAL PR	467.84	565.14	.732
292	OTH ENDCR,NUT>69	1877.00	2267.42	2.936
293	OTH ENDCR,NUT<70	2666.00	3220.53	4.170
294	DIABETES AGE>35	471.87	570.02	.738
295	DIABETES AGE<36	577.79	697.97	.904
296	MISC MET DIS,A|C	707.38	854.51	1.106
297	MISC MET DS,A<70	575.21	694.85	.900
298	MISC MET DS,A<18	443.83	536.15	.694
299	INBORN MET ERROR	691.98	835.91	1.082
300	ENDCRN DIS,A|CC	603.47	729.00	.944
301	ENDCRN DIS~A|CC	463.98	560.49	.726
303	KID,UR PR NEPLSM	3831.00	4627.85	5.992
304	KID,UR>69~MLG~AC	2494.00	3012.75	3.901
305	KID,UR<70~MLG~AC	1653.03	1996.86	2.585
306	PROSTAT >69&ORCC	2024.00	2444.99	3.166
307	PROSTAT <70W/OCC	1062.00	1282.90	1.661
308	MNR BLDR PR,A|CC	1463.06	1767.38	2.288
309	MNR BLDR PR~A|CC	793.40	958.43	1.241
310	TRNSURETH PR,A|C	816.94	986.87	1.278
311	TRNSURETH PR~A|C	651.68	787.23	1.019
312	URETHRAL PR,A|C,	863.00	1042.50	1.350
313	URETHRAL PR~A|C,	743.00	897.54	1.162
314	URETHRAL PR <18,	1041.00	1257.53	1.628
315	OTH KID&URN PROC	3867.53	4671.97	6.049
316	RENAL FLR~DLYSIS	1641.53	1982.97	2.567
318	KID&UR NEOP,A|CC	1032.72	1247.52	1.615
319	KID&UR NEOP~A|CC	668.79	807.90	1.046
320	KID&UR INF,A|CC	704.91	851.53	1.102

DRG	Ave.Cost 1984 £	Ave.Cost 1988* £	Cost Weight
321 KID&UR INF,A<70	430.21	519.69	.673
322 KID&UR INF,A<18	494.18	596.97	.773
323 URNRY STONES,A|C	566.69	684.56	.886
324 URNRY STONES~A|C	363.49	439.10	.569
325 KID&UR SG&SY,A|C	583.00	704.26	.912
326 KID&UR S&S,A<70	384.73	464.75	.602
327 KID&UR S&S,A<18	410.13	495.43	.641
328 URTHRL STRCT,A|C	493.31	595.92	.772
329 URTHRL STRC,A<70	370.12	447.10	.579
330 URTHRL STRC,A<18	460.00	555.68	.719
331 OTH KID&UR DX,AC	718.68	868.16	1.124
332 OTH KID&UR,A<70	677.14	817.98	1.059
333 OTH KID&UR,A<18	735.45	888.43	1.150
334 MJR PELVIC PR,CC	2942.55	3554.60	4.602
335 MJR PELVIC PR~CC	2078.11	2510.35	3.250
336 TRNSUR PRSTCT,AC	1557.53	1881.49	2.436
337 TRNSUR PRSTCT~AC	1115.17	1347.13	1.744
338 TSTS PR,MLG	1021.00	1233.37	1.597
339 TSTS PR~MLG,A>17	609.00	735.68	.952
340 TSTS PR~MLG,A<18	435.37	525.92	.681
341 PENIS PROCS	1859.73	2246.55	2.909
342 CIRCUMCSION,A>17	439.12	530.46	.687
343 CIRCUMCSION,A<18	240.37	290.37	.376
344 OTH MALE REP MLG	1892.00	2285.54	2.959
345 OTH MALE REP~MLG	779.00	941.03	1.218
346 ML RPRO MLG,A|CC	988.41	1194.00	1.546
347 ML RPRO MLG~A|CC	647.40	782.06	1.013
348 BNGN PRST HYP,AC	622.56	752.05	.974
349 BNGN PRST HYP~AC	393.54	475.40	.616
350 MALE REPRO INFLM	448.72	542.05	.702
352 OTH ML REPRO DX	336.64	406.66	.527
354 NON-RAD HYST,A|C	2149.84	2597.00	3.362
355 NON-RAD HYST~A|C	1001.03	1209.25	1.566
356 FEM RPR RCNST PR	898.28	1085.12	1.405
357 UTRS&ADNEXA,MALG	1757.40	2122.94	2.749
358 UTRS&ADNEXA~MLG	838.54	1012.95	1.311
360 VGNA,CRVX&VLV PR	459.75	555.38	.719
361 LAPSCPY&ENDSC,FE	258.38	312.12	.404
363 D&C,CON,R-I,MALG	418.45	505.48	.654
364 D&C,CONZTN~MALIG	178.04	215.07	.278
365 OTH FEM RPRO PR	1424.13	1720.34	2.227
366 FEM RPRO MLG,A|C	1274.10	1539.12	1.993
367 FEM RPRO MLG~A|C	714.40	863.00	1.117
368 FEM RPRO INFCTNS	468.48	565.92	.733
369 MNSTRL&OTH F RPR	259.55	313.54	.406
371 CESAREAN,~CC	658.00	794.86	1.029
372 VAG DEL,COMPL DX	1021.04	1233.42	1.597
373 VAG DEL~COMPL DX	293.02	353.97	.458

DRG		Ave.Cost 1984 £	Ave.Cost 1988* £	Cost Weight
375	VAG DEL,OR PR	1262.00	1524.50	1.974
376	PSTPRTM DX~OR PR	438.53	529.74	.686
377	PSTPRTM DX,OR PR	220.44	266.29	.345
378	ECTOPIC PRGNANCY	1075.60	1299.33	1.682
379	THRTNED ABORTION	231.43	279.57	.362
380	ABORTION,~D&C	152.87	184.67	.239
381	ABORTION, D&C	303.60	366.75	.475
382	FALSE LABOR	118.61	143.28	.186
383	OTH ANTPRTM DX,C	404.08	488.13	.632
384	OTH ANTP DX~COMP	340.68	411.54	.533
385	NEONTS,DIED|XFRD	911.68	1101.30	1.426
386	NEONTS,XTRM IMMT	5375.00	6493.00	8.407
387	PREMTRTY,MJR PRB	3501.56	4229.88	5.476
388	PREMTRTY~MJR PRB	2274.00	2746.99	3.557
389	FULL TRM NN,PRBS	941.64	1137.50	1.473
390	NEON,OTH SIG PRB	594.18	717.77	.929
391	NORMAL NEWBORNS	233.91	282.57	.366
392	SPLENECTOMY,A>17	5150.00	6221.20	8.055
394	OTH OR PR,BLOOD	682.13	824.02	1.067
395	RED BLD CL,A>17	940.54	1136.17	1.471
396	RED BLD CL,A<18	770.79	931.11	1.206
397	COAGULATION DSRD	791.00	955.52	1.237
398	RTCLEND&IMMN,A|C	1399.60	1690.72	2.189
399	RTCLEND&IMMN~A|C	505.26	610.35	.790
400	LYMPH|LEUK,MJ PR	3814.60	4608.04	5.966
401	LYMPH|LEUK,MN,AC	1562.09	1887.00	2.443
402	LYMPH|LEUK,MN~AC	3077.00	3717.02	4.812
403	LYMPH|LEUK,A|CC	2302.53	2781.45	3.601
404	LYMPH|LEUK,A<70	958.22	1157.53	1.499
405	LYMPH|LEUK,A<18	1200.76	1450.52	1.878
406	MYELO DISRDR&CC	3291.00	3975.53	5.147
408	MYELO DISRDR,CC	1072.99	1296.17	1.678
410	CHEMOTHERAPY	442.24	534.23	.692
411	HIST MALG~ENDSCP	568.50	686.75	.889
412	HIST MALG,ENDSCP	432.33	522.26	.676
413	OTH MYELO DIS,AC	1030.87	1245.29	1.612
414	OTH MYELO DIS~AC	691.42	835.23	1.081
415	OR PR,INF&PAR DS	2625.21	3171.25	4.106
416	SEPTICEMIA,A>17	1913.21	2311.16	2.992
417	SEPTICEMIA,A<18	1248.18	1507.81	1.952
418	PSTOP&PSTTR INFC	712.41	860.59	1.114
419	FEVER UNKNWN,A|C	1160.98	1402.46	1.816
420	FEVER UNKN,A<70	503.09	607.74	.787
421	VIRAL ILLNS,A>17	436.33	527.08	.682
422	VRL ILL,FVR,A<18	292.08	352.84	.457
423	OTH INF&PAR DIS	1248.18	1507.81	1.952
424	OR PR,DX1=MENTAL	642.30	775.89	1.005
425	PSYCHOSOC DYSFNC	796.77	962.50	1.246

DRG		Ave.Cost 1984 £	Ave.Cost 1988* £	Cost Weight
426	DEPRSV NEUROSES	715.23	863.99	1.119
427	NEUROSES~DEPRSV	1480.00	1787.84	2.315
428	PERS DIS&IMP CON	1448.54	1749.83	2.266
429	ORG DISTRB&M RET	1056.62	1276.40	1.653
430	PSYCHOSES	871.90	1053.26	1.364
431	CHILDHD MNTL DIS	334.25	403.77	.523
432	OTH DX=MNTL DSRD	572.70	691.82	.896
434	DRUG DEPENDENCE	288.10	348.02	.451
435	DRUG USE~DEPNDNC	390.82	472.11	.611
440	WOUND DEBRD,INJR	1319.41	1593.85	2.064
441	HAND PROC,INJURY	833.51	1006.88	1.304
442	OTH OR PR,INJ,AC	4508.71	5446.53	7.052
443	OTH OR PR,INJ~AC	1356.72	1638.92	2.122
444	MLTPL TRAUMA,A|C	543.58	656.65	.850
445	MLTPL TRMA,A<70	387.91	468.60	.607
446	MLTPL TRMA,A<18	354.92	428.74	.555
447	ALLRGC READ,A>17	1268.67	1532.55	1.984
448	ALLRGC READ,A<18	191.90	231.82	.300
449	TOX EFF,DRGS,A|C	538.00	649.91	.841
450	TOX EFF,DRG,A<70	503.38	608.08	.787
451	TOX EFF,DRG,A<18	213.83	258.31	.334
452	TRTMT CMPL,A|CC	974.92	1177.71	1.525
453	TRTMT CMPL~A|CC	557.63	673.62	.872
454	OTH INJ,TXC,A|C	445.76	538.48	.697
455	OTH INJ,TXC~A|C	243.38	294.00	.381
459	NON-EXT BRN,DBRD	1710.02	2065.70	2.674
460	NON-EXT BRN~OR P	699.30	844.75	1.094
461	OR PR,DX=OTH CTC	1273.93	1538.91	1.992
462	REHABILITATION	860.94	1040.01	1.347
463	SIGNS&SYMPTMS,CC	502.44	606.95	.786
464	SIGNS&SYMPTMS~CC	391.37	472.77	.612
466	AFTRCR,DX2=MALIG	275.56	332.88	.431
467	OTH HLTH FACTORS	266.12	321.48	.416
468	UNRELATED OR PRO	1790.02	2162.34	2.800
469	INVALID DX1	365.04	440.96	.571
470	UNGROUPABLE	462.37	558.54	.723
				746.49

* PANCE deflator used to specify 1984 costs at the 1988 level