

THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE

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**OPHTHALMIC SERVICES
IN IRELAND**

P. R. KAIM-CAUDLE

Assisted by

KATHLEEN O'DONOGHUE

ANNETTE O'TOOLE

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SUMMARY

(i) *Introduction*

The introduction covers a statement of the objectives of the paper.

(ii) *Ophthalmic Disorders*

A brief account is given of the four ophthalmic disorders—eye diseases, refractive errors, strabismus and colour blindness. The social effects of eye conditions are outlined.

(iii) *Ophthalmic Conditions*

Defective vision affects to a greater or lesser extent 18 per cent of all children above the age of eleven who attend National Schools, a further three per cent suffer from strabismus.

(iv) *Ophthalmic Manpower*

Prior to the Opticians Act, 1956, the most important provisions of which came into force in 1959, anybody, without requiring any formal qualification, could undertake an examination of the eyes and prescribe and sell spectacles. This Act restricts the performance of these tasks to persons who have a statutory qualification.

In 1969, the Register of Ophthalmic Opticians contained 230 names and that of Dispensing Opticians 320. Some 33 ophthalmic consultants take hospital out-patient clinics and 24 take local authority clinics. In addition, 79 ophthalmic medical practitioners are on the Panel of the Department of Social Welfare. In 1969, there were about 12,400 people of all ages for each registered ophthalmic optician and about 9,200 people for each person—registered ophthalmic opticians and medical practitioners—who normally prescribes spectacles.

The first full-time course for ophthalmic opticians was instituted at the College of Technology, Kevin Street in 1959. The course now takes three and a half years, (three years at the College and six months practical training with a registered ophthalmic optician) and commences biennially with a maximum intake of 16 students. The first two years of the course are also taken by student dispensing opticians.

(v) *Organization of Public Ophthalmic Services*

Optical services are provided for persons insured under the Social Welfare Acts. At all ages the proportion of women receiving optical benefit was greater than that of men. Spectacles are supplied free in a Class I frame and on payment of £1.00 in a Class II frame. In the past, the majority of claimants purchased their frames privately.

National School children receive free ophthalmic treatment from their local health authority. About five per cent of all children received spectacles during 1968. Dublin is the main centre for in-patient ophthalmic services. The recommendations of the Report on Child Health Services are outlined.

Some 580,000 adults with full eligibility are entitled to free ophthalmic services. The present system of examination and dispensing spectacles appears to be somewhat complicated and lengthy. No changes in the present system are envisaged for the time being. Some six per cent of eligible persons received spectacles during 1968.

(vi) *Survey of Ophthalmic Opticians*

A survey of all ophthalmic opticians on the Register for 1966/67, with additions up to 1969, was undertaken. Of the 230 ophthalmic opticians on the Register, 57 per cent replied. The majority of the respondents were men in single practices and almost all were on the Panel of the Department of Social Welfare. More than half of the respondents combined their work as an ophthalmic optician with some other occupation. Only a quarter of ophthalmic opticians employed ancillary staff.

(vii) *Ophthalmic Services in Other Countries*

A comparison of ophthalmic services in Ireland with those of Northern Ireland and the United States shows that (1) in each country three groups participate in the provision of the service—ophthalmologists, ophthalmic opticians and dispensing opticians. In Denmark, effectively only two groups provide services—ophthalmologists and opticians. (2) In Northern Ireland and the United States, ophthalmic opticians require a University degree, in Ireland, students follow a three and a half year course

while in Denmark, opticians require no formal qualification but those who examine and prescribe spectacles usually take a four and a half year apprenticeship course. (3) Free or subsidised ophthalmic services are provided for all Northern Ireland and Danish residents and for the majority of the population in the Republic while persons in the United States rely mainly on private services. (4) In Northern Ireland, ophthalmic opticians receive an average remuneration, excluding lenses and frames, of £2.72 for spectacles provided under the General Eye Services—£0.71 less than that received by ophthalmic opticians for a Class II frame in the Republic under the Optical Benefit Scheme. (5) The General Health Services Board in Northern Ireland inspects the premises of contractors and carries out examinations to check if the spectacles dispensed are in agreement with the prescriptions. Such tests are not undertaken in the other three countries. (6) Data on the prevalence of defects show that in the Republic, Northern Ireland and the United States, excluding dental caries, eye disorders are commonest. (7) The proportion of the population who acquired spectacles was higher in the United States (at 13 per cent) than in Northern Ireland and Denmark (at about 10 per cent) and much higher than the estimated figure for the Republic (at 5–6 per cent). (8) The population per ophthalmic optician and ophthalmic medical practitioner was 9,200 in the Republic, 9,000 in Northern Ireland and 8,000 in the United States. (9) The average number of persons examined by an ophthalmic optician was 230 in the Republic, 810 in the United States and 1,090 in Northern Ireland. Information is not available on the dispersion around the means.

(viii) *Ophthalmic Services—Some Issues*

The issues discussed are (1) the education of ophthalmic opticians, (2) the tasks appropriate to ophthalmologists and ophthalmic opticians and (3) charges for the supply of spectacles.

The three and a half year course for student ophthalmic opticians follows closely similar courses in the United Kingdom. It is designed to enable students to attain standards set by the Opticians Board. The premises and the equipment are conducive to the attainment of high academic standards and these are

attained in ophthalmic optics and related subjects. However, the students receive no lectures from ophthalmologists nor do they attend hospital out-patient ophthalmic clinics. Irish ophthalmologists do not desire to participate in the education of opticians as they believe that the limited knowledge of eye diseases which ophthalmic opticians could be expected to acquire is insufficient for recognizing these disorders. This view does not take into account that ophthalmic opticians are permitted by law to perform certain tasks. The education of ophthalmic opticians contains much that is not directly relevant to the practitioner and is geared to a scope of practice more comprehensive than that considered desirable by ophthalmologists.

The desirability of providing courses for ophthalmic opticians is discussed and it is suggested that there is at present no practical alternative to the continuation of these courses.

For dispensing opticians the two year full-time course in Dublin plus three months practical training, is thought to be unreasonably long and to aim at standards too high for the nature of the work. A correspondence course, supplemented by nine fortnightly periods of college tuition, is suggested.

Ophthalmologists and ophthalmic opticians disagree on the work ophthalmic opticians are competent to undertake. The disagreement mainly centres on the ability of opticians to recognize abnormalities. Ophthalmologists have a more comprehensive knowledge of the functions and diseases of the eye and the case for eye-examinations by opticians must therefore rest largely on opticians' ability to render an adequate eye-examination at lower expense. Opticians generally do charge less for eye-examinations, but the higher fee charged by an ophthalmologist is related to a complete diagnosis of the state of the eye. One of the controversies between the two professions is the extent to which this complete diagnosis is necessary and the certainty of opticians recognizing abnormalities. Ophthalmologists do not consider ophthalmic opticians as an independent health service profession, but as one supplementary to medicine which should be practised only under medical supervision, while the ophthalmic opticians consider their practice unduly restricted. The number of ophthalmologists in the State would appear adequate to render all eye-examinations at the present level of demand. Ophthalmology

logists practise from more than 140 private addresses in the State and with few exceptions the geographical pattern of their practices is similar to that of ophthalmic opticians.

If ophthalmic opticians were willing to work at a level of remuneration equal to that of a National School teacher their employment would be in the public interest. If they claim a similar remuneration to that of a medical specialist this, in Irish conditions, would not be the case.

At the 1970 rates of payment to ophthalmic opticians by the Department of Social Welfare it is estimated that a practitioner working full-time, i.e. 30 hours per week for 45 weeks, would attend to 1,350 claimants and have an annual gross income from fees (before payment of rent, rates, etc.) of more than £5,000. This is a theoretical calculation as the number of opticians in relation to the work available is excessive.

The pay structure remunerates eye-examinations—the professional work—at only half the rate paid for dispensing which is more in the nature of a craft. The payment made by local authorities to their optical contractors is comparatively meagre.

Spectacles have important cosmetic and fashion aspects. The willingness of people to incur expense in improving their appearance is the basis of much of the optician's income. The discouragement of price-competition by the prohibition of advertising increases the price the public has to pay for goods with a high fashion element.

The Opticians Act does not provide any machinery for checking the accuracy and quality of the lenses dispensed. The institution of test checks would be desirable and not involve any great expenditure.

It is suggested that the composition of Bord na Radharcmhastóirí should be modified to include more dispensing opticians and some manufacturers and wholesalers. The present election procedure requires review. There appears a strong case for a wider representation of public interest on the Board.

(ix) *The Future of Ophthalmic Services*

The eleven outstanding characteristics of ophthalmic services are summarized on page 59.

The present fee scales paid by the Department of Social Welfare to opticians can only be justified by the very low number of spectacles dispensed. Eye-examination and refraction are considered a professional task while it is suggested that dispensing is a craft requiring some of the flair of a beautician or boutique owner. For this reason advertising and price competition are quite legitimate in the dispensing of spectacles. The provisions required to maintain standards—dispensing only on prescriptions, lenses and frames adhering to the British Standards, appropriate qualification for dispensing and machinery for checking quality of ingredients and adherence to prescriptions—in a competitive environment are outlined. The permission and encouragement of price-competition in dispensing on these terms would be unpopular with opticians, but would lower prices to persons requiring spectacles without endangering the quality of the service.

The following suggestions are made for the extension and recasting of ophthalmic services—

- (1) All children under 14 years and all persons with full and limited eligibility be entitled to an eye-examination, without charge, at public expense.
- (2) That persons with full or limited eligibility be given the choice of attending for eye-examination at the consulting rooms of an ophthalmologist or ophthalmic optician.
- (3) That all children under 14 years have their eyes examined by an ophthalmologist.
- (4) That all lenses and frames dispensed must adhere to the British Standard specifications.
- (5) That advertising and price-competition in the sale of spectacles is permitted and encouraged.
- (6) That children under 14 years and persons with full eligibility receive spectacles free of charge from any optician who places himself on the panel of the Department of Health.

Two additional points also deserve consideration—the extension of the age up to which children are entitled to free spectacles from 14 to possibly 16½ years and the limitation of the

eye-examination of persons over 70 years to ophthalmologists.

These suggestions would abolish the present grant-in-aid of £3.50 towards the cost of spectacles for claimants under the Optical Benefit Scheme. This grant without price-control except for Class I or II frames is considered to support a high cost structure. Price control is considered desirable for spectacles as they have a high fashion content.

The estimated cost for 1970/71 to public funds is £230,000 for the Optical Benefit Scheme, £148,000 for services to persons with full eligibility and £93,000 for National School children—a total of £471,000.

Table 11 gives a detailed analysis of the estimated expenditure on ophthalmic services for 1970/71. This excludes the cost of ophthalmic in-patient treatment and out-patient treatment for eye diseases for all except National School children and persons with full eligibility. Table 12 analyses the cost of ophthalmic services incorporating the changes proposed on the assumption that the demand for services remains at the 1970/71 level. This would leave public expenditure unaltered but increase private expenditure on subsidized services by about £250,000 while expenditure on non-subsidized services would decline by £400,000. Charges for dispensing fees are estimated to decline by about one third. Table 13 estimates the cost which would be incurred on the proposed services if the volume of demand was approximately equal to that of Northern Ireland. For rather involved reasons explained in the text, Table 13 is not strictly comparable with the other two tables, particularly in respect of ophthalmologists' fees. For all three tables full notes are given showing the basis on which the guesstimates have been made.

The object of the proposals is to provide a high quality service for the largest number of persons at a minimum cost.

Finally, the scope and standards of the services of ophthalmic opticians are higher in Ireland than in any European country except the United Kingdom. It cannot be anticipated that any rules made under the Treaty of Rome will set standards for ophthalmic opticians higher than those prevailing in this country at present. It is however, quite possible that they will be lower on account of the long established tradition of ophthalmology in countries such as Germany.

OPHTHALMIC SERVICES

I. INTRODUCTION

This is the third of several papers which will be concerned with various branches of the health services. The object of these papers will be fourfold:

1. To describe the service and attempt an evaluation of its costs and benefits.
2. To compare the service with those of other countries.
3. To ascertain whether changes in the organization of the service might increase the benefit it renders without appreciably increasing costs.
4. To assess the benefits which might be obtained if increased expenditure were to be devoted to the services.

A brief outline of the economic and social environment in which Irish health services operate is contained in "Dental Services in Ireland."¹

II. OPTHALMIC DISORDERS

Ophthalmic services are concerned with the prevention, cure and alleviation of ophthalmic disorders. The economic and social problems involved in providing the services are closely linked with the nature of these disorders. For this reason a brief account is given in this chapter of the four ophthalmic disorders—eye diseases, refractive errors, strabismus and colour blindness.¹

Eye Diseases

Like other parts of the body the eye may be affected by various micro-organisms causing infection. Three examples of such

¹Ai.

¹Bi.

diseases are conjunctivitis (the result of bacteria or viruses getting into the conjunctival sac—the white of the eye and the lining of the lids), trachoma (an inflammation of the upper and lower lids—a disease which thrives in unhygienic conditions, now very rare in Europe) and ophthalmia neonatorum (usually a gonorrhoeal infection at birth—now also rare on account of treatment at birth).

Glaucoma is caused by an increase in intra-ocular pressure which destroys the retina and the optic nerve. It may be caused by a structural defect of the eye (primary glaucoma) or be the result of inflammation or injury (secondary glaucoma). This disease is difficult to recognize and may destroy the peripheral vision without the person affected being aware of this. Surgical and medical treatment is only able to halt the disease, which unless it is diagnosed and treated in its early stages becomes chronic and leads to inevitable blindness.

Glaucoma is one of the most common eye diseases. In 1959, it was estimated to be the cause of 15–20 per cent of all blindness in the United States and to have affected two per cent of the population above the age of 40 years.

Cataract, a haziness of the lens, may be congenital, due to injury and in most cases is a senile condition. It usually affects older people and is precipitated by other illnesses. The only known treatment for senile cataract is surgery. There are in addition many other diseases of the eye but the examples given are sufficient to show the variety of factors which cause disease and the variety of forms which these diseases can take.

Refractive Errors

The human visual system also suffers from disorders of a different type. These are called refractive errors and indicate a disturbance in the focus. When rays of light enter the eye they become bent and focused on the retina chiefly by the cornea but partly by the lens. Near-sighted eyes (myopia) cannot focus on distant objects. This condition takes two forms, the benign form is a refractive error. It is usually low in degree and has its greatest incidence in children, especially between the ages of thirteen and fifteen. Myopia in high degree is a disease. Far-

sighted eyes (hypermetropia) cannot easily focus on near objects and the attempt to do so may result in discomfort.

The cornea and sometimes the lens may be irregularly curved so that the rays of light are also bent irregularly and cannot be sharply focused for either near or distant objects. This is called astigmatism and may occur in an otherwise normal eye (simple astigmatism) or in a myopic or hyperopic one (compound astigmatism).

The power of accommodation is greatest in infancy and decreases with age. This is due to the loss of elasticity of the lens fibres. Around the age of 45 accommodation becomes insufficient for all but short-sighted persons. This condition is called presbyopia. It becomes troublesome when the near point of the eye has receded beyond comfortable reading or working distance.

No preventive measures affecting any of these four defects are as yet known. Nor is it possible to arrest their development after they have set in. Refractive errors can be corrected by wearing glasses which are ground to correct the error. Contact lenses which are now in fairly common use, have similar corrective powers.

Strabismus

Strabismus (colloquially known as squint) occurs when one or more muscles are out of balance. Three distinct conditions should be distinguished. First, one eye turns out while the other fixes on an object (divergent strabismus). Second, one eye turns in while the other eye fixes on an object (cross-eyes or convergent strabismus). Third, one eye crosses or turns out when the other fixes on an object or *vice versa* (alternating strabismus). In this condition the vision in each eye may be satisfactory and only be temporarily suppressed while the other is active. Such cases always require surgical treatment but the other two conditions while usually requiring surgery, occasionally can be remedied by the wearing of glasses and/or orthoptic exercises. Squint in children, as in adults, may also be a manifestation of brain disease such as tumors.

If, due to reasons which may be congenital, developmental or

acquired by disease, one eye does not work in accord with the other eye, this may result in double vision. The child learns to suppress the vision of one eye and if this condition is not treated by the age of six it may be impossible to restore the sight of that eye. An infant's eyes do not co-ordinate for the first six months and frequently cross up to that age, however, the sooner after this age strabismus is diagnosed and treated the greater is the chance of remedying this condition.

Colour Blindness

Colour blindness is another type of ophthalmic disorder. It is an inherent defect, is congenital and handed down through the mother to her male offspring. Amongst females the degree of the disorder is less severe and the prevalence is less frequent. It occurs only when a colour-blind male is wedded to a female "carrier". (The daughters of a male colour-blind parent are carriers). This condition cannot at present be either cured or alleviated, but an individual may be trained to discriminate between intensities of colour, especially if the defect is mild.

Social Effects of Eye Conditions

As far as is known, the prevalence of defects of focusing and co-ordination has not changed over time. The willingness to suffer eye defects is, however, rapidly diminishing. This is largely due to the more wide-spread habit of reading, the increased urbanization, the advent of television and the ever increasing number of people who drive motor cars. All this has led to an increased demand for spectacles. This has further been accentuated by the reduced mortality in early and middle age which makes for an increasing proportion of the population reaching the age when they require spectacles. With increased standards of living, people strive for social reasons as well as for health reasons to have their eyes and those of their children properly corrected.

Ophthalmic services are very similar to dental services, both aim to alleviate pain and discomfort, to remedy defects, to restore faculty by prosthesis and both have important cosmetic effects.

III. OPHTHALMIC CONDITIONS

Children

In Ireland, as in most other countries, information about the ophthalmic condition of children is more readily available than data relating to other age groups. This can be explained by two factors. Vision defects amongst children are very prevalent, easy to discover and can be effectively remedied at relatively low expense. As poor eyesight to a greater or smaller extent reduces the ability to benefit fully from education, this makes it eminently desirable to record vision defects and eye diseases at regular intervals. School children in any case are for all kinds of enquiries a captive population about whom it is fairly easy to gather facts.

In recent years the School Health Service has examined on average about 30 per cent of the children attending National Schools. A return of the defects noted is sent to the Department of Health. These returns for the period 1961-1966 showed that some 16 to 17 per cent of all children were suspected to suffer from visual defects. The Study Group¹ set up by the Minister for Health in 1965 to examine the Child Welfare Clinic Service and the School Health Examination Service evaluated the statistics relating to defects in school children. They found that no valid deduction could be drawn from them on account of the lack of uniformity in the way in which they were compiled and the very broad classification of defects which were used. For vision defects the published statistics in any case show neither the severity of the defect nor the age of the children affected.

To remedy these shortcomings, the Study Group arranged for a special survey which aimed *inter alia* to discover the extent, character and seriousness of defects in National School children.² A more detailed defect classification (based largely on the International Classification of Diseases) than that used in the

¹Ct.

²The survey as regards ophthalmic disorders was based on measuring acuity. This will only ascertain myopes or those with substantial astigmatism but not young hyperopes as these do not usually suffer from poor acuity. As there is a general development from hyperopia through emmetropia into myopia, the nature of the survey did not make it possible to ascertain those who would suffer a loss of acuity in the future.

annual returns, was employed in the expectation that this would reduce the element of subjective decision in assigning defects to particular headings. The survey covered about 10 per cent of National School children in each health authority area (except County Roscommon). It was not based on a properly constructed random sample, but was designed to be reasonably representative of children in county boroughs, in towns with a population of more than 1,500 and in rural areas.

The main findings of the special survey in respect of ophthalmic disorders are shown in Table 1. Three grades of defective vision are distinguished. Grade I, the least severe, covers children who with both eyes can see at six metres distant what a child with normal vision can see at twelve metres or who with either eye can see at six metres what a child with normal vision can see at 18 metres. The notation for this grade is 6/12, 6/18 in either eye. Grade II covers children with a defect of 6/24, 6/36 in either eye and Grade III with a defect of 6/60 or less in either eye.

The least serious Grade I defect was found in 9.5 per cent of all children. The prevalence increased markedly with age; for the five year olds or under it was only 2.5 per cent, for the six year olds 7.7 per cent, while for children above the age of eleven it was 12 per cent. Grade II defects at 3.1 per cent were much less prevalent but showed an even steeper age gradient, 0.5 per cent at five years or under and 4.5 per cent at eleven years or over. Grade III defects were at 0.8 per cent the least prevalent and had the steepest age gradient—0.1 per cent at five years and 1.4 per cent at eleven years and over. At age eleven years or over 17.9 per cent of all children were found to have some vision defect. About a half of all children found to have eye defects by the School Health Survey were referred for specialist treatment.

The School Health Examination Service as well as the special survey covers only National Schools. The age group eleven years and over refers to children aged 11–14 years. Children in private, secondary and vocational schools are not included in the service and data about vision defects in older children are therefore not available. Vision defects amongst National School children with a prevalence rate of 13.4 per cent are the second most frequent group of defects, being exceeded only by “tonsils and adenoids”. The third most common defect is strabismus

TABLE I: School Health Survey—Analysis of Visual Defects 1965/66
Incidence expressed per 1,000 children in each age group

Children in Age Group	No Previous Examination Entrance				Sub Total	With Previous Examination Intermediate		Subtotal up to 10 years	With Previous Examina- tion Leavers	Total All Ages
	5 years or under	6 years	7 years	8 years or over		6 years or under	7-10 years		11 years or over	
Children in Age Group	9,308	4,828	3,335	8,024	25,495	1,049	13,649	14,698	11,587	51,780
Defective Vision:										
Grade 1	25	77	104	117	74	77	113	110	120	95
Grade 2	5	21	31	36	21	30	36	36	45	31
Grade 3	1	6	9	10	6	7	8	8	14	8
Subtotal	31	104	144	163	101	114	157	154	179	134
Other Defects:										
Strabismus					36			36	27	34
Blepharitis					7			9	11	9
Other Diseases					5			7	5	5
Subtotal					48			52	43	48
Grand Total					149			206	222	182

Source: Table II, *The Child Health Services Report*, Stationery Office, Dublin, 1967, (Pr. 171) and letter from the Department of Health, dated June 13, 1969.

Note: Figures may not add up exactly to the totals given because of rounding off.

Glossary: Defective Vision: Grade I. (6/12, 6/18 in either eye). Grade II. (6/24, 6/36 in either eye). Grade III. (6/60 or less in either eye).

Strabismus—A squint, a constant lack of parallelism of the visual axes of the eye.

Blepharitis—Inflammation of the eyelids, especially of the margins of the lids.

Source: *Stedman's Medical Dictionary*, 21st Edition, 1961.

(colloquially known as squint) with a prevalence rate of 3·4 per cent has an inverse age gradient; 2·7 per cent for pupils age eleven years and over. Another relatively common defect is blepharitis—an inflammation of the eye lids—which has a prevalence rate of 0·9 per cent and a slight age gradient. All other eye defects including conjunctivitis and nystagmus are fairly rare.

Defective vision, strabismus or some other eye disorders affect to a greater or lesser, but certainly not to a negligible degree, as many as 22·1 per cent of all children above the age of eleven who attend National Schools.

Children are not tested for colour blindness and the prevalence of this defect is not known. In Northern Ireland, the prevalence of defective vision for Belfast school children is recorded. About 10,000 children were examined in 1967 and 4·8 per cent were found to have some defect in colour vision. The prevalence for boys at 7·8 per cent was much higher than for girls at 1·6 per cent.

The validity of the findings of the Special Survey in respect of vision defects cannot be accepted without reservations as the conditions in which the vision screening takes place may be insufficiently standardized for the results of different schools to be comparable.

Survey of Old People

Very little is known about the eye conditions of adults. In 1965, Dr Corridan carried out a survey³ of 506 people above the age of 65 in the chronic sick wards of St Finbarr's Hospital, Cork, the County Home in Midleton and three cottage hospitals in County Cork. A section of this survey was concerned with the state of eye health of these patients and the ophthalmic services they had received.

Of the 199 men examined, seven per cent were blind, 47 per cent had glasses and 46 per cent were neither blind nor had glasses. Amongst those who had glasses, 15 per cent (14 out of 93) said that their glasses were of no use or had left them at home. The corresponding figures for the 307 women were very similar; six per cent were blind, 45 per cent had glasses (six per cent did not use them) and 48 per cent had no glasses.

³C2.

In order to ascertain how representative of metropolitan Ireland Dr Corridan's findings were we conducted a survey of 264 geriatric patients at St Mary's Hospital, Phoenix Park, Dublin in May 1970. Some 43 per cent of the men and 38 per cent of the women wore spectacles while rather more owned them—47 per cent of the men and 52 per cent of the women. The proportion of men owning spectacles in Cork and Dublin was the same (47 per cent) and the difference for the women was not statistically significant, (45 per cent in Cork and 52 per cent in Dublin). However, the proportion of women in Dublin who had spectacles and did not wear them was significantly higher at 21 per cent than in Cork at six per cent.

In England, well over 90 per cent of elderly men and women own glasses. On these standards many of the elderly in Cork and Dublin hospitals and homes are deprived.⁴

The overwhelming proportion of the patients in these hospitals come from the lowest social groups and they are not representative of all old people in Ireland nor are the ages of these patients typical of the population over 65. The proportion of very old people was large and they are, therefore, also in this respect unrepresentative of old people above the notional retirement age of 65. They are, however, representative of institutionalised old people in this country—a not unappreciable segment of the geriatric population.

IV. OPHTHALMIC MANPOWER

The Legal Position

Registered medical practitioners may treat all ophthalmic disorders and may employ all known methods of treatment—medication, surgery, refraction and orthoptic; they may also

⁴This view is not shared by the sub-committee of the Irish Faculty of Ophthalmology, who commenting on an earlier draft of the Broadsheet on August 17th, 1970, wrote "... that in their opinion the elderly in institutions in Ireland are not deprived of eye aids or eye care, unless by personal neglect in seeking these".

prescribe and provide spectacles.¹ Prior to the Opticians Act, 1956,² the most important provisions of which came into force in 1959, anybody, without requiring any formal qualification, could undertake an examination of the eyes and prescribe, dispense or sell spectacles. Up to that date it was possible to buy spectacles in retail shops and chain-stores in the same way as magnifying lenses and sunglasses can be bought at present.

The Opticians Act changed all this. It set up an Opticians Board (Bord na Radharcmhastóirí) which was empowered to regulate the prescribing, dispensing and sale of spectacles and to control advertising. The Board consists of eleven members. The Minister for Health appoints five, of which four must be medical practitioners. The other six are elected by all registered opticians; five have to be ophthalmic opticians and one a dispensing optician. The Minister appoints the President of the Board from amongst the members and it is now the convention that he is the one lay member appointed by the Minister.

The Board was charged with keeping two registers, one for ophthalmic and one for dispensing opticians. Any person who applies can have his name put on either register if he has undergone the appropriate training and passed such examinations as the Board has prescribed or as are recognized by the Board. Special provisions were contained in the Act to allow persons to register who had practised as opticians prior to the passing of the Act even if they had no formal qualifications. At present, the normal requirement for registration as an ophthalmic optician is the successful completion of the three and a half year full-time post-Leaving Certificate course offered at the College of Technology, Kevin Street. The successful completion of the first two years of this course and three months supervised practice is the requirement for registration as a dispensing optician.

The core of the Opticians Act is the granting of the exclusive right of prescribing, dispensing and selling spectacles to registered

¹Registered medical practitioners may treat eye diseases and prescribe spectacles without having received more advanced training than the sometimes rather elementary instruction included in their basic undergraduate course.

²D.I.

opticians. (The rights of medical practitioners are in no way affected by this legislation). The three main clauses provide that only registered ophthalmic opticians may prescribe spectacles, that only registered opticians may dispense prescriptions of ophthalmic opticians or medical practitioners for spectacles and that only registered opticians may sell spectacles. Another clause restricts the functions of ophthalmic opticians to the prescribing and providing of spectacles and to the giving of orthoptic treatment on the written authorization of a medical practitioner who has examined the patient. The functions of a dispensing optician are restricted to the provision of spectacles.

A registered optician is prohibited from (1) treating any disease of the eye or prescribing or administering any drug for that purpose; (2) prescribing or administering any drug for the purpose or paralyzing the accommodation of the eye; (3) suggesting that he has made or is capable of making a medical diagnosis of a disease of the eye. An ophthalmic optician may examine the eye to determine how well each eye sees and which errors of focus may be present. He also may ascertain the precise optical lens which when placed before the eye will neutralize the error. The Opticians Act does not in any other way limit the procedure he may use in such tests. Ophthalmic opticians, therefore, may apply subjective procedures such as an acuity test, which depends on communication, or objective procedures where the reaction of the eye is observed with the help of instruments.

Ophthalmic opticians may use drugs for dilating the pupil of the eye, for example in fundus photography or for local anaesthetic in the fitting of contact lenses. The Opticians Act makes no reference to an ophthalmic optician having the competence and duty to ascertain whether a person consulting him suffers from a disease of the eye or a general disease with symptoms similar to those of visual defects. It must, however, be inferred from the other provisions of the Act that an ophthalmic optician should be able to discover disease without being necessarily competent to diagnose the nature of the disease. As an ophthalmic optician is considered competent to prescribe spectacles it is a necessary corollary that he must also be competent in knowing when not to

prescribe.³ Whenever he ascertains or suspects disease he is under a duty to refer the patient to a medical practitioner.

The Opticians Act clearly prohibits the ophthalmic optician from treating any, even minor, diseases. He may not administer or recommend medicines which can be bought without prescription at a pharmacy and are of the kind which a parent might give his child or a public health nurse to an old lady she visits.

Several other facets of ophthalmic services are not subject to any regulations. There is no restriction on testing visual acuity. The Child Health Services Study Group considered that the existence of a visual acuity defect could be competently ascertained by a public health or school nurse, without requiring initial diagnosis by a doctor.⁴ Orthoptists who are concerned with vision training are also not subject to any regulations, though orthoptic treatment by ophthalmic opticians is only permitted on a doctor's written authorization. There are only four or five orthoptists working in the State, all but one are employed in hospitals. For the repair of spectacle frames no special qualification or registration is required and the same applies to the manufacture of spectacles to be dispensed by registered opticians.

Numbers

The Register of Ophthalmic Opticians in 1966/67 with additions to March, 1969, contained 230 names and that of

³This is the only possible inference which can be drawn from the provisions of the Opticians Act, 1956. However, the very core of this Act is not accepted by Irish ophthalmologists as being in the public interest. This is expressed quite unequivocally by the sub-committee of the Irish Faculty of Ophthalmology commenting on a draft of this Broadsheet on 17th August, 1970:— "The Faculty considers the ophthalmic optician is not trained to recognize eye diseases, much less general disease as manifested in the eyes. It regards as simpler and more practical to teach a nurse or other assistant to fit frames under supervision rather than to attempt to scratch the surface of ophthalmic pathology for a person whose business is the physical manipulation of light . . ." The Faculty is of the opinion that "an inexperienced examination is probably worse than none at all, since while public suspicions are lulled, there is the certainty that a proportion of abnormalities will be missed."

⁴Such an examination, however, may not discover hyperopes who may later develop a squint.

Dispensing Opticians 320.⁵ This was an increase of 22 ophthalmic opticians and a decrease of 118 dispensing opticians since 1959 when the Register was set up. To have their names retained on the Register ophthalmic opticians have to pay an annual fee of £10.00 and dispensing opticians a fee of £7.00. The number of opticians of either grade who practise full-time is not known, but it is known that there is a considerable overlap between the two Registers of opticians and the Register of pharmacists. In the year under review, the names of 63 per cent of all dispensing opticians and 35 per cent of all ophthalmic opticians also appeared on the Pharmaceutical Register.

The proportion of women amongst registered ophthalmic opticians increased from 12 to 15 per cent between 1959 and 1967. It was not very different from that of dentists or medical practitioners (14 per cent) but decidedly lower than that of pharmacists (35 per cent).

No information is available about the age distribution of ophthalmic opticians. It is not possible to estimate the age on the basis of the date on which an ophthalmic optician gained his qualification. Most of the qualifications were awarded to part-time students who need not have taken the examination at any particular age. Thirty-six ophthalmic opticians were registered without having any formal qualification, as on the establishment day they had earned, for at least seven years, their principal livelihood as ophthalmic opticians. Another six who had been practising as ophthalmic opticians for at least five years, took a special examination to qualify for registration.

Virtually all dispensing opticians who were practising at the time the Opticians Bill passed through the Houses of the Oireachtas (Parliament) had no formal qualification at all, but most of them were accepted on the Register of Dispensing Opticians in accordance with Section 35 of the Act. This provided *inter alia* for the registration of all those (1) who had been on the panel of opticians maintained by the Minister for Social Welfare, (2) whose principal means of livelihood for the previous seven years had been that of dispensing optician or (3) who passed an examination held by the Board and had been engaged full-time or part-time for the previous five years in the dispensing

⁵D2.

of spectacles. The great majority of those placed on the Dispensing Register availed themselves of the opportunity of becoming members of the newly formed Irish Association of Dispensing Opticians by taking a screening test conducted on two days in 1956 and 1957. This test was conducted by a panel of ophthalmologists nominated by the Irish Faculty of Ophthalmology and by two examiners of the Association of Dispensing Opticians in Great Britain.

In 1968, the Irish Faculty of Ophthalmology⁶ had 54 members who were resident in the State, including almost all ophthalmologists attached to teaching hospitals. However, not all medical practitioners who practise in some field of ophthalmology are members of the Faculty.

Seventy-nine medical practitioners are on the panel of the Department of Social Welfare and are entitled to prescribe spectacles under the Department's Treatment Benefit Scheme. These practitioners need not have any specialist ophthalmic qualifications, but some of them take also hospital and local authority clinics.

There are at present about 12,400 people of all ages for each registered ophthalmic optician and about 9,200 people for each person—registered ophthalmic opticians and medical practitioners—who normally prescribes spectacles. In addition, there are a few ophthalmologists who are mainly concerned with the treatment of disease rather than refraction.

Education of Opticians

In 1925, the Association of Ophthalmic Opticians, Ireland, which incorporated the Irish Optical Association (founded 1905) was established to promote the study of optics, particularly ophthalmic optics and to act as an examining body. At that time there was no course in any school and teaching was undertaken by individuals privately. The teaching was in accordance with the syllabus of examination laid down by the Association. In the early forties, the College of Technology, Kevin Street, Dublin

⁶The representative body of ophthalmologists for the maintenance of ophthalmic standards. For a statement of the objectives for which the Faculty is established, see the Faculty's Year Book, 1970, Page 8.

instituted evening classes for ophthalmic opticians which conformed to the requirements of the Association's diploma examination. Gradually the entrance qualification was raised from no formal minimum requirement to Leaving Certificate or Matriculation. In 1959, a full-time course for ophthalmic and dispensing opticians commenced in the College.⁷

The course, the only one in the State, for ophthalmic opticians takes three and a half years, the first two years of which are also taken by student dispensing opticians. The first year consists of general science subjects and in the following two years ophthalmic and optical subjects are studied. In the final six months, student ophthalmic opticians undergo a period of practical training with an approved ophthalmic optician. After the completion of this training they take the second part of their final examination. The period of practical training for a student dispensing optician is three months. Prior to admittance all students must undertake suitability and aptitude tests.

The course commences biennially and sixteen is the maximum number of students accepted. The actual number commencing, however, is usually smaller. The wastage is not normally high but in 1967/68, only six of the original fourteen students graduated. A mere two students in the last ten years have qualified as dispensing opticians; the majority of students take the three and a half year course to qualify as ophthalmic opticians.

An ophthalmic optician who is a full-time member of staff and is the teacher-in-charge of the course, takes most of the academic and practical optical subjects. The arrangement by which there is an intake of students only every other year makes it possible for him to devote his whole time to one group limited to sixteen—he teaches second and third year students in alternate years. Another full-time member of staff, a general medical practitioner teaches Anatomy and Physiology in the second year and Abnormal Conditions in the third year. The teacher-in-charge is assisted by a part-time practising ophthalmic optician in the teaching of professional subjects. Non-professional subjects and all first year subjects are taught by other members of the staff. The College is well equipped but additional capital expenditure

⁷In Ireland, prior to the middle 1950's, there were no provisions for the education of dispensing opticians.

is envisaged for the equipment of research facilities. To give students some practical experience the College has a clinic for patients who are referred by practising ophthalmic opticians. This differs from the Dublin Dental Hospital which treats many patients with full eligibility under the Health Acts.

The course for opticians like other courses at the College, is financed partly by student fees and partly by the City of Dublin Vocational Educational Committee. Student fees are £50 per annum. The total cost of the three and a half year course was in 1969 approximately £1,000—£1,200 per student to which the students fees contribute about 13 to 14 per cent.

Students who have passed their examination and completed their practical training are awarded the Fellowship Diploma and Dispensing Diploma, respectively, of the Association of Ophthalmic Opticians, Ireland (F.A.O.I. and Disp. Cert. A.O.I.). Neither of these qualifications is at present recognized in the United Kingdom, though they are recognized in a number of other countries. (The Curriculum of the Course for Ophthalmic Opticians is given as Appendix 1).

V. ORGANIZATION OF PUBLIC OPHTHALMIC SERVICES

In Ireland, three groups of the population are entitled to free or subsidized ophthalmic services; most employees who are compulsorily insured under the Social Welfare Acts; children attending child welfare clinics or National Schools and persons with full eligibility under the Health Acts—usually the holders of Medical Cards.

Social Insurance Treatment Benefit

The great majority of persons insured under the Social Welfare Acts have coverage for treatment benefit which includes dental and optical benefit as well as the supply of contact lenses and hearing aids. Such persons are mainly employees who are engaged in a manual capacity or, if engaged in a non-manual capacity earn less than £1,200 per annum. Persons under 21

years of age are qualified for optical benefit on the payment in respect of them of 26 employment contributions. This means that persons starting work at 16 years of age become entitled to benefit after having been employed for six months. Persons over 21 years of age must have had at least 156 employment contributions paid in respect of them to qualify. This represents roughly three years employment. In addition, they must have 26 paid or credited employment contributions in the contribution year which governs the benefit year of claim.

Optical benefit comprises¹:—

- (a) examination or advice (without cost to the insured person) by an ophthalmic surgeon, doctor or optician with a view to issuing a prescription for glasses if required;
- (b) the supply of glasses in an imitation shell frame, without cost to the insured person. If the claimant chooses another type of glasses, he is liable to pay a portion of the cost and the optician will advise him of the amount;
- (c) repairs to glasses: the cost, if any, to the insured person depends upon the nature of the repair or replacement. If he is liable for any of the cost, the optician will advise him of the amount.

Furthermore, an insured person who needs contact lenses may receive them from an approved supplier. The claim must be accompanied by a recommendation from the doctor attending the claimant. The insured person will be required to pay a sum towards the cost of these lenses.

In 1967/68 approximately 467,000 men and 243,000 women were entitled to treatment benefit. In that year optical benefit claims were paid in respect of 22,000 men and 17,000 women, that means to approximately five per cent of the men and seven per cent of the women who could have claimed. In the four years ending March 1969, the number of claims paid increased by about 12 per cent, an annual rate of increase of some three per cent. The number of claims received by the Department each year is about a quarter greater than the number of claims paid. The reason

¹E1.

for this difference is twofold. Some claims are made by insured persons who do not satisfy the contribution conditions. Others apply for a letter of authority to obtain optical benefit but do not avail themselves of the service after they have obtained authority to use it.

At all ages, the proportion of women receiving optical benefit is greater than that of men. Up to the age of forty the proportion is about twice as great and for the higher ages is about one and a half times as great. For both men and women, as is to be expected, the proportion receiving benefit increases quite steeply after forty and in the fifties and sixties is about nine per cent for men and 13 per cent for women. (See Table 2).

More than three-fifths of claims paid in respect of women refer to women below the age of forty-five while the corresponding proportion for men is just over two-fifths. This is partly explained by the fact that 77 per cent of insured women but only 62 per cent of insured men are below this age and partly by the greater discrepancy in claim rates for men and women at the younger ages.

An insured person may have his eyes examined by any ophthalmic surgeon, general medical practitioner or ophthalmic optician who is on the panel of the Department of Social Welfare. Glasses prescribed by an ophthalmic surgeon or a general medical practitioner are dispensed by either an ophthalmic or a dispensing optician who is on the Department's panel. Usually ophthalmic opticians dispense their own prescriptions.

In 1968/69, there were 212 ophthalmic opticians, 77 ophthalmic surgeons and two general practitioners participating in the scheme and during that year approximately 50 per cent of eye-examinations were given by ophthalmic opticians and 50 per cent by the 79 medical practitioners. Examination fees paid to ophthalmic surgeons are £1.50, to ophthalmic opticians £1.15 when he also dispenses glasses, and £1.25 when he prescribes only or when glasses are not required. Whenever glasses (single vision lenses) are prescribed the Department pays the optician who dispenses them £3.50.

The person requiring glasses had three choices. He may take the prescribed lenses in an imitation shell frame (Class 1) and not make any payment to the optician. He may opt to take a

TABLE 2: *Optical Benefit Claims Paid Under Social Welfare Acts, Analyzed by Sex and Age, 1968/69*

Age	Number of Claims		Proportion of Claims		Claims per 100 insured	
	Men	Women	Men	Women	Men	Women
	000's	000's	%	%		
Under 21	1.5	3.2	6	19	2	5
21—25	2.5	3.6	11	21	4	7
26—30	1.4	1.5	6	8	3	6
31—35	1.1	0.7	5	4	3	4
36—40	0.9	0.7	4	4	2	5
41—45	1.6	1.0	7	6	4	7
46—50	3.1	1.8	13	10	7	13
51—55	3.7	1.4	16	8	9	11
56—60	3.0	1.5	13	9	9	13
61—65	2.2	1.1	10	6	8	13
66—70	1.6	0.8	7	5	8	13
Over 70	0.7	0.3	3	2	n.a.	n.a.
Total	23.2	17.5	100*	100*	5	7

Source: Communication from the Department of Social Welfare dated 7th January, 1969, and 9th July, 1969.

*Due to rounding off the individual proportions do not add up exactly to 100.

Class II frame² and pay the optician a contribution of £1.00 towards the cost of his glasses. Finally he may choose any other type of frame; in that case he will have to pay to the optician whatever price he is asked to pay, or take his prescription to another optician. When payments were revised in January 1970, the fees paid by the Department of Social Welfare to ophthalmic opticians and ophthalmologists for eye-examinations remained unaltered. The payment for the dispensing of lenses and Class II frames was fixed at £4.50 of which approximately £2.25 was for material and £2.25 as a dispensing fee. This was an increase

²Class II. Type of Frame. "P.R.O. shape, two-tone (in half and quarter tones) of imitation shell with pin-joints and reinforced, hockey-end sides, material of fronts and sides to be not less than 4mm in thickness."

of approximately 50 per cent over the payments previously made. At the time the payment was revised, the specification of the Class II frame was slightly amended. For claimants who are willing to accept the cheapest type of frame the aggregate payment to the optician is at present £3.50 and this, prior to 1970, had been £1.18. However, the quality of the cheapest frame (Class I), since 1970, is similar to the previous Class II frame. Allowing for this modification the optician's payment for a substantially similar service was thus increased from £3.00 to £3.50. The 1970 revision means that opticians no longer make a loss on supplying these spectacles as they did previously. The material cost difference between Class I and Class II frames is quite marginal so that the £1.00 paid by the claimant for the Class II frame mainly enables the optician to earn the full dispensing fee.

The Department estimates that for 1968/69 some four per cent of claimants took a Class I frame⁸ and received their glasses free and that about 30 per cent choose frames from Class II and paid an average of £1.83 for their glasses. The optician has some financial inducement to discourage his clients from taking a Class I frame as this requires him to provide the lenses and frames as well as to fit the glasses for a payment by the Department of £3.50. The optician's financial interest is best served if he encourages his client to select a frame of the more expensive type for which the price is not controlled by the Department.

The expenditure on optical benefit in 1968/69 was £94,000. The average cost to the Department was £2.30 per claim and £0.13 per person insured. In comparison the cost of dental benefit was £0.90 per person insured in the previous year. An eye-examination and the supply of glasses by an ophthalmic optician in that year cost the Department £2.33. An eye-examination by an ophthalmic surgeon and the supply of spectacles by an optician cost £2.68. As from 1970 the cost has increased to £4.65 and £5.00 respectively.

The income opticians receive from the Social Welfare Treat-

⁸The four per cent refers to a date when Class I frames were of the unpopular nickel beaufort type. It may well be that this proportion will increase in future years with the introduction of the imitation shell frame.

ment Benefit Scheme is quite limited. On average the 212 ophthalmic opticians give only 89 eye-tests per year⁴ which would yield them an income of only just over £100. In addition they will receive from the Department a further £310 for dispensing the same number of spectacles. The ophthalmic surgeon examines an average of 230 claimants which yields an income of £345.

Child Health Services

Children who are found to suffer from vision defects and other eye disorders are referred, by child welfare clinics or the medical officers conducting the school health examinations, to either voluntary hospitals or local authority ophthalmic clinics. In Dublin County and County Borough, all children are referred to ophthalmic clinics held at out-patient departments of voluntary hospitals. Referrals to out-patient departments are also made in Galway and the County Boroughs of Cork, Limerick and Waterford. In other areas, children are seen by ophthalmic surgeons employed part-time on a sessional basis by the local health authorities.

In 1967, 350 clinics were held each month at hospital out-patient departments (most of these were for children as well as adults) and 140 monthly sessions for children at local authority clinics. The average session was said to be three hours. The attendance at local authority children's clinics varied from less than 10 per session in two counties to over 30 in another three counties. At the end of 1967, over 4,000 children were on waiting lists. This varied between counties—less than 100 children in fifteen counties and over 300 children in six others. The Ophthalmic Medical Officer in a review of the services, considers that 15–18 children should be dealt with in a three-hour clinic and when this limit is exceeded, essential tests may not be carried out.⁵

In local health authority ophthalmic clinics, glasses are pre-

⁴The dispersion around this mean is not known, but a member of the Council of the Association of Ophthalmic Opticians, Ireland, suggested that as many as 75 per cent of all Social Welfare Optical Benefit claims originate from as few as 50 opticians—25 per cent of those on the Panel.

⁵Cf.

scribed by an ophthalmologist. They are dispensed by an optician who supplies frames of a type he submitted (and which were approved by the authority) at the time he was appointed by public tender. At present, plastic frames are supplied by almost all health authorities. Patients are measured for frames by an optician at the clinics. They receive the glasses by post usually three weeks after they had the eye-examination. The power of the lenses is rarely checked and there is usually no final fitting of the frames. In Dublin, one contracting optician dispensed all glasses for children and adults with full eligibility. The procedure differs from that in the counties and is described in some detail in the next section.

In 1969, orthoptic services for the treatment of squint were only available at three centres, primarily due to the shortage of trained orthoptists.

During 1968, some 43,000 children (including re-calls) had their eyes examined by ophthalmologists and 24,000 of these received spectacles. Some 500,000 National School children up to 14 years are eligible for the service, thus about five per cent received spectacles during that year. There is evidence that there are variations between the services in the different counties. However, due to inconsistencies in the available records, the information does not lend itself to detailed analysis.

In-patient services are centred in Dublin, Cork, Limerick and Waterford. All children (as well as adults with full eligibility) from 16 health authority areas and some patients from seven others were referred to Dublin Voluntary Hospitals. During 1967, 1,300 children received in-patient treatment.

A detailed review of the ophthalmic services by the Ophthalmic Officer of the Department of Health in 1966 found that there were long waiting lists in some counties. The Department advised the health authorities to arrange extra clinics and reduce the waiting period. Recommendations made by the Ophthalmic Officer (quoted in the Connolly Report on Child Health Services) included:—"An adequately equipped central clinic in each county; the introduction of an appointments system at clinics; changing from the present contract system of supplying spectacles to one based more on personal service; extension of the orthoptic service for the treatment of squint;

more routine ophthalmic surgery at regional level; minor ophthalmic surgery at local level and greater utilization of ophthalmic beds at Limerick Regional Hospital and Ardkeen Hospital, Waterford".(7.15).

Approximately £62,000 was spent on the examination of children's eyes and the provision of spectacles in 1968, an increase of 25 per cent since 1965. The fee paid to an ophthalmologist in 1968 for a three-hour session was £4.75 and from January 1969 this was raised to £8.00.⁶ Some ophthalmic medical officers are paid on a capitation rate of £0.50 per child examined.

The Connolly Report on Child Health Services discusses the method of paying ophthalmologists for taking sessions at local health authority clinics. The ophthalmic medical officer is reported as not favouring the capitation rate system of remuneration, as it has a built-in incentive for ophthalmologists to deal with large numbers of children and to recall people perhaps too frequently. The advantage, however, of this method of pay is that large numbers of children referred to the clinic are likely to receive treatment sooner than if under a sessional system of pay. Under the latter scheme, the ophthalmologist is entitled to give all the attention needed to a particular child and is more conducive to high standards of examination. It is argued that if all clinics were operated on a sessional basis long waiting lists would probably occur, as less than the optimum number of children would be seen at a session. Non-attendance for appointments would be a waste of resources and the sessional payment might not compensate for the time the ophthalmologist spent in travelling to the clinic.

The Connolly group feel that the sessional method offers a better chance of comprehensive ophthalmic examination for the child, in spite of the practical difficulties and recommends that the capitation system should not be extended and that the sessional basis of pay should be introduced whenever possible.

The Connolly Report also makes an interesting suggestion to improve the efficacy of the services:—"If the clinic has . . . a nurse to marshall (children) then the ophthalmologist will be able to concentrate on examining the children who come before

⁶From April 1970 the fee was increased to £9.00.

him. If a nurse is trained to record the visual acuity of children on arrival at the clinic, the ophthalmologist can devote more of his time to specialist examination." (7.17):

At present, no public services are provided for children at private primary schools, at secondary schools, at vocational or comprehensive schools. While the concentration of limited resources on National School children may have been justified in the past, the policy of post-primary education after the age of 12 does make it desirable to review this policy.

Lower Income Group

Ophthalmic services, provided by each health authority, include an eye-examination, the prescribing and supply of spectacles and their repair, medical and surgical treatment, either as an in-patient or out-patient, to persons with full eligibility for health services. (Prior to the Health Act, 1970 these were designated as persons in the lower income group). Under Section 14 of the Health Act, 1953, all ophthalmic services are provided free. Approximately 30 per cent of the population have full eligibility and about one third of these may be assumed to be children. Adults for whom free ophthalmic services are available are thus about one fifth of the total population—say 580,000 persons.

Adults are referred to ophthalmic clinics through the health authorities or directly by the District Medical Officer. In the major urban areas, Dublin County and County Borough, Cork, Limerick, Galway and Waterford County Boroughs, adults are examined at out-patient departments of hospitals. In all other areas adults attend local health authority clinics and are seen by ophthalmic surgeons who are employed part-time on a sessional basis. These clinics are held in either hospitals, dispensaries, courthouses or schools. During 1967, a total of 350 clinics were held monthly at hospital out-patient departments. The majority of these clinics were for children as well as adults. In addition, there were 180 monthly sessions for adults in local authority clinics. The attendance at clinics varied between counties. It was ten or less per three-hour clinic in six counties and over 20 in five others. At the end of 1967 over 7,500 adults were on

waiting lists for examination and here again there were considerable county variations.

The mode of prescribing and dispensing spectacles for adults is the same as that for children and has already been described in the section on "Child Health Services", (paragraph 3). Each local authority employs one or more opticians under contract.

An insured person with full eligibility is obliged to avail of the Optical Benefit Scheme of the Department of Social Welfare.

In Dublin, persons with full eligibility requiring an eye-examination are referred by their District Medical Officer or private practitioner to out-patient departments where they are seen by an ophthalmologist. This involves two visits—(i) to make the appointment, (ii) for examination. When glasses are prescribed the person takes the prescription to his local dispensary and it is then forwarded to the Dispensaries Section of the Dublin Health Authority. The person may, if he wishes, send the prescription directly to the Dispensaries Section. The Dublin Health Authority then forwards the prescription to the optician contractor and notifies the person to attend the contractor's premises to be fitted for frames. He attends a second time for a final fitting and to collect his glasses. In the case of old people transport is provided when necessary. The time span between the issue of the prescription and the collection of spectacles by the patient may be from three to six weeks and the waiting period for examination varies from 2-3 weeks in eight hospitals to six weeks in two others.⁷

Persons with full eligibility who are in-patients in St. Kevin's Hospital and require glasses have their eyes examined by the ophthalmologist at the out-patients' department. The prescription is returned to the ward and then to the Medical Superintendent's Office accompanied by the patient's name and address. It is then sent to the contracting optician and on return is given to the patient or sent to his home address, if he has been discharged in the interim. The patients are not fitted individually for frames, but are supplied a standard size. During 1969/70, approximately 100 in-patients, most of whom were in geriatric wards, received glasses in this way. The usual waiting period was three to four weeks.

⁷E2.

The present system appears to be somewhat complicated. A person with full eligibility requiring glasses has to call (i) on the District Medical Officer, (ii) to the hospital to make an appointment, (iii) on the ophthalmologist, (iv) on the dispensary, (v) on the contractor for measuring and (vi) the contractor for fitting and collection. At all these calls there is a probability that he will have to wait for some time. The processing between leaving the prescription at the dispensary and being asked to call at the contractor may vary from ten days to two weeks. The contractor, as far as could be ascertained, renders an expeditious and courteous service. The interval between taking the first step of obtaining or replacing a pair of spectacles and receiving them is for the person with full eligibility longer by several weeks than it is for the social insurance claimant or for the person who consults the ophthalmologist and/or optician privately.

No changes in this procedure for ophthalmic services are envisaged for the time being. However, with the disappearance of the District Medical Officer and the dispensary system the person with full eligibility will in future be referred to the ophthalmic out-patient's clinic by a private practitioner in his area.

During 1968 some 77,000 adults (including re-calls) had their eyes examined and 33,000 of these received spectacles. Of the 580,000 adults with full eligibility about six per cent received spectacles during that year. In the four-year period between 1965 and 1968 the number of persons examined increased by 20 per cent and the number of spectacles dispensed by 18 per cent. (See Table 3).

Some 4,800 adults received in-patient treatment in 1968—an increase of 14 per cent since 1965. Almost half of these (2,300 persons) attended Dublin hospitals. The other main centres were Cork, Limerick, Waterford and Galway.

The recommendations made by the ophthalmic officer of the Department of Health for the improvement of ophthalmic services for children should also apply to the services provided for adults with full eligibility. (See "Child Health Services", para. 7.15).

The cost of the service in 1968 was approximately £94,000,

an increase of 20 per cent in the four-year period 1965 to 1968. Ophthalmologists' fees for a three-hour session were brought to parity with those of other medical consultants by an increase from £4.75 to £8.00 in 1969 and to £9.00 in 1970. The cost of spectacles at about the same time rose from approximately £1.15 to £1.75 per pair. Had these increases been introduced in 1968 the cost of the service would have been £134,000, an increase of £40,000—43 per cent.

TABLE 3: *Ophthalmic Services for Adults on the General Medical Services Register 1965-1968*

Year	Number of Persons Examined		Number of Spectacles Supplied		In-patient Treatment	
	000's	Index 1965=100	000's	Index 1965=100	000's	Index 1965=100
1965	64	100	28	100	4.2	100
1966	71	111	29	104	4.6	110
1967	78	122	33	118	4.6	110
1968	77	120	33	118	4.8	114

Source: Communication from the Department of Health dated 12th January, 1970.

For children and persons with full eligibility, the expenditure on an eye-examination is estimated to be about £1.00⁸ and on spectacles £1.75—a total of £2.75. The fees paid by the Department of Social Welfare for an eye-examination are £1.50 to an ophthalmologist and £1.15 to an ophthalmic optician and for the supply of spectacles in a plastic frame £3.50 to an optician—a total of £4.65 to £5.00. For a Class II frame the insured person pays £1.00.

As an ophthalmologist is better qualified than the ophthalmic optician to discover diseases of the eye the person with full eligibility is receiving a more comprehensive examination, at slightly less expense to the State, than the social insurance beneficiary who has his eyes examined by an ophthalmic optician.

⁸This is based on the ophthalmologist's fee of £8.00 for a three-hour session, covering 12 eye-examinations and other costs of approximately £4.00, including light, heat and ancillary staff if employed.

However, the situation in which the service is rendered differs greatly. While the person with full eligibility will have to wait for some time at an ophthalmic clinic, often in not too comfortable surroundings, the social insurance beneficiary attends the private consulting rooms of the ophthalmologist or ophthalmic optician. The difference in expenditure for the supply of spectacles is also quite marked. However, the dispensing of spectacles under the Optical Benefit Scheme is more speedy and the quality of the lenses provided is uniformly high. Lenses and frames supplied by contractors to persons with full eligibility occasionally come from different sources than those normally sold by opticians and their quality may not invariably be up to the British standard.

VI. SURVEY OF OPHTHALMIC OPTICIANS

The only information published on ophthalmic opticians is that contained in the Register of Ophthalmic and Dispensing Opticians. This gives particulars in respect of (1) surname and christian name, (2) business address, (3) qualifications and dates thereof and (4) date of registration. In order to supplement those rather scanty data a survey of all ophthalmic opticians on the Register for 1966/67, with additions up to March 1969, a total of 230 was undertaken. The survey was conducted by mail questionnaire and covered the calendar year 1969. The questionnaire was approved by the Council of the Association and their Secretary sent a letter to all members requesting their co-operation. The questionnaire was designed in three parts (see Appendix II); part "A" asked questions about ophthalmic opticians; part "B" was concerned with the size of the practice and part "C" with fee-structures, methods of charging and income.

After two reminders 131 replies were received, a response rate of 57 per cent. Thirteen of the respondents were no longer practising (six had retired, two had emigrated, one had died and the remainder gave no reason) leaving 118 from whom usable returns were obtained.

Three checks were made to see if the replies were representative of all ophthalmic opticians. The names of 35 per cent of

registered Ophthalmic Opticians also appeared on the Register of the Pharmaceutical Society of Ireland, 1968. Amongst the respondents 36 per cent were pharmacists, which shows a very high level of agreement between the respondents and all opticians. While ophthalmic opticians are not distributed proportionate to the population throughout the State the geographical distribution of the respondents corresponded closely to that of the Register. (See Table 4). The response rate was higher where the number of opticians on the Register was relatively low, with the exception of Limerick County and County Borough which at 40 per cent had the lowest response rate.

A further check was made for the representativeness of data given in part "B" of the questionnaire (size of practice). Opticians were requested to give the actual or estimated number of persons they examined under the Optical Benefit Scheme of the Department of Social Welfare. Only 94 respondents gave this information and they recorded an average of 171 persons examined in 1969. Statistics from the Department show that the 212 ophthalmic opticians on the panel examined 18,750 persons during 1968/69—an average of 89 per optician. Also the variation in the ratio of men and women patients between geographical areas as compared to Department of Social Welfare data was so great as to make the representativeness of the information doubtful.¹ For these reasons it was decided not to use the data contained in Part "B". However, there is no reason to think that inaccuracies in that part invalidate the quite different data contained in the other two parts.

Of the 118 opticians who completed the questionnaire in whole or in part, 106 were men and 12 were women. The majority (94) were in single practices, 10 were in partnerships, three were employers and 11 were assistants of whom two were employed by non-respondents. The majority of the women (7) were in single practices while two were employed as assistants. Almost all (112) of the respondents were on the panel of the Department of Social Welfare and nine were also contractors to a local health authority. (All ophthalmic and dispensing opticians may, on acceptance of a tender by a local health authority,

¹The information requested in the survey is not readily available from the form of records used by the majority of ophthalmic opticians.

TABLE 4: *Response to the Survey of Ophthalmic Opticians*

	<i>Ophthalmic Opticians on the Register</i>	<i>Returns</i>		<i>Not Practising</i>	<i>Completed† Questionnaires</i>	<i>No Answer</i>
		<i>Total</i>				
		<i>Number</i>	<i>%</i>			
Dublin County and County Borough*	103	51	50	5	46	52
Cork County and County Borough	15	9	60	1	8	6
Limerick County and County Borough	10	4	40	1	3	6
Waterford County and County Borough	5	3	60	1	2	2
Rest of Leinster	34	20	59	2	18	14
Rest of Munster	21	16	76	—	16	5
Connaught	30	17	57	—	17	13
Ulster (part of)	12	11	92	3	8	1
Total	230	131	57	13	118	99

*Includes Dun Laoire.

†Completed in whole or in part.

Source: Survey of Ophthalmic Opticians, 1969.

contract to dispense glasses for persons with full eligibility for one or more local health authority areas.) Another three were on neither of these lists and three did not answer this question.

An analysis of the age of respondents showed that 43 per cent were under 45 years, 38 per cent between 45–64 and 19 per cent over 65 years—the normal retirement age for most people. The large proportion of opticians over 65 years is remarkable even allowing for the fact that the profession has no pension scheme.

Historically, ophthalmic optics developed in conjunction with other professions, particularly pharmacy and jewellery/watch-making. These combinations though gradually fading are still very common. As many as 40 per cent of all those who completed the questionnaire were qualified pharmacists, eight per cent were trained as jeweller/watchmakers and a further 18 per cent had other training or qualifications, e.g. pharmaceutical assistant, radio work, air pilot, bank manager. Thus only 35 per cent had no other qualification. Amongst those under 45 years who completed the questionnaire, about half were ophthalmic opticians only, but of those above that age three-quarters had other qualifications.

Less than half the respondents practised solely as an ophthalmic optician. All those who had training in jewellery/watch-making (eight per cent) and almost all qualified pharmacists (36 per cent) worked in both fields. (See Table 5). Eight per cent combined their work as an ophthalmic optician with some other occupation. Three-quarters of the respondents worked single-

TABLE 5: *Occupations of the 118 Respondents*

<i>Occupation</i>	<i>Number</i>	<i>%</i>
Ophthalmic Optics	55	47
Ophthalmic Optics cum Pharmacy	43	36
Ophthalmic Optics cum Jewellery/Watchmaking	9	8
Ophthalmic Optics cum other occupation	9	8
No answer	2	2
Total	118	100

Note: Due to rounding off the percentages do not add to 100.

Source: Survey of Ophthalmic Opticians, 1969.

handed. The remaining quarter employed a total of 69 staff (18, one person; seven, two and six, three or more). Twenty were employed by a firm manufacturing lenses and the remainder was made up of 31 receptionist/secretaries, five dispensing opticians, three optical mechanics and nine ophthalmic opticians.

The geographical distribution of the respondents is shown in Table 4. The majority practised in one location only. However, 10 opticians (eight per cent) practised at several centres within one county. Another 13 (11 per cent) practised in several counties and six of these were based in Dublin. The attendance at centres other than their consulting rooms varied from weekly to monthly sessions. Some 70 per cent of the respondents worked 5-6 days per week while the remainder worked less. The average number of hours worked by opticians was 36 and premises were open for an average of 44 hours per week. The premises of 81 respondents were open for over 40 hours and almost 70 per cent of these were also working in some other field.

Ophthalmic opticians perform two different kinds of functions: (1) they render the professional services of examining eyes, prescribing lenses and dispensing them and (2) they provide appliances, i.e. lenses and frames. In part "C" of the questionnaire opticians were asked if they charged separately for each item of service. An analysis of these returns showed that there was a lack of uniformity in methods of charging. While the majority made separate charges for examination (including prescribing), lenses and frames, a much lower proportion did so for dispensing. (See Table 6). Only 47 (40 per cent) made separate charges for all four items.

TABLE 6: Respondents who made Separate Charges for Examination, Dispensing, Lenses and Frames

	Number			Total
	Making Separate Charges	Not Making Separate Charges	No Answer	
Examination	91	16	11	118
Dispensing	54	40	24	118
Lenses	84	18	16	118
Frames	84	18	16	118

Source: Survey of Ophthalmic Opticians, 1969.

Amongst the 118 opticians completing the questionnaire, 78 had a standard fee for examination, 18 varied their fees, three made no specific charge for this service and 19 did not answer the question. Less than two-thirds of the returns were sufficiently complete to make it possible to add the charges for the various items so as to give a total cost of supplying spectacles. For these, the average cost of examination, dispensing and lenses, but excluding frames, was £5.50; the total cost varied with the type of frame selected by the client. The respondents supplied information on the lowest, highest and estimated average wholesale price of frames, but not on the gross profit, if any, made on the sale of frames. These showed considerable variations. (See Table 7). Of the 73 respondents who gave an estimated average price, 33 practised in the four main urban areas and 40 in the rest of the State. In urban areas, just under half and outside these areas, just under one quarter charged on average more than £8.00 for a pair of spectacles excluding the gross profit, if any, on frames. Estimated average costs of less than £5.00 and over £9.00 were compared with three other factors—the age

TABLE 7: *Lowest, Highest and Estimated Average Cost of Spectacles, Excluding Gross Profit, if any, on Frames*

Costs	Respondents					
	Lowest		Highest		Estimated Average	
	Number	%	Number	%	Number	%
Under £4	12	15	—	—	3	4
£4—	37	47	7	9	23	31
£6—	23	29	16	21	26	36
£8—	6	8	19	24	16	22
£10 and over	1	1	36	46	5	7
Total	79	100	78	100	73	100

Note: One respondent did not state the highest cost of frames and six did not give an estimated average reducing these totals to 78 and 73 respectively.

Source: Survey of Ophthalmic Opticians, 1969.

of the respondents, the number of persons examined during the year and whether the respondent was also employed in some other occupation. No distinct pattern of relationship emerged between price and any of these factors. In response to the question "is the person made aware of the charges prior to choosing a particular frame?", 92 (78 per cent) answered in the affirmative, 15 (13 per cent) in the negative and 11 (nine per cent) did not answer. The majority of the respondents held a wide range of frame designs in stock; 14 per cent held less than 30 while as many as 27 per cent held over 100. (See Table 8).

TABLE 8: *Frame Designs Held in Stock by Ophthalmic Opticians*

<i>Frame Designs</i>	<i>Ophthalmic Opticians</i>	
	<i>Number</i>	<i>%</i>
Under 30	17	14
30—60	39	33
61—100	23	20
100 and over	32	27
No answer	7	6
Total	118	100

Source: Survey of Ophthalmic Opticians, 1969.

Finally, opticians were asked to give information on the gross receipts and net income (before taxation) from their optical practice. Almost half had gross receipts of less than £2,500 while one third had more and 19 per cent did not answer. The net incomes stated by the respondents were also low—60 per cent earned less than £1,500, only 20 per cent exceeded this figure and another 20 per cent did not answer. However, the majority (72 per cent) of those earning less than £1,500 also had another occupation. Half of those who worked solely as ophthalmic opticians had incomes exceeding £1,500. (See Table 9). Of the respondents 96 estimated what proportion of their income came from private practice, the Department of Social Welfare and local health authorities. The average proportions show that private practice at 68 per cent was the main source

of income while the average income from Social Welfare was 28 per cent and a mere four per cent came from local health authorities.

TABLE 9: *Net Income (Before Taxation) of the Respondents*

<i>Income £'s</i>	<i>Practising as an Ophthalmic Optician</i>				<i>Total</i>
	<i>With Pharmacy</i>	<i>With Jewellery</i>	<i>With Other Occupation</i>	<i>Only</i>	
Less than—					
1,000	32	6	4	7	49
1,000—	7	—	2	13	22
1,500—	—	—	2	2	4
2,000—	—	1	—	6	7
2,500—	—	—	—	7	7
3,000 and over	—	—	—	5	5
Subtotal	39	7	8	40	94
No answer					24
Total					118

Source: Survey of Ophthalmic Opticians, 1969.

VII. OPHTHALMIC SERVICES IN OTHER COUNTRIES.

A detailed description of ophthalmic services in Northern Ireland, the United States and Denmark is given as Appendix III. Their institutions, regulations and practices are examined to see if any lessons can be learned from them. The information available on the various facets of the service is not the same for all countries, thus the comparisons which can be made are limited. In any case inter-country and even inter-regional comparisons must be treated with caution.

In the Republic, Northern Ireland and the United States, three groups participate in the provision of ophthalmic services. Ophthalmologists or oculists (American nomenclature) are medical practitioners who specialize in the medical and surgical

treatment of eye diseases and abnormal conditions. Medical practitioners with or without further specialized training also carry out refractions. Ophthalmic opticians or optometrists (American nomenclature) are qualified to examine eyes and to determine the presence of refractive errors and to prescribe and dispense corrective lenses. They may not treat eye diseases or abnormal conditions. Dispensing or prescription opticians are only qualified to dispense prescriptions of the other two. In Denmark, effectively only two groups provide services—ophthamologists of similar qualification and status as in the other three countries and opticians. The latter are not registered and require no qualifications; all are entitled to dispense as well as prescribe, though those who do prescribe usually have some formal training of varying lengths.

The general rule appears to be that ophthalmic opticians can only practise in the national territory in which they are registered though some non-European countries accept foreign registrations. In Ireland and the United States, ophthalmic opticians are restricted to practising in their own countries. However, ophthalmic opticians registered in Northern Ireland may practise in all parts of the United Kingdom. In Ireland and Northern Ireland, registration is required for dispensing opticians. In the United States dispensing opticians require a licence in only 15 States. Ophthalmic opticians registered in Ireland may practise as assistant dispensing opticians in the United Kingdom.

The education of ophthalmic opticians differs in the four countries. In Ireland, students take a three and a half year course at the College of Technology and this includes a period of six months practical training. A pass Leaving Certificate is the standard of entry required. To practise in Northern Ireland the opticians must be registered with the General Optical Council. This entails taking a degree in Ophthalmic Optics at one of the six centres offering the course in Great Britain and, after having had one year of practical experience, passing the qualifying examination of one of the approved examining bodies. The entry standard for the degree course requires five passes in the G.C.E. including two A levels in Mathematics or other science subjects. To qualify for a licence in the United States the applicant must be a graduate of an accredited school of optometry and pass a

State Board Examination. Graduates are awarded the Degree of Doctor of Optometry after a six-year course of which the last four years are spent in professional optometry training. In Denmark, opticians are more a craft than a profession. The apprenticeship course for opticians takes four and a half years of which only six months are full-time. Apprentices do not require a University Matriculation qualification. However, opticians almost invariably glaze and edge lenses on their premises while in the Republic and Northern Ireland, this is usually done by wholesale optical companies.

In the Republic and the United States, ophthalmologists and ophthalmic opticians may charge their private patients any fee they wish. This is also the case in Northern Ireland and Denmark, but the proportion of the population who are private patients is much lower than in the other two countries. Where subsidized or free services are provided, fees are fixed under contracts negotiated by the professional bodies and the public authorities providing the services.

The structure and organization of ophthalmic services is quite different in the four countries under review. Services are either free or subsidized for all persons in Denmark and for those ordinarily resident in Northern Ireland. In the Republic, the majority of the population are also entitled to free or subsidized services while the opposite is true in the United States, where people have to rely mainly on private services.

In Northern Ireland, ophthalmic services are provided under the National Health Service. The General Eye Services are concerned with remedying refractive errors only, i.e. the testing of eyesight and the prescribing and dispensing of glasses. The treatment of eye diseases is the responsibility of the general practitioner or the hospitals. Children under 16 years and over that age if receiving full-time instruction in an approved school are entitled to glasses free of charge using frames from the children's range. Persons in receipt of supplementary benefits or with very low incomes have charges in respect of glasses refunded by the Supplementary Benefits Commission. The rest of the population are entitled to an annual sight-test free, but charges are made for lenses and frames. In 1969, charges for frames varied from £0.70 to £1.74 and the statutory charge for bi-focal

lenses was £2.50 and £1.60 for other lenses. If the person requiring glasses wishes to buy a frame privately he may have them fitted to health service lenses if the frame is of a suitable shape. The payment by the Board for sight-testing is £1.40 to an ophthalmic medical practitioner and £1.29 to an ophthalmic optician and for dispensing single vision lenses, £1.43. Thus the maximum payment received by the optician for the provision of glasses, using health service frames and single vision lenses, is £6.06. However, the receipts for glasses with the most popular frame are £5.02.

In the Republic, ophthalmic services are provided under the General Medical Services and the Optical Benefit Scheme of the Department of Social Welfare. All persons with full eligibility are entitled to free ophthalmic services, including the supply of spectacles, from their local health authority. Ophthalmic services are also provided free for children attending Child Welfare Clinics and National Schools. The Optical Benefit Scheme for insured persons who have made the required contributions, is concerned only with the remedying of refractive errors. From 1970, glasses are supplied free in a standard plastic frame. Alternatively, insured persons can take a Class II frame and be charged £1.00 or choose a frame from the optician's collection and pay the balance which will vary with the type of frame selected. The total payment to the optician by the Department for providing glasses with single vision lenses was increased from £2.33 to £4.65 in 1970. Thus for a Class II frame, the payment received by the optician for spectacles, including the £1.00 paid by the claimant, is £5.65. This represents an average remuneration, excluding lenses and frames, of £3.43 for dispensing a Class II frame—£0.71 more than that received by ophthalmic opticians in Northern Ireland under the General Eye Services. A larger selection of frame designs is provided under the National Health Service in Northern Ireland. However, the charge of £1.00 made to the claimant in the Republic compares with the charges of £2.30 to £3.34 for lenses and frames in Northern Ireland.

In the United States under the Medi-care Act, 1966, persons over 62 years and their dependents who are covered by Social Security Acts can receive hospital treatment and financial help

in paying doctors' fees. Routine physical care and examinations for prescribing and fitting glasses are not covered. Thus for almost all the population, including the majority of old people, ophthalmic care must be provided for privately.

In Denmark, virtually the whole population are members of Health Insurance Societies and as such are entitled to free eye-tests by ophthalmologists. In Copenhagen, all members where the head of the household earns less than £2,700 are on the panel of an ophthalmologist (average size of panel is 18,000 persons) who receives for each person on his panel £0.47 per year. Outside Copenhagen, eye-tests are conducted by ophthalmologists on a fee for service basis—at a rate of £2.58. Persons in the higher income groups are treated as private patients but they receive reimbursement of fees from the Health Insurance Societies up to the amount paid for those with lower incomes. The Societies make no payments for eye-tests conducted by opticians. Members are entitled to receive without charge lenses of a standard shape and an imitation shell frame. If they choose a more fashionable or better quality frame they receive the cost of the standard lenses and frame as a grant-in-aid. The Societies pay the optician £1.33 for the frame and £1.33 for both lenses with higher payments for bi-focals and other special lenses. There is no restriction on any form of advertising by opticians. None the less competition is by no means cut-throat. Clients are reputed to equate price with value.

In the Republic and Northern Ireland, as well as in the United States, members of all three groups providing ophthalmic services may practise once they are registered. In Northern Ireland, the General Health Services Board lays down minimum standards for premises and equipment to which contractors (ophthalmic medical practitioners and ophthalmic opticians) have to comply. All new premises and existing premises where there has been a change of contractor are inspected by officers of the Board to ensure adherence to standards. The Board also administers an examination service to check if the spectacles dispensed are in agreement with the prescriptions. In 1968/69, the Board's officers checked approximately 0.7 per cent of all spectacles dispensed. In the Republic, the Opticians Board has made Rules under Section 51 (1) providing that ophthalmic services “. . .

shall be carried out in a suitable apartment or space used primarily for such purposes so situated or constructed as to ensure reasonable privacy of the patient ...". In Denmark, the equipment and design of opticians' premises are of a high standard and on average compare favourably to those found in the Republic and Northern Ireland.

Information on the prevalence of eye defects in school children is available for the Republic and Northern Ireland. However, due to the lack of standardization in recording errors in both countries a reliable comparison cannot be made. While in 1968 an average of 26 per cent of children examined in Northern Ireland suffered some eye defect, this was true for only nine per cent in Tyrone, but 34 per cent in County Derry. In the Republic, the Report on Child Health Services, 1967, found that no valid deductions could be drawn from the returns of the School Health Examination Service due to the lack of uniformity in the way in which they were compiled and the very broad classification of defects used. However, the very sketchy data available for all three countries leave no doubt that eye defects are very prevalent amongst children and are more numerous than almost any other defect.

In Northern Ireland in 1968/69, some 12 per cent of the population had an eye-examination and about 10 per cent acquired spectacles. In the United States in 1964-1966, the corresponding proportions were 15 per cent and 13 per cent respectively. In both countries, the same proportion of children under 16 years were provided with spectacles but the proportion was distinctly higher in the United States for the older age groups. (See Table 10).

In Copenhagen, the proportion of the population who have their eyes examined annually is about 12 per cent, much the same as in Northern Ireland. Similar information is not recorded in the Republic. However, the data available indicate that the proportion of persons receiving spectacles annually is very much lower than in the other two countries. The best possible estimate suggests that approximately 5-6 per cent of the population received spectacles in the late 1960's.¹

These figures represent what appear to be the right orders of magnitude. The comparability of the data for the four countries

TABLE 10: *Proportion of the Population Receiving Spectacles in Northern Ireland (1968/69) and the United States (1964-1966)*

Age	Proportion of Population Receiving Spectacles	
	Northern Ireland	United States †
	%	%
Under 16	5	5
16—44	7*	12
45 and over	16	23
Total	10	13

*Relates to the age group 16—40 years.

†These are annual rates based on information for the years 1964/65 and 1965/66.

Sources: *Twenty-First Annual Report 1968/69*, Northern Ireland General Health Services Board, Belfast 1969. National Center for Health Statistics (United States) 1965/66, Series 10, No. 53, Table 18.

is limited *inter alia* by their different origins. The Northern Ireland figures are based on services paid for by the General Health Services Board and exclude a relatively small number of glasses bought privately and an even smaller number of private examinations. The data for the United States are based on an interview survey and subject to all the limitations of such surveys—for example inaccurate recollection or when respondents did not know the correct answer. The Danish data were obtained from the records of the Health Insurance Societies for Greater

¹In 1967, about 57,000 spectacles were dispensed free of charge to persons with full eligibility and to National School children. Some 18,000 social insurance beneficiaries were examined by ophthalmologists and a further 19,000 by ophthalmic opticians in 1968/69. Results of our "Survey of Ophthalmic Opticians" indicate that ophthalmic opticians see about 30,000 persons privately. If it is assumed that ophthalmologists have approximately the same ratio of private to social insurance patients, they also see about 30,000 annually. This gives a grand total of some 154,000 persons annually, i.e. five per cent of the population acquired spectacles at that time. Even if the estimate of private examinations is too low by one third the aggregate percentage would not exceed six per cent. As these calculations are based mainly on the number of examinations (97,000) the number of persons being prescribed spectacles will be somewhat lower.

Copenhagen. The data for the Republic are derived from several sources. In respect of three-fifths, they are based on services paid for by public bodies and likely to have a high degree of accuracy, while for the remainder they are based on assumptions which are open to some question.

The population per ophthalmic optician was much the same in three of the countries—12,400 in the Republic, 11,700 in Northern Ireland and 11,500 in the United States. However, the population per ophthalmic optician and ophthalmic medical practitioner, who normally prescribe spectacles, was lower in the United States at 8,000 than in Northern Ireland at 9,000 and the Republic at 9,200. In these three countries, least in Northern Ireland and most in the Republic, the average work load of the optician is well below that which he could and would be happy to carry.

The average number of persons examined by an ophthalmic optician was 230 in the Republic, 810 in the United States and 1,090 in Northern Ireland. Information on the dispersion around the means is not known.²

In Denmark, ophthalmic opticians are not a registered profession and this makes it impossible to calculate ratios corresponding to that of the other three countries. The total number of opticians, some of whose practices are fairly minimal, is about 1,000, i.e. an optician for every 4,900 persons.

VIII. OPHTHALMIC SERVICES—SOME ISSUES

In considering the present state of ophthalmic services in Ireland, some issues arise which require further discussion: (1) The education of ophthalmic opticians, (2) the tasks appropriate to ophthalmologists and ophthalmic opticians and (3) charges for the supply of spectacles.

Education

The education students of ophthalmic optics receive is relevant to a paper concerned with ophthalmic services for a

²See Footnote, page 21.

number of reasons. First, the nature and quality of the services ophthalmic opticians are able to render are influenced by the education they receive. Second, an unduly high standard of education reduces the number of entrants to the profession and thereby tends to increase levels of remuneration. Third, a high educational standard may itself be used as an argument for high remuneration. Fourth, the expenditure of public funds to finance a level of education higher than required is wasteful.

The present three and a half year course at the Kevin Street College of Technology, the only one in the Republic, is conducted on premises and with equipment which are conducive to the attainment of high academic standards. The arrangement by which students share lectures and tutorials in their first year with students of other professions gives a wider orientation to some of the time they spend at College. The arrangement of entry to the course in alternate years is a resourceful device in the efficient use of the available teaching manpower for the final two years. This may, however, have the disadvantage that it discourages some young men and women, taking the Leaving Certificate in the alternate year in which the course does not commence, from taking up the profession.

A very small school which produces on average over the years a maximum of eight finalists inherently involves some risks. The teaching arrangements centre around one specialist teacher—the tutor-in-charge. If at any time he was for one reason or another not available for teaching, it is likely that the course would be severely disrupted. If this were to happen for a long period it would almost certainly be necessary to recruit another tutor from outside the country. At short notice this might prove by no means easy.

The nature and structure of the course appears to follow fairly closely similar courses in the United Kingdom. The standards are set by the Opticians Board¹ in consultation with the Association of Ophthalmic Opticians, Ireland and the College of Technology, all of which desire to keep in line with British standards. All have the same wish for high standards and for extending the scope of the profession. The nature of the services

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ophthalmic opticians wish to render can be summarized under six headings:—

1. To refract a patient of any age.
2. To use all drugs that may be necessary for a full examination of the eyes and for refraction.
3. To use any non-surgical procedure to establish the health and integrity of the eyes and the visual system—tonometry, gonioscopy.
4. To prescribe lenses and dispense spectacles.
5. To prescribe and fit contact lenses.
6. To treat strabismus, oculo-motor anomalies where no pathology is suspected and surgery is not indicated, by refractive and orthoptic procedures.

This is quite as comprehensive as the professional claims made by optometrists in the United States,² but goes somewhat beyond what ophthalmic opticians may undertake in this country. The Opticians Act, 1956, prohibits the prescribing or administering of any drug for the purpose of paralyzing the accommodation of the eye and only permits orthoptic treatment on the written authorization of a medical practitioner who has examined the patient.

The level and extent of the training in ophthalmic optics and related subjects appear to be of a high standard. This is maintained by a system of external assessors from outside the country for the final examination. The students' training in recognizing abnormal conditions which manifest themselves in the eye, is based on academic instruction by a general medical practitioner and the tutor (an ophthalmic optician). The students gain practical experience in refraction in a clinic at the College, taken by the tutor-in-charge. However, in their three years in College they receive no lectures from ophthalmologists—the medical specialists in eye diseases—nor do they attend at any hospital out-patient ophthalmic clinics.

The training of ophthalmic opticians set apart from hospitals

²See Appendix III, p. 92.

and University Medical Schools is not peculiar to Ireland. The five degree courses in ophthalmic optics at universities in England and Wales, all of which were previously Colleges of Advanced Technology, are associated with Departments of Physics, not with Medical Faculties. This can be explained by a number of reasons which are partly historical and partly due to the desire of ophthalmic opticians to assert their status as an independent health service profession rather than one supplementary to medicine.

A third reason was that the medical profession in all countries has traditionally viewed with suspicion the work of ophthalmic opticians. In recent years, the attitude of ophthalmologists in England has gradually shifted and while students of ophthalmic optics continue their under-graduate years in the traditional environment they now frequently have the opportunity of receiving hospital experience in their pre-registration year following graduation.³ At present, the Irish Faculty of Ophthalmology has no plans for facilitating student ophthalmic opticians gaining hospital experience. Leading ophthalmologists in this country are not sympathetic to the understanding reached between their British colleagues and the ophthalmic opticians. They believe that the limited knowledge of eye diseases and abnormalities that ophthalmic opticians acquire in College is insufficient not merely for diagnosing but even for recognizing these disorders. This in their view cannot be remedied by ophthalmologists participating in the education of opticians or by student ophthalmic opticians gaining hospital experience. In their view a full medical training is required to conduct a proper examination of the eyes and anything less they consider as inadequate. This view of Irish ophthalmologists may well be medically and scientifically accurate but it does not take into account the fact that ophthalmic opticians by law are authorized to examine the eyes and to prescribe spectacles. Furthermore,

³In a declaration of the General Optical Council, the Faculty of Ophthalmologists and the Joint Committee of Ophthalmic Opticians it is noted that "it is desirable in the public interest that ophthalmic opticians should in their pre-registration year and subsequently, have the opportunity of hospital experience to enable them in the course of eye-examinations, to widen their clinical experience in the recognition of deviations from the normal." (*The Ophthalmic Optician*, Vol. 10, No. 4).

ophthalmic opticians work on a contract basis for the Department of Social Welfare and their education is financed largely at public expense. Ophthalmologists may be justified in wishing to restrict the scope of practice of ophthalmic opticians but that does not alter the fact that ophthalmic opticians are an officially recognized profession and are entitled by law to perform certain tasks. This fact leads to the inevitable conclusion that it is in the public interest that student ophthalmic opticians should receive the best possible training in recognizing eye disorders. Ophthalmologists are the most qualified to provide this, both in the lecture hall and the hospital.

At present there seems little danger of an unduly high standard of education reducing the number of entrants to the profession. A pass Leaving Certificate is the minimum qualification for admission to the course. Few would consider this as excessive and many might consider a higher entrance standard as desirable. Ophthalmic opticians in Ireland on the basis of all the available evidence are without doubt under-employed. Even if for many years to come there were no entrants to the profession, scarcity of manpower leading to increased levels of remuneration would not arise. Unfortunately, the lack of co-operation by members of the profession in "The Survey of Ophthalmic Opticians" has made it impossible to compile a reliable analysis of its age structure. The limited data available do not support the view that there will be a shortage of manpower in the foreseeable future.

A discussion of whether the present standard of education is higher than necessary is outside the competence of an economist and is in any case academic. If the function of ophthalmic opticians is conceived merely as a straight-forward refraction, then today as in the past a considerably shorter course would be quite adequate. The education of ophthalmic opticians, like that of most other professions, contains much that is not directly relevant to the practitioner and is geared to a scope of practice more comprehensive than that considered desirable by ophthalmologists. All the same it would be unrealistic to suggest the streamlining of the education of ophthalmic opticians. The present climate of opinion favours the lengthening of educational courses for the health service professions. While some of the

recent expenditure in the College on capital equipment may be rather generous, the cost to public funds of educating ophthalmic opticians does not appear to be disproportionately excessive.

The extent to which these professional courses should be provided in this country involves not only economic but also political issues. The cost of an Irish student taking a three-year degree in an English University would be approximately £800 in fees and £1,200 in maintenance and fares—say a total of £2,000. This compares with an estimated tuition cost of about £1,200 in Dublin. The maintenance of the student who does not reside within travelling distance of the College is at least £800. A straight comparison suggests that (measured by the economist's rod) the expenditure by public authorities and his family on the student in Dublin is about as high if not higher than the cost of taking a degree course in ophthalmic optics in Britain. Such a proposition would require the award of scholarships to cover maintenance and travel to the value of £400 per annum to students—the equivalent of the expenditure incurred per student by the Vocational Education Committee. Irrespective of the political implications of such a proposition it would at present not be practical as the minimum entrance qualification for the degree course in England is appreciably higher than the Leaving Certificate. However, when the Senior Leaving Certificate is introduced in 1972, the proposition may be reviewed.

A further problem would arise if Irish students had to qualify in Britain to be ophthalmic opticians. At present the Irish qualification is not recognized in the United Kingdom and all those who qualify in Dublin are, therefore, restricted to practising in the Republic. If Irish students were to qualify through a British degree in ophthalmic optics they would be able to practise in any part of the United Kingdom. In that case it would have to be assumed that a proportion of those receiving scholarships to enable them to take the degree would not return to practise in the Republic. The nature of this problem would in essence be the same if at any time the Irish qualification—Fellowship of the Association of Opticians, Ireland—would give entitlement to practise in the United Kingdom. This would place ophthalmic opticians in the same position as medical and dental practitioners are at present.

An educational course for dispensing opticians of two years full-time at College followed by three months practical training is unreasonably long. It aims at a standard which is much too high for the nature of work undertaken. Dispensing opticians provide spectacles and contact lenses only on the prescriptions of ophthalmologists and ophthalmic opticians.

This involves *inter alia* the measuring of the face for the appropriate size of frame, the measurement of distance between the pupils with a P.D. Gauge (pupillary distance), the advising of the client on the availability of various types of frames and their cosmetic effects, also the characteristics of bi-focal and multi-focal lenses and the advantages of one or more pairs of spectacles. They also advise on the tints available and their powers of absorption. However, the lenses are invariably surfaced (ground) to the prescription by specialist wholesale houses from blanks which are imported. The vast majority of dispensing opticians have the lenses cut and glazed to the frame by the wholesaler. Only rarely is that mechanical task performed by the dispenser. He, however, is responsible for checking that the lenses are in accordance with the prescription and that the frame fits so as to give optimum vision.

The Irish Association of Dispensing Opticians (I.A.D.O.) submitted in 1966 to the Opticians Board an application⁴ for formal authority to undertake training and conduct examinations for future entrants to the Register of Dispensing Opticians. They also requested that the I.A.D.O. be authorized to depute the British A.D.O. to undertake on its behalf training courses and seminars and to conduct the examination for the Fellowship of the A.D.O. Diploma. They suggested that this diploma should be recognized as a qualification for admission to the Register for Dispensing Opticians.

The course for the F.A.D.O. consists of theoretical and practical examinations. The A.D.O. offers correspondence courses which cover the necessary theoretical knowledge for their examinations. The students taking these courses have to work as trainee dispensers for a dispensing optician who undertakes to instruct them adequately in the practical work required for the examination. In addition, students have to attend for two

⁴Dated 22nd April, 1966.

periods, of a fortnight each year, of the three-year course at the City College for Further Education in London for personal instruction in supplementation of their private studies. These courses, which are approved by the British General Optical Council have been in existence for nearly 30 years and have been the medium by which the majority of British dispensers have acquired their theoretical knowledge. They have been revised repeatedly to keep abreast with modern dispensing techniques.

The I.A.D.O. in their submission to the Board emphasized that their proposals have the advantage of enabling students to qualify who live outside Dublin and who would not need to be full-time students. The Opticians Board rejected the request of the I.A.D.O. as they considered correspondence courses as an inadequate substitute for full-time courses and because they viewed with apprehension the possible consequential registration of foreign students who had qualified in the same way. The Opticians Board also expressed the hope that in future the preliminary training of dispensing opticians might possibly be taken in the Regional College of Technology.

The arguments advanced by the I.A.D.O. appear the more convincing and more in the public interest. The refusal of the Opticians Board to accept the suggestions of the I.A.D.O. is all the more difficult to understand in view of Section 34 of the Opticians Act:

“The Board shall, in accordance with rules, register in the Register of Dispensing Opticians a person who applies for such registration and who has undergone such courses of training and passed such examinations (being courses of training and examinations held outside the State) as are specified for the purposes of this section of the rules”.

All the same, the Opticians Board is unwilling to automatically accept on the Register of Dispensing Opticians persons who have obtained the A.D.O. Diploma in Great Britain.

Tasks Appropriate to Ophthalmologists and Ophthalmic Opticians

In Ireland as in other countries, the two professions disagree on the work which ophthalmic opticians are qualified to undertake, on the education of ophthalmic opticians and the extent to

which they should participate in services rendered by public authorities. This disagreement is caused as much by genuine differences in the evaluation of the work of ophthalmic opticians as by a certain degree of economic rivalry. The first point is discussed in this section, the second has already been considered in the previous section and the third will be discussed in the final chapter.

The post-secondary education of ophthalmologists takes about ten years and that of ophthalmic opticians three and a half years. The ophthalmologist is competent and authorized to diagnose all eye disorders, to prescribe corrective lenses and to treat diseases by any known means. The ophthalmic optician is competent to prescribe for the correction of refractive errors, has a restricted ability in recognizing abnormalities and to provide orthoptic treatment on the written authorization of a medical practitioner. The extent, if any, to which ophthalmic opticians are incapable of recognizing abnormalities is one of the contested issues between the professions.

From this it might be concluded that if other things were equal it would be most desirable for all eye-examinations and curative treatment to be provided by ophthalmologists. The case for any services to be performed by ophthalmic opticians must therefore be based on other things not being equal. Their services may be preferable because their charges are lower. In Ireland, ophthalmologists on the Panel of the Department of Social Welfare undertake eye-examinations for £1.50 while ophthalmic opticians receive £1.15 for such examinations.

This difference while it represents a fairly large proportion, 30 per cent, is absolutely, only £0.35. For the 18,000 insured persons examined by ophthalmologists this difference of £0.35 amounted to £6,500. (In Northern Ireland, the difference in the fees for an eye-test is even smaller; ophthalmologists receive £1.40 and ophthalmic opticians £1.29 under the General Eye Services). The refraction performed by ophthalmologists and ophthalmic opticians under these social service provisions are identical but ophthalmologists, in addition, give advice as to the nature and prognosis of disease, if present, and the remedial measures that should be taken. A person with an eye disease has to be treated by a medical practitioner, though an ophthalmologist

conducting the eye-examination may provide treatment outside the Optical Benefit Scheme.

Anybody consulting an ophthalmologist privately has to pay for an eye-examination, say £3.00—£5.00, possibly 50—150 per cent more than he would pay to an ophthalmic optician. (No information about ophthalmologists' charges is published.) However, for this higher fee the patient consulting the ophthalmologist receives a complete diagnosis of the state of his eyes and any prescription for glasses or medicines and, if required, advice as regards medical or surgical treatment. The person consulting an ophthalmic optician will have to be referred to a medical practitioner if he suffers from an eye disorder other than refractive errors. In assessing the significance of these two different types of service it should be noted that the proportion of persons suffering from eye diseases is relatively small. The actual figure is not known, but it may be relevant to mention that in Northern Ireland, only 1.2 per cent of persons examined by ophthalmic opticians are referred to medical practitioners.

Ophthalmologists in Ireland firmly believe that the restrictions on ophthalmic opticians in respect of orthoptic treatment and in the administering of drugs for the purpose of paralysing the accommodation of the eye, should be maintained and are in the public interest. At a special meeting of the Irish Faculty of Ophthalmology in July, 1968, disapproval was expressed of any change in the Opticians Act which might allow opticians to practise orthoptics in any circumstances except under direct medical control. In Britain, the recent Joint Declaration on behalf of ophthalmologists and ophthalmic opticians appears to give greater scope to ophthalmic opticians but the phraseology employed is rather ambiguous.⁵

⁵"It is agreed that mutual co-operation between ophthalmic opticians and ophthalmologists in the field of orthoptics would be beneficial to the public, especially where a squint shows any characteristics that suggest the possibility of a pathological condition. It is suggested that such co-operation could take the form of collaboration at an early stage. If orthoptic treatment is indicated, and the ophthalmic optician is prepared to provide it, then this should be undertaken by him and the case reviewed with the ophthalmologist at appropriate intervals." (Joint Declaration on Behalf of Ophthalmologists and Ophthalmic Opticians, February 1970, *The Ophthalmic Optician*, Vol. 10, No. 4).

Irish ophthalmic opticians consider that their practice is unduly restricted by not being permitted to administer drugs to paralyze the accommodation of the eye. This procedure is permitted in the United Kingdom and has recently been reaffirmed in the Joint Declaration.

It is not possible to assess the influence competition with ophthalmic opticians has on ophthalmologists' fees. If ophthalmologists were the only profession capable of examining eyes and prescribing glasses, their charges might be higher than they are at present.

There may be a need for refraction to be carried out by opticians because the number of ophthalmologists practising is insufficient to render an adequate service. This is the case in Northern Ireland and some other countries but it does not appear to be the position in the Republic. The 79 ophthalmic medical practitioners on the Panel of the Department of Social Welfare could provide an eye-testing service for some 345,000 persons, i.e. 12 per cent of the population. This assumes that they work 30 hours per week, for 45 weeks in the year and examine an average of 12 persons in a three-hour session and that 30 of them spend about half of their time conducting surgical sessions. This would allow for a rate of eye-examinations slightly higher than that of Northern Ireland and almost twice that of the Republic at present. At the fee paid for examination by the Department of Social Welfare this would give ophthalmologists, fully employed in eye-examinations, an annual gross income in excess of £8,000, almost exactly twice as much as if they were paid for 10 sessions per week at the Department of Health fee of £8.00 per session.

Many ophthalmologists practise in more than one county. The 79 practitioners on the Panel of the Department of Social Welfare practise from 140 different addresses. With the exception of two counties—Donegal and Louth—the geographical pattern of the practices of ophthalmologists appears to be similar to that of ophthalmic opticians. While the latter may be found in some smaller places where ophthalmologists do not practise, it appears that with comparatively few exceptions, all the population is within reasonable distance of an ophthalmologist's practice. In any case, visits for an eye-examination are a comparatively rare

event. However, with a different demand for their services the geographical distribution of ophthalmologists would probably adjust itself accordingly.

It may be argued that it does not require a ten-year post-secondary education, partly at public expense, to render an eye-examination service. Whether this is desirable or not depends mainly on the evaluation of the competence of ophthalmic opticians to recognize eye diseases. If their average ability of recognition was the same as that of ophthalmologists this would be a strong argument for employing the profession whose education is shorter and presents a lower burden on public funds.⁶

Some people argue with a certain degree of cogency that restriction on the sale of spectacles is not really in the public interest. They suggest that it is by now well established that only in most exceptional circumstances does the use of wrong glasses do any harm to the eyes.⁷ They suggest that the restrictions introduced by the Opticians Act, 1956, possibly have done more to increase the earnings of opticians than to protect the public. Whatever may be the validity of such arguments they are not worth pursuing. A reversal of public policy reducing the status and privileges of a profession is outside the realm of practical politics.

⁶Ophthalmic opticians might wish to add a third issue to which some of them attach great importance—the probability of an ophthalmic optician conducting a refractive examination more competently than an ophthalmologist.

⁷“But the wearing of wrong glasses will not lead to any organic (anatomical) change in any part of the eye. It will not produce any permanent diseased condition. These dogmatic statements are based on the daily experience of many ophthalmologists. The fallacy of the statement that ‘your eyes can be ruined if your glasses are wrong’, used as scare-head advertising, is a very common one. Don’t believe it for one minute. Wrong glasses can blur your vision, make your eyes uncomfortable, bother you in many ways, such as causing burning and irritation of the lid margins, but they cannot effect any change in your eyes, let alone ‘ruin them’.

Obviously, however, there is no excuse for wearing wrong glasses. If glasses are to be worn at all they should be as accurately fitted and correct as possible, compatible with eye comfort and checked or possibly changed about every two years”. (*The Truth About Your Eyes*, Derrick Vail, M.D. Collier Books, N.Y., 1962).

In the final analysis the case for the profession of ophthalmic opticians and for the scope of practice they should be permitted must rest on two issues:— first, to what extent are they rendering a service which is less expensive—to the public authorities providing services, to the private patient and to the public authorities subsidizing education. This will depend on how much less of what an ophthalmologist earns, an optician will be satisfied to accept. It would not be unreasonable to expect an ophthalmic optician to be remunerated at the same level as a National School teacher and some might consider this as rather generous. At that rate an ophthalmic optician would need to be paid about £4.20 for a three-hour session, assuming that he works ten sessions per week and 45 weeks in the year.

Second, the likelihood of ophthalmic opticians not recognizing diseases which would be recognized by an ophthalmologist— on this issue the two professions differ markedly. If an answer to the following question could be given in quantitative terms it would be possible to attempt a rational decision by answering the question—is it desirable to spend an additional £10,000 a year to save one man from losing his eye-sight in circumstances where this could have been avoided if a more expert examination had taken place?

Charges for Supply of Spectacles

Ophthalmic opticians supplying spectacles under the Department of Social Welfare Optical Benefit Scheme receive a payment from the Department of £3.50 which is supplemented in case of supplying Class II frames by a payment of £1.00 by the claimant. If the claimant prefers to purchase private frames the optician receives £3.50 from the Department plus any price he charges for the frame. There is no control whatsoever in respect of the prices charged to the two-thirds of all claimants who opt to buy frames not provided under the Optical Benefit Scheme.

It is estimated that of the total payment of £4.50 made in respect of Class II frames at least half is paid as a dispensing fee and the remainder is the material cost for lenses and frames. If it is assumed, most conservatively, that an ophthalmic optician takes on average one hour for an eye-examination and the

dispensing of spectacles, that he sees clients for 30 hours a week and works for 45 weeks a year (allowing for holidays and illness), he will be able to see 1,350 clients a year. For each he will receive a payment of £3.40 (excluding the cost of materials, but including the examination fee). This means that he will have a gross income of £4,590 per annum. This would represent a reasonable work load and in a well organized practice a competent optician should be able, at these rates, to earn more.

For the supply of glasses with private frames to social insurance claimants, the income of the optician is certainly substantially higher, say by at least £2.00 per pair, while for the supply of Class I frames it is only £2.40. For this reason the aggregate income of an ophthalmic optician under the Optical Benefit Scheme would be in excess of £5,000 per annum. These calculations of course are based on opticians having enough work to keep them occupied full-time.⁸ This at present is certainly not the case. The average number of social insurance claimants examined by an optician is only 89 per year and this would provide him with an income of only £414 on the above assumptions.

The structure of fees paid by the Department of Social Welfare is rather remarkable. Assuming that the time spent on the eye-examination is 30 minutes and on dispensing is also 30 minutes, the responsible professional task—the eye-examination—is remunerated at approximately half the rate paid for dispensing.

A contractor supplying spectacles for a local health authority to children and persons with full eligibility receives at present a fee of approximately £1.75 per pair. It is unlikely that his material cost will be less than £1.00 and may possibly be as much as £1.25, leaving him with a dispensing fee of £0.50. The quality of the frame is much the same as a Class I frame under the Optical Benefit Scheme, but the quality of the dispensing

⁸Even if the supply of spectacles was at the same rate as in Northern Ireland—10 per cent of population—the average number of examinations per ophthalmic optician would only be about 680, assuming that about half of all persons having their eyes tested visit an ophthalmologist and the remainder an ophthalmic optician. It must, however, be remembered that many ophthalmic opticians are not working full-time in the profession.

is lower and the standard of the lenses is questioned by some.⁹ All the same, on the volume of spectacles supplied this represents a not insignificant gross profit for the contractor—say in 1968 approximately £350 for County Wicklow and £1,000 for County Donegal.

The Survey of Ophthalmic Opticians shows clearly that opticians charge for their services in different ways, but the results do not lend themselves to ascertain accurately the average remuneration received for supplying a pair of spectacles. It seems unlikely that this, including the eye-examination, is less than £5.00—a fairly generous reward.

Opticians, like pharmacists, but unlike other health service professions, supply a commodity as well as giving a professional service. The pharmacist dispenses medicines in exact accordance with the prescription of a medical practitioner. In respect of this service he receives from the patient a professional fee of £0.25 and a mark up of 50 per cent on the cost of the materials dispensed. The dispensing of lenses of a particular strength and other optical characteristics by the optician offers considerable scope for the patient to choose according to his preference and for the optician to give his advice. Lenses may differ *inter alia* in shape, size and tincture and may be in frames of a variety of designs, sizes and colours.

The fact that spectacles cover a significant proportion of the face means that they have an important effect on a person's appearance. In this respect services rendered by opticians have some affinity to dental services which also have a cosmetic effect. The peculiar characteristic of optical services, however, is that the willingness of people to incur expenses in improving their appearance is the basis of much of the optician's income.

Opticians endeavour to be recognized as an independent health service profession and dislike being considered as sellers

⁹There is some doubt whether all the lenses are up to the British Standard (B.S. 2738. Specification for Spectacle Lenses). This specification covers 13 items: (1) scope, (2) definition, (3) material, (4) surface defects, (5) conformity with prescription, (6) measurement of lens power, (7) tolerances on power of all lenses, (8) cylinder axes, (9) optical centration, (10) base setting and powers of plano prisms, (11) bi-focals and multi-focals, (12) lens pairs and (13) glazing. British Standard 3062 gives the specification for spectacle lens material.

of spectacles. This is not merely more prestigious but also clearly to their economic advantage. The Opticians Act, 1956 makes the sale of spectacles other than on prescription illegal and confines the right to prescribe spectacles to medical practitioners and ophthalmic opticians.¹⁰ This was meant to protect the interests of persons suffering from eye defects. The Act also confines the dispensing of spectacles to ophthalmic opticians and dispensing opticians. The same Act in Section 52, empowers the Opticians Board to make rules for the control of advertising and makes the breach of a rule an offence liable on summary conviction to a fine not exceeding £20·00. The Board has made rules prohibiting virtually any form of advertising and even restricts to 12 the number of frames which may be shown in a public window display at a business address.

It is difficult to understand the reasons why a statutory body was given such a power. While the absence of advertising may improve the status of the optician and surround him with the aura of a professional man, it is by no means clear that these restrictions are in the public interest. The 1956 Act gives opticians a monopoly position without controlling the prices that they may charge either for their services or for the materials (lenses and spectacles) they supply. Simultaneously, the Act discourages price-competition between opticians and thereby prevents the public from knowing where they can obtain the least expensive service and material they require. The desire of opticians to play down the fashion consideration in the minds of their clients when selecting frames is perfectly understandable, but for the State to prevent competition between the suppliers of a fashion good increases the price the public has to pay.

The Opticians Act does not provide any means of checking whether the lenses dispensed agree with the prescription presented nor do public authorities make any provision for checking that prescriptions dispensed to social insurance claimants, to National School children, or to persons with full eligibility under the Health Acts, are dispensed in accordance with the prescription presented. The caveat emptor doctrine of lawyers is hardly appropriate to the provision of spectacles and reliance on professional standards, while perfectly satisfactory in the vast

¹⁰At present the sale of frames without lenses is not controlled.

majority of transactions, is not adequate to discover the individual whose practice falls below acceptable professional standards. There would be no great difficulty or expense involved in providing the machinery by which a person dissatisfied with the service he has received would be able to submit his spectacles for checking whether they were in accordance with his prescription. In respect of those spectacles which are provided at public expense it would be perfectly proper to set up machinery to test a small random sample, much on the same lines as is done in Northern Ireland.

The Opticians Board (Bord na Radharcmhastóirt)

The present composition of the Board does not necessarily make it the best guardian of the public interest in an optical context. While it is desirable to have representatives of the professions and interests providing ophthalmic services as members, it is equally desirable to have a reasonable number of persons representing those requiring ophthalmic services. The present composition (four medical practitioners, five ophthalmic opticians, one dispensing optician and one lay member), appears to be heavily weighted in favour of ophthalmic opticians, to give inadequate representation to dispensing opticians and provides no representation whatsoever for manufacturers and wholesalers. The method of election of the five ophthalmic opticians and the one dispensing optician by all registered opticians is also somewhat strange. A selection by their peers would appear to be more reasonable.

If the Board were to be reconstituted it might be advisable to include amongst the other members, representatives of the New Health Boards, of the Vocational Education Committees and possibly of the Irish Congress of Trade Unions and the Federated Union of Employers.

In addition to changes in the composition of the Board and in the election procedure there is also the general case that public interest is generally best served by statutory bodies operating in public rather than in camera. This suggests three modifications: first, that the meetings of the Board should be open to the press and any other person interested in attending,

and second, that the minutes of the meeting of the Board should be published. The third suggestion is possibly more fundamental. At present Section 18 (3) provides that rules "shall have no effect unless and until they are approved by the Minister". This means that the Board can make rules and the Minister approve them without there being any opportunity for public debate. It would be more desirable if the rules made by the Board were laid before both houses of the Oireachtas before coming into force. This would make it possible for all interested parties to make their voice heard.

IX. THE FUTURE OF OPHTHALMIC SERVICES.

The outstanding characteristics of the present services appear to be: (1) ophthalmic opticians (and most likely ophthalmologists) are under-employed. Many ophthalmic opticians combine their work with that of other professions, especially pharmacy. (2) The number of dispensing opticians in the country is more than adequate; the present statutory regulations for their training are unduly restrictive. (3) The number of eye-tests proportionate to population is about half that of Northern Ireland and less than two-fifths that of the United States. (4) The number of people having spectacles in the Republic, especially amongst the elderly, is rather low. (5) It is not possible to assess the standard of dispensing. There is no machinery for test checks. (6) The remuneration of ophthalmic opticians and dispensing opticians under the Social Welfare Scheme is generous and the fee for dispensing spectacles privately is on average rather high, but the remuneration of contractors to the local health authorities for the supply of free spectacles to the eligible groups seems stringent. (7) The Department of Social Welfare pays for an eye-examination only about half the fee it pays for the dispensing of spectacles, excluding materials. (8) The statutory prohibition of most forms of advertising coupled with the even more restrictive rules of the Association of Ophthalmic Opticians, reduces the element of competition and thereby increases prices. (9) The capital equipment and value of stocks of ophthalmic opticians is quite small and only

very rarely would exceed £500. (10) The free services for National School children and persons with full eligibility are often cumbersome and slow. (11) The exclusion from free ophthalmic services of all children and young persons attending vocational, comprehensive and secondary schools as well as those at work before the age of 16½ years except those whose parents have full eligibility under the Health Acts.

The White Paper on "The Health Services and Their Further Development", issued in January 1966, proposes the extension of subsidized ophthalmic services:

"It is proposed that the ophthalmic services will, as soon as is practicable, be extended to the middle income group generally, in accordance with Section 21 of the Health Act, 1953. Charges, not normally exceeding half of the cost, would be made, but the service will remain free of charge for the classes at present eligible. The optical benefit scheme of the Department of Social Welfare would then be discontinued. Discussions will be held with representatives of the ophthalmologists and of the opticians on this proposed extension of the service". (Para. 98).

Under the Health Act, 1970, provision is made for the extension of ophthalmic services (ophthalmic treatment and optical appliances) to persons with limited eligibility and for the transfer of these services from the health authorities to the health boards set up by this Act. However, no date has been fixed for these provisions to come into operation. The under-employment of ophthalmic opticians and possibly ophthalmologists makes it possible to implement these proposals, at least as far as staff is concerned, without any difficulty.

The 1970 scale of remuneration for ophthalmic opticians participating in the Optical Benefit Scheme reduced the contribution made by the claimant for Class II frames from an average of approximately £1.83 to £1.00.¹

It is difficult to justify this reduction. If the total payment to the optician, excluding the eye-examination fee, was to be

¹If the present Class I frame is considered as equivalent to the pre-1970 Class II frame the claimant's contribution for this quality of frame has been reduced from £1.83 to nil.

£4.50 the appropriate payment by the claimant, in line with the proposals of the White Paper, should have been £2.25. (This incidentally would have compared with a contribution of £2.30 from the claimant in Northern Ireland.) The present fee scales paid by the Department of Social Welfare would give an optician working full-time a gross income, excluding the cost of materials, of more than £5,000 per annum. This rate of fee can only be justified by the fact that the average number of prescriptions dispensed is low. From this it follows that if, at some date, the proposals of the White Paper were to be implemented, a substantially lower dispensing fee would be a fair remuneration.

The restriction and virtual prohibition of advertising is an essential pillar of the policy of ophthalmic opticians to establish themselves as a profession. Another important plank in their policy is the desirability of a unified service, that means eye-examinations and dispensing being undertaken by the same practitioners. They claim that this is superior to a service where the prescribing and dispensing are undertaken separately. The superiority of a unified service is not admitted by ophthalmologists and the validity of the arguments in support of it is disputed. If a unified service is not accepted as superior it might be argued that the proper professional task of ophthalmic opticians, like that of ophthalmologists, is to undertake eye-examinations. This, as is the case in other professions, should be practised on ethical standards in which advertising is not considered appropriate. The dispensing of prescriptions is not a professional task.² It requires skill which is more appropriate to a craft and with some of the flair of beauticians or boutique owners.

²This view is supported by Mr. Patrick Casey, Honorary General Secretary of the Irish Association of Dispensing Opticians, who commenting on an earlier draft of this Broadsheet, in a letter dated 28th July, 1970, writes—(The paragraph is quoted in toto):

“You refer also in your Survey to the ‘professional’ aspirations of the Ophthalmic Opticians. This is really the base of all their objections to the very existence of Dispensing Opticians who very rightly maintain that they are not a profession as such but engage in a highly skilled technical vocation or trade. Your emphasis on the cosmetic aspects of Optical Dispensing, lends support to our traditional claims.”

A salesman can as little dispense spectacles as a labourer can install domestic plumbing or electric wiring. This, however, is no justification for referring to a plumber or an electrician as a professional man. In most states of the United States, dispensing opticians require no statutory qualification, and in Northern Ireland, dispensing opticians can in addition to full-time courses at a college, serve an apprenticeship and take an examination for which they can prepare themselves by correspondence courses. If the assessment of dispensing as a skilled craft, rather than a profession, is accepted it follows that advertising by dispensers leading to price-competition is quite legitimate.³ Advertising and price-competition in the sale of spectacles would not lead to an undesirable lowering of standards and thereby harm the public interest if there were four statutory provisions:— (1) spectacles are only to be dispensed on an ophthalmologist's or ophthalmic optician's prescription; (2) lenses and frames are to be of a definite minimum standard; (3) provisions are made for checking whether lenses and frames adhere to these standards and that lenses are in accordance with prescriptions; (4) dispensing is restricted to those who have the appropriate qualification.

None of these provisions should be difficult to implement. Already spectacles may only be dispensed if they have been prescribed by ophthalmologists or ophthalmic opticians. At present, there is no Irish standard for either spectacles, lenses or frames. There are, however, British standards to which the overwhelming majority of spectacles dispensed in this country adhere. It would be possible to impose on opticians, dispensing for local authorities and the Department of Social Welfare, the contractual obligation to adhere to these standards. Alternatively, it would be possible in a future Opticians Act to impose on all opticians a statutory obligation to adhere to these standards. With modern equipment there is no difficulty in testing glasses speedily and cheaply for adherence to the prescription and the quality of the lenses. The dispensing of glasses requires a certain skill and it would be desirable to maintain the restriction limiting

³The present practice by which local health authorities advertise tenders for dispensing for those groups of the population entitled to free glasses, implies the legitimacy of price-competition.

dispensing to persons having a qualification approved by Bord na Radharcmhastóirí.

These proposals will certainly be unpopular with ophthalmic opticians. Already there are too many of them for the work available. Any suggestion of considering dispensing not as an integral part of their professional work, but as a skill which can be performed by technicians, must appear to them a device which will reduce their work and especially that section of it which is most remunerative. It is, however, not suggested that ophthalmic opticians should be debarred from dispensing. They could continue to offer a unified service, but if they choose to dispense they would have to do so in an environment which would be more competitive than at present. If it is admitted that dispensing glasses like domestic plumbing and electric wiring is a legitimate field for competition, it would be reasonable not merely to permit but even to encourage dispensing by department and chain-stores. There appears here a conflict of interests between ophthalmic opticians and the public. If the validity of the argument is admitted, there can be no doubt which should prevail.

If these suggestions were adopted it might be considered appropriate, in an extension of subsidized ophthalmic services to persons with limited eligibility, to provide free eye-tests and leave it to those within this group to pay for spectacles which, it can be anticipated, would then be much less expensive than at present. In competitive conditions, spectacles adhering to the standards outlined might be available from about £3.00 upwards.⁴

In any future extension of ophthalmic services three issues, all of them containing an element of controversy, must be considered. First, should the present system of local authority optician contractors for dispensing spectacles be continued? The present scheme has the disadvantage of not allowing the recipients a choice of optician. There would be considerable benefits to the persons affected both in speed and in quality of service if they could obtain spectacles under the same conditions as others. It has not been possible to ascertain whether the lenses and frames

⁴The 1970 contract price for spectacles paid by local authorities varied from about £1.15 to £1.75.

supplied by contractors always come up to British standards. If they do not, it is suggested that they should do so in future.

A choice of optician coupled with material of a fairly high minimum standard would increase the present cost of ophthalmic services to persons entitled to free spectacles by possibly as much as 50 per cent. But it seems likely that in any case, contract prices will have to be increased in future.

Second, whenever ophthalmic services are extended to persons with limited eligibility ophthalmic opticians would have a strong claim to participate in the examination service. Such an extension would replace the present Optical Benefit Scheme in which ophthalmic opticians conduct about half of all eye-examinations. However, it is decidedly controversial whether persons with full eligibility and National School children would in future as in the past be examined by ophthalmologists in out-patient clinics or whether they, like claimants of optical benefit, should have the free choice of consulting an ophthalmologist or optician at his private premises. In line with the spirit of the White Paper, freedom of choice would be desirable. There appear to be strong medical arguments in favour of ophthalmologists examining children's eyes, while adults with full eligibility would not normally present different medical problems in respect of eye-examination than claimants of optical benefit. It would thus appear reasonable to give them the facilities for having their eyes examined by ophthalmologists or opticians in the same conditions as at present enjoyed by social insurance claimants. However, as the incidence of eye diseases increases with age, there might be an argument for restricting the eye-examination of persons above the age of 65 or 70 to ophthalmologists.

The present estimated cost of eye-examinations in clinics for persons with full eligibility is about £1.00 and the increased cost of offering the same choice as under the social insurance scheme would be of the magnitude of one third. For this higher cost persons with full eligibility would receive a service which they would certainly prefer and which would fit more logically into the new scheme of general medical services which will come into operation in April 1971.

Third, the Report on "Child Health Services" published in November 1967, in paragraph 8.15 recommends:

“that any extension of the School Health Examination Service to post-primary schools should not be introduced until the services for pre-school and national school children have been overhauled on a more rational, selective and scientific basis and until the new type service has attained a smooth working rhythm”.

In the following paragraphs the views of the study group on an extension of services to post-primary school children and youths in employment are given.

“Spectacles and dental treatment are the most common requirements at the post-primary ages. We consider that the extension of the dental and ophthalmic services to the middle-income group proposed in the White Paper on the Health Services (January 1966) would cater adequately for this group. The range of free treatment services envisaged for national schools need not, we feel, be extended to post-primary schools, as the main bulk of defect should by then have come under notice and have been treated.⁵ The range of free services would already have accomplished its basic purpose, *viz.*, to encourage parents to have defects in children treated at an early stage during the critical phase of health development. It should be noted that a young person becomes eligible under the law for institutional and specialist health services in his own right on reaching the age of 16 years.

We also considered the position of those who leave national school at 14 years of age, e.g. to take up employment. The majority would, we believe be in the lower-income group and entitled as such to the full range of free health services. If possible, the remainder could be granted any facilities made available to their contemporaries in post-primary schools. We see, however, considerable practical difficulty in arranging for any kind of medical examination for working adolescents because of the fact

⁵This view does not take into account that myopia tends to increase during adolescence and may require attention and correction at secondary school age.

that they are not so readily accessible as school pupils.”
(Report on “Child Health Services”, 8.16 and 8.17).

The cogency of these arguments is persuasive, but all the same two points deserve consideration. First, if the subsidized ophthalmic services for persons with limited eligibility is postponed for any length of time there may be an argument, as a first step, to extend ophthalmic services to all up to the age of 16½ years, that means the age at which those working become eligible to receive spectacles under the Optical Benefit Scheme. Those to whom such a scheme is extended might either receive it on the same basis as persons with full eligibility or possibly on the same terms as claimants under the Optical Benefit Scheme. Even after a general scheme for persons with limited eligibility has been introduced, it would not be unreasonable to give to young persons a higher rate of subsidy.

Second, while in the past those receiving post-primary education may have been judged capable of providing their own medical services, on account of changes in the composition of the post-primary population, especially in rural areas, this is less the case today than it has been in the past.

The views of ophthalmic opticians and ophthalmologists are so divergent that it is impossible to devise a scheme which would completely satisfy both professions. On the basis of the above discussion the following suggestions are made:—

- (1) All children under 14 years and all persons with full and limited eligibility be entitled to an eye-examination, without charge, at public expense.
- (2) That persons with full or limited eligibility be given the choice of attending for eye-examination at the consulting rooms of an ophthalmologist or ophthalmic optician.
- (3) That all children under 14 years have their eyes examined by an ophthalmologist.
- (4) That all lenses and frames dispensed must adhere to the British Standard specifications.
- (5) That advertising and price-competition in the sale of spectacles is permitted and encouraged.

- (6) That children under 14 years and persons with full eligibility receive spectacles free of charge from any optician who places himself on the panel of the Department of Health.

Two additional points also deserve consideration—the extension of the age up to which children are entitled to free spectacles, from 14 to possibly 16½ years and the limitation of the eye-examination of persons over 70 years to ophthalmologists.

An estimate of the cost of the various changes proposed can only be approximate but all the same an indication of the magnitudes is useful. The estimated cost for 1970/71 to public funds at current rates for the Optical Benefit Scheme is £230,000,⁶ for persons with full eligibility is £148,000 and for National School children is £93,000—a total of £471,000.

In Table 11, an attempt is made to estimate the expenditure on ophthalmic services in 1970/71. Separate estimates are made for public and private expenditure for each of the groups receiving subsidized and non-subsidized services. The examination fees of ophthalmologists and of ophthalmic opticians are estimated, and for dispensing, fees are distinguished from the material cost. From this table it can be seen that the cost of dispensing is rather more than twice the payment for eye-examination and that about a quarter of the cost of eye-examinations is paid to ophthalmic opticians. In dispensing the cost of materials is slightly higher than that of charges for fees. Public expenditure on ophthalmic services is £471,000, and claimants of Optical Benefit, for obtaining a minimum standard of a Class II frame, have to contribute £30,000 and do pay another £48,000 voluntarily for a higher standard of frame. Approximately half of the total expenditure on ophthalmic services is paid by persons not entitled to any subsidies from the public purse.

The estimates in this and the following two tables completely exclude the cost of in-patient treatment of ophthalmic diseases.

⁶This allows for the increase in claims of about one fifth between 1969/70 and 1970/71 compared with the previous annual increase of four per cent. This substantially higher rate of claims recorded in the first 16 weeks of 1970/71 is apparently due to the changed fee-structure introduced in January 1970.

TABLE 11: *Estimated Expenditure on Ophthalmic Services 1970/71*

	<i>Expenditure</i>		<i>Examination Fees</i>		<i>Dispensing</i>	
	<i>Public</i>	<i>Private</i>	<i>Ophthalmologists</i>	<i>Ophthalmic Opticians</i>	<i>Fees</i>	<i>Material Cost</i>
	£,000's	£,000's	£,000's	£,000's	£,000's	£,000's
Subsidized Services						
Population Group:						
Full Eligibility*	148	—	85	—	18	45
Optical Benefit Scheme*	230	78	38	29	125	116
Children**	93	—	47	—	13	33
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	471	78	170	29	156	194
Expenditure on:						
Examinations	199	—	170	29	—	—
Spectacles	272	78	—	—	156	194
	471	78	170	29	156	194
Non-Subsidized Services	—	645	105	60	240	240
All Services	471	723	275	89	396	434
	<hr/>		<hr/>		<hr/>	
	1,194		364		830	

See Notes following Table 13.

They do cover treatment in respect of disease for persons with full eligibility and National School children but do not cover out-patient treatment for the remainder of the population. As was pointed out previously, the ophthalmologist's eye-examination is in its nature different from that of an ophthalmic optician, but this difference is not reflected in the costings.

In Table 12, an attempt is made to estimate the cost of the proposed ophthalmic services on the assumption that the volume of services provided remains at the 1970/71 level. On the basis of these guesstimates public expenditure on ophthalmic services would remain, unaltered. Private expenditure on subsidized services would increase sharply, partly because the present claimants of Optical Benefit would have to pay for their spectacles and partly because more people would become entitled to subsidized services while the number of those obtaining non-subsidized services would decline correspondingly. It is visualized that competition in dispensing would lead to a substantial reduction, of the magnitude of one third, in the aggregate gross income from dispensing fees. This is the balance of reduced income due to competition and higher income for dispensing spectacles for which no charge is made to the claimant. The income of ophthalmologists would marginally decline mainly on account of the extension of a free eye-examination to persons with limited eligibility.⁷

In Table 13, an attempt is made to estimate the cost which would be incurred if the volume of services was approximately equal to that of Northern Ireland. This would lead to an increased aggregate expenditure from about £1 million to £1.5 million, and of the total, rather less than half would be borne by the public purse. Unfortunately this table is not strictly comparable with the two previous ones as it is now assumed that five per cent of children under 14 years and 12 per cent of persons with full eligibility are attending for eye-examination and that the same

⁷This is the result of assuming that private patients pay an average of £3.50 for an eye-examination while the Health Boards will only pay £1.50. However, it ought to be remembered that in this table it is assumed that under the proposed scheme the demand for services will be the same as at present. It would be more reasonable to assume that with a free eye-examination the demand will increase.

TABLE 12: *Estimated Cost of Proposed Ophthalmic Services in 1970/71 at the 1970/71 Volume of Services*

	<i>Expenditure</i>		<i>Examination Fees</i>		<i>Dispensing</i>
	<i>Public</i>	<i>Private</i>	<i>Ophthalmologists</i>	<i>Ophthalmic Opticians</i>	<i>Material Cost</i>
	£000's	£000's	£000's	£000's	£000's
<i>Subsidized Services:</i>					
Population Group					
Full Eligibility*	232	—	103	21	36
Optical Benefit Scheme*	67	190	38	29	70
Limited Eligibility	46	133	26	20	49
Children**	125	—	47	—	26
	470	323	214	70	181
					328
<i>Expenditure on:</i>					
Examinations	284	—	214	70	—
Spectacles	186	323	—	—	181
	470	323	214	70	181
					328
<i>Non-Subsidized Services</i>	—	244	44	25	75
<i>All Services</i>	470	567	258	95	256
	1,037		353		684

See Notes following Table 13.

proportion receive spectacles. The previous two tables were based on the actual number of examinations undertaken and on the actual number of spectacles dispensed. In ophthalmic clinics the number of persons examined and re-examined is far in excess of the number of spectacles prescribed. This discrepancy is due to Table 11 covering all out-patient ophthalmic treatment while Table 13 covers only a proportion of the treatment which is required. For this reason in the three tables dispensing fees, material cost and examination fees of ophthalmic opticians are comparable, while this is not the case for the ophthalmologists' fees. For all three tables full notes are given showing the basis on which the guesstimates have been made. This makes it possible to adjust them easily for any variation in the assumptions.

The object of the proposals is to provide a high quality service for the largest number of people at the minimum cost to individuals and the public purse. The encouragement of competition in dispensing with freedom to advertise would, it is suggested, significantly reduce the cost of the services. The present grant-in-aid of £3.50 towards the cost of spectacles to claimants of Optical Benefit is not linked to any restrictions in the charges an optician may make for any but Class I or II frames. The abolition of this grant should also tend to reduce prices. These changes would undoubtedly benefit the public in their capacity as tax-payers and as citizens requiring glasses. It is not claimed that it would economically benefit those who provide the service. Amongst those it would favour, like all competition, would be the efficient against the inefficient. In the last resort when the State confines the provision of a particular commodity to one group of people, the public is entitled to be protected against excessive charges either by statutory price control or by the operation of competitive forces. In a commodity such as spectacles, where the fashion element is becoming increasingly important, the arguments for competition are extremely strong.

Finally, a brief reference should be made to the effects of joining the Common Market. At present, the scope of practice and the education of ophthalmic opticians differs widely within the countries of the European Economic Community and the European Free Trade Area. For example, in France and Norway ophthalmic opticians are not permitted to use objective methods

TABLE 13: *Estimated cost of Proposed Ophthalmic Services in 1970/71 on the Assumption that Five per cent of Children under 14 years and 12 per cent of the Population over 14 years Attend for Eye-Examination and Receive Glasses.†*

	Expenditure		Examination Fees		Dispensing	
	Public	Private	Ophthalmologist	Ophthalmic Optician	Fees	Material Cost
	£,000's	£,000's	£,000's	£,000's	£,000's	£,000's
Subsidized Services:						
Population Group						
Full Eligibility*	353	—	61	47	82	163
Limited Eligibility*	174	563	98	76	216	347
Children under 14 years	168	—	42	—	42	84
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	695	563	201	123	340	594
Expenditure:						
Examinations	324	—	201	123	—	—
Spectacles	371	563	—	—	340	594
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	695	563	201	123	340	594
Non-Subsidized Services*	—	317	58	32	97	130
All Services	695	880	259	155	437	724
	<hr/>		<hr/>		<hr/>	
	1,675		414		1,161	

*Excludes National School Children.

**National School children only.

†This approximates the present volume of services in Northern Ireland.

NOTES: to Tables 11, 12 and 13.

1. All expenditure incurred on hospital in-patient treatment of ophthalmic diseases is excluded.
2. Out-patient treatment for ophthalmic diseases for persons with limited and no eligibility is excluded. Such treatment is covered in Tables 11 and 12 for National School children and persons with full eligibility, but for reasons explained in the text is not fully covered in Table 13.
3. Tables 12 and 13 incorporate the proposals outlined on Page 66 and are based on the following assumptions:
 - (a) The fees for examination will remain as under the present Optical Benefit Scheme, £1.50 to an ophthalmologist and £1.15 to an ophthalmic optician.
 - (b) Half of those requiring spectacles opt to consult an ophthalmic optician and the other half an ophthalmologist.
 - (c) Health Boards will pay the full cost of supplying spectacles for children under 14 years and persons with full eligibility. This is assumed to be £2.00 in respect of lenses and frames and £1.00 as a dispensing fee. All other persons will pay for their own lenses and frames.
4. In Table 11, it is assumed that under the Optical Benefit Scheme the dispensing fee will be on average £1.75 for Class I and II frames, £1.00 for reglazing old frames and £3.75 for private frames. The cost of materials is assumed to be £2.25 for Class I and II frames, £1.50 for reglazed frames and £2.75 for private frames.
5. In Table 11, for non-subsidized services it is assumed that in the absence of competition the dispensing fee is £4.00 and that the cost of materials is the same amount.
6. For persons with limited eligibility and social insurance claimants, in Table 12, it is assumed that 20 per cent of clients will have lenses fitted to old frames (reglazed) at a dispensing fee of £0.50 and material cost of £1.50; 30 per cent will pay £1.00 for dispensing and £2.00 for materials and 50 per cent will pay £2.00 for dispensing and £3.00 for materials.
7. For persons with no eligibility the cost of an eye-examination by an ophthalmologist is assumed to be £3.50 and by an ophthalmic optician £2.00. The average cost of spectacles is assumed to be £7.00 (£4.00 for materials, £3.00 for dispensing fee).

8. The numbers of persons receiving services are shown below:

Tables	Eye-Examination			Spectacles		
	11	12	13	11	12	13
	ooo's			ooo's		
Subsidized Services						
Full Eligibility	85	85	82	36	36	82
Optical Benefit Scheme	50	50	—	50	50	—
Limited Eligibility	—	35	132	—	35	132
Children*	47	47	42	26	26	42
Non-Subsidized Services	60	25	32	60	25	32
	242	242	288	172	172	288

*Tables 11 and 12—National School children only.

It should be noted that in Table 12 the number of examinations and spectacles dispensed on the constant volume assumption are identical to those in Table 11, while in Table 13 the aggregate number is equal to one tenth of the population of the State.

The numbers for the subsidized services are those of the most recent year available projected forward to 1970/71. Those for the non-subsidized services are least reliable and are based on the "Survey of Ophthalmic Opticians" as explained in Footnote 1, Page 41.

in refraction; in Italy they are not permitted to refract for children or correct astigmatism and in several countries the optometric profession is classified as para-medical. In no country are the standards of the profession as high and the scope of the work they are permitted to do as wide as in the United Kingdom. In Ireland, standards and conditions are only slightly less restricted. It is very unlikely that if legal regulations for the profession of ophthalmic optics are instituted in an expanded EEC that they will be higher than those prevailing in this country at present. It is, however, quite possible that they will be lower on account of the long established tradition of ophthalmology in countries such as Germany.

APPENDIX I

CURRICULUM OF THE COURSE FOR OPHTHALMIC OPTICIANS

Course at the College of Technology, Kevin Street, Dublin 1968/69

1st Year: Mathematics, Chemistry, Biology, Anatomy and Physiology, Workshop Practice.

2nd Year: Light and Optical Instruments, *Geometrical Optics, Anatomy and Physiology, *Physiological Optics, *Optometry, *Optical Dispensing, *Ethics and Law.

3rd Year: *Optometry, *Physiological Optics, Abnormal Conditions, **Orthoptics, *Ophthalmic Instruments, *Environmental Optics.

In addition all years include General Studies and Social Science.

*Subjects taken by the teacher-in-charge.

**Subjects taken partly by the teacher-in-charge.

APPENDIX II

SURVEY OF OPHTHALMIC OPTICIANS

This survey of ophthalmic opticians is conducted by the Economic and Social Research Institute. The results of the survey will form part of a study of "Ophthalmic Services in Ireland". Questionnaires are being sent to all ophthalmic opticians on the Register. Your co-operation in completing this questionnaire is important if we are to obtain a complete picture of the services rendered by ophthalmic opticians today. Any information given will be regarded as confidential.

Note: Where boxes appear opposite answers in some questions, please mark the one that applies to you with an "X" e.g.

PART A.

1. To which age-group do you belong?

- under 25
- 25—34
- 35—44
- 45—54
- 55—64
- 65 and over

2. Do you practise as an ophthalmic optician on your own, in partnership or as an employee?

- on your own
- in partnership
- as an employee

If you work in partnership or as an employee, please give the occupation of your partner or employer.

	<i>Occupation</i>
Partner	
Employer	

3. Address/es of your practice/s as an ophthalmic optician:

	<i>Hours premises are open</i>	<i>Frequency of Attendance</i>	<i>Hours you are present</i>
(a) _____ _____			
(b) _____ _____			
(c) _____ _____			

4. Do you employ staff for your optical practice?

yes

no

If yes, please allow a separate line on the following chart for each person employed.

<i>Occupation</i>	<i>Sex</i>	<i>Age</i>

5. Are you

(a) on the Panel of the Department of Social Welfare

(b) a current contractor with a Local Health Authority

(c) both

(d) not on either of the two?

6. Do you have any training or qualifications outside the optical field?

yes

no

If yes, please give details

7. In what fields do you work either full-time or part-time?

	<i>Ophthalmic Opticians</i>		<i>Pharmacist</i>	<i>Jeweller/ Watchmaker</i>	<i>Other (please state)</i>
	<i>Examining and prescribing</i>	<i>Dispensing</i>			
Full-time					
Part-time					

Please mark the spaces that apply to you, leaving the others blank.

8. Are any of your children qualified or student ophthalmic opticians?

Qualified Number.....

Student Number.....

PART B.

This section of the questionnaire is concerned with the number of persons examined, those for whom spectacles were prescribed, the number of spectacles dispensed and the number of persons referred to medical practitioners during 1969. Exact figures should be given where available and if not, the nearest possible estimate.

1. How many persons did you examine during 1969?

Male _____

Female _____

2. For how many of these were spectacles prescribed (including contact lenses)?

Male _____

Female _____

3. How many persons did you refer to medical practitioners during 1969?

Number _____

4. How many prescriptions from medical practitioners did you dispense during 1969?

Number _____

5. How many persons were examined under the Optical Benefit Scheme of the Department of Social Welfare and how many paid the examination fee themselves?

<i>Number</i>	
<i>Social Welfare</i>	<i>Private</i>

6. What is the average time you allow for an examination excluding dispensing?

PART C.

Let us again assure you of the confidentiality of any information given. Charges made by individual opticians will not be published. We are interested in the aggregate, not the individual, charges.

1. Do you make separate charges for the following?

	<i>Yes</i>	<i>No</i>
eye-examination	<input type="checkbox"/>	<input type="checkbox"/>
dispensing	<input type="checkbox"/>	<input type="checkbox"/>
lenses	<input type="checkbox"/>	<input type="checkbox"/>
frames	<input type="checkbox"/>	<input type="checkbox"/>

2. Do you normally charge a standard examination fee?
 yes £..s... no

If no, what examination fees do you charge?

lowest £..s...
 highest £..s...
 estimated average £..s...

3. Do you normally charge a standard dispensing fee?
 yes £..s... no

If no, what dispensing fees do you charge?

lowest £..s...
 highest £..s...
 estimated average £..s...

4. Do you charge a standard price for lenses or is the charge affected by the prescription?

(a) standard price yes £..s... no

(b) according to prescription—estimated average price
 £..s...

5. Approximately how many frame designs did you keep in stock in 1969?

less than 30 designs
 30—60
 61—100
 over 100

6. What were the prices of frames you supplied in 1969?

<i>Price</i>	<i>Wholesale Price</i>
Lowest	
Highest	
Estimated Average	

7. Is the person made aware of the charges prior to choosing a particular frame?
 yes no

8. Which of the following categories was nearest to your gross receipts and net income from your optical practice in 1969?

<i>Gross Receipts</i>	<i>Net Income*</i>
less than £1,500 ———	less than £1,000 ———
£1,500—£2,499 ———	£1,000—£1,499 ———
£2,500—£3,499 ———	£1,500—£1,999 ———
£3,500—£4,499 ———	£2,000—£2,499 ———
£5,500—£6,500 ———	£2,500—£3,000 ———
over £6,500	over £3,000

*Before Tax.

9. Approximately what proportion of your income comes from the following sources?

	<i>per cent</i>
Private Practice	———
Social Welfare Benefit Scheme	———
Contractor with Local Health Authority	———
Total	100
	———

Thank you for your co-operation in completing the questionnaire.

APPENDIX III

OPHTHALMIC SERVICES IN OTHER COUNTRIES

For the purpose of better understanding the nature of ophthalmic services in the State it is of interest to review briefly the position in some other countries. This will also make it possible

to judge in what ways and to what extent measures, regulations and practices employed abroad could usefully be adopted here. The three countries which will be reviewed are Northern Ireland, on account of its proximity; the United States, a rich country which relies mainly on private services and Denmark, a small country which has well-developed social services.

NORTHERN IRELAND

Manpower

The Opticians Act of 1958 prohibited the testing of sight and the supply of optical appliances by unregistered persons. The Act made provisions for the registration of and regulated the practice of opticians. To be included in the Register of the General Optical Council set up by the Act it is necessary to take a degree in Ophthalmic Optics at one of six centres offering the course in Great Britain, and after having had one year of practical experience, passing the qualifying examination of one of the approved examining bodies in Great Britain.

When the National Health Service was instituted in 1948 the administration of the Supplementary Eye Services (renamed General Eye Services) was vested in the Northern Ireland Hospital Authority. In implementing a recommendation of the Committee on Health Services in Northern Ireland (Tanner Committee) the Health Services (Administration Amendments) Act, 1955, transferred the administration of this service to the Northern Ireland General Health Services Board.

The Board contracts with three different groups of practitioners to provide eye services—ophthalmic medical practitioners, ophthalmic opticians and dispensing opticians. The General Eye Services are concerned with remedying refractive errors only, that means the testing of eyesight and the prescribing and dispensing of glasses. If they discover any disease of the eye in the course of the examination they may not treat it under the National Health Service, but must refer the person to his general medical practitioner. (They may, however, offer to take him on as a private patient.) The 128 ophthalmic opticians

contract with the Board for the testing of eyes and the prescribing and dispensing of glasses, while the 13 dispensing opticians contract to dispense glasses prescribed by the two other groups of practitioners.

The numbers of all three groups increased from the institution of the service in 1948 until 1954 when there were 20 ophthalmic medical practitioners, 164 ophthalmic opticians and 19 dispensing opticians on the Board's list. Since then the number in all three classes has declined steadily.

The Northern Ireland Hospital Authority had in 1967 a staff of 27 ophthalmologists. Eleven consultants provided a total of 142 out-patient sessions per month. About 14 ophthalmic practitioners provided a total of 288 school ophthalmic clinics a month.

The population per ophthalmic optician was about 11,700 and the population per ophthalmic optician and ophthalmic medical practitioner who normally prescribes glasses is just over 9,000.

General Eye Services

Persons who are ordinarily resident in Northern Ireland are entitled to General Eye Services which cover sight-testing and supply of glasses. A person may choose any ophthalmic optician or ophthalmic medical practitioner who has contracted with the General Health Services Board to participate in this service. Any contractor is free to accept or refuse anybody who applies to him. Everyone is entitled to a sight-test free of charge but there are charges for frames and the lenses. The Health Service range of frames includes a wide variety of shapes most of which are available in six different colours. The charges for these frames which covered the whole cost in 1970 varied from £0.70 to £1.74. In addition, there is a statutory charge for bi-focal lenses of £2.50 and £1.60 for other lenses. If the person requiring the spectacles wishes to buy a frame privately, Health Service lenses may be supplied and fitted to this frame if it is of a suitable shape and has a surrounding protective rim. If any other type of frame such as a rimless or partially rimless is desired, the whole transaction falls outside the Health Service and the optician's charges for frames and lenses must be met as a private transaction. People

who are not particularly choosy can obtain a new pair of spectacles for £2.30.

Children under 16 years and over that age if receiving full-time instruction in an approved school are entitled to glasses free of charge using frames from the children's range. If 10 years of age and over they may alternatively be supplied with free lenses in an adult Health Service frame, but the charge for the frame must then be paid. If Health Service or private frames are otherwise used, the same charges must be paid as by adults.

Persons in receipt of Supplementary Benefit (or Welfare Assistance subject to a means test) and other persons having very low incomes have charges in respect of glasses refunded by the Supplementary Benefits Commission.

Virtually all testing of eyes is provided under the National Health Service. The total number of tests carried out in 1968/69 was 175,000 and the General Health Services Board paid for the dispensing of 143,000 glasses of which nearly 18,000 were prescribed in local health authority clinics and at hospitals.

The 21st Annual Report of the Board shows that ophthalmic medical practitioners were paid for 8,586 eye-tests and prescribed 6,186 spectacles, a rate of 72 per cent. Ophthalmic opticians were paid for 139,748 eye-tests and prescribed 118,834 spectacles, a rate of 85 per cent. These ratios indicate the right orders of magnitude, but they cannot claim to be absolutely accurate as the number of glasses prescribed refers to the number paid for by the Board and not to the prescription forms received. A number of prescription forms approved for glasses are not returned to the Board. This may be due to the claimant not ordering any glasses at all or to the claimant obtaining the glasses privately, that means buying spectacles and frames outside the Health Service range. It may well be that completely private transactions are proportionately more common for prescriptions of ophthalmic medical practitioners than of ophthalmic opticians.

The total number of cases where glasses were not prescribed or where the patient was in possession of suitable glasses was nearly 20,000. On the other hand more than 12,000 claimants received two pairs of glasses. About 2,000 people who had their eyes tested were referred to their general medical practitioners. Virtually all these referrals were from ophthalmic opticians.

The 21st Annual Report of the Health Services Board records "An analysis of one tenth of the total number of dispensing claims paid during the year indicated that of each 100 persons provided with glasses, 17 were children, 21 were adults under 40 and 62 were adults over 40, and of the frames selected or used again, 29 were new Health Service frames, five reglazed Health Service frames and 18 reglazed private frames".

From this it can be deduced that while about ten per cent of the population of the Province were supplied with glasses in 1968/69 the proportion was approximately five per cent for the under 16's, seven per cent for adults under 40 and 16 per cent for adults over 40. In respect of expenditure the figures indicate that just over half of all people receiving glasses will have incurred a maximum expenditure of £1.74 on frames (the top price of the Health Service range) and a maximum of £2.50 on lenses, in cases requiring two bi-focals, and £1.60 for single vision lenses. Actually less than 23 per cent of all glasses dispensed were bi-focals.

The gross expenditure by the Board on General Eye Services was £557,000; of this £195,000 was paid in charges by applicants leaving the Board with a net cost of £362,000. The gross cost was made up of sight-testing (£155,000), dispensing fees (£186,000), supply of glasses (£212,000) and repairs (£5,000). The average cost of dispensing and supplying glasses was £2.78 of which just under half was paid by the applicant. This average excludes the payment contractors receive from the applicants in respect of private frames and lenses.

The fee for sight-testing is £1.29 to ophthalmic opticians and £1.40 to ophthalmic medical practitioners. The dispensing fee for bi-focal glasses is £1.86, and £1.43 for single vision lenses. These fees were somewhat reduced for the nine per cent of all applicants who received two or more pairs of single vision glasses.

No information is available about expenditure on private frames and lenses. If it is assumed that the average cost of a private frame is about £5.00, then the expenditure of the 70,000 people on frames would be £350,000, almost exactly the same as the total expenditure of the Board on all eye services.

The Board lays down minimum standards for premises and equipment to which contractors have to comply in accordance

with their terms of service. All new or existing premises where there has been a change of contractor are inspected by officers of the Board to ensure adherence to these standards.

The Board's officers checked approximately 0.7 per cent of all spectacles dispensed. Fifteen "spot check" examination sessions were held to which 371 persons were called of whom about two-thirds attended and produced their glasses for examination. Forty-eight sessions were held for selected cases to which 303 patients were called and about five-sixths attended and produced their glasses for examination. In addition, 606 applicants were requested to send their glasses. In 87 per cent of these cases the glasses were received and examined.

When the General Eye Service was first introduced it was completely free of charge and had to cope with a considerable backlog of needs which had been unsatisfied over many years. In the early 1950's, when the dispensing covered only current needs and after charges for frames and lenses had been introduced, the number of glasses dispensed was some 87,000. Since then it has increased steadily but irregularly to 143,000 in 1969. The most recent figure is actually 2,000 less than that of the previous year. During this period the population increased by about 10 per cent and the population above the age of 40 by 13 per cent while the number of glasses dispensed increased by about 72 per cent. It appears that increased standards of living seem to have resulted in a greater demand for services. However, even in 1968/69, the cost to public funds of General Eye Services came to less than £0.25 per head of population per year.

School Health Services

In 1968, of approximately 335,000 school children in grant-aided schools eligible for school medical services 34 per cent were examined. The proportion varied among the local health authorities; 48 per cent were examined in Armagh and only 22 per cent in Londonderry County Borough.

Included in the medical examination was a test of visual acuity and an average of 26 per cent were found to have some defect of the eyes. The average prevalence of these defects conceals substantial county differences; the prevalence of all defects was nine per cent in Tyrone and 34 per cent in County Londonderry.

In all counties a larger proportion of children were affected by vision defects (refractive errors) than by any other defect. An average of three per cent of children examined suffered strabismus (squint) and one per cent had other defects of the eyes. The validity of these figures can not be accepted without some reservation. The variation between counties appears to be much greater than could be explained by likely differences in the prevalence of defects. A more probable explanation may be lack of standardisation in the screening tests applied.

Tests of colour vision have been published only for children in the Belfast area. These show that 4·4 per cent of the boys, but only 0·1 per cent of the girls suffer from defective colour vision to a degree which was considered unsafe. By that was meant that they would be incapable or handicapped in following certain professions or occupations, for example, a pilot or electrician. A further 3·1 per cent of the boys and 0·4 per cent of the girls were found to suffer from a less severe defective form of colour vision.

The report on the Health of the County Borough of Belfast for the year 1968 contains much interesting information about eye defects. Amongst the children examined eight per cent were found to have a vision defect requiring treatment. A further 24 per cent were found to have a vision defect which was noted for observation. In addition, one per cent were found to suffer from squint which required treatment. Some three per cent were found to have squint which was noted for observation. About one per cent of children suffered from other forms of eye disorders.

UNITED STATES

Manpower

The professions rendering ophthalmic services in the United States are broadly comparable with those in Ireland but have different designations. Ophthalmologists or oculists are physicians who specialize in the medical and surgical treatment of eye diseases or abnormal conditions, including refractive errors. There were in 1967 about 9,000 ophthalmologists in active prac-

tice. Of these, 7,000 were recorded as providing patient care in office or in institutional settings other than hospitals, while 1,800 were providing patient care in a hospital-based practice. The training of an ophthalmologist takes approximately twelve years after graduating from High School.

Optometrists (ophthalmic opticians) are specially licensed in all States and are educated and trained to examine the eyes and related structures to determine the presence of vision impairments, eye diseases and other abnormalities. In 1967, there were about 17,000 active optometrists of whom nearly three-quarters were in private practice. To qualify for a licence the applicant must be a graduate of an accredited school of optometry and pass a State Board Examination. Graduates are awarded the degree of Doctor of Optometry after a six-year course of which the last four are spent in professional optometry training. Nearly 2,000 students were enrolled in ten schools of optometry in 1967 and 467 graduated in that year. During the last seven years the number of students has increased by about 80 per cent.

There were also about 8,000 prescription opticians (dispensing) including 1,000 proprietors of retail optical establishments. Opticians require a licence in only 15 States. In addition, California and Hawaii license opticianary establishments—offices from which lenses are dispensed. In the States which require a licence to practise, high school graduates follow an apprenticeship programme which lasts from one to four years.¹

Optometrists regard examination, prescribing, ordering, fitting and adjusting of spectacles all as part of a single service and as in Ireland, they examine and dispense. Ophthalmologists frequently employ opticians and provide a complete optical service including dispensing. The population per practising optometrist was about 11,500 in 1967 and per optometrist and oculist normally prescribing glasses, was about 8,000.

Eye Conditions and Services

The National Health Interview Survey conducted by the National Center for Health Statistics covered in 1965/66 a probability sample of the civilian non-institutional population of the United States consisting of approximately 42,000 house-

¹J3.

holds containing about 134,000 people. Data derived from this Survey gives much information about ophthalmic services.²

Amongst the population above the age of three years about 43 per cent of the men and 53 per cent of the women wore corrective lenses. At all ages more women than men wore glasses. Contact lenses were only worn by one per cent of the population, say by about two per cent of people having corrective lenses. Contact lenses are most commonly worn by young women aged 17 to 25 when they account for 11 per cent of all corrective lenses.

The proportion of the population wearing corrective lenses increases with age: 15 per cent for the 3—16 age group; 42 per cent for both the 17—24 and the 25—44 age groups; but 88 per cent for those over 45 and 93 per cent for those over 65 years. More than three-quarters of those over 45 who had corrective lenses were wearing them all the time. Amongst the same age groups, for six per cent the age when they first wore glasses was not known; nine per cent had glasses before they were 17 years; eight per cent had glasses first when they were aged 17—24 years; 31 per cent when aged 25—44 years and 46 per cent when they were above the age of 45 years.

About 36 per cent of corrective lenses were prescribed for near vision only, 12 per cent distance vision only and 49 per cent for both near and distance vision. The nature of the prescription showed little difference between men and women. Some 43 per cent of those having corrective lenses had obtained them in the past two years.

Statistics from the Health Interview Survey conducted in 1963/64 give data on consultation rates with ophthalmologists and optometrists. During that year an estimated 15 per cent of the non-institutional civilian population had their eyes examined and 58 per cent of the examinations were by optometrists and 42 per cent by ophthalmologists. The proportion of the population who had an eye-examination increased with age except for those between 25 and 44 years. A higher proportion of children under six years were examined by ophthalmologists while the proportion of persons, over 65 years, examined by ophthalmologists and optometrists was the same (10 per cent). For all

²J4.

other age groups a greater proportion were examined by optometrists especially persons between 17-24 and 45-64 years. (See Table 14).

TABLE 14: *Estimated Proportion of the Population Examined by Ophthalmologists and Optometrists in U.S.A., 1963/64*

Age	Proportion of the Population Examined by		
	Ophthalmologist %	Optometrist* %	Either %
under 6	2	1	2
6-16	7	9	16
17-24	6	11	17
25-44	5	8	13
45-64	8	13	21
65 and over	10	10	20
All ages	6	9	15

*Ophthalmic Optician.

Note: Due to rounding off, percentages may not add to stated totals.

Source: National Center for Health Statistics, Series 10, Number 28, Tables 6 and 24.

More women (17 per cent) than men (13 per cent) had their eyes examined during 1963/64 and this was true for those who visited ophthalmologists or optometrists. For those residing in metropolitan areas the proportion consulting the ophthalmologist was twice as great at 7.1 per cent as in rural areas at 3.5 per cent, while the proportion consulting the optometrist did not vary with place of residence.

Proportionately twice as many people (11 per cent) whose head of household had some college education, consulted ophthalmologists than did those in other education categories—six per cent of people whose head of household had some high-school education and four per cent where the head of household had less than nine years of education. The proportion consulting the optometrist also increased with the level of education, but at a much slower rate. The percentages for the same education

categories were respectively, 10 per cent, nine per cent and eight per cent.

With the exception of those who had family incomes of less than £2,000 per annum, which includes a large majority of persons over 65 years, the proportion of the population examined by ophthalmologists increased with income as did the proportion consulting the optometrist.

All the proportions quoted have a high degree of statistical significance as the probability sample on which they are based was very large and the total was divided only into a fairly small number of sub-groups. However, the validity of the data depends entirely on the accuracy of the information given to the interviewers. The data are faulty whenever the respondents did not know the correct answer (for example whether his eyes were examined by an ophthalmologist or an optometrist), or could not recall it accurately (for example if he said his eyes were examined 20 months ago when the correct answer should have been 32 months ago), or did not wish to give the correct answer (for example, wished to give an impression of social superiority by claiming to have seen an ophthalmologist when he had seen an optometrist). For these reasons the data quoted cannot claim to be absolutely accurate; they are, however, thought to be a reasonably close approximation.

On the basis of the survey data it can be estimated that the 17,000 optometrists prescribed, on average, 810 corrective lenses annually, while the 7,000 ophthalmologists, excluding those working in administration and hospitals, prescribed, on average, 1,160 corrective lenses.

Ophthalmologists and Optometrists

The role of optometrists and ophthalmologists in the US health services has never been defined clearly. Only three per cent of all doctors are trained in ophthalmology and it is generally recognized that with the increasing complexity of medicine and demand for health services that ophthalmologists will need to be assisted by optometrists. Certain groups of ophthalmologists have long advocated that the optometrist's role is that of a technician who would render services under the supervision of an ophthalmologist. Optometrists insist that optometric services

are a necessary part of a comprehensive health programme and while the services of the two professions overlap, each has unique knowledge and skills. Optometrists hold themselves out to be the general practitioners in the vision field. They claim to provide a unified, optimal and personalized service.

The American Optometric Association considers many services beyond the traditional refraction or "eye-examination and providing of glasses" within the professional competence of its members. Such services include: "To investigate fully patients with symptoms of ocular discomfort. Such symptoms may be physical, pathological or of other origin, and may require correction by lenses, orthoptic training, surgery, dentistry or other means." Also "to develop visual skills for optimal visual performance". Possibly the most far reaching claim is "to use in clinical studies of an individual patient many instruments and procedures which are not required in refraction, but which enable the optometrist more fully to determine the visual status of the patient". These instruments include: visual field charting to detect disease; tonometry, the determination of intra-ocular pressure to test for the presence of glaucoma; ophthalmoscope, to view the interior of the eye to disclose cataracts, retinopathy and glaucoma; slit-lamp biomicroscopy to study eye tissues and certain eye functions; isochromatic charts, to determine the degree of colour-blindness.³

Ophthalmologists in the United States, like in other countries, consider the proper field of an optometrist as more restricted. Dr Vail, the head of the Department of Ophthalmology at North Western University Medical School and Editor-in-Chief of the American Journal of Ophthalmology, puts forward in his book *The Truth About Your Eyes*⁴ an ophthalmologist's view. He considers that due to their lack of general medical qualifications they cannot hope to diagnose diseases that affect general health and the eyes. He stresses that optometrists, in almost all States, are not required by law to diagnose ocular diseases and that they have no legal responsibility to recognize or treat eye diseases. He scorns the optometrists claim to give "a complete eye-examination" which he considers they lack the

³J6.

⁴B1.

competence to interpret. He also disapproves of their "proudly flaunting the honourable title of doctor on every occasion" and accuses optometrists of misleading the public in the confusion of titles.

The Medi-care Act, 1966, provides government medical insurance on a large scale for the first time. It applies to those over 62 years and their dependants who are covered by the Social Security Acts. Under this law a person can receive hospital treatment and financial help in paying doctors' fees for a premium of \$3 (£1.25) per month. Routine physical care and "eye-examinations for prescribing or fitting eye-glasses" are not covered. Optometrists are concerned about two exceptions to this rule which affect them. The first is that spectacles and contact lenses prosthesis for aphakics following cataract removal are considered acceptable medical expenses, which would seem to indicate that insurance will cover all prescriptions for aphakics after prior medical approval for a change of lenses is received. This means that an optometrist must send his patient to a physician for his approval in order to change corrective lenses.

The system of sending an aphakic patient to a physician prior to the optometrist prescribing lenses does have some justification, but "the real fear is that in future, and more inclusive, government health care programmes, optometrists may be placed under prior medical approval in even routine refractive cases".⁵ The National Commission on Community Health Services in its report to the President (US) in May, 1966, referred to optometrists only once: "It is clear that the intent of the Commission is that health care starts with the personal physician, and all allied health personnel, including optometrists, will provide services under the physician's direction. This certainly calls for a radically altered role for the optometrist, but implies that optometry continues to exist as an allied profession".⁶

The other exception which optometrists object to is that if during an eye-examination the ophthalmologist considers that a refraction is medically necessary for the patient's welfare, this too would be paid for under the programme. Optometrists argue that this can cover all eye-examinations done by an ophthalmo-

⁵J7, page 506.

⁶J8, page 608.

logist and if ophthalmologists can conduct examinations under Medi-care and use refractive prescriptions to prescribe spectacles they want the same privilege.

Most vision care is provided by optometrists in their own premises; about 85-90 per cent of all practitioners operate on their own. Group practices and chains employing optometrists are comparatively rare. Most patients pay their own fees, but some have their fees paid, in whole or in part, by charitable organizations, employers or by trade unions. Many States provide a vision care programme for welfare recipients. In most of these programmes optometrists are employed and usually are remunerated on a fee for service basis.

Optometry is recognized as an independent health profession in the armed services. This section of the Army Medical Service Corps had in 1966 an authorized strength of 315 commissioned officers. They cater for that third of the Army's active personnel who wear corrective lenses.

An economic survey carried out by the American Optometric Association in 1964 found that the median earnings of optometrists was about \$15,000.⁷ In 1959, on the basis of figures collected for the Census of Population, the American Association of University Professors compiled a Table of Median Male Incomes of Professional Occupations.⁸ This showed the income of optometrists aged 25-34 to be 77 per cent of that of a dentist and 110 per cent of that of an architect; for the age group 35-44 it was 68 per cent of a dentist's and 103 per cent of an architect's and for the age group 45-64 it was 71 per cent of a dentist's and 78 per cent of an architect's income.

DENMARK

Ophthalmologists in Denmark, of whom there are about 130, have broadly similar qualifications and status as their colleagues in the United States and in Ireland. This is not the case for optometrists (ophthalmic opticians) who do not enjoy any statutory recognition. The position in Denmark today is what

⁷J6, page 232.

⁸J6, page 230.

it was in Ireland prior to the passing of the Opticians Act, 1956. Anybody without restriction and without any qualification may prescribe and dispense spectacles.⁹

Most practising opticians of whom there are about 1,000 have not received any formal training, but opticians who prescribe glasses usually have had some formal training of varying lengths. Courses in ophthalmic optics have been provided since 1951 and at present there is a four and a half year apprenticeship course, including 1,800 hours of instruction, of which six months are full-time. This is conducted in a new school opened in 1969 and in that year had a budget of about £25,000. The school itself is only temporary, but has spacious premises and contains the most advanced equipment. The course has a considerable practical orientation. Only about 10 per cent of the time is spent on Anatomy, Pathology and Physiology, another 40 per cent on Mathematics, Optics and Refraction, while the remainder is devoted to practical subjects.

In Denmark, contrary to the other countries reviewed, it is the normal practice for an optician to undertake his own edging and glazing.

In Denmark, virtually the whole population are members of Health Insurance Societies (Sygekasser). There are two types of full membership—insurance in the “A” division or “B” division. Income is the deciding factor of which division a person is a member. Heads of families, having in 1970 incomes of less than 49,000 Danish Kroner (£2,700) or single persons with incomes below 37,200 D.Kr. (£2,100) are in division “A”, those having higher incomes are in division “B”.¹⁰ All members in both divisions are entitled to optical benefit. This covers spectacles in an imitation shell frame which can be supplied by any optician. In 1970, the Health Insurance Societies paid to the optician 24 D.Kr. (£1.33) for this frame which he purchased for 10 D.Kr. (£0.56).

For lenses the prices paid vary according to the strength and type. For spherical -4 diopters the payment is 12 D.Kr. (£0.67)

⁹A similar freedom also operates in the supply of dentures. Denmark is the only European country except Switzerland, which permits dental technicians, who require no formal training, to fit and make dentures.

¹⁰Outside Greater Copenhagen, the income limits are marginally lower.

while it is 31 D.Kr. (£1.72) for the corresponding bi-focals. Approximately 10 per cent of the population receiving spectacles from private opticians are thought to take the standard frame. For those who select more expensive frames the Health Insurance Societies pay a grant-in-aid equivalent to the price of the standard frame and the prescribed lenses. A company which has 30 optician premises (semi-official shops), of which 24 are in Copenhagen, is closely associated with the Health Insurance Societies.¹¹ In these shops it is claimed that 30 per cent or more of clients select the standard frame. The divergence in the proportion taking the standard frame is thought by some to be partly due to differences in approach between the private optician and the optician-managers working in the "semi-official shops" and partly due to the standard frame they supply being more attractive. It is interesting to note the rapid increase in prices of spectacles having the standard frame and lenses. In 1964, this was 25 D.Kr. (£1.39) while in 1970, it has risen to 48 D.Kr. (£2.67)—an increase of 92 per cent.

The equipment and lay-out of the premises of both private and "semi-official" opticians are of a high order. Competition between private opticians and the "semi-official shops" as well as amongst the private opticians themselves is neither restricted by law nor by any Rules of the Opticians' Association (Special-optikerforening). Opticians exhibit spectacles in their windows which frequently have price tags attached to them. Advertising is not uncommon and one company advertises by flash-light from a rooftop at the very centre of Copenhagen that it supplies the cheapest spectacles of the highest quality. All the same, it appears that price-competition is not severe on account of the public's belief that price is an indication of quality.

The number of claims for optical benefit has greatly increased in recent years. In the last decade it is estimated that the number of people receiving spectacles in Copenhagen has risen by one half and is now equal to more than one eighth of the population receiving spectacles annually.

All members of division "A" are entitled to an eye-examination by an ophthalmologist free of charge. In Copenhagen, ophthalmo-

¹¹This company is owned by a trust, the articles of which provide that the Health Insurance Societies appoint the Chairman of the Board of Directors.

logists at present are paid a capitation fee of 8.5 D.Kr. (£0.47) per year.¹² This is in respect of members on the panels of general practitioners with whom an ophthalmologist is associated. The average number on an ophthalmologist's panel is 18,000 giving him an annual income from this source of 153,000 D.Kr. (£8,500). Outside Copenhagen, ophthalmologists are recompensed on a fee for service basis which is 46.5 D.Kr. (£2.58). Members of division "B" pay ophthalmologists as private patients but are recompensed by the Health Insurance Societies in respect of the amount paid for "A" members. A large proportion of the population do not avail themselves of this free service but prefer to have their eyes tested by an optician. Eye-examinations by opticians are not covered by payments of the Health Insurance Societies but spectacles are supplied to members on the same terms irrespective of whether the prescription is made out by an ophthalmologist or an optician. The normal charge by an optician for eye-testing is about 20 D.Kr. (£1.11) but in the "semi-official shops" it is 15 D.Kr. (£0.83). Not all opticians charge for eye-tests—some incorporate the fees for this service in the price of the spectacles. The reason why members prefer to have eyes tested by an optician rather than by an ophthalmologist is due to the delay in seeing an ophthalmologist and the length of time spent in his consulting rooms. Opticians are known to conduct an examination carefully in the sense that it may take longer than that of an ophthalmologist. In the same way as the public equates price with quality it is said to equate the length of an eye-test with the standard of the examination.

¹²In 1960, the fee was 3 D.Kr. (£0.17)—an increase of 183 per cent.

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