Report of the announced inspection of medication safety at University Hospital Limerick.

Date of announced inspection: 29 May 2018
About the Health Information and Quality Authority

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HIQA aims to safeguard people and improve the safety and quality of health and social care services across its full range of functions.

HIQA’s mandate to date extends across a specified range of public, private and voluntary sector services. Reporting to the Minister for Health and the Minister for Children and Youth Affairs, HIQA has statutory responsibility for:

**Setting Standards for Health and Social Services** — Developing person-centred standards, based on evidence and best international practice, for health and social care services in Ireland.

**Regulation** — Registering and inspecting designated centres.

**Monitoring Children’s Services** — Monitoring and inspecting children’s social services.

**Monitoring Healthcare Safety and Quality** — Monitoring the safety and quality of health services and investigating as necessary serious concerns about the health and welfare of people who use these services.

**Health Technology Assessment** — Providing advice that enables the best outcome for people who use our health service and the best use of resources by evaluating the clinical effectiveness and cost effectiveness of drugs, equipment, diagnostic techniques and health promotion and protection activities.

**Health Information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information about the delivery and performance of Ireland’s health and social care services.
Report of the announced inspection of medication safety at University Hospital Limerick

Table of Contents

1. Introduction ........................................................................................................................................ 1
2. Findings at University Hospital Limerick ......................................................................................... 3
   2.1 Risks identified ............................................................................................................................... 3
   2.2 Governance and risk management ............................................................................................... 4
   2.3 Audit and evaluation ..................................................................................................................... 11
   2.4 Medication safety support structures and initiatives ............................................................... 13
   2.5 Person-centred care .................................................................................................................... 16
   2.6 Policies procedures and guidelines and access to information ............................................. 17
   2.7 Training and education ................................................................................................................ 20
3. Conclusion .......................................................................................................................................... 24
4. References ........................................................................................................................................... 24
5. Appendices .......................................................................................................................................... 28
   Appendix 2: Copy of letter sent from HIQA to University Hospital Limerick ................................ 29
   Appendix 3: Copy of response received by HIQA from University Hospital Limerick ...................... 31
   Appendix 5: Hierarchy of Effectiveness of Risk Reduction Strategies in Medication Safety ............. 36
1. Introduction

Medications are the most commonly used intervention in healthcare, and advances in medication usage continue to play a key role in improving patient treatment success. However, where medicines are used, the potential for error, such as in prescribing, administering or monitoring, also exists. While most medication errors do not result in patient harm, medication errors have, in some instances, the potential to result in catastrophic harm or death to patients.

Medication related events were the third most common type of adverse event recorded in the Irish National Adverse Events Study.\textsuperscript{1} Medication safety has also been identified internationally as a key focus for improvement in all healthcare settings and it is estimated that on average, at least one medication error per hospital patient occurs each day.\textsuperscript{2}

HIQA's medication safety monitoring programme, which commenced in 2016, aims to examine and positively influence the adoption and implementation of evidence-based practice in public acute hospitals around medication safety. HIQA monitors medication safety against the \textit{National Standards for Safer Better Healthcare}\textsuperscript{3} to determine if hospitals have effective arrangements in place to protect patients from harm related to medication use.

An expert advisory group was formed to assist with the development of this medication safety monitoring programme. The advisory group membership included patient representation, alongside members with relevant expertise from across the Irish health service. Specific lines of enquiry were developed to facilitate medication safety monitoring. The lines of enquiry which are aligned to HIQA’s \textit{National Standards for Safer Better Healthcare} are included in Appendix 1 of this report. Further information can be found in a \textit{Guide to the Health Information and Quality Authority’s Medication Safety Monitoring Programme in Public Acute Hospitals 2016} \textsuperscript{4} which is available on HIQA’s website: www.hiqa.ie

A national overview report of the of medication safety monitoring programme ‘\textit{Medication safety monitoring programme in public acute hospitals- an overview of findings}’ \textsuperscript{5} was published in January 2018 which presented the findings from thirty-four public acute hospitals inspected from November 2016 to October 2017 (the report is available on HIQA’s website, www.hiqa.ie). In this report HIQA identified areas of good practice in relation to medication safety and areas that require improvement to ensure medication safety systems were effective in protecting patients.
An announced medication safety inspection was carried out at University Hospital Limerick by Authorised Persons from HIQA; Emma Cooke, Nora O Mahony, Aoife Lenihan and Geraldine Ryan. The inspection was carried out on 29 May 2018 between 09:00 and 16.45 hrs. Interviews were held in the hospital with the following groups of managers and clinical staff:

- **Group One**: the chairperson of the Drugs and Therapeutics Committee, the chief pharmacist, group lead for quality and safety.
- **Group Two**: the acting director of nursing as nominee on behalf of the director of nursing, the general manager diagnostics directorate as nominee on behalf of the chief executive officer, the clinical director diagnostics directorate as nominee on behalf of the clinical director.

Inspectors visited the following clinical areas and spoke with staff and reviewed documentation on:

- Sunshine Ward
- Medical Ward
- Trauma Ward.

HIQA would like to acknowledge the cooperation of staff who facilitated and contributed to this announced inspection.
2. Findings at University Hospital Limerick

The following sections of this report present the general findings of this announced inspection which are aligned to the inspection lines of enquiry.

- **Section 2.1** outlines risks identified during this announced inspection.
- **Sections 2.2 to 2.7** present the general findings of this announced inspection aligned to the inspection lines of enquiry

2.1 Risks identified

During this announced inspection by HIQA on 29 May 2018, risks were identified at University Hospital Limerick in relation to medication safety. The risks identified were in relation to:

- the ongoing lack of clinical pharmacy services to meet the size and services provided at the hospital
- a relative lack of access to locally developed or adapted information to guide clinical staff in the safe use of medicines such as a hospital formulary, comprehensive up-to-date, policies, procedures, guidelines and intravenous medicine information monographs that are consistently available to all ward areas and available at the point of care. Of note locally approved intravenous medicine information monographs were unavailable in high risk areas such as the paediatric unit visited during the inspection
- disparities in the implementation of medication safety measures outlined to inspectors and what was observed by inspectors in clinical areas.

Details of these risks were communicated to hospital management so that the hospital could act to mitigate and manage these risks as a matter of urgency. A copy of the letter issued to the hospital regarding the risks identified during the inspection on 29 May 2018 and a copy of the response received from the hospital are shown in Appendices 2 and 3 respectively.

In response, hospital management provided HIQA with plans to address the risks identified with the level of clinical pharmacy service provision and the lack of access to locally developed or adapted information to guide clinical staff in the safe use of medicines. However, the response letter did not include actions to be taken in response to disparities found in the implementation of medication safety measures outlined to inspectors and what was observed by inspectors in clinical areas.
2.2 Governance and risk management

**Lines of enquiry:**
- Patient safety is enhanced through an effective medication safety programme underpinned by formalised governance structures and clear accountability arrangements.
- There are arrangements in place to identify report and manage risk related to medication safety throughout the hospital.

University Hospital Limerick (UHL) is a model four* acute hospital and is one of six hospitals comprising the University Limerick Hospitals Group (UL Hospitals Group) established in January 2012. The hospital provides complex and specialist clinical care to the Mid-Western region of Ireland.

Inspectors were informed that the existing medication safety governance arrangements were applicable to five hospitals within UL Hospitals Group (University Hospital Limerick, University Maternity Hospital Limerick, Nenagh Hospital, Croom Hospital and Ennis Hospital).

HIQA undertook an announced inspection of medication safety in University Hospital Limerick in May 2017 and found that governance arrangements relating to medication safety at the hospital and group level were fragmented in approach and underdeveloped. This had resulted in a relative lack of effective systems in place to ensure minimum standards of safety and quality were met relating to medication safety.

HIQA therefore used this repeat inspection to review the current arrangements in place to support medication safety and to assess the level of progress achieved in the 12 months since the previous inspection.

HIQA found that changes had been made to strengthen governance structures and reporting arrangements for medication safety at the hospital. Since the last inspection, a Group Medication Safety Committee had been established. Inspectors were informed that from an operational perspective, the Group Medication Safety Committee which encompassed the medication safety functions was responsible for driving medication safety within the hospital. A medication safety programme for

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* Hospital groups: Hospitals in Ireland are organised into seven hospital groups including 1. Ireland East Hospital Group, 2. Dublin Midlands Hospital Group, 3. South/South West Hospital Group, 4. Saolta Hospital Group, 5. University Limerick Hospitals Group, 6. RCSI Hospitals Group, 7. National Children’s Hospital Group.
2018 was now in place which outlined how the hospital aimed to make continuous measureable improvements in medication safety. Furthermore, a medication safety officer had been appointed in March 2017 and was responsible for providing advice regarding the development of medication safety initiatives and follow-up investigation of critical events as well as other medication-related duties.

Although progress had been made with these changes, the inspection team determined that some of the systems and measures put in place to improve medication safety at the hospital had not been effectively implemented in clinical areas. Other initiatives were also in the early stages of development. Findings in this regard will be discussed in further detail throughout the report.

**Group Drugs and Therapeutics Committee**

Pharmacy services at University Limerick Hospitals Group was under the management of the University Hospital Limerick Director of Diagnostics. The chief pharmacist based at University Hospital Limerick, had oversight of three of the five hospitals within the group which included University Hospital Limerick, Croom Hospital and University Limerick Maternity Hospital.

An effective Drugs and Therapeutics Committee should have on-going oversight of the medication management and safety system within a hospital. The Drugs and Therapeutics Committee at University Hospital Limerick was established and functioned at University Limerick Hospitals Group level. The committee was ultimately accountable to the Quality and Safety Executive and subsequently to the chief executive officer of the hospital who was also the chief executive officer of University Limerick Hospitals Group.

The Drugs and Therapeutics Committee was chaired by a consultant physician and meetings were held monthly. Terms of reference, approved in September 2017, outlined the objectives, membership, frequency of meetings, reporting relationship and performance measurement.

Terms of reference outlined that the Drugs and Therapeutics Committee was advisory in its function and was responsible for:

- formulary oversight
- development of policies, procedures and guidelines
- oversight of relevant medication related risks on the corporate risk register
- audit and quality improvement
- antimicrobial stewardship
- oversight of prescribing practice
- medication safety
financial prudence
communication and education.

The Drugs and Therapeutics Committee had set a number of key performance indicators to monitor the effectiveness of the Committee which was outlined in the Committee’s terms of reference and included:

- percentage of attendance at meetings by individual members
- achievement of statement objectives
- numbers of actions completed
- numbers of actions awaiting completion.

A review of the hospital’s quality improvement plan devised in response to the last inspection indicated 14 actions had been completed, another 16 actions had been initiated and one action had yet to be started.

Drugs and therapeutics committees should be multidisciplinary to reflect the fact that medicines management is the responsibility of a number of clinical professional groupings. Since the last inspection, inspectors were informed that committee membership had been expanded in an effort to achieve a broader representation from across the hospital, and membership now included a community pharmacist and a general practitioner. Attendance at the Drugs and Therapeutics Committee was good with most representatives identified by the hospital attending meetings. However, inspectors noted that there was no representation from obstetrics.

Hospital management outlined that membership of the hospital’s local Medication safety Committee included representation from obstetrics.

Following the last inspection, a Group Medication Safety Committee had been established and had their first meeting in April 2018. Hospital management outlined that the committee served a strategic and operational role with responsibility for driving medication safety at the hospital. The committee was chaired by a consultant physician and met bi-annually and reported to the Group Drugs and Therapeutics Committee twice a year.

The committee was one of five sub-committees that were accountable to the Group Drugs and Therapeutics Committee along with the following group committees:

- The Antimicrobial Stewardship Committee
- The Nurse Prescribing Committee
- The Medication Expenditure Oversight Committee
- The Clinical taskforce for e-prescribing.
A hospital organogram provided to HIQA outlined that University Hospital Limerick had a local joint medication safety committee with Croom Orthopedic Hospital and University Maternity Hospital Limerick. This Committee along with two other medication safety committees from Ennis Hospital and Nenagh Hospital reported to the newly established Group Medication Safety Committee twice yearly. Minutes of the hospital’s local Medication Safety Committee meetings reviewed showed that the committee followed a standardised agenda which included items such as functions of the medication safety committee, reports from the medication safety officer, medication incidents, nursing metrics and quality improvement initiatives. Updates in respect of each hospital’s medication safety committee were a standing item agenda at the monthly University Limerick Hospitals Group Drugs and Therapeutic Committee meetings.

Hospital management reported that improvements in relation to medication safety at the hospital were progressing as a result of the new governance and reporting arrangements at the hospital as outlined above.

The hospital should continuously monitor the impact of these new governance and reporting structures and conduct a formal evaluation of these new arrangements to ensure that each committee is an effective and efficient use of staff resources and to avoid duplication of effort.

**Formulary Management**

An up-to-date locally approved medication formulary† was in development at the time of inspection at the hospital. Inspectors were informed that the pharmacy department had undertaken a review of all medicines at the hospital to determine formulary and non formulary medicines which was available on the pharmacy computer system. However, this was not available to staff in the clinical areas inspected at the time of this inspection.

A suitable electronic formulary product had been identified and approved by the Drugs and Therapeutics Committee to support the development of an e-formulary for the hospital. A senior pharmacist had been assigned to customise the product for local use within the hospital. At the time of inspection, it was explained that the electronic formulary was being customised at a rate of one chapter per month and that the antimicrobial chapter had been completed. Work on other chapters was

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† Formulary: a managed list of preferred medicines that have been approved by the hospital’s Drugs and Therapeutics Committee for use at the hospital. Use of a formulary ensures governance oversight of the introduction and on-going use of medicines in practice at the hospital, and in doing so ensures an appropriate level of management control over medicines use, in the interest of both patient safety and financial management.
planned with certain areas identified as areas of priority based on risk and hospital need.

A process for assessing and evaluating requests for the supply of new medications was in place. Progress had been made since the last inspection to formalise this process. An application form had been developed for the approval of a new medicinal product to be submitted to the Drugs and Therapeutics Committee and this was also supported by a newly developed policy. There was evidence to support that new medications were regularly discussed at Drugs and Therapeutic Committee meetings.

HIQA acknowledges that the development of a local formulary is a considerable undertaking. The hospital should continue to progress their plans for implementing a formulary system to manage risk and ensure efficiency in the use of medicines used in hospitals. In the interim, inspectors were informed that the British National Formulary was available as a reference point in each clinical area and an inventory of medications stocked in the hospital was kept in the Pharmacy Department.

**Risk Management**

Risks in relation to medication safety were recorded on the diagnostics directorate risk register which was reviewed by inspectors and detailed the following risks:

- a lack of out-of-hours pharmacy cover
- a lack of clinical pharmacy service in some clinical areas.

These risks had been placed on the risk register in 2017 and escalated to the hospital’s corporate risk register. It was reported that these risks had been escalated at group level also. However, at the time of this inspection clinical pharmacy services\(^\text{2}\) were limited to 50% of the hospital beds which was the same level of service identified during the last medication safety inspection. This lack of clinical pharmacy services was detailed in correspondence sent to the hospital’s Group CEO following the inspection (see appendix 2) and subsequently HIQA was informed that submissions were made for additional pharmacists to provide dispensing and clinical pharmacy services (see appendix 3).

Furthermore, inspectors were informed that there was no clinical pharmacist service in the maternity hospital. This was of significant concern to HIQA considering the size and complexity of the services provided by the hospital, as other comparable

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\(^{2}\) Clinical pharmacy service describes the activity of pharmacy teams in wards and clinic setting.
model 4 hospitals inspected as part of this monitoring programme were found to deliver ward or team based\(^5\) clinical pharmacy services to most if not all wards.

In response to a high risk letter issued to the hospital, it was outlined to inspectors that funding for a basic grade pharmacist, pharmacy technician and 0.5 WTE senior clinical pharmacist for renal services had been approved. These positions were due to be progressed via the National Recruitment Service.

**Incident Management**

Higher incident reporting rates both demonstrate and promote an improved culture of safety.\(^8\) During the last inspection, inspectors found that there was poor awareness and underreporting of medication errors and near misses. Through discussion with hospital management and from reviewing medication incident summary reports, inspectors found that some progress had been made with improving the incident reporting culture at the hospital.

Medication incident reports reviewed by inspectors outlined that 272 medication incidents were reported in 2017. This was an increase from 138 reported medication related incidents and near misses during 2016.

Hospital management reported that the increase in reporting incidents was as a result of promoting a ‘just culture’ \(^*\)* and by implementing quality improvement initiatives such as learning notices, APINCH\(^†\) posters, awareness stands at the hospital canteen, medication safety talks at grand rounds\(^‡\), enhanced communication from department heads and increased visibility of the medication safety officer.

Staff who spoke with inspectors described the process for reporting medication safety incidents and near misses which involved the completion of electronic incident report forms. Completed forms for reporting medication safety incidents and near misses were collated and reviewed by the risk advisor and the medication safety officer. Medication incidents were initially graded by the risk advisor using the

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\(^5\) Clinical pharmacists are deployed to clinical teams rather than wards, and may have certain direct intervention powers agreed with medical consultants.

\(^*\) A just culture balances the need for an open and honest reporting environment with the end of a quality learning environment and culture

\(^†\) Anti-infectives, Potassium, Insulin’s, Narcotics, Chemotherapy, Heparin and other anticoagulants

\(^‡\) Grand rounds are formal meetings where physicians and other clinical support and administrative staff discuss the clinical case of one or more patients. Grand rounds originated as part of medival training.
grading system within the National Incident Management System (NIMS)\textsuperscript{55}. Inspectors were informed that the Medication Safety Officer further graded incidents using the National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP) Medication Error Index to categorise incidents in terms of patient harm (Appendix 4). It was reported that incidents were managed at directorate level and assigned to individuals responsible for addressing any actions.

Medication safety was a standing agenda item for discussion at directorate team meetings, the Drugs and Therapeutics Committee, medication safety committee meetings and the Group Quality and Safety Executive meeting. Summary incident reports were presented at the Drugs and Therapeutics Committee by the medication safety officer on a monthly basis and bi-annually to the Group Medication Safety Committee. Incidents were tracked and trended according to classification, categorisation, professions reporting the incidents and location of incidents. Inspectors were also informed that a live dashboard of incidents could be viewed through the hospital’s incident management system.

Minutes of the Drugs and Therapeutics Committee meetings reviewed outlined discussion around low reporting rates amongst other staff disciplines. Hospital management outlined that the majority of reports were submitted by nursing and pharmacy staff and that further work was required in order to improve the reporting culture across all disciplines at the hospital.

The hospital had identified some incident-related safety concerns and had put measures in place to address these risks. For example, the revision of the medication and administration record and the introduction of tamper proof sealed insulin bags was in response to a number of incidents. A number of ‘medication safety minutes’ which were short education sessions displayed on powerpoint slides had been distributed on a variety of topics, three of which were sent in response to medication incidents. Furthermore, the antimicrobial section of the new prescription administration record had been changed following an incident related to antimicrobials.

An example of shared learning from incidents was found in the paediatric ward visited whereby an incident which had occurred in the maternity hospital had been shared with the paediatric unit and openly displayed on a medication safety board.

\textsuperscript{55} The State Claims Agencies (SCA) National Incident Management System (NIMS) is a risk management system that enables hospitals to report incidents in accordance with their statutory reporting obligation to the SCA (Section 11 of the National Treasury Management Agency (Amendment) Act, 2000).
Plans to promote a positive patient safety culture were outlined in the hospital’s medication safety plan for 2018 and involved measuring a baseline of safety culture at the hospital.

The hospital should continue with the progress made to date in relation to increasing incident reporting at the hospital. The hospital should look to promote incident reporting among all clinical staff within a just culture to strengthen reporting of medication incidents in the hospital so that safety surveillance is improved, learning is shared, and safety culture is promoted and enhanced across the organisation.

2.3 Audit and evaluation

**Line of enquiry:**
- The effectiveness of medication management systems are systematically monitored and evaluated to ensure they are effective.

Hospitals should have arrangements in place to ensure that the effectiveness of healthcare is systematically monitored and continuously improved. The information gathered should be used to improve services, and the learning gained should be shared throughout the hospital.

Inspectors reviewed progress made in relation to clinical audit of medication management and safety at the hospital. The hospital was in the process of establishing a more formalised approach to audit to ensure that they were centrally co-ordinated. Inspectors were informed that an audit committee had been set up in recent months and the hospital had appointed a clinical lead for audit. A medication audit schedule for 2018 was in place and included audits for completion across all disciplines. Furthermore, a quality and audit day was planned for the month following this inspection.

Documentation provided to inspectors outlined that a total of 30 medication-related audits had been completed by a number of staff disciplines from November 2017 to April 2018 and included audits on:

- insulin storage and labelling
- documentation of allergy status on patient medication record
- recording of patient weight on the medication chart

*** The framework of a just culture ensures balanced accountability for both individuals and the organisation responsible for designing and improving systems in the workplace. Engineering principles and human factors analysis influence the design of these systems so they are safe and reliable.
• generic prescribing rates
• medicines reconciliation discrepancy††† rates.

The hospital used other sources of information to identify strengths and weaknesses in the hospital medication system including audit, nursing and midwifery metrics and some proactive risk assessment tools.

Nursing metrics‡‡‡ were monitored across the hospital to review practice around some aspects of medication storage and administration. Results for the previous year for some of the clinical areas inspected relating to medication storage, custody and administration were generally good. However, there were consistently less than satisfactory findings in relation to observations around medication prescribing. This was also a finding during the last inspection and was identified as a trend in incident summary reports. Minutes of local medication safety committee meetings outlined that a number of interventions had been implemented to address prescription practices such as safety pauses, discussion at lunch talks, audits, education and memorandums sent from the clinical director. A prescription writing policy and standing operating procedure had been developed to improve medication prescribing practices and support the launch of the new prescription administration record.

Inspectors found some examples where medication safety audit results were used as the basis for decision-making, action and change. For example, an audit of generic prescribing rates found that adherence to generic prescribing was not in keeping with national recommendations. In response to this finding, a clinical taskforce for e-prescribing had been established with the aim of developing electronic prescribing at the hospital and improving medication prescribing practices.

Evidence of audit reports submitted and discussed at drugs and therapeutic committee meetings were reviewed by inspectors. For example, antimicrobial stewardship audits, insulin storage and labelling audits within clinical areas. Medical staff who spoke with inspectors outlined the process for undertaking and presenting audit findings as well as following up on recommendations. Dissemination of audit results is essential so that the clinical workforce is informed of the areas that need improvement, and also to motivate them to change practice and participate in improvement activities.¹⁰,¹¹

††† A discrepancy is defined as an inconsistency between the two medication lists of a patient, regarding the presence, absence, dosage, route, frequency or formulation of a medication.

‡‡‡ Metrics are parameters or measures of quantitative assessment used for measurement and comparison or to track performance.
Inspectors were informed that results of audits conducted to evaluate the safety of medication management systems were communicated throughout the organisation through various forums including grand rounds, ward meetings, directorate meetings and through hospital staff email.

The hospital should continue to progress the plans outlined to inspectors to enhance monitoring and evaluation arrangements at the hospital and to ensure dissemination of audit findings throughout the hospital.

2.4 Medication safety support structures and initiatives

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<th>Line of enquiry:</th>
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<td>Hospitals develop effective processes to promote medication safety that are implemented and supported by clear and up-to-date policies, procedures and or protocols.</td>
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There are currently no agreed national standards outlining requirements for the provision of clinical pharmacy services in hospitals. International studies support the role of clinical pharmacists in hospital wards in preventing adverse drug events. During HIQA’s last medication safety inspection at the hospital in 2017, inspectors were told that clinical pharmacists provided cover to 50% of beds in the hospital. However, inspectors found that this level of cover still remained the same at the time of this inspection. A business case for a medication safety officer had been approved at the hospital since the last inspection and the post had commenced in March 2018. While the appointment of a medication safety officer at the hospital is a positive step, provision of clinical pharmacy services was not available in all wards and clinical departments.

Inspectors were informed that clinical pharmacy cover was available in the oncology service, critical care unit, paediatric unit and emergency department. Antimicrobial pharmacists were also in place at group level. Correspondence received following this inspection outlined that the submission for an additional 19.5 pharmacists included business cases for pharmacy staff for paediatrics and neonates which had also been submitted in 2018 and will be submitted again in 2019 as part of the estimates process.

It is recommended that the hospital continues to review its current provision for clinical pharmacy services, in the interest of optimising medication safety in the

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§§§ Clinical pharmacy describes the activity of pharmacy teams in ward and clinic settings.
hospital and progress the plans to address the lack of clinical pharmacy that have been discussed at the beginning of this report.

**Medication Reconciliation**

Medication reconciliation is a systematic process conducted by an appropriately trained individual to obtain an accurate and complete list of all medications that a patient is taking on admission, discharge and other transitions in care.\(^{18,19,20}\) During the last inspection, inspectors found that there was a lack of a formalised medication reconciliation process at the hospital. Overall, inspectors found that some progress had been made with respect to medication reconciliation at the hospital since the last inspection.

It was reported that clinical pharmacists undertook medication reconciliation for patients on admission in the areas they were assigned, and this would be further guided by a medication reconciliation policy which was in draft format at the time of this inspection. However, due to the limited clinical pharmacist service, only 50% of beds at the hospital were resourced for medication reconciliation. Hospital managers informed inspectors that medication reconciliation was not conducted at the time of discharge with the exception of some patients under speciality teams. In the absence of clinical pharmacy cover in other clinical areas, inspectors were informed that doctors and nurses would contact community pharmacists or general practitioners to clarify prescriptions if required. The hospital’s new prescription administration record also had a designated section for medication reconciliation.

Updates in respect of medication reconciliation were presented at drugs and therapeutics committee meetings. Minutes of meetings from May 2018 outlined medication reconciliation progress to end of April 2018 and showed a total of 561 patients had received medication reconciliation. The hospital had identified a discrepancy rate of 21% through its continuous monitoring and evaluation of the medication reconciliation process at the hospital.

Overall, inspectors found that efforts had been made to improve medicines reconciliation at the hospital in the context of a limited clinical pharmacy service since the last inspection. The hospital should continue to progress the work to date and look to expand the process to include medication reconciliation on discharge and other transitions in care.

**High-risk medicines**

High-risk medicines are those that have a high risk of causing injury or harm if they are misused or used in error. The hospital maintained a list of high risk medications
that presented a heightened risk of causing significant patient harm if not used correctly.

The hospital had some risk reduction strategies in place for high-risk medication (Appendix 5), for example:

- the use of premixed potassium chloride solutions and restricted access to potassium chloride ampoules in some clinical areas
- placement of clinical pharmacy services in some high risk areas
- warning labels for some medicines e.g. sodium valproate
- insulin pens that were dispensed in heat sealed tamper proof bags.

During the inspection, inspectors found examples where risk reduction strategies that had been put in place to raise awareness of high risk medicines or to flag risks associated with drugs had not been effectively implemented at ward level. For example, the Pharmacy Department had generated a yellow warning sticker for a particular medicine to raise awareness of significant risk associated with the medicine. However, inspectors found that this had not been effectively implemented in a clinical area visited. Furthermore, inspectors were informed that the term ‘SALADS’ had been introduced as a means of raising awareness of sound-alike look-alike drugs, however, inspectors found that staff in the clinical areas inspected were not familiar with this initiative.

The hospital promoted medication safety awareness of high-risk medications using posters which were displayed in some clinical areas visited. These posters could be further enhanced by detailing the risk reduction strategies in place so that staff are not only aware of the medicine but are also knowledgeable of the measures put in place to minimise the risks associated with these medicines. Hospital management reported that compliance with some risk reduction strategies were monitored through clinical audit activity.

Inspectors were informed of and reviewed some examples of quality improvement initiatives that had been implemented which included:

- weekly medication safety minutes
- medication safety newsletters
- pharmacist development of antimicrobial intravenous administration information for paediatrics

**** SALADS: are ‘Sound-alike look-alike drugs’. The existence of similar drug names is one of the most common causes of medication error and is of concern worldwide. With tens of thousands of drugs currently on the market, the potential for error due to confusing drug names is significant
- measuring medication reconciliation discrepancy rate
- high alert medication list
- development of a new medication prescription and administration chart.

Overall, inspectors found that the hospital had endeavoured to develop medication safety support structures and processes at the hospital. However, inspectors found disparities in the implementation of medication safety measures outlined to inspectors and what was observed by inspectors in clinical areas. The hospital needs to ensure that the development of quality improvement initiatives and processes to promote medication safety are fully and effectively implemented in clinical practice through on-going monitoring and evaluation of these initiatives. Furthermore, the hospital should strengthen its communication process to ensure that the support structures and systems developed for medication safety is communicated to staff at the frontline so that the required improvement for patient safety can be achieved.

### 2.5 Person-centred care

**Line of enquiry:**
- Patients and/or carers are informed about the benefits and associated risks of prescribed medications in a way that is accessible and understandable.

Patients should be well informed about any medications they are prescribed and any possible side effects. This is particularly relevant for those patients who are taking multiple medications.  

University Hospital Limerick National Patient Experience Survey †††† was completed by 50% of the 1437 people discharged from the hospital in May 2017.

Two questions related directly to medication in the National Patient Experience Survey:

- **Question 45:** Did a member of staff explain the purpose of the medications you were to take at home in a way you could understand?

†††† The National Patient Experience Survey was a nationwide survey which asked people for feedback about their stay in hospital. The survey was a partnership between the Health Service Executive (HSE), HIQA and the Department of Health. All adult patients discharged during May 2017 who spent 24 hours or more in a public acute hospital, and have a postal address in the Republic of Ireland were asked to complete the survey.
- **Question 46**: Did a member of staff tell you about medication side effects to watch for when you went home?

<table>
<thead>
<tr>
<th>Question 45: Did a member of staff explain the purpose of the medicines you were to take at home in a way you could understand?</th>
<th>University Hospital Limerick</th>
<th>National score</th>
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| Question 46: Did a member of staff tell you about medication side effects to watch for when you went home? | 5.1 | 5.1 |

**Figure 1: Comparison between University Hospital Limerick and national scores for the National Patient Experience Survey questions 45 and 46.**

The response for Question 45 received an overall score of 7.8 which was in line with the national average score of 7.8. Question 46 received an overall score of 5.1 which was the same as the national average score of 5.1.

In response to the National Patient Experience Survey hospital management outlined that it intends to introduce a ‘Know Your Medication Leaflet’ to increase focus on medicines and empower patients. This had yet to be approved by the Drugs and Therapeutics Committee and implemented in practice.

**2.6 Policies procedures and guidelines and access to information**

**Lines of enquiry:**
- Hospitals develop effective processes for medication management that are implemented and supported by clear and up to date policies, procedures and/or protocols.
- Essential information supporting the safe use of medicines is readily available in a user friendly format and is adhered to when prescribing, dispensing and administering medications.

**** Score out of 10 was given for each question belonging to a stage of care or a stage as whole. A score of 0 indicates a very negative experience and a score of 10 indicates a very positive experience.
Inspectors reviewed progress made since the previous inspection to address findings in relation to a lack of policies, procedures, and guidelines to support clinical staff in safe prescribing and administration of medication.

Hospital management outlined that a gap analysis of medication-related policies, procedures, and guidelines had been completed. The newly established group medication safety committee included a policy, procedure, guideline subgroup tasked with producing a shortlist of specific policies, procedures, and guidelines for the group.

The hospital’s medication policies, procedures, and guidelines were approved by the Drugs and Therapeutics Committee. Hospital policies were accessible to staff on computers via the hospital electronic document control system.

Decision support tools and policies, procedures, protocols, and guidelines must be readily available at the point of use to ensure the information is followed in practice. Generic and some locally developed prescribing supports were available to clinical staff to assist staff when prescribing or administering medicines. For example:

- British National Formulary for Children and British National Formulary in print and electronic format
- UHL adult injectable medicines guide
- Guidelines for the administration of intravenous antibiotics in paediatrics
- HseLand medication management prescription checklists
- Guide to dosing and monitoring of gentamicin and vancomycin in adult patients.

HIQA acknowledges that while these prescribing and administration supports were available for staff involved in medicines management, the overarching finding was that not all information available had been locally adapted and the information was not consistently available to all ward areas and available at the point of care. In particular, approved intravenous medicine information monographs were unavailable in high-risk areas such as the paediatric unit.

It is recommended, by both the Health Service Executive and the National Clinical Effectiveness Committee that policies, procedures, and guidelines are reviewed and updated every three years. The hospital was in the process of developing and updating some medication-related policies, procedures, and guidelines. However, it

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5555 Decision support tools: are resources that provide guidance or incorporate knowledge to help clinicians make the most appropriate clinical decision for patient care.

***** Point of use: includes when prescribing, preparing, or administering.
was of concern to HIQA that a number of medication policies, procedures and guidelines were found to be overdue for review. This was also found during the previous medication safety inspection in 2017. The hospital must ensure that clinical staff are provided with timely up-to-date information including policies, procedures, guidelines and or protocols in an easily accessible way to guide the safe use of medicines at the point of prescribing, preparation and administration.

Inspectors found an example where the most up-to-date version of an intravenous monograph was not available at the point of preparation. Correspondence received following this inspection outlined that until new versions of policies, procedures and guidelines were made available, existing versions were to remain in place.

The paediatric unit did not have locally developed or adapted intravenous drug administration monographs to assist staff in the safe administration of intravenous medicines available at the point of medicines preparation. This was of concern to HIQA as the paediatric unit would be considered an area where medicines use may be more complex and where a higher risk of medication error is present. The availability of locally developed or adapted intravenous drug administration monographs to assist staff in the safe administration of non-antibiotic intravenous medicines should be considered. Correspondence received following this inspection outlined that paediatric intravenous medicine monographs were in draft format for three medicines.

Inspectors were provided with some examples of policies which had been developed or reviewed such as a policy on access to UL pharmacies to obtain medicines outside regular pharmacy opening hours. A policy containing information on medicines reconciliation, prescription writing, administration of medicines and medicines management at ward/departmental level had been developed and was in draft format at the time of this inspection.

Inspectors were informed that medicines information was disseminated to staff via emails, memoranda and medication safety newsletters. For example, in order to keep staff informed of medication safety updates the hospital developed and circulated ‘Medication Safety Minutes’ weekly with key messages for staff involved in the medication management process. These were also available for staff to access via computer desktops or in hard copy in folders on wards visited by inspectors. Examples of recent topics covered included insulin management, prescribing of insulin, high-risk medicines, and access to decision support making tools. Inspectors observed a medication safety notice board displayed at the nurses’ station in the paediatric ward visited. Recent medication safety minutes and learning notices were clearly displayed. Additional educational material such as ‘spot the difference’
outlining a good example and a poor example of a prescription were also displayed on the board. Patient safety alerts were also observed in the clinical rooms of some of the wards visited.

Healthcare requires access to complete and accurate patient information, relevant to the safe use of medications, at the point of clinical decision making to help ensure patient safety. Clinical staff had access to patients’ diagnostic results on computers in clinical areas visited by inspectors.

Medication safety alerts and recalls were managed through the diagnostics directorate and pharmacy department.

Hospital management acknowledged that further work is needed to update policies procedures and guidelines. Correspondence received following this inspection outlined that the hospital have arranged for a review of documents across the hospital group from the hospital’s document management provider which is anticipated to commence in the weeks following this inspection.

2.7 Training and education

**Line of enquiry:**

- Safe prescribing and drug administration practices are supported by mandatory and practical training on medication management for relevant staff.

Staff education can effectively augment error prevention when combined with other strategies that strengthen the medication-use system. The hospital should ensure that professionals have the necessary competencies to deliver high-quality medication safety through induction and on-going training. This should be a structured, targeted programme of education for medication safety aligned with the hospital’s medications safety programme.

Hospital management reported that medication safety training was included in induction training for non consultant hospital doctors, nursing staff, clinical pharmacists, pharmacy technicians and pharmacy porters. It was now also mandatory for all staff involved in medication management to complete HSElanD Medication Management online training programme.

Inspectors were informed that the hospital had recently undertaken a review of the induction programme for new nursing staff at the hospital. Medication management was mandatory on induction for nurses and included an outline of important aspects of safety medication management and an introduction to the local medication policy and prescription and administration record. Other e-learning programmes which
were required to be completed on induction included a management of anaphylaxis programme.

Nurses were required to attend a separate study day on intravenous medication and this had to be repeated every three years. During the last inspection, inspectors were informed that not all nurses had received training in relation to intravenous medication administration. Training records provided outlined that 76% of staff in the trauma unit and 50% of staff in the paediatric unit had attended the intravenous medication study day at the time of this inspection. However, 100% of staff in the medical ward inspected had attended the intravenous medication study day at the time of this inspection.

The uptake of anaphylaxis training required improvement as training records from the perioperative directorate for May 2018 outlined that only 22% staff had completed this training.

The pharmacy department maintained a log of education sessions provided to staff and patients. A total of 32 formal education and training sessions had been provided by the pharmacy department from January 2018 to May 2018.

The hospital should ensure that education and training in relation to medication safety is planned to ensure that staff can attend training, for example allocating time for frontline staff to attend in-house training. This can be supported through a structured, targeted programme of education for medication safety aligned with the hospitals medication safety strategy.
3. Conclusion

Medications represent the primary measure for treatment intervention in hospitalised patients. Error associated with medication usage constitutes one of the major causes of patient harm in hospital. Medication-related events were the third most common type of adverse event recorded in the recently published Irish National Adverse Events Study. Medication safety should therefore be a priority area for all acute hospitals as they seek to ensure a high quality and safe service for patients.

This report details the findings of the second medication safety inspection at University Hospital Limerick. Inspectors concluded that some of the risks identified in the previous inspection in 2017 were still present, and that University Hospital Limerick was only able to demonstrate limited progress in addressing some of these risks. This was of concern to HIQA considering the size and complexity of services provided at the hospital. One of these risks related to a lack of clinical pharmacy services at the hospital. While actively progressing the need for additional pharmacists, the hospital must ensure that the current clinical pharmacy services are utilised most appropriately to deliver safe and effective care with regard to medication management.

HIQA found that changes had been made to strengthen governance structures and reporting arrangements for medication safety at the hospital since the last inspection. A medication safety programme was now in place at the hospital which outlined how the hospital aimed to make continuous measureable improvements in medication safety at the hospital. Furthermore, a medication safety officer had been appointed in March 2017 and a group medication safety committee had been established. The hospital should continue to monitor the impact of these new governance and reporting structures and formally evaluate the effectiveness of these new arrangements for medication safety at the hospital.

Inspectors found examples of quality improvement with medication safety including increased audit activity related to medication safety, improved incident reporting rates and medication reconciliation practices. HIQA acknowledges that the development of a local formulary is a considerable undertaking and the hospital had also made progress in this area since the last inspection. The hospital should continue to progress their plans for implementing a formulary system to manage risk and ensure efficiency in the use of medicines used in hospitals.

The lack of up-to-date information sources to guide clinical staff and disparities in how medication safety measures were implemented were identified as requiring improvement. The inspection team acknowledges that many quality improvements were being initiated by hospital management and the Drugs and Therapeutics
Committee since the last medication safety inspection and these efforts should continue. However, inspectors found that many of the medication safety support structures and initiatives had not been effectively implemented in clinical areas. The hospital needs to ensure that the development of quality improvement initiatives and processes to promote medication safety are fully and effectively implemented in clinical practice. Audit represents a key component of this and the hospital should continue its plan to promote quality assurance systems across the hospital including audit of medication safety, aligned to a formalised medication safety plan.

Following this report, the hospital must focus its efforts to address the risks and findings identified in this report, and work to ensure that the necessary arrangements are in place to protect patients from the risk of medication-related harm.

It is recommended that this report is shared with senior managers, clinicians and other relevant staff at University Hospital Limerick to highlight both what has been achieved by the hospital in implementing medication safety activities to date, and to foster further collective progression from this time point.
4. References


Available from:


5. Appendices


<table>
<thead>
<tr>
<th>Area to be explored</th>
<th>Line of enquiry</th>
<th>National Standards for Safer Better Healthcare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear lines of accountability and responsibility for medication safety</td>
<td>Patient safety is enhanced through an effective medication safety programme underpinned by formalised governance structures and clear accountability arrangements.</td>
<td>3.1, 5.1, 5.2, 5.4, 5.5, 5.6, 5.8, 5.9, 5.10, 7.1</td>
</tr>
<tr>
<td>Patient involvement in service delivery</td>
<td>Patients and or carers are informed about the benefits and associated risks of prescribed medicines in a way that is accessible and understandable.</td>
<td>1.4, 1.5, 1.7, 3.1, 4.1</td>
</tr>
<tr>
<td>Policies procedures and guidelines</td>
<td>Hospitals develop effective processes to promote medication safety that are implemented and supported by clear and up-to-date policies, procedures and or protocols.</td>
<td>2.1, 3.1, 3.2, 3.3, 3.5, 3.6, 3.7, 5.8, 5.11, 8.1</td>
</tr>
<tr>
<td>Risk management</td>
<td>There are arrangements in place to identify, report and manage risk related to medication safety throughout the hospital.</td>
<td>3.1, 3.2, 3.3, 3.5, 3.6, 3.7, 5.8, 5.10, 5.11, 8.1</td>
</tr>
<tr>
<td>Audit and evaluation</td>
<td>The effectiveness of medication management systems are systematically monitored and evaluated to ensure they are effective.</td>
<td>2.8, 3.1, 5.8, 8.1</td>
</tr>
<tr>
<td>Education and training</td>
<td>Safe prescribing and drug administration practices are supported by mandatory and practical training on medication management for relevant staff.</td>
<td>6.2, 6.3</td>
</tr>
<tr>
<td>Access to information</td>
<td>Essential information of the safe use of medications is readily available in a user-friendly format and is adhered to when prescribing, dispensing and administering medications.</td>
<td>2.5, 8.1</td>
</tr>
</tbody>
</table>
Appendix 2: Copy of letter sent from HIQA to University Hospital Limerick

Colette Cowan
Chief Executive Officer
University Hospital Limerick
Dooradoyle
Co. Limerick
CEOULHospitals@hse.ie

31 May 2018

Ref: MS/196

Medication Safety Monitoring Programme in Public Acute Hospitals

Dear Colette

During the course of the announced Medication Safety inspection conducted at University Hospital Limerick on 29 May 2018, Authorized Persons\textsuperscript{18} identified a number of medication safety related risks at the hospital that may collectively present a serious risk to the health or welfare of patients, and measures need to be put in place to mitigate these risks.

These risks relate to:

- The ongoing lack of clinical pharmacy services to meet the size and services provided at the hospital.

\textsuperscript{18} Authorized Persons of the Health Information and Quality Authority (HIQA) under Section 70 of the Health Act 2007 (the Act) are authorized for the purpose of monitoring against the National Standards for Safer Better Healthcare pursuant to Section 8(1)(c) of the Act.
A relative lack of access to locally developed or adapted information to guide clinical staff in the safe use of medicines such as a hospital formulary, comprehensive up-to-date, policies, procedures, guidelines and intravenous medicine information monographs that are consistently available to all ward areas and available at the point of care. Of note locally approved intravenous medicine information monographs were unavailable in high risk areas such as the paediatric unit visited during the inspection.

Disparities in the implementation of medication safety measures outlined to inspectors and what was observed by inspectors in clinical areas.

Despite a number of these risks being highlighted previously, during the inspection on 18 May 2017, University Hospital Limerick was only able to demonstrate limited progress in relation to addressing these risks.

Consequently, I am writing to you to seek assurance as to how the specific risk issues will be comprehensively and speedily addressed and how the effectiveness of medication safety systems at the hospital will be enhanced following this most recent inspection.

HIQA notes that a number of senior decision makers were not available at the time of this inspection despite the fact that this was an announced inspection. In light of this and in response to the findings during the inspection, we would be happy to speak with you should you feel that further clarification in relation to the above findings is required.

Please note that details of this correspondence will be included in the report of the announced medication safety inspection. This will include copies of HIQA’s correspondence and the service provider’s response.

Please confirm receipt of this letter by email and formally report back to HIQA by 06 June 2018 to qualityandsafety@hiqa.ie outlining measures to address the identified risks.

Should you have any queries, please do not hesitate to contact me.

Yours sincerely

___________________
Emma Cooke
Authorised Person

CC: Mary Dunnion, Director of Regulation, Health Information and Quality Authority
Appendix 3: Copy of response received by HIQA from University Hospital Limerick

Ospidéal OL
UL Hospitals
Working together, caring for you

Offic an Phríomhhothairseachtaí, Grúpa Ospidéal OL, Ospidéal na Ollscoile, Lúimnseach,
Dochtúir Naomh Naoimh, Tin an Oide, Lúimnseach, V94 F6S6
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Office of the Chief Executive Officer,
UL Hospitals Group, University Hospital Limerick,
St. Nicholas’s Road, Drumcondra, Limerick, V94 F858
Tel: 061 482508 Email: ceo@hospitals@live.ie

Ref: CC/MRL
06th June 2018

Mr. Emma Cooke
Authorised Person
HIQA
Dublin Regional Office
George’s Court
Georges Lane
Dublin 7

Re: Medication Safety Monitoring Programme in Public Acute Hospitals

Dear Emma,

Thank you for your correspondence of the 31st May 2018 regarding your recent announced Medication Safety inspection at UHL on the 29th May 2018. I note the risks you have raised from HIQA’s inspection.

Firstly I think it is important to reiterate the governance model at UL Hospitals Group, the 6 hospitals are managed by an Executive team of 6 managers with a direct line report to me as CEO. The second most senior structure report to my 6 direct reports is namely our Directorates, managed by a Clinical Director, General Manager and Director of Nursing.

On the day of the inspection, two of my Executive team met with you, both of whom were interim Chief Clinical Director and interim Chief Director of Nursing/Midwifery. A Directorate General Manager was also in attendance as well as the Operational Director of Nursing. They feedback and entered the Executive Management team post the inspection therefore I am comfortable that the Executive was represented at the inspection despite the leave period.

In response to the risks identified I wish to advise and assure you of the following;

1. Ongoing lack of clinical pharmacy services to meet the size and services provided at the hospital

Clinical Pharmacy
ULHG faces significant challenges in providing clinical pharmacy services due to insufficient resources. The risk regarding lack of Pharmacy manpower has been highlighted by the Group Drugs & Therapeutic Committee and escalated to the Corporate Risk Register by the Diagnostics Directorate.

In 2018 a submission was made to the Estimates Process supported by business cases for 19.5 additional Pharmacists to assist with dispensing and clinical pharmacy service.
However to date we have not received funding or approval for this submission. We are currently in the process of compiling the estimates for 2019 and will include these requirements.

Since the last HQA inspection April 2017 a Medication Safety Officer has been appointed for ULHG. Funding for a basic grade pharmacist and basic grade pharmacy technician has been approved from Quarter 1 2018. These posts are currently with the National Recruitment Service. A 0.5 WTF Senior Clinical Pharmacist for renal services has been approved and will be progressed in 2018 via the National Recruitment Service.

2. A relative lack of access to locally developed or adapted information to guide clinical staff in the safe use of medicines

A. HOSPITAL FORMULARY

At the end of 2017 after much research during 2017, a suitable electronic formulary product was identified and approved by the D&T. In January 2018 a quote was received, and a purchase order was issued in March 2018. In April 2018 a senior pharmacist was assigned to customise the product for local use from within existing resources. This is a resource intensive process, currently the pharmacist dedicates one day per week. At the inspection it was explained that the product is currently being customised using available resources at the rate of one therapeutic area (i.e. BNF chapter) per month and that the antimicrobial therapeutic area (chapter) had been completed and could be presented to the inspectors if required.

While awaiting completion of the electronic formulary a current formulary list is available in pharmacy and it is clear to staff in pharmacy which medicines are on the formulary.

COMPREHENSIVE UP-TO-DATE POLICIES, PROCEDURES AND GUIDELINES

OPRUSE is the documentation management system in use across the group.

A gap analysis with respect to Medication related PPGs has been completed by [Name Redacted]. In the interim the chair of the D&T has advised until the new versions become available the old PPGs are to remain in place. There is a subgroup of the D&T for PPGs which is focusing on updating and revising policies for medication safety across the ULH.

The D&T, medication safety pharmacist and nursing will develop a robust communication to all areas regarding initiatives to support medication safety, e.g. SALADs.

The Storage of Medication on Wards Policy and the Multi-Disciplinary Policy UHL, Croom and Maternity has recently been updated by NPDU and is currently being uploaded onto Q
Pulse. These were presented in hard copy to the inspectors from HIQA on the day of the inspection.

I can advise that I have approved a service level agreement with our Q-Pulse provider to provide a review of document management across the hospital group. It is anticipated that this process will commence in the coming weeks.

A significant amount of work was done on thrombophrophylaxis in the past year in preparation for the introduction of thrombophrophylaxis as a national KPI under the SaferMed programme. The "Thrombophrophylaxis policy" is included in the new kardex which is in the final stages of development.

**INTRAVENOUS MEDICINES INFORMATION MONOGRAPHS - ADULT INJECTABLE MEDICINES GUIDE (EDITION 3 2017)**

I can assure you that further to your findings in relation to Monographs, I have asked for a review of the current Training and Communication plan for Medication Safety to be reviewed and a quality improvement plan implemented across the LLHG.

**Paediatric Injectable Medicines Guide**

In January 2018 a 0.4 WTE senior clinical pharmacist (paediatrics) commenced a newly approved 2 day per week post. Since commencing in January 2018 the part time senior clinical pharmacist (paediatrics) has prepared information on replacement values for intravenous medicines and assisted with the education of staff in this regard. Instruction on the preparation for administration of all Intravenous Antibacterial agents has been completed and approved through D&T. Three paediatric intravenous medicine monographs (Mephenesin sulphate, aminophylline, salbutamol) are in draft.

Business cases for pharmacy staff for paediatrics and neonatology have been submitted in the Estimates process in 2018 and will be submitted again for 2019. Most recently pharmacy completed documentation at the request of the Maternal and Child Health Directorate for the submission under the National Clinical Programme for Paediatrics (March 2018). All the pharmacy staff requirements for paediatrics and neonatology were outlined in this submission.

3. **Disparities in implementation of medication safety measures outlined to inspectors and what was observed by inspectors in clinical areas.**

In conclusion much work has been carried out to enhance medication safety by the multidisciplinary D&T to address deficiencies identified by previous HIQA inspection one year ago. The new sub committee structures are functioning very well and the vision for...
medication safety has been consolidated by the recent appointment of a Medication Safety Officer. Work remains to be done and requires prioritisation of resources and submission to the Estimates 2019. Like all acute services we are subject to a funding envelope from government which we must adhere to. However we will continue to prioritise these posts for 2019.

Thank you for your time and to the overall team for your important assessments and recommendations to enable us to continuously improve our service.

Yours sincerely,

Colette Cowan
Group Chief Executive
UL Hospitals

Cc: Mary Dunnian, Director of Regulation, Health Information and Quality Authority

Definitions

Harm
Impairment of the physical, emotional, or psychological function or structure of the body and/or pain resulting there from.

Monitoring
To observe or record relevant physiological or psychological signs.

Intervention
May include change in therapy or active medical/surgical treatment.

Intervention Necessary to Sustain Life
Includes cardiovascular and respiratory support (e.g., CPR, defibrillation, intubation, etc.)

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Appendix 5: Hierarchy of Effectiveness of Risk Reduction Strategies in Medication Safety

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Report of the announced inspection of medication safety at University Hospital Limerick

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