Report of the announced inspection of medication safety at Our Lady of Lourdes Hospital and Louth County Hospital.

Date of announced inspection: 24 and 25 February 2020
About the Health Information and Quality Authority (HIQA)

The Health Information and Quality Authority (HIQA) is an independent statutory authority established to promote safety and quality in the provision of health and social care services for the benefit of the health and welfare of the public.

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

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

- **Regulating social care services** — The Chief Inspector within HIQA is responsible for registering and inspecting residential services for older people and people with a disability, and children’s special care units.

- **Regulating health services** — regulating medical exposure to ionising radiation.

- **Monitoring services** — Monitoring the safety and quality of health services and children’s social services, and investigating as necessary serious concerns about the health and welfare of people who use these services.

- **Health technology assessment** — Evaluating the clinical and cost-effectiveness of health programmes, policies, medicines, medical equipment, diagnostic and surgical techniques, health promotion and protection activities, and providing advice to enable the best use of resources and the best outcomes for people who use our health service.

- **Health information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information on the delivery and performance of Ireland’s health and social care services.

- **National Care Experience Programme** — Carrying out national service-user experience surveys across a range of health services, in conjunction with the Department of Health and the HSE.
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1. Introduction

HIQA’s medication safety monitoring programme began in 2016 and monitors public, acute hospitals in Ireland against the *National Standards for Safer, Better Healthcare* to ensure patient safety in relation to the use of medications.¹ The programme aims to examine and positively influence the adoption and implementation of evidence-based practice in relation to medication safety in acute healthcare services in Ireland.

Medications are the most commonly used intervention in healthcare. They play an essential role in the treatment of illness, managing chronic conditions and maintaining health and wellbeing. As modern medicine continues to advance, increasing medication treatment options are available for patients with proven benefit for treating illness and preventing disease. This advancement has brought with it an increase in the risks, errors and adverse events associated with medication use.²

Medication safety has been identified internationally as a key area for improvement in all healthcare settings. In March 2017, the World Health Organization (WHO) identified medication safety as the theme of the third Global Patient Safety Challenge.³ The WHO aims to reduce avoidable harm from medications by 50% over 5 years globally. To achieve this aim the WHO have identified three priority areas which are to:

- improve medication safety at transitions of care
- reduce the risk in high-risk situations
- Reduce the level of inappropriate polypharmacy.*

Medication safety has also been identified by a number of organisations in Ireland as a key focus for improvement.⁴,⁵,⁶,⁷,⁸,⁹ Medication safety programmes have been introduced in many hospitals to try to minimise the likelihood of harm associated with the use of medications, and in doing so maximise the benefits for patients. These programmes aim to drive best practice in medication safety by working to encourage a culture of patient safety at a leadership level and through the introduction of systems that prevent and or mitigate the impact of medication-related risk.¹⁰

**HIQA’s medication safety monitoring programme 2019**

HIQA published a national overview report of the medication safety monitoring programme *‘Medication safety monitoring programme in public acute hospitals - an overview of findings’*¹¹ in January 2018 which presented the findings from thirty-

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*Polypharmacy: the use of many medications, commonly five or more.*
four public acute hospital inspections during phase one of the programme. This report identified areas of good practice in relation to medication safety and areas that required improvement, to ensure medication safety systems were effective in protecting patients. A number of recommendations were made focusing on improving medication safety at a local and national level. The recommendations are detailed in the report which is available on the HIQA website (www.hiqa.ie).

The final phase of HIQA’s medication safety monitoring programme has been updated and developed and the current approach is outlined in eight lines of enquiry. The lines of enquiry are based on international best practice and research, and are aligned to the National Standards (see Appendix 1). The monitoring programme will continue to assess the governance arrangements and systems in place to support medication safety. In addition, there will be an added focus on high-risk medications and high-risk situations.

High-risk medications are those that have a higher risk of causing significant injury or harm if they are misused or used in error. High-risk medications may vary between hospitals and healthcare settings, depending on the type of medication used and patients treated. Errors with these medications are not necessarily more common than with other medications, but the consequences can be more devastating.

High-risk situation is a term used by the World Health Organization to describe situations where there is an increased risk of error with medication use. These situations could include high risks associated with the people involved within the medication management process (such as patients or staff), the environment (such as higher risk units within a hospital or community) or the medication.

International literature recommends that hospitals identify high-risk medications and high-risk situations specific to their services and employ risk-reduction strategies to reduce the risks associated with these medications (Appendix 2).

System-based risk-reduction strategies have a higher likelihood of success because they do not rely on individual attention and vigilance, and a small number of higher-level strategies will be more likely to improve patient safety than a larger number of less effective strategies. Therefore, risks associated with the procurement, dispensing, storage, prescribing, and administration of high-risk medications need to be considered at each step of the medication management pathway.

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1 Lines of enquiry are the key questions or prompts that inspectors use to help inform their inspection, assessment or investigation.
2 Risk-term reduction strategies: a term used to describe different ways of dealing with risks. Strategies include risk avoidance, transfer, elimination, sharing and reducing to an acceptable level.
Information about this inspection

An announced medication safety inspection was carried out at Our Lady of Lourdes Hospital and Louth County Hospital by Authorised Persons from HIQA; Nora O’ Mahony and Emma Cooke. The inspection was carried out on 24 February 2020 in the Louth County Hospital site between 10:00hrs and 16:15hrs, and on 25 February 2020 in the Our Lady of Lourdes Hospital site between 09:00hrs and 16:50hrs.

Inspectors spoke with staff, reviewed documentation and observed systems in place for medication safety during visits to the following clinical areas:

- Theatre department in the Our Lady of Lourdes Hospital site
- Stroke rehabilitation and medical 1 wards in the Louth County Hospital site
- Oriel level 2 and Newgrange level 1 wards in the Our Lady of Lourdes Hospital site.

One group interview was held in the Louth County Hospital site with the following staff:

- The site manager, the chief pharmacist, the assistant director of nursing and a medical representative.

Two group interviews were held in the Our Lady of Lourdes Hospital site with the following staff:

- Group one: the chairperson of the Drugs and Therapeutics Committee, the chief pharmacist and the quality and risk manager.
- Group two: the director of nursing, the director of midwifery, the general manager, the clinical director and the clinical director for women and children’s services.

HIQA would like to acknowledge the cooperation of staff that facilitated and contributed to this announced inspection.

Information about the hospital

Our Lady of Lourdes Hospital and Louth County Hospital form one hospital across two sites which is part of the Royal College of Surgeons in Ireland Hospital Group. Our Lady of Lourdes Hospital site provides a range of 24/7 services including acute medical and surgical, maternity and critical care. The Louth County Hospital site provides medical and stroke rehabilitation care, with a minor injuries unit and a range of diagnostic and support services onsite.

Throughout this report the Our Lady of Lourdes Hospital and Louth County Hospital are collectively referred to as the hospital.
2. Findings at Our Lady of Lourdes Hospital and Louth County Hospital

Section 2 of this report presents the general findings of this announced inspection.

The inspection findings are outlined under each of the eight lines of enquiry and opportunities for improvement are highlighted at the end of each section.

2.1 Leadership, governance and management

Our Lady of Lourdes Hospital and Louth County Hospital had formalised governance arrangements in place for medication management and safety. The Drugs and Therapeutics Committee was responsible for overseeing medication safety in both hospital sites, and the general manager had overall accountability for medication safety across both sites.

The hospital had recently changed the Drugs and Therapeutics Committee’s reporting structure, which now reported to the Quality and Safety Executive Committee and any medication safety issues were escalated by the chair of the Quality and Safety Executive Committee to Senior Management Team meetings. The committee’s terms of reference did not include these new reporting structures but hospital management told inspectors that these would be updated to reflect the new reporting structures and the frequency of reporting.

Membership of the Drugs and Therapeutics Committee was multidisciplinary reflecting that medication management is the responsibility of a number of clinical professional groupings. This committee had representatives from both hospital sites.

There was a Medication Management Committee on each hospital site. A cross-hospital Medication Safety Subgroup was based in Our Lady of Lourdes Hospital and this committee had representation from both sites. These committees were subgroups of and reported to the Drugs and Therapeutics Committee.

The Medication Management Committees on both sites were operational and provided two-way communication between the Drugs and Therapeutics Committee and the frontline staff in both hospital sites.

The Medication Safety Subgroup included representation from senior management and had a strategic focus on medication safety and oversight of the hospitals’ medication safety programme. This committee’s terms of reference was overdue for review and should be reviewed by the hospital. In undertaking this review, the hospital should consider the most efficient and effective use of staff resources going
forward to avoid duplication of effort, while still maintaining the strategic focus to drive sustainable improvement for patient safety.

The medication safety programme 2019/2020 set out the hospital’s objectives for medication safety across sites and outlined the responsible person, department or committee and the due date for each objective. The Medication Safety Subgroup tracked the status of each objective of the programme, and to date 82% of the medication safety objectives were completed, in progress or ongoing.

**Opportunities for improvement**

- The hospital should review and update the terms of reference of the Drugs and Therapeutics Committee and the Medication Safety Subgroup. Consideration should be given to the most efficient and effective use of staff resources going forward to avoid duplication of effort, while still maintaining the strategic focus to drive sustainable improvement for patient safety.

### 2.2 Risk management

Two medication-related risks requiring additional control measures were documented on the hospital’s corporate risk register reviewed by the Senior Management Team. One risk related to the the lack of clinical pharmacists in clinical specialist areas and the impact this had on the conduct of medication reconciliation on admission, transfer and discharge.

To mitigate this risk, the hospital prioritised medication reconciliation for patients on admission in some clinical areas such as the emergency department and the acute medical assessment unit.

The hospital had completed and submitted business cases to recruit and appoint pharmacists to fill the vacant positions. Despite approval from the Health Service Executive to undertake local recruitment, the hospital were unsuccessful in recruiting pharmacists to fill the vacant positions.

The lack of progress in the provision of clinical pharmacy services since the previous medication safety inspection at the hospital is of significant concern to HIQA considering the size and complexity of the services provided by the hospital. This will be discussed later in the report.

The second risk on the corporate risk register related to the storage conditions for medicinal products in the pharmacy department. Inspectors were informed that the equipment required to mitigate this risk was in the new pharmacy department which opened in September 2019. The risk would be reviewed and closed as appropriate at the next meeting of the Senior Management Team.
The hospital had introduced an electronic quality management system\(^5\) for reporting and managing medication safety incidents. The introduction of the electronic quality management system provided managers with direct access to all incidents which occurred in their areas, with individuals assigned responsibility for corrective and prevention actions to minimise the chance of reoccurrence.

Inspectors were informed that reporting of medication incidents was promoted at forums such as regular leader’s safety walks,\(^*\) at medication safety weeks held in the hospital in 2018 and 2020 and through posters seen on clinical areas visited.

The focus on improving reporting was reflected in the hospital’s medication incident reporting rates, which although acknowledged as still low, had increased year on year from 141 in 2017 to 308 in 2019 (See Figure 1). The majority of medication incidents were reported by nurses and pharmacists.

![Medication incidents reported 2017-2019](image)

**Figure 1. Medication incidents reported in Our Lady of Lourdes Hospital and Louth County Hospital 2017 to 2019**

The hospital used the National Coordinating Council for Medication Error Reporting (NCC MERP) index to categorise medication incidents in terms of severity of outcome (see Appendix 3). Incidents were also categorised and inputted onto the National Incident Management System (NIMS).\(^\dagger\dagger\)

Medication incident reports were monitored by the Medication Safety Subgroup and reviewed at meetings of the Drugs and Therapeutics Committee. Feedback on

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\(^5\) The electronic quality management system included modules for managing incidents and corrective and preventative actions.

\(^*\) Senior management visited clinical areas.

\(^\dagger\dagger\) 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).
incidents was provided to staff at the Medication Management Committees and at Speciality Governance Committee++ meetings.

A survey on the patient safety culture and a focus group on barriers to incident reporting was carried out at the Louth County Hospital site in 2018. Overall the patient safety grade for this site was found to be excellent by 36% of staff and very good by 52% of staff. There is a plan to repeat the survey across both hospital sites as part of the medication safety programme 2019/2020.

**Analysis of incidents**

The reporting of incidents is of little value unless the information collected is used to identify trends or patterns in relation to risk and the resulting recommendations for improvement are shared with frontline staff.¹⁷

Within Our Lady of Lourdes Hospital and Louth County Hospital medication incidents were analysed by the quality and risk department and presented as:

- number per month
- location across sites
- process involved per sites§§
- NCC MERP categorisation
- type of incident.***

Learning from incidents was shared through meetings of the Medication Management Committees in both hospital sites, pharmacy memos, patient safety alerts, education sessions provided to doctors and a medication safety day††† attended by nurses.

Inspectors were informed that the hospital used the Health Service Executive’s After Action Review‡‡‡ methodology to support and help staff reflect on reported

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+++ Speciality Governance Committees such as the Medical Governance Committee, Surgical Governance Committee, Emergency Medicine Governance Committee and the Women and Children’s Governance Committee.

§§ Process involved: administration, preparation, prescribing, monitoring, reconciliation, storage or supply ordering or transport.

*** Type of incident involved such as: adverse drug reaction, contraindication, drug interaction, failure/ malfunction of equipment, incomplete/inadequate, not performed when indicated, wrong: dose/strength, drug, formulation, label patients quantity duration.

††† The medication safety day was a one day medication safety education programme, repeated at intervals, which nurses were currently recommended to attend once.

‡‡‡ After Action Review (AAR) is most commonly used as a means of framing a structured facilitated discussion of an event that has occurred. The outcome of this discussion enables the individuals involved in the event to understand what went well and why and what didn’t go well and why. This allows them to agree on what they would do differently in the future and what learning can be identified to inform improvement. AAR can also provide staff with a psychologically safe space to
incidents. This methodology can be also used to identify learning opportunities to inform quality improvement initiatives.†††

Quality improvements were initiated to mitigate the reoccurrence of reported incidents. For example the hospital had developed a new insulin prescribing and monitoring record and had recently introduced a revised medication record. ††††

**Alerts and recalls**

The process in place for the management of alerts and recalls related to medication was outlined to inspectors. An example of the actions taken in response to a recent product recall alert was outlined to inspectors.

**Opportunities for improvement**

- The hospital should continue to promote incident reporting among all clinical staff and across all clinical areas within a just culture, to strengthen reporting of medication incidents so that safety surveillance is enhanced.

**2.3 High-risk medications and situations**

High-risk medications require special safeguards to reduce the risk of errors and minimise harm. Strategies for reducing risk with high-risk medications and in high-risk situations may include high leverage, medium leverage or low leverage risk-reduction strategies (see Appendix 2).†††††

High leverage risk-reduction strategies such as forcing functions, standardisation and simplification, need to be implemented alongside low leverage risk-reduction strategies such as staff education, passive information and the use of reminders.

Our Lady of Lourdes Hospital and Louth County Hospital had implemented evidence-based safety measures for high-risk medications. The hospital had developed a high-risk medication list based on both evidence-based literature and local incidents which outlined the associated risk-reduction strategies in place.

discuss and process what happened and why it happened. This can reduce individual stress and creates a positive team dynamic which places a focus on learning.

††††† The insulin prescription and monitoring record was titled the Louth Hospital Group Adult Insulin Prescription and Blood Glucose Monitoring Chart General & Maternity'.

‡‡‡‡‡ The medication record titled the Drug Prescription and Administration Record Louth Hospitals.

Recalls are actions taken by a company to remove a product from the market. Recalls may be conducted on a firm's own initiative or by an authorised authority.

§§§§ The framework of a just culture ensures balanced accountability for both individuals and the organisation responsible for designing and improving systems in the workplace.

***** High-risk situation is a term used by the World Health Organization to describe situations where there is an increased risk of error with medication use.

††††† Risk-reduction strategies: a term used to describe different ways of dealing with risks. Strategies include risk avoidance, transfer, elimination, sharing and reducing to an acceptable level.
The following sample of high-risk medications and high-risk situations were reviewed in detail during this inspection to review the risk-reduction strategies in place:

- anticoagulants
- insulins
- concentrated potassium chloride
- medication safety during the peri-operative period.

**Anticoagulants**

The hospital had some risk-reduction strategies in place for anticoagulants as outlined below:

- unfractionated heparin was only stocked in critical care areas
- the medication record had a specific section for the prescribing of all anticoagulants, to support reducing the risk of duplicate anticoagulant prescriptions
- a clinical pharmacist provided education to patients who were newly prescribed anticoagulants on request from doctors and nurses
- staff had access to up-to-date guidance to support safe anticoagulant therapy management.

**Insulin**

The hospital had risk-reduction strategies in place to mitigate the risks associated with insulin. Examples of these are outlined below.

Unopened insulin pens were stored in a monitored temperature controlled fridge with a blank flag labels. Once opened the patient’s name and date of opening was recorded on the flag label. All pens in use were stored in patient’s individual compartments of the medication trolley.

Clinical nurse specialists in diabetes reviewed diabetic patients and provided education to patients, and staff as required.

The hospital had developed an insulin prescription and monitoring record which also contained information for staff on the management of hypoglycaemia. Staff

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**Anticoagulants**: are commonly referred to as blood thinners that prevent or treat blood clots, but these medicines also carry an increased risk of bleeding or clots, so patient education and regular monitoring of blood levels are essential to maintain patient safety and ensure good patient outcomes.

**Flag labels**: are used to attach label on small syringes and containers where part of the label is applied to the syringe, leaving an exposed ‘flag’ portion to ensure that details on the labels can be read, and the markings and contents of the pen remains visible.
education sessions were provided by the clinical nurse specialist in diabetes and a clinical pharmacist during the implementation of the insulin prescription and monitoring record.

In line with good practice, there was a prompt on the regular medication record which was ticked to indicate to staff that an insulin medication record was in use.21,22

Hospital staff had access to a hypoglycaemic box,****** and guidance on the management of diabetic conditions for adults and paediatrics.

The hospital regularly monitored compliance of the storage of insulin against hospital standards. Results viewed for the Our Lady of Lourdes Hospital site between 2018 and 2020 demonstrated that compliance with hospital standards ranged between 84% to 68%, with an average compliance of 77%. It is commendable that the hospital was undertaking monitoring but they should continue to work on areas for improvement identified during this monitoring process.

**Concentrated potassium chloride**

Concentrated electrolyte solutions for injection are especially dangerous with potentially fatal consequences when not prepared and administered properly.23 National and international evidence recommends the complete removal of concentrated potassium from patient care areas as the goal, with the use of pre-mixed potassium infusions stored segregated from other solutions.23,24,25,26

The hospital had a combination of risk-reduction strategies in place to support safe management of potassium chloride. These included the following:

- concentrated potassium ampoules were only stocked in critical care areas with storage controls in place
- intravenous potassium was supplied in pre-mixed potassium chloride solutions, these fluids were stored separately from other intravenous fluids and administered via an electronic pump
- systems in place for potassium chloride were outlined in a guidance documents accessible to staff however this policy was overdue for review.

**Medication management during the perioperative period**

A hospital's operating theatre presents a unique situation with the use of multiple high-risk medications, high patient throughput and complex procedures.27 A diverse

****** Hypoglycaemic box: provided quick access to equipment required to support effective treatment for patients in the event of hypoglycaemia.
range of medications are used which have the potential for a serious adverse event if administered incorrectly. Therefore, the perioperative period is a high-risk situation in relation to medication safety.

The operating theatre department in Our Lady of Lourdes Hospital site was newly built and opened in February 2020. At the time of this inspection, three theatres were in operation with the remaining two theatres due to open mid to late 2020.

Examples of risk-reduction strategies in place to mitigate the risks of medications used within the theatre department included:

- medications were drawn up by the person who administered them
- international colour-coded labels were used to label drawn up medications
- colour-coded infusion labels were used to differentiate between different infusions such as patient controlled analgesia and epidurals
- anaesthetic medications were drawn up, reconciled and if not used were discarded at the end of each theatre procedure
- medications were stored in an organised manner which supported safe selection.

Inspectors were informed that prefilled syringes were used where possible during the peri-operative period in line with good practice. Staff informed inspectors that anaesthetic medications were prepared, labelled and administered by the same anaesthesiologist on a case by case basis only.

There was evidence of good communication regarding medications administered at transitions of care throughout the perioperative patient pathway.

The new build and design of the operating theatre department had enabled many technological advancements in the area of medication safety. The hospital had introduced a number of technology-assisted medication identification, delivery and automated information systems. Inspectors observed a number of automated dispensing cabinets which applied many forcing functions to support medication safety.

Inspectors were informed that an automated anaesthetic work station had been purchased by the hospital and was due to be implemented in the operating theatre department at the time of this inspection. A key feature of his machine included

†††††† This anaesthetic workstation securely stores all medications and supplies needed for a full day of cases and automatically tracks inventory used.
barcode scanning for the automatic checking of medications pre-administration and would also facilitate second check in medication selection. The work station would also support medication reconciliation at the end of each case.

**Other high-risk medications**

Examples of risk-reduction strategies in place to mitigate the risks for other high-risk medications and situations were also identified during this inspection and are outlined below.

Our Lady of Lourdes Hospital and Louth County Hospital had a number of risk-reduction strategies in place for oral methotrexate. Staff informed inspectors that oral methotrexate was not stocked in clinical areas. Only one strength methotrexate tablets were stocked in the hospital and dispensed as a patient specific single dose.

Antimicrobials requiring therapeutic monitoring were prescribed on a separate section of the medication record. Antimicrobial guidance was accessible to staff on computers and mobile phone applications, and hard copy guidance was displayed in clinical areas inspected.

The microbiologist reviewed patients on antimicrobials as required, and was available to provide guidance to staff on antimicrobial use across both hospital sites. An antimicrobial pharmacist was available for patient review and staff support on the Our Lady of Lourdes Hospital site. Inspectors were informed that the consultant microbiologist and pharmacist provided support on antimicrobials requiring therapeutic monitoring for staff in the Louth County Hospital site.

Our Lady of Lourdes Hospital and Louth County Hospital had developed a list of sound-alike look-alike medications (SALADs)‡‡‡‡‡‡ which was seen displayed in clinical rooms visited by inspectors in both sites. The hospital had identified practical steps which could be considered to prevent errors related to sound-alike look-alike medication. For example, sound-alike look-alike medications were considered during procurement.

**2.4 Person-centred care and support**

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.31, 32

‡‡‡‡‡‡ ‘Sound-alike look-alike drugs’ (SALADs) or Look-alike sound-alike (LASA). The existence of similar drug and medication 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.
**National Inpatient Experience Survey**

The National Inpatient Experience Survey is a nationwide survey that offers patients the opportunity to describe their experiences of public acute healthcare in Ireland. Of the 1078 people discharged from Our Lady of Lourdes Hospital and Louth County Hospital during the month of May 2019, 479 people completed the survey, achieving a response rate of 44%.  

Two questions related directly to medication in the National Inpatient Experience Survey. The scores for Our Lady of Lourdes Hospital and the Louth County Hospital and the national scores for 2017, 2018 and 2019 are illustrated in table 1 below.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Year</th>
<th>Our Lady of Lourdes Hospital and Louth County Hospital score</th>
<th>National score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q44. Did a member of staff explain the purpose of the medicines you were to take at home in a way you could understand?</td>
<td>2019</td>
<td>7.9</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>7.9</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>7.7</td>
<td>7.8</td>
</tr>
<tr>
<td>Q45. Did a member of staff tell you about medication side effects to watch for when you went home?</td>
<td>2019</td>
<td>5.4</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>4.8</td>
<td>5.2</td>
</tr>
</tbody>
</table>

**Note:**

- The National Inpatient Experience Survey is a nationwide survey which asks people for feedback about their stay in hospital. The survey is a partnership between HIQA, the Health Service Executive (HSE) and the Department of Health. All patients over the age of 16 discharged during May who spent 24 hours or more in a public acute hospital, and have a postal address in the Republic of Ireland are asked to complete the survey.
- Please note that the numbering of questions changed after the 2017 survey was completed. Question 44 ‘….’ was originally question 45 in the 2018 survey and question 45 ‘….’ was originally question 46.
Table 1: Comparison between Our Lady of Lourdes Hospital and Louth County Hospital and national scores for Questions 44 and 45 of the National Inpatient Experience Survey 2017, 2018 and 2019.

Our Lady of Lourdes Hospital and Louth County Hospital’s score for question 44 was lower than the national average score each year. The hospital’s score was marginally above the national average this year in question 45, there was still room for improvement in this area.

Staff informed inspectors that a working group was established to review the National Inpatient Experience Survey results. A quality improvement initiative commenced in response to the survey included improving information for patients on discharge. The hospital was in the process of developing a patient safety leaflet, a draft of which was reviewed by inspectors during the inspection.

**Patient information**

Pharmacists provided counselling‡‡‡‡‡‡‡ to patients commenced on anticoagulants as requested by nurses or doctors. Patient education was also provided by clinical nurse specialists for the cohort of patients within their specialty areas such as diabetes, respiratory, heart failure, gerontology, stroke and palliative care.

**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.³⁴, ³⁵, ³⁶

At Our Lady of Lourdes Hospital and Louth County Hospital the clinical pharmacist undertook medication reconciliation on the wards to which they were assigned. However, as there was only a very limited clinical pharmacy service, medication reconciliation was not standardised across the hospital but was prioritised by clinical pharmacists for patients on admission, for example in the emergency department. Medication reconciliation was not routinely undertaken for patients on discharge.

In the Louth County Hospital site the pharmacist reviewed the medication record and discharge prescription for patients requiring dispensed medications for weekend leave or for a limited number of patients on discharge to nursing homes. Inspectors were informed of a good initiative whereby a ‘medication record card’ was completed.

‡‡‡‡‡‡‡ Counselling: Patient counselling involves the pharmacist communicating the correct information and advice to patients regarding medication therapy.
for this cohort of patient. This record included some general medication information and listed the name, doses, frequency and special instructions for the medication prescribed for the patient on discharge. Extending this practice for all patients across the Louth County Hospital site would support patient safety.

HIQA acknowledges the challenges, complexity and resources required to implement an effective medication reconciliation process but notes that, with relevant resources, this has been progressed in other hospitals of similar size and function.

**Systems to support medication safety and optimisation.**

Systems were in place to support medication safety in relation to the prescribing and administration of crushed medications, and the prescribing and administration of medications intended for nasogastric administration across the hospital. Guidelines were in place to support the safe administration of medications to patients with dysphagia.

A specialist consultant informed inspectors the medications for patients under their care were reviewed with the intent to deprescribe as appropriate. The STOPP criteria was informally used to support this review. Formalising this process across the hospital sites would support medication optimisation and inappropriate polypharmacy.

Patient weight measurements are important for medications that require an individual weight-based dose, and patient known allergies should be available throughout the episode of care. Patient allergies and weights were recorded on all medication records viewed by inspectors on the day of inspection. Nursing and Midwifery Quality Care Metric viewed by inspectors, showed high compliance was identified in the recording of patient’s weights and allergy status.

**Opportunities for improvement**

- The hospital needs to work towards establishing medication reconciliation for all patients on admission, and progressing towards the development of this service to include patients on discharge.
- The hospital needs to have systems in place to ensure that all patients are informed about any medications they are prescribed and any possible side effects.

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STOPP: Screening tool of older peoples potentially inappropriate prescription

START: Screening tool to alert doctors to right treatment

Metrics are parameters or measures of quantitative assessment used for measurement and comparison or to track performance.
2.5 Model of service and systems in place for medication safety

Clinical pharmacy service

International studies support the role of clinical pharmacists in hospital wards in preventing adverse drug events.\textsuperscript{41,42,43,44,45,46}

As previously mentioned, the lack of progress in the provision of a clinical pharmacy service since the previous medication safety inspection at the hospital is of significant concern to HIQA considering the size and complexity of the services provided by the hospital.

At the time of this inspection, inspectors were informed that the hospital had four permanent whole time equivalent and two temporary whole time equivalent pharmacist positions vacant. Inspectors were informed by senior management, that despite local efforts to recruit pharmacists, these permanent and temporary positions remained unfilled. Senior management outlined that the inability to recruit pharmacists had been escalated to hospital group level with a plan to formulate a hospital group approach to managing the deficit in pharmacist resources.

Clinical pharmacy services at Our Lady of Lourdes Hospital and Louth County Hospital was limited to emergency department, four clinical areas, with a partial service in the intensive care and high dependency unit at the Our Lady of Lourdes Hospital site. Other clinical areas, including high-risk areas, did not have a clinical pharmacy service and there was no clinical pharmacy service in the Louth County Hospital site.

Inspectors were informed that the current clinical pharmacy service would be further depleted when planned leave was taken, and staff relocation would be required to cover priority areas.

While actively progressing with the appointment of additional pharmacists, hospital management should ensure that the current pharmacy resources are utilised appropriately across the hospital sites and high-risk areas are prioritised in order to mitigate risk and promote patient safety.

List of approved medications (Formulary)\textsuperscript{55555555}

\textsuperscript{55555555} Clinical pharmacy service describes the activity of pharmacy teams in ward and clinic settings. The following core activities are involved in providing clinical pharmacy services: prescription monitoring, prescribing advice, optimising therapeutic use of medicines, adverse drug reaction detection and prevention, patient counselling, inter-professional education about medicines. It may also involve some or all of the following: medication history taking, medication reconciliation, specialist clinics clinical audit, protocol/guideline development.

\textsuperscript{55555555} Formulary: a managed list of preferred medications that have been approved by the hospital’s Drugs and Therapeutics Committee for use at the hospital.
Inspectors were informed that the hospital did not have a formulary in place. The hospital had a system in place for the approval of new medications which was under the governance of the Drugs and Therapeutic Committee. The hospital could identify medications approved for use within the hospital since 2011 however, no formal list or review system was currently in place for these medications.

The hospital should move towards the development of a defined formulary system, to outline medications that are approved for use in the hospital and provide information and guidance on the use of these medications. This work could be supported through collaboration with other hospitals within the Royal College of Surgeons in Ireland Hospital Group.

**Opportunities for improvement**

- The hospital should progress the provision of a clinical pharmacy service for all inpatients, and examine how best to allocate the resources currently available.

- The hospital should move towards the development of a defined formulary system and this work could be supported through collaboration with other hospitals within the Royal College of Surgeons in Ireland Hospital Group.

**2.6 Use of information**

Access to relevant up-to-date and accurate medication reference information is essential at all stages of the medication management pathway.

Our Lady of Lourdes Hospital and Louth County Hospital had a number of medication information sources which were accessible to staff such as:

- intravenous medication guidelines
- medicines complete
- British National Formulary (hard copy and on computer)
- antimicrobial guidelines (on computer and smart phone application)
- drugs and pregnancy in lactation
- handbook of drug administration via enteral feeding
- palliative care formulary.

However, some clinical areas inspected did not have access to medication guidance in clinical rooms where medications were prepared. One area inspected by inspectors had difficulty accessing the medication information on the computers on the day of inspection.

The Health Service Executive and the National Clinical Effectiveness Committee recommend that policies, procedures and guidelines are reviewed and updated every three years.
Our Lady of Lourdes Hospital and Louth County Hospital had medication related policies, procedures and guidelines which were reviewed and approved by the Drugs and Therapeutics Committee. These documents were available on computers across both sites through the electronic quality management system recently introduced in the hospital for document control.

Out-of-date versions of policies, procedures and guidelines were observed in hard copy format in the Louth County Hospital site, and inspectors were informed that these versions would be removed on foot of the introduction of the electronic quality management system where the up-to-date version could be accessed.

Similar to findings from the previous inspection, although improved, some medication related policies, procedure or guidelines were overdue for review. The hospital outlined that the new electronic system will support identification of policies, procedure or guidelines due for review, with responsibility targeted to the owner of the document. Inspectors were also informed that all policies, procedures or guidelines approved by the Drugs and Therapeutics Committee had been identified on the electronic system with review and update planned as required.

Opportunities for improvement

- The hospital should ensure that staff have access to approved medication information at all stages of the medication pathway and that policies, procedure, protocols or guidelines are up to date.

2.7 Monitoring and evaluation

Monitoring of medication safety should be formally planned, regularly reviewed and centrally coordinated with resulting recommendations actioned, and the required improvements implemented.15

Monitoring and evaluation of medication safety was undertaken at Our Lady of Lourdes Hospital and Louth County Hospital through audit, Nursing and Midwifery Quality Care Metrics******** and measurement of some key performance indicators.

Similar to findings from the previous inspection the hospital did not have a system in place for overall coordination of hospital audits. Midwifery, obstetrics and gynaecology audits were centrally coordinated under the governance of a multidisciplinary audit committee and the hospital had recently appointed a 0.5 whole time equivalent midwifery audit facilitator. Nursing audits were also centrally coordinated and supported by a nurse audit facilitator.

******** Metrics are parameters or measures of quantitative assessment used for measurement and comparison or to track performance.
Senior hospital management acknowledged the opportunity for improvement in monitoring and evaluation across the hospital sites and at the previous inspection had highlighted a plan to develop a clinical audit programme supported by an audit lead. However, this plan had not progressed, and the hospital was now assigning a member of the quality and risk department to work with a newly appointed clinical audit lead for the hospital group to coordinate audit across the hospital sites.

Planned medication safety audits were outlined in the medication safety programme 2019/2020, and evidence of audits completed as per the plan were seen by inspectors. However, not all audits reviewed had time-bound action plans for recommendations made with re-audit to ensure the required improvements were achieved.

Audits results were fed back to staff through the Medication Management Committees and Speciality Governance Committees, and circulated in hard copy versions to relevant clinical areas. Some audits, such as nursing audits, were now accessible to staff on the recently introduced electronic quality management system. Inspectors were also informed that the hospital held an annual quality improvement and audit day which included medication safety audits.

**Opportunities for improvement**

- The hospital should ensure that audits are centrally controlled and strategically driven with appropriate oversight around the implementation of recommendations with re-audit to ensure the required improvements are achieved.

**2.8 Education and training**

Staff education can effectively augment error prevention when combined with other strategies that strengthen the medication-use system. At Our Lady of Lourdes Hospital and Louth County Hospital medication management was included in the induction programme for doctors and nurses.

The hospital also held regular medication safety days attended by nurses across the hospital sites which covered topics such as; incidents review, legal aspect of medication safety, update on medication guidelines, perioperative medications, inhalers, insulins and sound alike look alike medications. All nurses were encouraged to attend. The hospital had evaluated the programme with very good feedback from those who attended, and the programme had been adapted for midwives with the first session due to be held shortly.
The hospital has considered extending the programme to non-consultant hospital doctors but inspectors were informed that releasing these staff to attend was proving difficult. Inspector were informed that doctors did attended weekly education session and grand rounds.

The hospital held medication safety weeks in 2018 and 2020 where members of the multidisciplinary team held workshop for staff on various topics to support medication safety.

On line training such as the HSELaND elearning module, insulin video training and stroke care elearning modules were also recommended for nursing staff. Nurses also attended additional workshops on topics such as inhaler technique and diabetes management. Hard copy records of education sessions attended by individual nurses were viewed by inspectors in clinical area visited, and inspectors were informed that all nursing records were in the process of being transferred to the electronic quality management system.

Information to support medication safety was also circulated to staff through memos, patient safety alerts and posters seen displayed in clinical areas inspected by inspectors. Information was locally adapted for the Louth County Hospital site as appropriate.

Inspectors were informed that education was provided for staff during the introduction of the insulin prescription and monitoring record, supported by the diabetes clinical nurse specialist and clinical pharmacist. The record had been audited post implementation with results presented to staff and the record modified based on findings.

However, a similar programme was not undertaken during the recent introduction of the revised medication record. The hospital did outline that procurement issues associated with the supply of the medication record had hampered the proposed education plan.

The lack of staff education on the revised medication record may pose a risk of prescription errors such as duplicate prescribing of anticoagulation or platelets. The hospital should ensure that the required education is provided to staff, to minimise risk and optimise the benefits of this revised medication record.

††††††††† The HSE’s eLearning and development service.
‡‡‡‡‡‡‡‡‡ The electronic quality management system included a training module for recording of training records.
Opportunities for improvement

- The hospital should ensure that professionals have the necessary competencies to deliver high-quality medication safety through structured targeted ongoing programme of education for medication safety aligned with the hospital’s medication safety programme.11
3. **Summary and conclusion**

Medications play a crucial role in maintaining health, preventing illness, managing chronic conditions and curing disease. However, errors associated with medication usage constitutes one of the major causes of patient harm in hospitals and the impact of medication errors can be greater in certain high-risk situations. Understanding the situations where the evidence shows there is higher risk of harm from particular medications and putting effective risk-reduction strategies in place is key for patient safety.

Our Lady of Lourdes Hospital and Louth County Hospital had formalised governance arrangements in place for medication management and safety across both sites. The Drugs and Therapeutics Committee was responsible for overseeing medication safety across both hospital sites, and the general manager had overall accountability for medication safety. The hospital’s medication safety programme was driven strategically through the Medication Safety Subgroup and operationally by Medication Management Committees on both sites, under the governance of the Drugs and Therapeutics Committee.

The hospital should now proceed to review and update the term of reference of the Drugs and Therapeutics Committee and the Medication Safety Subgroup in line with new reporting structures, considering the most efficient and effective use of staff resources going forward, while still maintaining the strategic focus to drive sustainable improvement for patient safety.

Similar to previous inspection findings, there remained a lack of clinical pharmacy service and medication reconciliation services in the hospital. Considering the size and complexity of the services provided by the hospital the lack of these essential services constituted a risk to patient safety.

Acknowledging the efforts made to recruit additional pharmacy resources, and the escalation of the issue to hospital group level with a plan to address recruitment at that level, the hospital should work to assure itself that the current pharmacy resources are utilised most appropriately across the hospital and high-risk areas prioritised in order to mitigate risk and promote patient safety.

The hospital was implementing and monitored the objectives of the hospital’s medication safety programme for 2019/2020. Medication incident reporting rates, although still low, had increased year on year with promotion and support from senior management, and related quality improvements had been implemented and evaluated by the hospital.
The hospital had established systems in place for high-risk medications and had implemented evidence-based safety measures to protect patients from the risk of harm associated with these high-risk medications.

Monitoring and evaluation of medication safety was planned with good structures in place for coordination of audit within nursing and midwifery. The hospital needs to progress with the plan for overall coordination of audit so that monitoring and evaluation is strategically driven to ensure the required improvements are implemented in practice.

The hospital had approved medication information available for staff however the hospital should ensure that staff can access the medication information at all stages of the medication pathway, and that policies, procedure, protocols or guidelines are up to date.

Overall, despite the absence of some essential elements required for medication safety, HIQA did find evidence of a sustained effort and focus within the Our Lady of Lourdes Hospital and Louth County Hospital in relation to medication safety. There was clear leadership from the chief pharmacists in both hospital sites with support from the senior management team, the Drugs and Therapeutics Committee and staff across both hospital sites.

The hospital should continue to work towards improving medication safety practices by addressing the findings of this report, and progressing the implementation of initiatives identified through its own monitoring of practices in place.

This report should be shared with relevant staff at Our Lady of Lourdes Hospital and Louth County Hospital and the Royal College of Surgeons in Ireland Hospital Group to highlight the findings from the inspection, including what has been achieved to date and to foster collaboration in relation to opportunities for improvement.
4. References


### Appendices


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<th>Area to be explored</th>
<th>Lines of enquiry</th>
<th>Dimensions/Key areas</th>
<th>National Standards</th>
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<tr>
<td>Leadership, governance and management</td>
<td>1. Patient safety is enhanced through an effective medication safety programme underpinned by formalised governance structures and clear accountability arrangements.</td>
<td>Capacity and capability</td>
<td>3.7, 5.1, 5.2, 5.5, 5.4, 5.6, 5.11</td>
</tr>
<tr>
<td>Risk management</td>
<td>2. There are arrangements in place to proactively identify report and manage risk related to medication safety throughout the hospital.</td>
<td>Quality and Safety</td>
<td>3.1, 3.2, 3.3, 3.6, 5.8, 5.11, 8.1</td>
</tr>
<tr>
<td>High-risk medications</td>
<td>3. Hospitals implement appropriate safety measures for high-risk medications that reflect national and international evidence to protect patients from the risk of harm.</td>
<td>Quality and Safety</td>
<td>2.1, 3.1</td>
</tr>
<tr>
<td>Person centred care and support</td>
<td>4. There is a person centred approach to safe and effective medication use to ensure patients obtain the best possible outcomes from their medications.</td>
<td>Quality and Safety</td>
<td>1.1, 1.5, 3.1, 2.2, 2.3</td>
</tr>
<tr>
<td>Model of service and systems for medication management</td>
<td>5. The model of service and systems in place for medication management are designed to maximise safety and ensure patients’ healthcare needs are met.</td>
<td>Quality and Safety</td>
<td>2.1, 2.2, 2.3, 2.6, 2.7, 3.1, 3.3, 5.11, 8.1</td>
</tr>
<tr>
<td>Use of Information</td>
<td>6. Essential information on 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>Quality and Safety</td>
<td>2.1, 2.5, 8.1</td>
</tr>
<tr>
<td>Monitoring and evaluation</td>
<td>7. Hospitals systematically monitor the arrangements in place for medication safety to identify and act on opportunities to continually improve medication.</td>
<td>Quality and Safety</td>
<td>2.8, 5.8</td>
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<tr>
<td>Education and training</td>
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<td>Capacity and capability</td>
<td>6.2, 6.3</td>
</tr>
</tbody>
</table>
Appendix 2: Hierarchy of effectiveness of risk-reduction strategies in medication safety.

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Appendix 3: National Coordinating Council for Medication Error Reporting and Prevention. Index for Categorising Medication Errors

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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