Health Information and Quality Authority

An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

Report of the announced inspection of medication safety at Mallow General Hospital.

Date of announced inspection: 30 April 2019

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 Office of 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-

* 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[1] (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.[12] 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.[13]

High-risk situation is a term used by the World Health Organization[3] 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).[14]

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.[14] 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.[15]

[†] Lines of enquiry are the key questions or prompts that inspectors use to help inform their inspection, assessment or investigation.
[‡] 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.

Information about this inspection

An announced medication safety inspection was carried out at Mallow General Hospital by Authorised Persons from HIQA; Nora O' Mahony, Aoife Lenihan and Agnella Craig. The inspection was carried out on 30 April 2019 between 09:30hrs and 16:25hrs.

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

- St Patrick's ward
- Endoscopy unit.

Two group interviews were held in the hospital with the following staff:

- Group one: the senior pharmacist and the risk manager.
- Group two: the general manager, a consultant geriatrician and the director of nursing.

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

Information about the hospital

Mallow General Hospital is a model 2[§] acute general hospital. The hospital is part of the Cork University Hospital Group within the South/South West Hospital Group. The services provided by the hospital include; acute inpatient, outpatient and day patient services. The hospital also has an Urgent Care Centre incorporating a Medical Assessment Unit and a Local Injury Unit.

[§] A model 2 hospital can provide the majority of hospital activity including day and stay surgery, selected acute medicine, local injuries and diagnostic services, such as endoscopy.

2. Findings at Mallow General 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

The Cork University Hospital Group Drugs and Therapeutics Committee represented Cork University Hospital, Cork University Maternity Hospital, Bantry General Hospital and Mallow General Hospital. The Committee's terms of reference outlined the role and purpose of the committee to develop and maintain medication management policies, procedures and guidelines to support evidence-based, safe, effective and economic use of medication.

Mallow General Hospital also had a local Medication Management Committee in place which was, according to its terms of reference, responsible for overseeing all local processes relating to medication safety in the hospital. This committee was accountable locally to the Mallow General Hospital Quality, Safety and Risk Committee and to the Cork University Hospital Group Drugs and Therapeutics Committee. The general manager who reported to the chief executive officer of the Cork University Hospital Group was responsible for medication safety within Mallow General Hospital.

The hospital was represented on the Drugs and Therapeutics Committee by a consultant physician and a pharmacist who attended regular meetings, which was an improvement made by the hospital since the previous HIQA inspection.

However, there was limited evidence of oversight by the Cork University Hospital Group Drugs and Therapeutics Committee of medication safety practices in Mallow General Hospital from minutes of meetings reviewed by inspectors.

In September and November 2018 the Drugs and Therapeutics Committee did highlight the need to include formal reporting from Mallow General Hospital as an agenda item to report medication-related issues, updates and progress. It was of concern to HIQA that implementation of this essential overnight and governance arrangement was still not evident in committee minutes available to inspectors at the time of this inspection.

However, inspectors were informed that Mallow General Hospital had been included as an agenda item at the April 2019 Drugs and Therapeutics Committee, and that the first formal hospital report had been presented to the committee. Minutes of this meeting were not available for review.

The Drugs and Therapeutics Committee did support medication safety within Mallow General Hospital though the sharing of medication management information, policies and documentation. This sharing was evident to inspectors during the inspection and supported medication safety within the hospital.

Mallow General Hospital did not have a medication safety strategy[10,16] or links to an overarching medication safety strategy or plan developed or overseen by the Cork University Hospital Group Drugs and Therapeutics Committee.

The hospital outlined medication safety priorities in an annual service plan, as part of the Medication Management Committee Annual Report, which was presented at the Mallow General Hospital's Quality, Safety and Risk Committee. Inspectors were informed that the hospital's 2018 annual report had been included in the Mallow General Hospital's report presented at the most recent Drugs and Therapeutics Committee meeting.

Opportunities for improvement

- Mallow General Hospital management and the Drugs and Therapeutics Committee, should ensure there is oversight and governance of medication practices at Mallow General Hospital, and promote formal and consistent reporting of medication safety-related activities and issues through defined reporting lines.
- The hospital should look to develop a medication safety strategy to clearly articulate the short and long-term operational goals for medication safety, with oversight from the Drugs and Therapeutics Committee.

2.2 Risk management

Medication-related risks requiring additional control measures were documented on the hospital's corporate risk register. The lack of an antimicrobial pharmacist was identified as a risk and had been escalated to group level through submitted business cases.

The lack of a clinical pharmacy service was not included in the risk assessment viewed, but inspectors were informed that pharmacy resources was identified as a current risk for which business cases had been submitted without success. Approval to recruit a pharmacy technician had been granted, and recruitment for this post was due to commence shortly.

Medication incidents within Mallow General Hospital were reported on the hospital's Medication Incident Report Form or on a National Incident Report Form. Incident

reports were reviewed by line managers and then forwarded to the risk manager who inputted the incidents onto the *National Incident Management System* **(NIMS).

The number of medication incidents reported between 2015 and 2017 had been under twenty per year. In 2018 the number reported increased to 57, with most incidents reported by nurses (Figure 1). The reason for the increased reporting was attributed to the promotion of medication incident reporting at the hospital through; the Medication Safety Week in 2018, staff education and a staff survey.

Medication incident reported 2015 to 2018

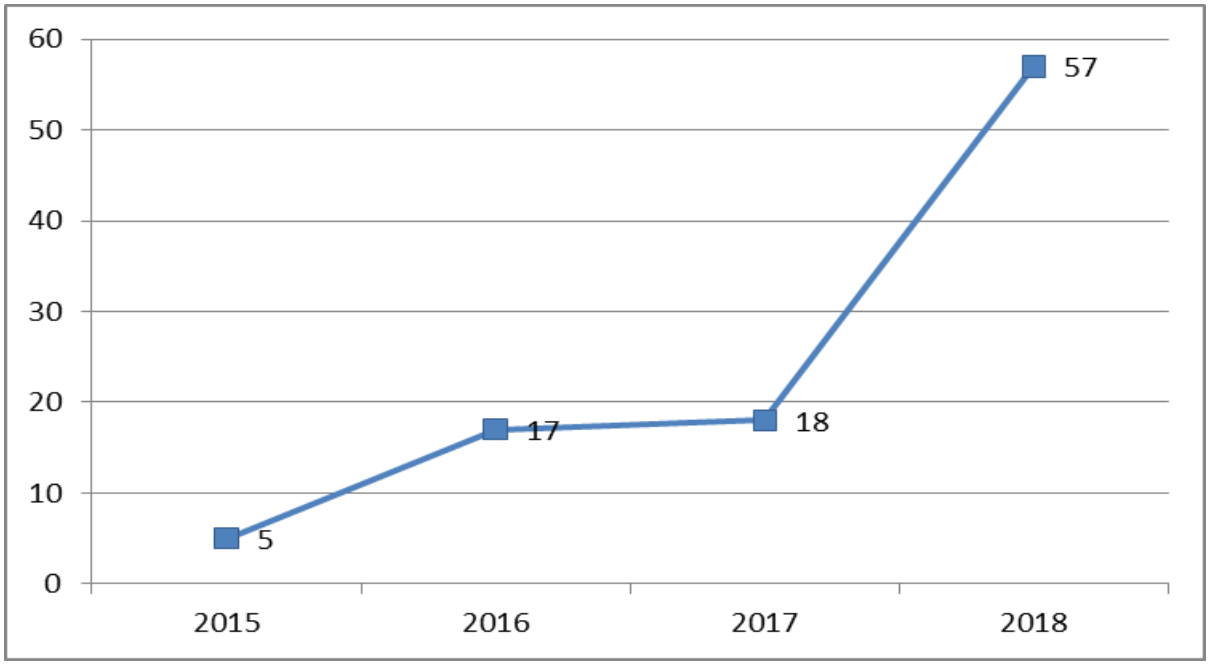

Figure 1. Medication incidents reported 2015 to 2018

Important lessons can be learned from analysis and trending of medication-related incidents and near misses to identify areas that need targeted improvement[11] with recommendations implemented and monitored.[17] Medication incidents were analysed by number, process and severity rating and categorised using the NIMS. Incidents were reviewed at the Medication Management Committee. Medication incident numbers were circulated to wards. No details of the incidents were included, or actions taken to mitigate the risks, thus missing an opportunity for shared learning. The hospital did demonstrate how medication-related incidents had led to some changes in practice.

** 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).

However, despite the promotion of medication incidents in 2018, the overall reporting of medication incidents remained low, and as a result key medication-related risks could not be recorded, analysed or mitigated effectively by the hospital. In addition, the hospital's risk manager, who was in post two days per week, was being redeployed from the hospital.

Alerts and recalls

The senior pharmacist received and acted on alerts and recalls[††] related to medication. The process in place was outlined to inspectors, and evidence of alerts circulated to frontline staff was observed by inspectors.

Opportunities for improvement

- The hospital should identify and support targeted promotion of medication incident reporting, so that a culture of reporting is enhanced across all disciplines within a just culture,[‡‡18] to mitigate effectively against key medication-related risks identified.
- The hospital should put contingency arrangements in place to ensure the risk management function, including the collation, analysis and trending of medication incidents is undertaken, to support identification of medication-related risks and inform interventions needed to minimise the risk to patients.

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.

Mallow General Hospital had developed a high-risk medications list adapted from literature with associated risk-reduction strategies in place. The following sample of

[††] 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 authorised authority.
‡‡ Just culture: 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[2] 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.

high-risk medications and high-risk situations were reviewed in detail during the inspection to identify the risk-reduction strategies in place:

- insulins
- antimicrobials requiring therapeutic drug monitoring
- anticoagulants[†††]
- procedural sedation in the non-theatre environment.

Insulin

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

- the hospital had adopted the Cork University Hospital's Insulin Prescribing and Capillary Blood Glucose Monitoring Record to support safe insulin prescribing and administration
- the term 'units' was pre-printed to support safe prescribing of insulin
- insulin was double checked prior to administration
- insulin was administered using an insulin syringe or insulin pen device
- a diabetes clinical nurse specialist was available for patient review and education
- the hospital had a hypoglycaemic[‡‡‡] guide and 'hypoglycaemic boxs[§§§].
- insulin pens in use in the hospital were for single patient use only
- opened insulin pens were reported to be stored in the medication trolley in a special insulin box, with individual patient details and date of opening recorded on a flag label [19]
- unopened multidose insulin vials and insulin pens with blank flag labels, were stored in a temperature controlled fridge for single patient use only, reported to be labelled with patients details and dated on opening.

Antimicrobials requiring therapeutic drug monitoring

[†††] 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.
[‡‡‡] Hypoglycaemic: when a person's blood sugar falls below the normal level
[§§§] Hypoglycaemic box: Hypo box provided quick access to equipment required to support effective treatment for patients in the event of hypoglycaemia.

The hospital used antimicrobials which required therapeutic drug monitoring. The medication record adopted from Cork University Hospital had a separate antimicrobial section which facilitated prescribing, monitoring and administration of gentamicin and vancomycin. The hospital also had an Adult Antimicrobial Guide which staff could access on the computer. This guide was developed by the Antimicrobial Guideline Working Group for Acute Hospitals in Cork and Kerry.

Inspectors were informed that monitoring of antimicrobials which required therapeutic drug monitoring was not supported locally by an antimicrobial pharmacist. The lack of an antimicrobial pharmacist was identified as a risk by the hospital and escalated to group level. The on-site pharmacy role did not extend to monitoring of antimicrobials, but the pharmacist was available to medical and nursing staff for advice by telephone. Inspectors were informed that a consultant microbiologist at Cork University Hospital was available for advice.

Anticoagulants

The design of the medication record[****] supported safe management of anticoagulants with thrombophylaxis, warfarin, antiplatelets and anticoagulants prescribed in the same section of the medication record to minimise inadvertent duplication of these medications. The medication record had been adopted from Cork University Hospital and had been recently updated.

Direct oral anticoagulants (DOACs)[††††] guidance was available and display in clinical areas.

The hospital stocked one strength of unfractionated heparin in general wards and although stored segregated from other anticoagulants, there may be opportunity for the hospital to eliminate any potential risk associated with unfractionated heparin[20] storage. Also, different doses of low molecular weight heparins [‡‡‡‡]were stored together in the same box on one ward inspected.

Procedural sedation in the non-theatre environment

The process for procedural sedation was reviewed by inspectors in the endoscopy unit and found to be in line with national and international evidence as outlined below:[21,22]

[****] The Medication Record is the medication prescription and administration record, drug kardex or drug chart.
[††††] Direct oral anticoagulants: are medications used to treat or prevent blood clots. However, there is a potential for bleeding with their use or clotting leading to stroke with missed doses. Options for anticoagulation have been expanded recently with the introduction of new anticoagulants called direct oral anticoagulants.
[‡‡‡‡] Heparin is an anticoagulant specifically used in the initial treatment and prevention of deep vein thrombosis, pulmonary embolism, and arterial thromboembolism.

- patients were pre-assessed prior to procedures
- medication doses were titrated for individual patients
- only one strength midazolam was stocked in the unit
- medications were double checked by a second person prior to administration
- patients were monitored appropriately throughout and after the procedure
- patients remained in the recovery area until fully recovered
- patient handover to wards included an explanation of the procedure and the medications administered during the procedure
- the use of reversal agents was monitored locally in line with good practice, but only reported as a medication incident if patient harm occurred.[23]

The endoscopy unit had a nursing staff induction programme and a draft Policy and Procedure on Nursing Care of a Patient Receiving Conscious Sedation in the Endoscopy Department. This policy should be expanded to include all disciplines involved in procedural sedation to standardise practice in the hospital.

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.

Mallow General Hospital had a number of high-leverage risk-reduction strategies in place for oral methotrexate. Inspectors were informed 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.[24] A request to the pharmacy for methotrexate triggered a pharmacist review of the patient's medication record.

The hospital also had high-leverage risk-reduction strategies in place to support safe use of potassium chloride infusion in line best practice.[25,26,27,28,29] Concentrated potassium chloride ampoules were not stocked in general clinical areas. Pre-mixed potassium chloride solutions were stored securely in clinical areas, segregated from other solutions, double checked prior to administration, and administered via an electronic pump supported by guidelines for the Safe Prescribing and Administration of Intravenous Potassium.

The hospital had developed a list of sound-alike look-alike medications (SALADs)[§§§§] which was seen displayed in clinical rooms visited by inspectors. However, no additional risk-reducing strategies were in place for SALADs.

Opportunities for improvement

- Procedural sedation should be supported by a hospital policy.
- The hospital should review the risk-reduction strategies in place for high-risk medications and consider:
    - the rationalisation of stock and storing of heparin
    - improving support for antimicrobial therapeutic drug monitoring
    - strategies to mitigate risks related to sound-alike look-alike medications.

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.[30, 31]

National patient experience survey

The National Patient Experience Survey[*****] is a nationwide survey that offers patients the opportunity to describe their experiences of public acute healthcare in Ireland. Of the 150 people discharged from Mallow General Hospital during the month of May 2018, 82 people completed the National Patient Experience Survey, achieving a response rate of 55%.[32]

Two questions related directly to medication in the National Patient Experience Survey. The results show that Mallow General Hospital scored well above the national average in responses for both years as illustrated in table 1.

[§§§§] SALADS are 'Sound-alike look-alike drugs'. The existence of similar drugs or medications 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.

[*****] 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 and 2018 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.

Questions	Year	Mallow General Hospital score	National score
Q44. Did a member of staff explain the purpose of the medicines you were to take at home in a way you could understand?	2018	9.5	8.0
	2017	9.2	7.8
Q45. Did a member of staff tell you about medication side effects to watch for when you went home?	2018	7.6	5.2
	2017	6.9	5.1

Table 1: Comparison between Mallow General Hospital and national scores for Questions 44 and 45 of the National Patient Experience Survey 2017 and 2018.

The hospital identified patient discharge as an area for further improvement and had undertaken some proactive measures to improve the patient discharge process, which included the development of an information leaflet Managing your Medicines at Home adapted with permission from Health Products and Regulatory Authority[††††††] information.

This leaflet also prompted patients to ask specific relevant questions[‡‡‡‡‡] about their discharge medications. The theme for the hospital's 2019 Medication Safety Week was Managing Medicines on Discharge during which the hospital planned to launch the new leaflet.

Patient information

Inspectors were informed that patient information on medications was provided by doctors and nurses. Clinical nurse specialists played a role in patient education in specialist areas such as diabetes, cardiology and respiratory. Patient information leaflets from the Health Products and Regulatory Authority (HPRA) were also available to patients on the wards, although staff informed inspectors that these were not routinely given to patients unless specifically relevant. Information leaflets available included:

- How to take medicine safely (HPRA)

[††††††] Health Products Regulatory Authority (HPRA) role: to protect and enhance public and animal health by regulating medicines, medical devices and other health products.
[‡‡‡‡‡] Have you stopped any of the medicines I was taking at home/ Have you prescribed any new medications/What is the new medications for /How do I take my new medications/What are the common side effect of this new medications.

- Generic medicines (HPRA)
- Medicines and side effects (HPRA)
- Medicines and driving (Road Safety Authority).

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.[33, 34,35]

Medication reconciliation was not undertaken formally on admission or discharge. Staff informed inspectors that doctors used two sources of information when prescribing, if feasible, to obtain the best possible medication history [§§§§§]. To support the use of two sources of information for best possible medication history[******] the hospital planned to include a section on the admission booklet for prescriber to record the information sources used.

Systems to support medication safety

Some systems were in place to support medication safety in relation to the prescribing and administration of crushed medications and to prevent inadvertent administration through the incorrect route, for example:

- patients requiring crushed medication received a pharmacist review
- purple oral syringes were in use for liquid medications.

Patient weight measurements are important for medications that require an individual weight-based dose[36] and patient known allergies should be available throughout the episode of care.[15]

Patient's allergy status was recorded on all medication records reviewed by inspectors and patient's weights were recorded on 83% of records reviewed. The finding from local annual audits from 2016 to 2018 identified over 95% compliance each year with the documentation of patient's allergy status. Recording of patient's weights on the medication record was 85% compliant in the 2017 audit, but compliance reduced to 55% in 2018.

Inspectors observed variance in how medications were discontinued between clinicians, which could lead to confusion and a risk that patients could receive medications that were discontinued. The hospital should review the system in place for discontinuation of medications on the medication record to standardise the

[§§§§§] A Best Possible Medication History (BPMH) is a medication history obtained by a clinician which includes a thorough history of all regular medication use (prescribed and non-prescribed), using a number of different sources of information.

process across the hospital to prevent inadvertent administration of discontinued medications.

Opportunities for improvement

- The hospital should implement formal medication reconciliation for all patients on transitions of care.

2.5 Model of service and systems in place for medication safety

Clinical pharmacy service

International studies support the role of a clinical pharmacy service[††††††] in hospital wards in preventing adverse drug events.[37,38,39,40,41,42]

In Mallow General Hospital the pharmacy provided predominantly a purchasing and dispensing service with only three hours per week allocated to clinical pharmacy service, which was of concern to HIQA. Inspectors were informed that even this limited clinical pharmacy service was not always achievable due to other conflicting demands on the service.

Inspectors were informed that some medication requests did trigger a priority clinical pharmacist review such as methotrexate, crushed medications and medicines with multiple interactions such as linezolid. The pharmacist was also very accessible to staff for advice and support by phone.

However, despite the limited pharmacy resources in the hospital, there was positive promotion of medication safety throughout the hospital which was evident to inspectors.

The hospital did not have a list of medications approved for use in the hospital (a formulary),[‡‡‡‡‡‡] but HIQA was informed that the hospital was planning to undertake a review of the Cork University Hospital Preferred Drugs List with a view to adapting this list for use within Mallow General Hospital.

The approval of any new medications was under the governance of the Drugs and Therapeutic Committee[43] to ensure appropriate oversight of medications approved for use within the hospital, and that a safety evaluation occurred before new medications were introduced.[44]

[††††††] Clinical pharmacy service describes the activity of pharmacy teams in ward and clinic settings; 'core' activities may include:-prescription monitoring, prescribing advice, optimising therapeutic use of medicines, adverse drug reaction detection and prevention, patient education and counselling,
[‡‡‡‡‡‡] Formulary: a managed list of preferred medications that have been approved by the hospital's Drugs and Therapeutics Committee for use at the hospital.

Opportunities for improvement

- The hospital should continue to progress the recruitment of pharmacy staff to support the availability of a clinical pharmacy service for the hospital.
- The hospital should continue to progress the adaptation of a hospital formulary.

2.6 Use of information

Access to relevant up-to-date and accurate medicines reference information is essential at all stages of the medication management pathway.[11, 15]

Mallow General Hospital had a number of medication information sources which were accessible to staff though hard copy or electronic version such as:

- intravenous medication administration guidelines
- British National Formulary
- adult antimicrobial guide
- NEWT guidelines
- medicines complete
- choice and medication for HSE mental health services.

The medication information available on electronic version was accessible to staff on computers in certain areas. However, the hospital needs to be mindful of staff need to access medications information at point of prescribing, preparing and administration. The updated adult antimicrobial guide was available on computers only, however, hard copy out-of-date antimicrobial guides were found on medication trolleys in a clinical area.

The Cork University Group Drugs and Therapeutic Committee had within its remit to develop and maintain medication management policies, procedures and guidelines to support evidence-based safe practice. In November 2019 the Drugs and Therapeutic Committee outlined that Mallow General Hospital could adapt policies for local use. Adapted polices were to be returned to the committee with changes highlighted for final endorsement.

Currently, Mallow General Hospital approved policies, procedure and guidelines which were locally developed or adapted or adopted from Cork University Hospital.

The Drugs and Therapeutic Committee should review the process for approval of polices, procedure and guidelines developed or adapted by Mallow General Hospital and ensure approval through the most appropriate process to ensure safety, and maintain oversight and governance.

It is recommended, by both the Health Service Executive[45] and the National Clinical Effectiveness Committee[46] that policies, procedures and guidelines are reviewed and updated every three years. Most policies, procedure and guidelines viewed by inspectors during the inspection were up to date.

Opportunities for improvement

- The approval process for medications-related policies, procedure and guidelines developed or adapted by Mallow General Hospital should be reviewed, clarified and formalised by the Drugs and Therapeutic Committee.
- The hospital should review both the system in place for removal of out-of-date documents, and the availability of up-to-date documents for staff in a manner that supports safe prescribing and administration of medications.

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]

In Mallow General Hospital some ongoing monitoring and evaluation was undertaken for medication safety, and audits reviewed by inspector included:

- audit of medication and prescription records undertaken in 2016, 2017 and 2018.
- audit of insulin prescribing and capillary glucose monitoring records 2017, 2018 and 2019
- fridge audits 2018 and 2019
- nursing metrics
- audit of red apron[§§§§§§] initiative.

Audit results were reviewed by Mallow General Hospital Medication Management Committee, circulated to ward areas and presented at education sessions. 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.[15, 47]

Some individual audit reports viewed by inspectors had recommendations outlined but did not include the associated action or quality improvement plan with time frames or person responsible to ensure the desired improvements have been made.

[§§§§§§]Red 'do not disturb' aprons: were worn by nurses to reduce interruptions during medicines administration as interruptions during medication administration rounds can contribute to medications errors.

Opportunities for improvement

- Medication safety audits should have time-bound action plans, which are implemented and re-audited 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.[48]

Mallow General Hospital had a structured induction programme for doctors and nurses which included medication safety education. Nurses completed the HSELanD[*******] medication management module and an intravenous study day with associated competency assessment. Pharmacists provided medication safety education to non-consultant hospital doctors on induction. Training records were accessible by managers on computer, and records viewed by inspectors demonstrated good compliance with attendance for nurses.

Some additional medication-related education was provided for staff such as:

- inhaler demonstration
- hypoglycaemic guideline and hypoglycaemic box education
- quarterly non-consultant hospital doctors medication-related education sessions provided by the pharmacist on topics such as:
    - inappropriate polypharmacy
    - medication choice in mental health
    - medication prescribing audit results
    - medication information for patients on discharge.

Staff informed inspectors that the pharmacist was easily accessible for medication information and support. The pharmacist also attended the doctor's weekly education sessions and contributed medication information when relevant.

To promote medication safety the hospital had run a Medication Safety Week in 2018 and 2019 which consisted of:

- poster displays with competition for individual ward initiatives
- pop-up education sessions on wards
- education sessions for nurses and doctors
- promotional stands
- a staff medication quiz.

[*******] The health service elearning and development service

Opportunity for improvement

- The hospital should ensure that professionals have the necessary competencies to deliver high-quality medication safety. This could be enhanced by a mandatory ongoing programme of structured education for medication safety.[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.

An effective drugs and therapeutics committee must have ongoing oversight of the medication management and safety system within a hospital.

The governance and oversight for medication safety at Mallow General Hospital rested with the Cork University Hospital Group Drugs and Therapeutics Committee. There was a local Medication Management Committee, which was responsibility for overseeing local processes relating to medication safety in the hospital. However, inspectors found a lack of clarity in relation to responsibility for specific roles and functions between the Drugs and Therapeutics Committee and the local Medication Management Committee.

Inspectors also found limited evidence of oversight by the Cork University Hospital Group Drugs and Therapeutics Committee of medication safety practices within Mallow General Hospital and this requires improvement following this inspection.

Inspectors were informed that that first formal report from Mallow hospital had been presented at the previous Drugs and Therapeutics Committee meeting. This reporting relationship must continue through formal and consistent structures.

The hospital's clinical pharmacy service was limited to 3 hours per week which was of concern to HIQA, and even this limited service was not always achievable due to conflicting demands on the service. Also medication reconciliation was not formally undertaken for patients on admission or discharge.

Despite these challenges, inspectors found the pharmacy service had a positive impact on the promotion of medication safety, and the hospital had systems in place to reduce the risks associated with high-risk medications.

The hospital was proactive in adapting or adopting medication management information, policies and documentation developed by Cork University Hospital and approved by the Drugs and Therapeutics Committee to support medication safety within Mallow General Hospital.

There is however, further potential to increase integration between Mallow General Hospital and Cork University Hospital Group from a medication safety governance and practice perspective.

The National Patient Experience Survey for 2017 and 2018 results showed that Mallow General Hospital scored well above the national average in responses both years which was commendable.

Medication incidents reporting had increased in 2018, following active promotion of incident reporting. However, the overall reporting level remained low, and as a result key medication related risks could not be recorded, analysed, mitigated or escalated effectively by the hospital.

The hospital should continue to work in collaboration with the Cork University Hospital Group Drugs and Therapeutics Committee to improve medication safety governance and 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 Mallow General Hospital, the Cork University Hospital Group and the South/South West Hospital Group to highlight both the findings from the inspection and what has been achieved to date, to foster collaboration in relation to opportunities for improvement.

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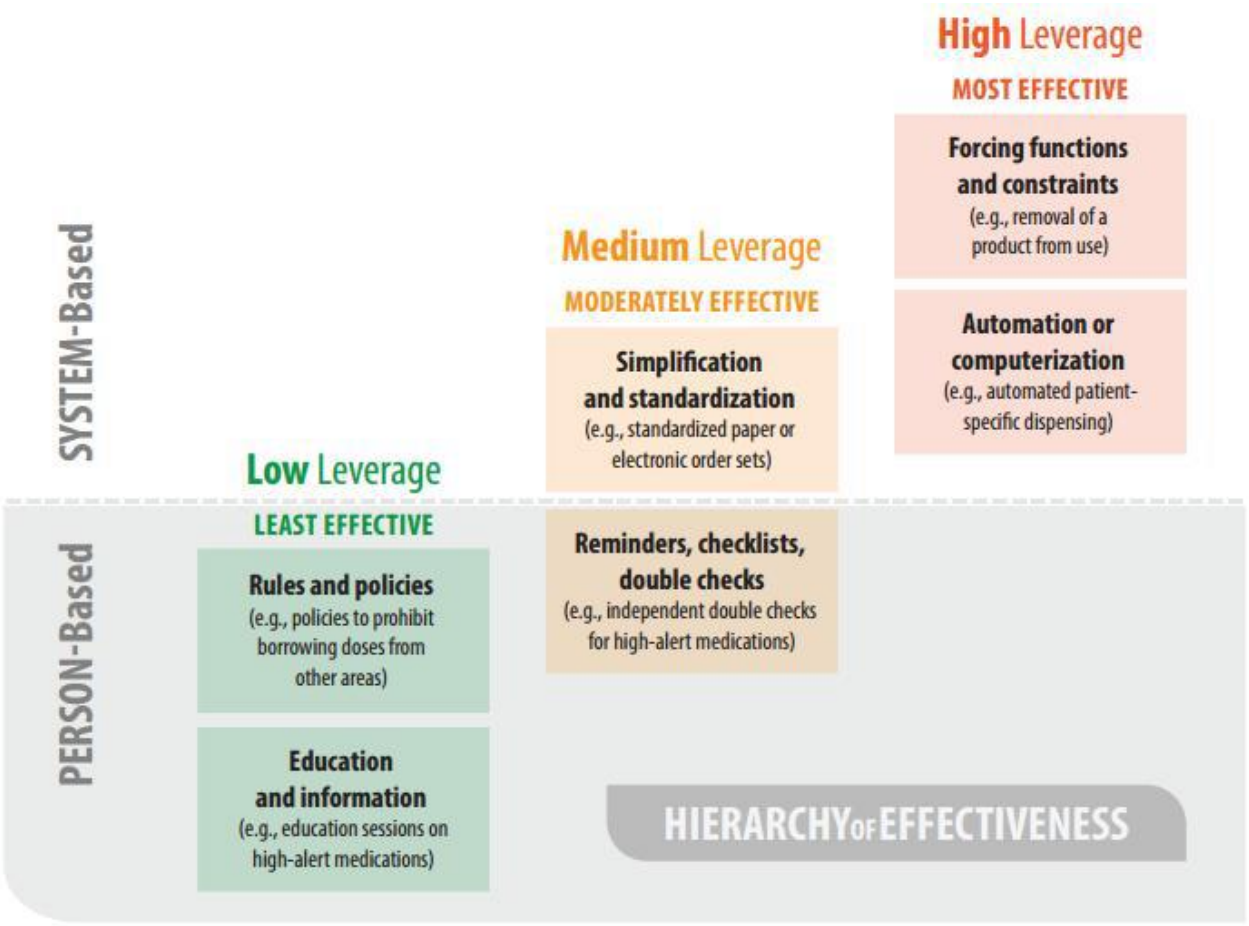
5. Appendices

Appendix 1: Lines of enquiry and associated National Standards for Safer Better Healthcare.

Area to be explored	Lines of enquiry	Dimensions/ Key Areas	National Standards
Leadership, governance and management	1. Patient safety is enhanced through an effective medication safety programme underpinned by formalised governance structures and clear accountability arrangements.	Capacity and capability	3.7, 5.1, 5.2, 5.5, 5.4, 5.6, 5.11
Risk management	2. There are arrangements in place to proactively identify report and manage risk related to medication safety throughout the hospital.	Quality and Safety	3.1,3.2,3.3,3.6, 5.8, 5.11, 8.1
High-risk medications	3. Hospitals implement appropriate safety measures for high-risk medications that reflect national and international evidence to protect patients from the risk of harm.	Quality and Safety	2.1, 3.1
Person centred care and support	4. There is a person centred approach to safe and effective medication use to ensure patients obtain the best possible outcomes from their medications.	Quality and Safety	1.1, 1.5, 3.1, 2.2, 2.3
Model of service and systems for medication management	5. The model of service and systems in place for medication management are designed to maximise safety and ensure patients' healthcare needs are met.	Quality and Safety	2.1, 2.2 ,2.3, 2.6, 2.7, 3.1,3.3, 5.11, 8.1
Use of Information	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.	Quality and Safety	2.1, 2.5, 8.1
Monitoring and evaluation	7. Hospitals systematically monitor the arrangements in place for medication safety to identify and act on opportunities to continually improve medication.	Quality and Safety	2.8, 5.8
Education and training	8. Safe prescribing and drug administration practices are supported by mandatory and practical training on medication management for relevant staff.	Capacity and capability	6.2, 6.3

Appendix 2: Hierarchy of effectiveness of risk-reduction strategies in medication safety.



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