



**Health  
Information  
and Quality  
Authority**

An tÚdarás Um Fhaisnéis  
agus Cáilíocht Sláinte

# **Report of the announced inspection of medication safety at Beaumont Hospital.**

**Date of announced inspection:**

**03 July 2018**



## **About the Health Information and Quality Authority**

The Health Information and Quality Authority (HIQA) is an independent authority established to drive high-quality and safe care for people using our health and social care services in Ireland. HIQA's role is to develop standards, inspect and review health and social care services and support informed decisions on how services are delivered.

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

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

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

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

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

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

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

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



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## 1. Introduction

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

Medication related events were the third most common type of adverse event recorded in the Irish National Adverse Events Study.<sup>1</sup> Medication safety has also been identified internationally as a key focus for improvement in all healthcare settings and it is estimated that on average, at least one medication error per hospital patient occurs each day.<sup>2</sup> The World Health Organisation (WHO) has identified Medication Safety as the theme of the next Global Patient Safety Challenge on Medication Safety.<sup>3</sup> This global initiative, launched in March 2017, safety aims to address the weaknesses in health systems that lead to medication errors and the severe harm that results.

HIQA's medication safety monitoring programme, which commenced in 2016, aims to examine and positively influence the adoption and implementation of evidence-based practice in public acute hospitals around medication safety. HIQA monitors medication safety against the *National Standards for Safer Better Healthcare*<sup>4</sup> to determine if hospitals have effective arrangements in place to protect patients from harm related to medication use.

An expert advisory group was formed to assist with the development of this medication safety monitoring programme. The advisory group membership included patient representation, alongside members with relevant expertise from across the Irish health service. Specific lines of enquiry were developed to facilitate medication safety monitoring. The lines of enquiry which are aligned to HIQA's *National Standards for Safer Better Healthcare* are included in Appendix 1 of this report. Further information can be found in a *Guide to the Health Information and Quality Authority's Medication Safety Monitoring Programme in Public Acute Hospitals 2015*<sup>5</sup> which is available on HIQA's website: [www.hiqa.ie](http://www.hiqa.ie)

A national overview report of the of medication safety monitoring programme '*Medication safety monitoring programme in public acute hospitals- an overview of findings*'<sup>6</sup> was published in January 2018 which presented the findings from thirty-four public acute hospitals inspected from November 2016 to October 2017 (the report is available on HIQA's website, [www.hiqa.ie](http://www.hiqa.ie)). In this report HIQA identified areas of good practice in relation to medication safety and areas that require

improvement to ensure medication safety systems were effective in protecting patients.

An announced medication safety inspection was carried out at Beaumont Hospital by Authorised Persons from HIQA; Emma Cooke, Nora O Mahony and Noelle Neville. The inspection was carried out on 03 July 2018 between 10:00 and 16:45hrs. Interviews were held in the hospital with the following groups of managers and clinical staff:

- Group One: chair of the Drugs and Therapeutics Committee, the chief 1 and chief 2 pharmacist, the risk manager and deputy risk manager and the medication safety co-ordinator
- Group Two: the chief executive officer, the deputy director of nursing as a nominee of behalf of the director of nursing, the senior clinical director, the chief 1 pharmacist, the director of clinical audit and the clinical audit manager.

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

- Surgical ward
- Medical ward

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



## **2. Findings at Beaumont Hospital**

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

### **2.1 Governance and risk management**

#### **Lines of enquiry:**

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

Beaumont Hospital is a model 4<sup>\* 7</sup> voluntary public acute hospital which is both a university teaching hospital and tertiary referral centre. The hospital is part of the Royal College of Surgeons in Ireland (RCSI) Hospital Group.

Inspectors found that there were clear lines of accountability and responsibility in Beaumont Hospital in relation to governance and management arrangements for medication safety.

The Drugs and Therapeutics committee formally reported to the Clinical Governance Committee. Membership of the Clinical Governance Committee included hospital clinical directors, the chief pharmacist, director of nursing and the chief executive officer. This committee reported to the Executive Management Team, which was led by the chief executive officer and was accountable to the Hospital Board. Formalised reporting structures also included direct reporting lines to the Governance and Risk Sub-Committee of the Hospital Board.

The chief executive officer of Beaumont Hospital was identified to inspectors as the person with overall responsibility for the oversight of medication safety at the hospital.

#### **The Drugs and Therapeutics Committee**

The Drugs and Therapeutics Committee was chaired by a consultant physician and meetings were held every six to eight weeks. Terms of reference, updated and

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\* Model 4 hospital admit all types of patients with any degree of seriousness or severity of illness or injury, provide 24 hour acute surgery, acute medicine and critical care and also provide tertiary care and, in certain locations, supra-regional care.

approved in June 2018, outlined the committee's main objectives and detailed its overall functions which included:

- medication organisation and management
- medication process management
- financial and administrative functions associated with medication use
- medication safety
- communication regarding medication use.

An effective Drugs and Therapeutics Committee should have ongoing oversight of the medication management and safety system within a hospital.<sup>8</sup> The Drugs and Therapeutics Committee operated a standing agenda which reflected the core functions of the committee. The committee formally reported to the hospital's Clinical Governance Committee three times a year using a standardised reporting template and also produced an annual report to the Hospital Board. Effective reporting systems in relation to medication safety were evident from review of the minutes of these meetings.

Membership of drugs and therapeutic committees should reflect the size of the hospital and services provided with representatives from all the major specialities and other relevant stakeholders including community partners.<sup>9</sup> Membership included physicians, pharmacists, nursing management, risk management, representation from individual directorates and a non consultant hospital doctor<sup>†</sup> representative. Inspectors observed representation and good attendance from primary care members which included a general practitioner and community pharmacist. This was a positive finding as it demonstrated that medicines management is the responsibility of a number of clinical professional groupings and also a reflected a commitment from the hospital to ensure membership includes all health professionals who are involved in the medicines management pathway.

Minutes of the Drugs and Therapeutics Committee from July 2017 to April 2018 identified poor attendance from clinical directorate members. The terms of reference outlined that non-attendance at three consecutive meetings without apologies would result in removal from the committee. This had not been enforced but the chair of the Drugs and Therapeutics Committee had written to members in the weeks prior to this inspection outlining their obligations to attend all committee meetings which resulted in improved attendance from almost all members at the most recent meeting in June 2018.

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<sup>†</sup> Non-consultant hospital doctor (NCHD) is a term used in Ireland to describe qualified medical practitioners who work under the (direct or nominal) supervision of a consultant in a particular speciality.

The hospital had a medication safety work plan in place for 2018 and identified key areas of focus including: medication incident reporting system, incident management, shared learning, education, audits and project plans. Operational implementation of the medication work plan was effectively facilitated by the medication safety officer and pharmacy department and overseen by the Drugs and Therapeutics Committee.

An annual report produced by the Drugs and Therapeutics Committee detailed the committee's activities for the year and outlined progress against some elements of the medication safety work plan. For example, the hospital had recently designed and developed a new online medication safety education programme available for all staff involved with medicines management at the hospital.

The Drugs and Therapeutics Committee had established a number of sub-committees to support the operation of the committee including:

- antimicrobial stewardship
- nurse prescribing
- NCHD<sup>†</sup> medication safety
- nursing medication management.

There was evidence that senior management actively sought assurance in relation to medication safety. For example, the Integrated Quality and Safety Committee and Clinical Governance Committee produced a monthly report comprising of a consistent set of quality and safety metrics and an overview of corporate risk register changes. The number of medication incidents and an analysis of these incidents were a standing item agenda as well as audit activity and quality improvement initiatives.

Commitment and regular attendance by members of the Drugs and Therapeutics Committee at meetings is essential. The hospital needs to ensure that the Drugs and Therapeutics Committee has the requisite expertise in attendance at committee meetings to reflect the role of the committee and decisions being made.<sup>8</sup>

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<sup>†</sup> Non-consultant hospital doctor (NCHD) is a term used in Ireland to describe qualified medical practitioners who work under the (direct or nominal) supervision of a consultant in a particular speciality.

## **Formulary<sup>§</sup>**

Inspectors were informed that the hospital had a medication formulary. This consisted of a locally approved list of medicines stocked in the hospital.

The hospital had a medicine applications form which was completed by requesting consultants and reviewed by the Drugs and Therapeutics Committee before new medicines were approved for use in the hospital. The decision to approve a new medicine was based on certain information, for example:

- whether the medicine is licensed for use in Ireland
- evidence to support the proposed medicine
- expected benefits of the medicine requested
- estimated annual cost
- reason why the drug supersedes current treatment options
- medicines to be replaced in the list of approved medicines.

A review of the Drugs and Therapeutics Committee meetings minutes outlined that applications, revisions, deletions and requests for new medicines were regularly discussed.

Hospital management outlined that work needed to be completed to rationalise the number of medicines available for use and to determine preferred medicines for use at the hospital in order to avoid unnecessary duplication of medicines. This work was due to be carried out by a recently appointed medicines information pharmacist. The hospital should continue to review the list of approved medicines for use in the hospital and rationalise the number of medicines available to ensure that appropriate governance exists within the hospital of what medicines are approved and preferred for use by the hospital's Drugs and Therapeutics Committee.

## **Risk Management**

The hospital had systems in place to identify and manage risk in relation to medication. The Integrated Quality and Safety Department in the hospital supported and advised clinical directorates and the Clinical Governance Committee on risk management and patient safety concerns.

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<sup>§</sup> Formulary: a managed list of preferred medicines that have been approved by the hospital's Drugs and Therapeutics Committee for use at the hospital. Use of a formulary ensures governance and oversight of the introduction and ongoing use of medicines in practice at the hospital, and in doing so ensures an appropriate level of management control over medicines use, in the interest of both patient safety and financial management.

Hospital management reported that risks identified in relation to medication safety at the hospital had been recorded in the hospital's corporate risk register. The risk register detailed current control measures in place to mitigate against documented risks, progress against actions taken and timelines for risks to be reviewed and evaluated. For example, the hospital had recently appointed a medicines information officer in response to an identified risk on the risk register.

### **Medication safety incidents**

A review of local medication safety data from 2017 outlined a total of 623 medication-related incidents had occurred at the hospital. This figure included 238 near miss incidents. The number of medication related incidents for 2017 was double the amount reported in the previous year. However, inspectors observed a recent decline in the number of medication incidents reported. Figures provided for quarter one 2018 outlined an average of 30 medication incidents reported per month compared to quarter four 2017 in which there was an average of 50 medication incidents reported per month. Hospital management demonstrated an awareness of the recent decline in the number of medication-related issues and reported that the hospital was considering introducing an electronic reporting system to facilitate better reporting.

At the time of this inspection, the hospital facilitated voluntary reporting of medication-related incidents and near misses through the use of an incident report form available in hard copy. All medication incidents were graded using the National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP) Medication Error Index to categorise incidents in terms of patient harm (Appendix 2). The index considered factors such as whether the error reached the patient and, if the patient was harmed, to what degree. All incidents<sup>\*\*</sup> that occurred in the hospital were reported to the National Incident Management System.<sup>††</sup> Hospital management reported that it was mainly nurses and pharmacists reporting medication incidents.

Incidents were tracked and trended according to numbers per month, location, reporting professions, nature of medication incidents reported by process stage and incident severity. Through this process, the hospital identified its top 10 categories of reported medication incidents in 2017. Drug omission, incorrect dose and

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<sup>\*\*</sup> An incident is an unplanned, unexpected or uncontrolled occurrence which causes (or has the potential to cause) injury, ill-health, and /or damage. An incident can be a harmful incident (adverse event), a no harm incident, a near miss, dangerous occurrence or complaint.

<sup>††</sup> 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).

incorrect drug were amongst the top three categories of reported medication incidents. This enabled the hospital to target areas which required improvement and informed medication-related education programmes.

Important lessons can be learned from analysis of medication-related incidents and near misses. Medication-related incidents were discussed at drug and therapeutic committee meetings. Minutes of meetings reviewed demonstrated that corrective and preventative actions were discussed and agreed in response to incidents. For example, following a trend in incidents associated with increased medicine omissions in a particular ward, the medication safety officer reviewed practices within the ward and provided targeted education for staff. In addition minutes of meetings reviewed by inspectors identified which wards were not reporting medication incidents so they could be targeted for improvement action.

Staff received information on incidents that had occurred throughout the hospital through ward meetings, medication safety bulletins, medication safety newsletters, nurse management meetings and grand rounds.<sup>††</sup>

Overall, inspectors found that the hospital had systems in place for identifying, evaluating and responding to medication-related risks. Detailed analysis of medication incidents enabled hospital management to identify areas for improvement. However, the culture of incident reporting needs to be broadened out to include other healthcare staff to improve safety surveillance and promote a safety culture across all disciplines.

## **2.2 Audit and evaluation**

### **Line of enquiry:**

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

Hospitals should have arrangements in place to ensure the effectiveness of healthcare is systematically monitored and continuously improved. The information gathered should be used to improve services, and the learning gained should be shared throughout the hospital.<sup>4</sup>

Beaumont Hospital had a Clinical Effectiveness Committee in place to centrally manage audit activity within the hospital. The committee's role involved providing

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<sup>††</sup> Grand rounds are formal meetings where physicians and other clinical support and administrative staff discuss the clinical case of one or more patients. Grand rounds originated as part of medical training.

strategic direction and supporting the development of robust and useful clinical audit as well as reviewing findings and implementing recommendations.

Documentation provided to inspectors outlined that as of June 2018, a total of 14 medication-related audits had been completed by a number of staff disciplines in the previous 18 months. Progress updates on other registered audits ongoing at the time of this inspection was also documented. Inspectors were informed that medication safety audits accounted for 25% of all audits undertaken at the hospital and pharmacy staff were responsible for 80% of this audit activity.

Inspectors were informed of and provided with some examples of medication-related audits which included:

- insulin storage audit
- missed medication doses audit
- an audit of inhaler technique
- audit of appropriate psychotropic usage.

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.<sup>10, 11</sup> Inspectors were informed that audit results were communicated throughout the organisation through various forums including senior nurse management meetings, grand rounds<sup>§§</sup>, medication safety bulletins and newsletters and through hospital staff emails. The hospital held an annual quality and safety day with poster presentations of audits completed at the hospital.

Inspectors found an example where an audit completed in 2016 on the use of a particular medicine at the hospital had been re-audited in 2017. The main findings were compared to that of the previous year and briefly summarised and disseminated to staff in a medication safety newsletter along with the audit recommendations.

The hospital used other sources of information to identify strengths and weaknesses in the hospital medication system including proactive risk assessment, nursing metrics, retrospective patient healthcare record reviews, direct observation, voluntary reporting of adverse events and medication-related key performance indicators.

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<sup>§§</sup> Grand rounds are formal meetings where physicians and other clinical support and administrative staff discuss the clinical case of one or more patients. Grand rounds originated as part of medical training.

The hospital used the following key performance indicators to evaluate their medication safety programme:

- number of medication incidents per quarter by reporter location, reporter profession, process stage and outcome
- rate of reported medication incidents per 100 bed days used
- number of medication incidents per annum by drug class and category.

Progress against these key performance indicators to date was detailed in a medication safety interim report for 2017 and discussed at drugs and therapeutics committee meetings and clinical governance committee meetings. Formal assurance was also provided to the Hospital Board through submission of an annual medication incident report to the board.

Nursing metrics<sup>\*\*\*</sup> were monitored across the hospital to review practice around some aspects of medication storage and administration. Documentation provided outlined that the average hospital score for medicine storage and custody across the hospital ranged between 80-89% for 2018 which were similar to the previous year. It was reported that local action plans were implemented by clinical nurse managers in response to poor performance. Performance reports in relation to nursing metrics were tracked and trended and discussed at clinical governance committees also.

### **2.3 Medication safety support structures and initiatives**

#### **Line of enquiry:**

- Hospitals develop effective processes to promote medication safety that are implemented and supported by clear and up-to-date policies, procedures and or protocols.

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

- the introduction of a new clinical pharmacy service to a care of the older person day hospital
- a new medication prescription and administration record
- the introduction of an e-learning medication safety programme.

Inspectors found examples of where medication safety quality improvement initiatives were strategically driven by learning gained from risks identified and

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<sup>\*\*\*</sup> Metrics are parameters or measures of quantitative assessment used for measurement and comparison or to track performance.



medication incidents. For example, the hospital developed a quality improvement plan to enhance the care of the older person services at the hospital. Dedicated clinical pharmacists were positioned at three clinical points along the patient journey which included: the emergency department, the care of the older person inpatient ward and the day hospital. The initiative was evaluated in terms of the numbers of medication reconciliations completed, prescriptions reviewed and clinical significance of pharmacists' interventions. The initiative has seen the rate of acceptance of pharmacist interventions by medical teams increase from 49% to 89% for inpatients on the care of the older person ward and 15% of pharmacist interventions were considered to have averted severe harm to patients in the emergency department.

There was also evidence of ongoing evaluation of quality improvement initiatives which had been implemented. For example, a new medication prescription administration record was introduced in the hospital in 2016 and there was ongoing review and revision of the document in 2017 with pilot phases.

### **High-Risk Medicines**

The hospital maintained a list of high-risk medications that present a heightened risk of causing significant patient harm if not used correctly. The acronym 'A PINCH S†††' which grouped medications into categories was used to facilitate education and to raise awareness of high-risk medications. Inspectors observed accessible and user friendly posters displayed in clinical areas outlining high-risk medicines. These posters outlined the associated policies, procedures and guidelines available to enable staff to manage the risks associated with these medicines. The hospital promoted medication safety awareness of high-risk medications through some risk reduction strategies, for example;

- segregation of potassium containing infusion bags from non potassium containing infusion bags
- use of pre-mixed potassium solutions whenever possible.

Inspectors were informed that compliance with some risk-reduction strategies in place for high-risk medicines were monitored through auditing and incident reporting. The hospital would also rely on direct observation to identify any concerns.

The hospital had devised a sound-alike-look-alike (SALADS) list to make staff aware of medicines that have similar names which was also observed in the clinical areas inspected.

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<sup>†††</sup> **A**nti-infectives, **P**otassium, **I**nulin's, **N**arcotics, **C**hemotherapy, **H**eparin and other anticoagulants and **S**ystems/**S**pecialist Drugs/**S**ound-alike-look-alike-drugs.

Beaumont Hospital was participating in the Health Service Executive (HSE) Quality Improvement Division venous thromboembolism quality improvement collaborative.<sup>†††</sup>

### **Clinical pharmacy service**

There are currently no agreed national standards outlining requirements for the provision of clinical pharmacy services in hospitals. International studies support the role of clinical pharmacists in hospital wards in preventing adverse drug events.  
12,13,14,15,16,17

Inspectors were informed that 26 wards were in receipt of a clinical pharmacy service on a daily basis. A number of pharmacists had been allocated to speciality services such as the aseptic compounding unit, antimicrobial stewardship, infectious diseases, hepatitis and psychiatry.

It was explained to inspectors that four clinical areas in the hospital received no clinical pharmacy cover. These areas were provided with a regular medication stock supply, dispensary service and could contact a designated senior clinical pharmacist as required. Hospital management reported that all high risk areas within the hospital received a clinical pharmacy service.

The hospital had undertaken a formal review of their clinical pharmacy requirements relevant to the size and level of services provided and estimated requirements for clinical pharmacy resources based on current and proposed staff to patient ratio benchmarking with similar sized and model of hospital. Based on this review a clinical pharmacist had commenced at the hospital in the week prior to this inspection in the role of a medicines information officer and the hospital was progressing additional pharmacy resources.

Overall, inspectors found the hospital took a risk based approach to the allocation of clinical pharmacy services based on resources available and patients' needs. The hospital should continue to review clinical pharmacy services provided to ensure that clinical areas are receiving the appropriate level of clinical pharmacy cover as required and identified by the hospital.

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<sup>†††</sup> This is a collaborative among multidisciplinary teams in Irish adult acute public and voluntary hospitals who are working together to achieve appropriate thromboprophylaxis for their hospital's inpatients, to reduce the risk of venous thromboembolism and to minimise harm and expenditure associated with unnecessary thromboprophylaxis.

## 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.<sup>18,19,20</sup>

Inspectors were informed that clinical pharmacists carry out medication reconciliation on admission for patients where there are queries or concerns about their medication and for certain groups of patients where resources have been allocated. This process was guided by hospital policy. Inspectors were informed that frail older patients were prioritised for medication reconciliation and that additional pharmacists had been dedicated to cover areas for this particular patient profile.

Inspectors observed that the hospital's new medication prescription administration had a designated section for medication reconciliation.

Overall, inspectors found that the hospital endeavoured to provide a medicines reconciliation service at the hospital in the context of existing clinical pharmacy resources and had prioritised areas of known risk. The hospital should continue to progress the work to date and look to expand the process to include medication reconciliation on discharge and other transitions in care.

### 2.4 Person-centred care

#### Line of enquiry:

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

Patients should be well informed about any medications they are prescribed and any possible side effects. This is particularly relevant for those patients who are taking multiple medications.<sup>21,22</sup>

The National Patient Experience Survey<sup>§§§</sup> was completed in Beaumont Hospital by 50% of the 1646 people discharged from the hospital in May 2017.<sup>23</sup>

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

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<sup>§§§</sup> 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), HIOA and the Department of Health. All adult patients discharged during May 2017 who spent 24 hours or more in a public acute hospital, and have a postal address in the Republic of Ireland were asked to complete the survey.

- **Question 45:** Did a member of staff explain the purpose of the medications you were to take at home in a way you could understand?
- **Question 46:** Did a member of staff tell you about medication side effects to watch for when you went home?

	Beaumont Hospital score	National score
Question 45: Did a member of staff explain the purpose of the medicines you were to take at home in a way you could understand?	7.3	7.8
Question 46: Did a member of staff tell you about medication side effects to watch for when you went home?	4.2	5.1

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

In response to the National Patient Experience Survey results the hospital plans to review information provided to patients on their discharge, specifically relating to medication. Plans were outlined to inspectors to improve the discharge process with elements focusing on medication safety.

Recent improvements had been made to the hospital's electronic discharge and the hospital planned to implement electronic prescriptions upon discharge in the coming months. One clinical area was in the process of trialling a discharge pack for patients which included medication information.

Beaumont Hospital had some systems in place to support the provision of patient information and education in relation to medication. Inspectors were informed that clinical pharmacists offered counselling to patients prescribed high-risk medicines such as oral anticoagulant medication. Education packages such as the epilepsy passport and transplant passport were also available for some speciality areas.

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. It was reported that patients attending the emergency department were less likely to receive education in relation to medication safety on discharge. Efforts should be made to further improve communication with all patients about their medications.

## 2.5 Policies procedures and guidelines and access to information

### Lines of enquiry:

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

The hospital had an electronic document management system to facilitate document version control and access to staff across the hospital. Inspectors found that medication policies, procedures, protocols and guidelines were readily available and accessible to staff through the hospital's controlled document management system in the clinical areas inspected.

All medication-related policies, procedures and guidelines were approved at directorate level before final approval by the Drugs and Therapeutics Committee. Minutes of the Drugs and Therapeutic Committee meetings demonstrated discussion and decision making about new policies for approval.

Decision support tools<sup>\*\*\*\*</sup> and policies, procedures, protocols and guidelines must be readily available at the point of use<sup>†††</sup> to ensure the information is followed in practice. The hospital had medicines information resources available to assist staff when prescribing or administering medicines in the hospital, for example:

- antimicrobial smartphone application
- medical smartphone application
- renal smartphone application
- intravenous drug monographs
- the British National Formulary (BNF) available in electronic format.

Commercially available injectable medicines monograph guides were available to staff on ward computers and printable to guide staff in the prescribing and administration of intravenous medicines. Inspectors observed that these intravenous drug monograph guides were not available to staff at the point of medicines preparation in one of the clinical areas visited by inspectors.

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

††† Point of use: includes when prescribing, preparing or administering.

It was explained to inspectors that this information had been adapted to Beaumont Hospital and live links enabled staff to access local corresponding policies, procedures and guidelines associated with the medicine. However, inspectors found an example in which an injectable medicines monograph guide had not been locally adapted to reflect hospital policy within Beaumont. The first dose of the injectable medicine could only be administered by a doctor but this was not outlined on the injectable medicines monograph observed by inspectors.

Correspondence received following this inspection outlined that the hospital had developed an updated medication policy on safe prescribing and administration of intravenous medications which included intravenous medications that nursing staff are not permitted to administer. The policy has been approved by the Drugs and Therapeutics Committee and is awaiting implementation of an education programme.

Inspectors were informed that medicines information and alerts were disseminated to staff via emails, grand rounds and medication safety alert bulletins. Medication safety newsletters were also produced as a means of promoting the importance of medication incident reporting and also to provide educational updates on specific medication-safety related matters. Inspectors observed recent examples of these which included alerts on prescribing of regular medicines on admission, look-alike packaging for morphine injections and recommended practices to reduce the risk of sound-alike-look-alike-drugs (SALADS). While inspectors were provided with some examples of these, these initiatives were not displayed in the clinical areas and some staff spoken with were not familiar with them and could not locate or access medication safety newsletters or alerts on the hospital's computer system.

Hospital management outlined a system in place for managing safety alerts and product recall. Medicines alerts and communications in relation to medication safety from other authorities were also a standing item agenda at the Drugs and Therapeutics Committee meetings.

Healthcare requires access to complete and accurate patient information, relevant to the safe use of medications, at the point of clinical decision making to help ensure patient safety. Clinical staff had access to patient's diagnostic results on computers in clinical areas across the hospital.

Overall, the hospital had developed a range of medicines information and decision support tools to guide staff involved in providing safe and effective medication. The hospital needs to ensure that all staff involved in medicines management are fully aware of the medication support structures and initiatives developed and designed by the hospital to enable staff to deliver safe and effective care and to promote medication safety.

## 2.6 Training and education

### Line of enquiry:

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

Staff education can effectively augment error prevention when combined with other strategies that strengthen the medication-use system.<sup>24</sup> Hospitals should ensure that professionals have the necessary competencies to deliver high-quality medication safety through induction and on-going training. This should be a structured, targeted programme of education for medication safety aligned with the hospitals medications safety programme.

Hospital management reported that medication safety training was included in induction training for non consultant hospital doctors and nursing staff.

Medication management was mandatory on induction for nurses and included a talk on medication safety provided by the medication safety officer. Inspectors were informed that nursing staff were assessed and signed off as competent in medication management by senior nursing staff prior to being permitted to administer medications independently. Nursing staff were also required to attend mandatory intravenous medication administration training and undergo assessment prior to be deemed competent.

It was reported that all new nursing staff were also encouraged to complete the HSE LanD Medication Management online training programme.<sup>25</sup> Training records outlined that 55% of nursing staff had completed this e-learning module in the last three years. While this training was not mandatory, it was explained that this resource was utilised to support staff involved in medication safety incidents where additional training needs were identified.

Non consultant hospital doctors received medication safety from the pharmacy department as an allocated session on induction. Ongoing medication education was offered through weekly education sessions and education sessions on medication safety formed part of this overall programme. This training was mandatory for doctors and it was reported that good attendance at these sessions had been achieved by enabling a system that provided doctors with protected time to attend sessions.

The hospital had recently designed a new medicine safety e-learning package titled 'medication error and high risk drugs' on the hospitals new e-learning platform 'BORIS'. While this was not currently mandatory and was still on trial in the hospital, information provided to inspectors following this inspection outlined that 120

healthcare professionals had completed this training following the introduction of it in the hospital within the first two months. The hospital outlined that it was anticipated that this training would become mandatory going forward.

The medication safety officer had a key role in education at structured education sessions such as induction training, medical grand rounds, formal intern teaching sessions during the intern year and ward based education in response to incidents.

Inspectors found that the hospital was in the process of designing and implementing a more formalised education programme for clinical staff that was linked to the hospital's medication safety plan.



### **3. Conclusion**

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

Beaumont Hospital had established governance arrangements and systems in place to support medication safety in the hospital. It was evident that this was driven by effective local leadership and executive management support. The hospital should ensure attendance at Drugs and Therapeutic Committee meetings to ensure there is a multi-disciplinary approach to medication safety at the hospital. It was notable that Beaumont Hospital had members from primary care on the Drugs and Therapeutic Committee, which many other hospitals visited during this programme had not achieved.

The hospital had a medication safety programme plan in place for 2018 and demonstrated progress across some identified areas, for example medication safety training. The hospital needs to ensure that the development of quality improvement initiatives and processes to promote medication safety are fully and effectively implemented in clinical practice.

Although some areas did not have a clinical pharmacy service, it was evident that pharmacy resources were deployed using a risk based approach to target high risk areas and high risk patients. The hospital should continue to review and monitor clinical pharmacy services provided using a risk based approach and ensure that plans are put in place to address gaps in service delivery for clinical areas that do not have a clinical pharmacy service.

There was evidence that medication safety was informed and improved by incident reporting and clinical audit so that relevant data was used as the basis for decision-making, action and change. This was facilitated by effective oversight arrangements by management structures and the Clinical Effectiveness Committee.

Further improvement in relation to medication safety should focus on improving reporting of medication-related incidents across all disciplines and clinical areas, rationalising the number and use of medicines available on the hospital formulary and enhancing patient education on medicines. Furthermore, the hospital should ensure that access to information, such as intravenous monographs, are locally adapted and comprehensive so that all relevant information is available to clinical staff at the point of care.

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

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

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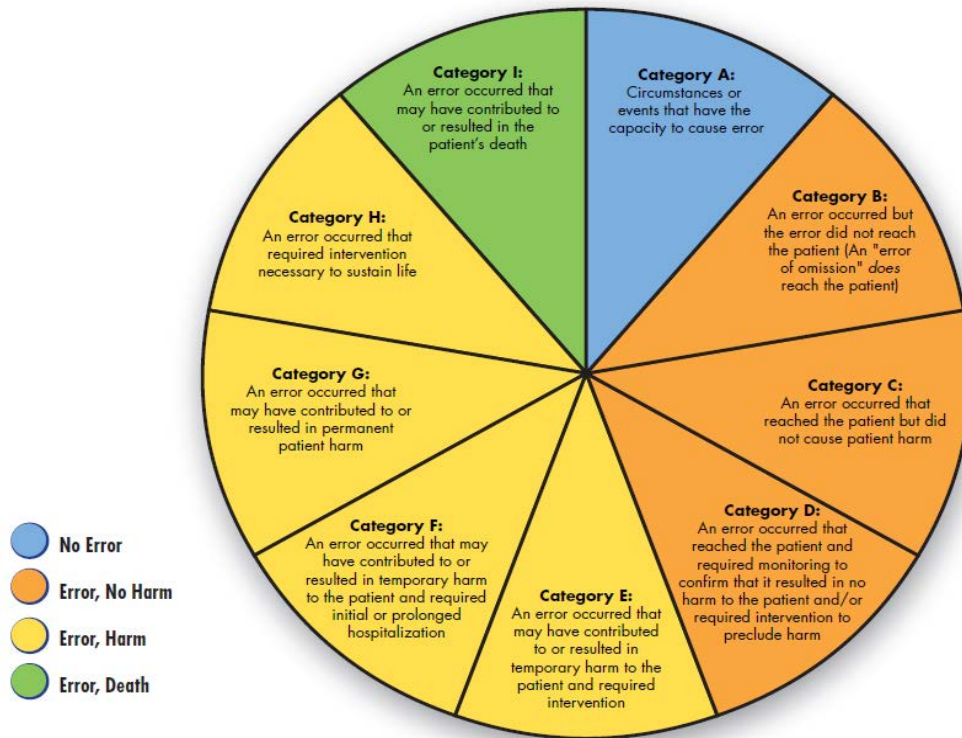


## 5. Appendices

### Appendix 1: Medication safety monitoring programme Phase One: Lines of Enquiry and associated National Standard for Safer Better Healthcare

Area to be explored	Line of enquiry <sup>1</sup>	National Standards for Safer Better Healthcare
Clear lines of accountability and responsibility for medication safety	Patient safety is enhanced through an effective medication safety programme underpinned by formalised governance structures and clear accountability arrangements.	3.1, 5.1, 5.2, 5.4, 5.5, 5.6, 5.8, 5.9, 5.10, 7.1
Patient involvement in service delivery	Patients and or carers are informed about the benefits and associated risks of prescribed medicines in a way that is accessible and understandable.	1.4, 1.5, 1.7, 3.1, 4.1
Policies procedures and guidelines	Hospitals develop effective processes to promote medication safety that are implemented and supported by clear and up-to-date policies, procedures and or protocols.	2.1, 3.1, 3.2, 3.3, 3.5, 3.6, 3.7, 5.8, 5.11, 8.1
Risk management	There are arrangements in place to identify, report and manage risk related to medication safety throughout the hospital.	3.1, 3.2, 3.3, 3.5, 3.6, 3.7, 5.8, 5.10, 5.11, 8.1
Audit and evaluation	The effectiveness of medication management systems are systematically monitored and evaluated to ensure they are effective.	2.8, 3.1, 5.8, 8.1
Education and training	Safe prescribing and drug administration practices are supported by mandatory and practical training on medication management for relevant staff.	6.2, 6.3
Access to information	Essential information of the safe use of medications is readily available in a user-friendly format and is adhered to when prescribing, dispensing and administering medications.	2.5, 8.1

## Appendix 2: National Coordinating Council for Medication Error Reporting and Prevention. Index for Categorizing 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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