Report of the announced inspection of medication safety at Tallaght Hospital.

Date of announced inspection:
10 May 2017
Report of the announced inspection of medication safety at Tallaght Hospital, Dublin.
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.\(^1\) Medication safety has also been identified internationally as a key focus for improvement in all healthcare settings and it is estimated that on average, at least one medication error per hospital patient occurs each day.\(^2\)

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

An expert advisory group was formed to assist with the development of this medication safety monitoring programme. The advisory group membership included patient representation, alongside members with relevant expertise from across the Irish health service. Specific lines of enquiry were developed to facilitate medication safety monitoring. The lines of enquiry which are aligned to HIQA’s 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 2016\(^4\) which is available on HIQA’s website: www.hiqa.ie

An announced medication safety inspection was carried out at Tallaght Hospital by Authorised Persons from HIQA; Dolores Dempsey Ryan, Kathryn Hanly, Noelle Neville and Kay Sugrue. The inspection was carried out on 10 May 2017 between 9:30hrs and 16:00hrs. Interviews were held in the hospital with the following groups of managers and clinical staff:

- Group one: the Chairperson of the Drugs and Therapeutics Committee, the Chief Pharmacist, the Medication Safety Manager and the Patient Risk and Safety Lead.
- Group two: the Director of Quality Safety and Risk Management, a Clinical Director for adult services, a Clinical Director for paediatric services and the Director of Nursing.
Inspectors visited the following clinical areas and spoke with staff and reviewed documentation:

- Ruttle Ward
- Maple Ward (Paediatric)

In addition, a survey was conducted among outpatients in the Outpatient’s Department.

HIQA would like to acknowledge the cooperation of staff who facilitated and contributed to this announced inspection, and the patients in the hospital’s Outpatient Department who completed an anonymised questionnaire in relation to prescribed medications.
2. Findings at Tallaght Hospital

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.

Tallaght Hospital is a model four hospital that provides a wide range of secondary and tertiary services across the Medical, Surgical, Paediatric and Diagnostic spectrum. The hospital is part of the Dublin Midlands Hospital Group.

Tallaght Hospital’s Drugs and Therapeutics Committee is responsible for the governance and oversight of the medication safety programmes within the hospital for both the adult and paediatric services.

The Drugs and Therapeutics Committee had recently updated its terms of reference which clearly outlined the Committee’s mission, role and function, membership, frequency of meetings and reporting relationships. Membership of the Drugs and Therapeutics Committee was multidisciplinary to reflect the fact that medicines management was the responsibility of a number of clinical professional groups. Membership included clinicians, non-consultant hospital doctors, pharmacists, nurses and hospital management. Other healthcare professionals who participate in the medication-use process are also invited to attend as required. Healthcare staff from the paediatric services also formed part of the Committee membership. In the absence of general practitioner (GP) representation, inspectors were informed that relevant information was communicated with GPs through the GP liaison committee meetings and through the hospital’s Chief Operations Officer. Inspectors viewed the minutes of the Drugs and Therapeutics Committee and noted that healthcare staff from both the adult and paediatric services attended these meetings.

The Director of Quality, Safety and Risk Management who also chaired the hospital’s Quality, Safety and Risk Management Executive Committee had corporate responsibility for oversight of medication safety at Tallaght Hospital. The Drugs and Therapeutics Committee reported to the Quality, Safety and Risk Management Executive Committee which in turn reported into the hospital’s Executive Management Team Committee (Appendix 2). It was evident that medication safety was supported at executive level in the hospital. Medication safety was a standing agenda item for discussion at the Drug and Therapeutics Committee meetings. It
was frequently discussed at the Quality, Safety and Risk Management Executive Committee and at the hospital’s Executive Management Team Committee meetings.

The Drugs and Therapeutics Committee was responsible for administering an evidence based formulary* of medications within the hospital and had good oversight of the formulary management system.\textsuperscript{7} Decisions to add medications to the formulary were guided by a detailed application process and supported by a status report system which tracked how each medication was being progressed. Evidence of this process was consistently described and supported by documentation provided to inspectors. Applicants were invited to attend the Drugs and Therapeutics Committee meetings to allow for constructive discussion of formulary applications.

New medicines were evaluated on the basis of efficacy, safety, quality and cost. Decisions with significant budgetary impact were additionally overseen by senior hospital management. In addition, the formulary was reviewed every two years. Hospital managers told inspectors that while paediatric drugs were not included in the local hospital formulary, clinical staff referred to the British National Formulary for Children.

All medicines must undergo clinical trials before they are granted a licence in Ireland, or in Europe.\textsuperscript{8} Hospital managers informed inspectors that the Drugs and Therapeutics Committee did not have oversight of clinical trials involving medicines that were being conducted in the hospital. The governance and oversight of clinical trials being conducted in the hospital was the responsibility of the St James’ Hospital and Tallaght Hospital Joint Research Ethics Committee (provided ethics approval for the trial was applied for through this Committee as opposed to one of the other nationally recognised Research Ethics Committees). However, the hospital Drugs and Therapeutics Committee intended to extend their remit, as part of their 2017 plan, to include oversight of a central registry of all current clinical trials involving medicines in the hospital, whether for inpatients, outpatients or day patients.

The Drugs and Therapeutics Committee evaluated its effectiveness by producing a comprehensive annual report in 2016 which included additional reports from sub-committees and working groups. This annual report detailed work completed in 2016 in relation to

- organisation and administration
- formulary and antimicrobial stewardship
- intravenous monographs for general wards
- medication policies for adult and paediatric services
- drug expenditure management and medicines optimisation

\textsuperscript{*} A formulary is a hospital’s approved list of medicines that staff can use as a reference document to ensure safe and cost-effective prescribing.
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- quality improvement medication safety initiatives and audit
- medication incidents report for adult and paediatric services
- staff education and nurse prescribing.

In addition, the sub-committees and other groups, for example, the non consultant hospital doctors provided a report on their achievements with regard to prescribing issues.

Overall, the annual report 2016 highlighted the Drugs and Therapeutics Committee’s achievements, identified areas for improvement, and ended with recommendations and a work plan for 2017. Importantly, one key area identified by the Committee in the work plan for 2017 was to strengthen links with the paediatric directorate and the Paediatric Medical Advisory Committee (PMAC) to support the paediatric service.

International evidence on medication errors indicates that a small error in dose of medication given to children has a greater risk of harm compared to the adult population.9 On the day of inspection, inspectors found that there were deficiencies in the governance and oversight of medication safety within the paediatric services relative to the adult acute services. The lack of a clinical pharmacist on the paediatric ward visited was highlighted by staff who spoke with inspectors as a significant deficiency in support of medication safety practices on the ward.

HIQA found that the acute adult services were well supported with formalised governance arrangements and organisational structures in place to support the safe use of medications. For example, the adult services was well support by

- Clinical pharmacists at ward level.
- Current medication-related policies were available.
- Medicines information on display in clinical areas.
- Medication reconciliation was supported by a Collaborative Pharmaceutical Care at Tallaght Hospital (PACT)10 programme on admission.
- Tallaght Education and Audit Management System (TEAMS†) electronic system captured medication reconciliation on admission and discharge.11

Notwithstanding the good medication safety practices observed in the adult services, inspectors found this was not reflected in the paediatric ward visited on the day of inspection. Inspectors found that staff on the paediatric ward did not have access to up to date policies, procedures and guidelines to support medication safety practices, for example, intravenous monographs were out-of-date.

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† Teams: described as the Tallaght Hospital's software system for admission medication reconciliation and discharge communication to general practitioners via electronic information system.
It was explained to inspectors that, with the exception of the paediatric cystic fibrosis service, the hospital had reallocated clinical pharmacy resources previously deployed in paediatrics to other duties in January 2017. Following this inspection, the hospital should review its approach to governance, resource allocation, systems and associated documents to ensure consistency across both adult and paediatric services.

**The Medication Safety Programme**

Operational implementation of the medication safety programme was effectively facilitated by the Medication Safety Manager and supported by the Pharmacy Department, the Drugs and Therapeutics Committee, the Executive Management Team and staff at the hospital. The hospital had an established system for reporting and addressing medication errors and near misses. This system was underpinned by a policy on management of incidents and near misses, however, inspectors noted that this policy was out-of-date at the time of this inspection.

The Medication Safety Manager reviewed and graded all medication incidents using the National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP) Medication Error Index to categorise incidents in terms of patient harm (appendix 3). A small number of these medication incidents which were categorised as more severe in nature were reported to the Quality Safety and Risk Management Department who in turn inputted these to the National Incident Management System (NIMS). Issues which were considered to potentially compromise the safe administration of medication were included on the hospital’s risk register. Inspectors were provided with copies of medication incidents recorded on the hospital’s risk register which showed that the risk register was updated regularly.

Ward staff told inspectors that they complete a medication incident form following a medication error and forward it to the Medication Safety Manager. Inspectors viewed the medication incident form and noted that the requirement to disclose the name of the reporter of the incident and their contact details was optional. This supported a non-punitive incident reporting culture within the hospital.

Medication safety reports were prepared by the Medication Safety Manager and submitted to the Drugs and Therapeutics Committee every other month from both the adult and paediatric services. A medication safety end of year report 2016 was prepared by the Medication Safety Manager for the Drugs and Therapeutics Committee. Medication incidents and near misses were tracked and trended in this

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† 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).
report to assess progress and to identify emergent medication safety concerns (figure 1).

**Figure 1: Number of medication incidents reported annually in Tallaght Hospital 2001-2016.**

The medication safety annual report for 2016 highlighted a downward trend in reporting from 2011 onwards, with a notable reduction in 2015. This was attributed by the hospital to the absence of a Medication Safety Manager from May 2015 to May 2016, reduction in nursing staffing levels and the implementation of medication safety initiatives to reduce medications errors. The appointment of a Medication Safety Manager in 2016 saw an improvement in medication incident reporting. Notwithstanding this positive improvement in reporting of medication incidents in 2016, the majority of reports were submitted by clinical pharmacists and nursing staff. Therefore, the culture of reporting medication incidents needs to be broadened out to include other healthcare staff so that safety surveillance is improved, learning is shared, and safety culture is promoted and enhanced across the organisation.

While the hospital had a medication safety programme, there was no formalised documented medication safety strategy in place. The hospital should now look to further progress the medication safety programme by devising a formalised medication safety strategy with clearly defined objectives aligned to the hospital’s overall patient safety strategy. In the absence of national guidance in this area, international guidelines which outline best practice in relation to medication safety strategic planning and quality improvement should be considered.

Open disclosure occurs when staff in the health and social care service communicate with patients in an open and honest manner when things go wrong with patient
Inspectors were informed that the hospital refers to the national policy on open disclosure to promptly inform patients when medication-related incidents occurred. Staff who spoke with inspectors could provide examples of when this open disclosure policy was adhered to.

Medication-related incident reporting facilitates the identification of risk and opportunities for improvement. However, on its own it does not provide a complete picture of all potential sources of risk and patient harm. The hospital used a variety of additional information sources to identify strengths and weaknesses in the hospital medication management system including retrospective chart review, direct observation of medication practices, Nursing Instrument for Quality Assurance (NIQA§) indicators, risk assessment tools and medication audits.

### 2.2 Audit and evaluation

**Line of enquiry:**

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

The Clinical Audit Department provided oversight of clinical audit activity at the hospital. The clinical audit programme for medication safety was designed and informed by medication safety audit results and medication incidents reports. The Drugs and Therapeutics Committee reviewed a selection of audit results that related to medication management and safety. Audit findings were presented at the annual audit day in the hospital.

Inspectors saw examples of audits from many different areas of clinical practice. Audits carried out by medical teams ranged from focused audits of specific relevance such as thromboprophylaxis prescribing to re-audit of oxygen prescriptions carried out by a multidisciplinary working group. The result of a re-audit of oxygen prescribing in 2016 showed that there had been an improvement in the prescription of oxygen therapy since 2014.

Documentation reviewed by inspectors showed that a number of medication safety-related audits had been undertaken by clinical staff at the hospital which included the following:

- Audit of medication-related policies approved (2016).
- Audit of medicines information on display in adult clinical areas (2016).

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§ Nursing Instrument for Quality Assurance is used to capture nursing sensitive outcome measures using indicators.
A trial to investigate the impact on medication error of a reconfigured pharmacy service implementing the Collaborative Pharmaceutical Care at Tallaght Hospital PACT model across medical and surgical specialties (2015).

Atrial Fibrillation Clinic audit.

Re-audit of the prescription of oxygen on inpatients therapy prescription and administration record in medical wards (2016).


Thromboprophylaxis** in medically admitted patients from the Emergency Department (2016).

An audit of new oral anti-coagulants (NOAC††) dosing and prescribing in accordance with renal function (2016).

An audit was undertaken of the hospital’s diabetes chart in 2017 to review the completeness of these prescriptions against the standards in place in Tallaght Hospital including the Adult Medicines Guide and the Adult Diabetes Chart. The audit identified one medication error where the strength of a specific brand of insulin was omitted on the prescription chart. Recommendations made following this audit included risk reduction strategies such as a plan to provide education on high alert insulin drugs to both medical and nursing staff at induction, and to add a warning alert to prescribers regarding the different strength of insulin in the medicines guide.

Tallaght Hospital had developed a Nursing Instrument for Quality Assurance (NIQA) for both the adult and paediatric services. This instrument was used to collect and analyze data on each ward every two months. Inspectors viewed the data findings for both adult and paediatric services relating to medication management and noted that the results relating to controlled drugs, medication storage, custody and administration were good.

** A measure taken to prevent the development of a thrombus.

†† Medication used in the management of venous thromboembolism, which is when a blood clot forms in a vein.
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.

Medication safety quality improvement initiatives were strategically driven by learning gained from analysis of medication incidents or near misses. For example, the paediatric medication safety incident and near miss report for January to March 2017 highlighted that 15 medication incidents were received and risk rated using the NCCMERP index. Of these 15 incidents reviewed, five related to incorrect recording of the child’s weight.

A nurse-led medication safety initiative was introduced to:

- Review and service weighing scales.
- Introduce a change to the hospital’s electronic information system in the Emergency Department to ensure that the ‘weight field’ on the information system was in the appropriate section to allowed for accurate recording of the child’s weight on admission.
- Education was provided to staff to ensure that all children were reweighed on admission to the ward from the Emergency Department.
- Up-to-date laminated posters of the paediatric resuscitation guidelines were placed in the appropriate areas within the Emergency Department which included a quick reference to children’s weight to support safe prescribing practices.

Additional quality improvement initiatives to enhance medication safety in the hospital were identified during this inspection. These included:

- Setting up of a multidisciplinary atrial fibrillation clinic to manage atrial fibrillation and supervise the use of direct oral anticoagulants (DOACs).
- Introduction of a ‘Know Your Medicines’ leaflet.
- Introduction of a Drug Allergies Working Group (reporting to the Drugs and Therapeutics Committee) with a plan for a ‘Know Your Allergies’ campaign later in 2017.
- Updating the capacity plan for the Pharmacy Aseptic Unit.
- A Zero harm Inhaler group to implement a quality improvement initiative to improve patient education regarding inhaler use.
Introduction of a modified Cockcroft & Gault (C&G) equation‡‡ to calculate creatinine clearance§§ with a validated electronic medical calculator.

**Clinical Pharmacy Services and Medication Reconciliation**

International studies support the role of clinical pharmacists in hospital wards for preventing adverse drug events.\(^{17,18,19,20,21}\) Configuration of the clinical pharmacy service at Tallaght Hospital was changed from a ward base model to a team-based Collaborative Pharmaceutical Care in Tallaght Hospital model (PACT)\(^{10}\) following a study in 2014 to improve care and reduce the rate of serious adverse medication events. This model which has as a first step been prioritised towards adult medical and vascular surgical patients on the basis of risk facilitates medication reconciliation by clinical pharmacists and physicians at admission, during inpatient care and at discharge. The hospital plans to expand this service to inpatient services by the end of 2018. Documentation provided to inspectors indicated that clinical pharmacist’s were involved in medication reconciliation for both the adult and paediatric services in 2016.

Medication reconciliation at time of admission is a systematic process conducted by an appropriately trained individual, to obtain an accurate and complete list of all medications that a patient was taking prior to admission.\(^{22,23,24}\) The hospital’s medication reconciliation service was underpinned by a medication reconciliation policy.

To support medication reconciliation, the hospital had also introduced a module to their electronic patient management system. This was a hospital-wide system known as Tallaght Education and Audit Management System (TEAMS***). Over 80% of patients had an electronic discharge prescription completed in TEAMS. It was used to reconcile patients’ pre-admission medication with the discharge list to generate a discharge prescription which was transmitted to the patient general practitioner via Healthlink†††.

High-risk medicines can cause significant harm when system errors occur.\(^{25}\) The hospital promoted medication safety awareness of high alert medications through the pharmacy journal club, in service education and the zero harm awareness campaign which was supported by senior hospital managers. High alert information was disseminated to all relevant clinical staff by the medicines information

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‡‡ The Cockcroft-Gault equation allows the creatinine clearance to be estimated from the serum creatinine in a patient with a stable serum creatinine.

§§ Creatinine clearance is a test that helps determine whether the kidneys are functioning normally.

*** Teams : described as the Tallaght Hospital’s software system for admission medication reconciliation and discharge communication to general practitioners via electronic information system.

††† Healthlink transfers a range of messages in real time including laboratory and radiology reports, discharge information and waiting list updates to General Practitioners.
pharmacist, the formulary development pharmacist, or the medication safety manager.

The hospital planned to introduce a single central cross-hospital high-alert medication list in 2017.

Evidence-based risk reduction strategies\textsuperscript{26} (appendix 4) were implemented to reduce unwarranted clinical variation in medication prescribing and administration of high alert drugs. These strategies included the:

- Development of 127 medication intravenous administration monographs for the general wards.
- Standardised protocols and dosing regimens for example, for insulin and chemotherapy drugs.
- Introduction of pre-filled syringes and pre-prepared potassium bags to reduce risk of error when administering medicines. In addition, the hospital completed an audit on the concentrated potassium usage to determine key users of this high alert drug with a focus on reducing use in the paediatric wards.
- A leaflet called ‘medication safety pearls’ provided a list of high alert medicines including safety alerts related to insulin, direct oral anticoagulants (DOACs\textsuperscript{‡‡‡}) and high alert antibiotics such as gentamicin.
- A medicines management technician’s programme was introduced to improve stock control of all drugs including high alert drugs at ward level.

The hospital set up an atrial fibrillation clinic with the support of the pharmacy service to manage atrial fibrillation and supervise the use of direct oral anticoagulants (DOACs). A subsequent audit of the service highlighted that 15% of consultations with clinic pharmacists resulted in a change of type or dose of anticoagulants for the patient supporting medication safety.

The Peri-Operative Medicines Committee (POMC), which is a sub-committee of the Drugs and Therapeutics Committee, also introduced high level risk reduction strategies (appendix 4) across the theatre department to:

- Standardise stock list of drugs and equipment to support consistency in terms of medication stock and location and reduce interruptions to work flow during anaesthesia.
- Stored look-alike sound-a-like drugs in the paediatric theatre in different storage locations to reduce medications errors.

\textsuperscript{‡‡‡} Direct oral anticoagulants (DOAC) are a group of new anticoagulants that either treats or prevents blood clots.
Standardised use list of medications and equipment to deal with anaesthetic emergencies in infected cases using an ‘infected case anaesthetic emergency box’.

The Pharmacy Department recently audited medicines information on display in clinical areas in the acute wards in line with hospital approved policies in 2017. Recommendations included a plan to have a dedicated notice board on each ward and review poster information every two years. The hospital should audit medicines information on display in clinical areas in the paediatric wards following this inspection with a view to updating medicines information displayed in all clinical areas.

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.

Tallaght Hospital had systems in place to support the provision of patient information and education in relation to medication usage. Patient information leaflets were provided to patients in relation to medicines. A “Know Your Meds” campaign was established at the hospital with the aim of increasing patient awareness with regard to their medications through the use of a medication leaflet that was carried by the patient with a record of their medicines. Senior Hospital Managers told inspectors that while patient education was not specific to one profession, ultimate responsibility lay with the prescriber. In addition, inspectors were told that clinical nurse specialists provided education and support to patients, for example, around the management of respiratory disease.

As part of the inspection, HIQA requested that a small sample of hospital outpatients attending the Outpatient Department complete an anonymised questionnaire in relation to prescribed medications. The questionnaire was completed by 15 people who had been inpatients in Tallaght Hospital within the past year and who were prescribed regular medications. Of the 15 patients surveyed, three patients had not been prescribed any new medicines and 12 patients had been prescribed new medicines. Of these 12 patients:
• Nine of the patients said that while in hospital, a staff member had explained the purpose of new medication in a way that they could understand.
• Seven of the patients said that prior to discharge from hospital, a staff member told them about possible medication side effects to look out for following discharge home.
• 11 of the patients said that they received instruction on how to take their medications at home.

It is acknowledged that this was a small sample of patients who completed the anonymised questionnaire in relation to prescribed medications at the hospital’s Outpatient Department, and therefore was not representative of all recently discharged patients taking prescribed medication. The information did however, provide some information about outpatient’s understanding of medications and could be expanded upon and used to identify opportunities for improvement.

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 Pharmacy Department in conjunction with the Drugs and Therapeutics Committee and the Nurse Practice Development Department had developed and implemented medication management policies, procedures, protocols and guidelines to support safe medication management systems within the hospital for both the adult and paediatric services.

Hospital managers told inspectors that all medication-related policies, procedures and guidelines were reviewed by the Drugs and Therapeutics Committee and approved by the hospital Executive Management Team Committee prior to implementation. Medication policies, procedures, protocols and guidelines were available to staff through the hospital’s controlled document management system and in the Adult Medicines Guide. The implementation of changes to hospital policies, procedures and guidelines was supported by staff education and information sessions. In addition, the hospital completed an audit of medication-related policies approved in 2016.
A telephone medicines information service was provided by the Pharmacy Department and was available at the point of care in clinical areas. This process was also outlined on an algorithm in the adult service medication management policy. This service provided ready access to expert advice in the management of medication related queries, and was open to all staff. In addition, ward based clinical pharmacy staff provided key information about medication to medical, nursing and other clinical staff, as well as to patients. However, on the day of inspection, inspectors found the availability of up-to-date policies; procedures and guidelines on the paediatric ward were not consistent with the findings in the adult service.

The Pharmacy Department had established and maintained a medicines guide\(^{555}\) The medicines guide was accessible in printed format, via computer desktops in the hospital and as an app which could be downloaded to mobile phones or tablets. This use of mobile technology gave prescribers easy access to the guidelines at the point of prescribing.

Multiple sources of medication information were readily available to staff involved in medication use including the;

- British National Formulary in print and in electronic formats.
- British National Formulary for Children in print and in electronic formats.
- Intravenous drug monographs for the general wards.
- Adult Medicines Guide.
- Adult Medicines Guide application.

Healthcare staff required 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 ready access to patient diagnostic results on computers in clinical areas across the hospital.

\(^{555}\) Medicines Guide: a guide that contains the agreed policies involving medications as well as the hospital medication formulary
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 is an important error prevention strategy when combined with other strategies that strengthen the medication use system. Medication safety education was included in induction programmes and provided by the Medication Safety Manager for all new clinical staff. However, participation in this course was not mandatory for all medical staff. Documentation provided to inspectors indicated that the induction training programme for medical interns was well attended.

The Pharmacy Department had weekly education meetings for all pharmacy staff including journal club meetings. Additional feedback and education was provided at the consultant ward rounds which clinical pharmacists attended as part of the Collaborative Pharmaceutical Care model at Tallaght (PACT) project subject to available time.

A PACT competency training programme was provided to all clinical pharmacists involved in the delivery of the PACT service.

Inspectors were informed that non consultant hospital doctors attended regular teaching sessions as part of their continuous professional development (CPD). Pharmacists were invited to provide informal education sessions at these meetings as required.

An on-line medication safety programme which focused on high risk medications was available to all staff including medical and nursing staff. Hospital managers told inspectors that they were currently rolling out training on the risk register and the national open disclosure policy.

The Pre-Operative Medicines Committee introduced teaching sessions with interns on the pre-operative drug administration guidelines to support compliance with the guideline following an audit.
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.

HIQA found on the day of inspection that Tallaght Hospital had effective governance and oversight of medication safety in the adult services. The Drugs and Therapeutics Committee had initiated multiple proactive measures to enhance medication safety and to support prescribers. One example of these programmes was the introduction of a team based medication reconciliation programme to improve care and reduce the rate of serious adverse medication events. This programme facilitated medication reconciliation by clinical pharmacist and physicians at admission, during inpatient care and at discharge. In addition, the hospital had developed a computerised system called TEAMS to facilitate pre-admission and discharge medication reconciliation in high risk areas. However, notwithstanding the good medication safety practices observed in adult services, inspectors found some inconsistencies in paediatric services. The hospital, as a priority, needs to put in place improvements to address the discrepancies identified between adult and paediatric services to ensure medication safety practices are standardised across the hospital.

Prevention of medication errors is dependent on the presence of a well-organised reporting system, supported by a culture of openness around reporting, and greater awareness amongst staff of the systemic nature of many of these errors. The hospital had a system for reporting and addressing medication errors and near misses, and promoted an open reporting culture for learning from medication-related incidents and near misses. HIQA note that while there was a positive trend in reporting in 2016, the majority of medication incident reports were submitted by clinical pharmacists and nursing staff. Therefore, as a next step, senior managers need to work to broaden out participation in the programme beyond the pharmacy department, and work in particular to promote systematic audit and incident reporting amongst other clinical staffing groups.

Audit represents a key component of all effective clinical governance programmes. Clinical audit in the Tallaght Hospital was well supported by clinical governance structures and HIQA found that the hospital had conducted a number of audits relating to medication management. Inspectors found that the hospital had successfully implemented a number of quality improvement initiatives to reduce medication errors which were supported by senior Hospital Managers and had
developed medication policies. Inspectors were informed of multiple proactive measures to reduce the incidence of medication errors associated with high-alert medications including an e-learning programme. None of these strategies was meant to replace vigilance, but each can greatly augment the safety of practice.

The hospital had a medication plan with clear defined goals for 2017. However, the hospital should build on their work to date to develop a medicines safety strategy that sets out a clearly articulated multidisciplinary vision for medication safety across both adult and paediatric services. In the absence of national guidance in this area, international guidelines, which outline best practice in relation to medication safety governance and improvement are available, and should be considered by staff responsible for patient safety in the hospital setting.

Overall, this inspection found a significant amount of innovative practice, employed to enhance medication safety which would be of value to review by other hospitals. It is recommended that this report is shared with senior managers, clinicians and other relevant staff at Tallaght 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 particularly in the paediatric services.
4. References


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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

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

Medication Safety Organogram

**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.)
Appendix 4: Hierarchy of Effectiveness of Risk Reduction Strategies in Medication Safety

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