MANAGEMENT OF MEDICINE ERRORS WITHIN DEPARTMENTS/WARDS

Improving medicine safety is a priority for NHS Grampian.

The following guidance is provided for healthcare staff to effectively manage adverse events involving medicines on their wards/departments, thus improving the safety of medicines.

A medicine adverse event (or incident) can be defined as "any incident where there has been an error in the process of prescribing, dispensing, preparing, administering, monitoring or providing medicines advice, regardless of whether any harm occurred or was possible"[(1)]. It is estimated that medicine adverse events account for 10% of all adverse events in NHS acute services[(2)]. Furthermore, of all the adverse advents in NHS hospitals that result in death of the patient, medicine incidents are involved in 20% of cases[(3)]. The PROTECT study[(4)], and other studies that have investigated medicine errors in hospital settings, have shown that the causes are multi-factorial and that a range of interventions at individual, ward and system level are needed to address these.

There follows a range of interventions which could be adopted by wards or departments which can help improve medicine safety:

1. Ward/ Department medicine safety "Champions"

Each team, ward and department is encouraged to identify a multi-disciplinary group to regularly review medicine adverse events, looking for trends and reflecting on the potential learning requirements of their team. This group can also encourage their team to report medicine adverse events, and give feedback on outcomes, thus, encouraging team involvement in improving medicine safety.

2. Use of Datix

The reporting of medicine errors helps to reduce risk to patients and staff if managed appropriately. All staff should undergo training to support good reporting and adverse event management. High quality incident reporting is required to improve the analysis of trends. The medicine adverse event should be reported via Datix as soon as possible after the event and staff should be encouraged to provide a full and accurate description of events. Each event can be unique in its presentation, so it is important that staff provide a detailed account, to gain a full understanding of the processes/human factors involved in its cause and so to reduce the occurrence of future errors.

Staff should be given clear guidance as to the "First Approver" who should be chosen within the Datix reporting form – i.e. who should manage the medicine adverse event. Often this is the reporter's team leader but it may more appropriately be, for example, the Consultant, pharmacy manager, or AHP team leader. Note – events which originate from another area, specialty or service should ideally be managed by that service. Staff should be empowered, not just to fill in the Datix report, but to discuss the event with their line manager and seek feedback on the investigation including plans to reduce the incidence of that error type occurring in the future. Staff involved in the medicine incident should be supported and have time to reflect on events, identifying learning points and developing action plans with their team leaders to manage performance.

Using Datix to look for trends and learning points:

Displaying medicine adverse event trends/shared learning to staff in a meaningful and interesting manner will help the team stay motivated and aware that progress is being made to improve medicine safety.

The following are suggested standardised searches for medicine adverse events which have been populated into "My Reports" within Datix. From these 5 searches wards/departments can highlight any trends in medicine adverse events, and review all the events which resulted in patient/staff harm. If a department would like to discuss other searches, the Quality Informatics Team can provide further support - contact details [redacted]

By setting specific learning goals or outcomes, and using the Model for Improvement/PDSA cycles, or other proven improvement methodology, medicine safety within departments and wards can be improved.

The following 5 Datix searches can be found in "My Reports" under the prefix "medication", and will only report back on your area of work, ward or department, depending on an individual's log on permissions.

A. "Medication – all medication adverse events by month (date prompt)"

This search will include all medicine incidents by monthly count from which further details can be viewed if required.

B. "Medication – medication adverse events by stage"

This search breaks down medicine errors into the 7 stages at which the medicine adverse events occurred:

- storage/supply
- prescribing
- dispensing/preparation
- administration
- recording
- provision of information
- monitoring/follow-up

This helps teams to spot whether any particular stages involved in medicine incidents require further investigation and improvement.

C. "Medication – high risk meds adverse events by month (w/prompts)"

This is a search for adverse events involving high risk medicines. High risk medicines are those that bear a heightened risk of causing significant harm to individuals when they are used in error. Examples of High Risk Medicines – top 10:

- Anticoagulants – warfarin, heparin, dalteparin, NOACs (e.g. rivaroxaban)
- Insulin
- Methotrexate
- Digoxin
- Anaesthetic agents

- Intravenous potassium
- Opioids – e.g. morphine, pethidine, oxycodone, methadone
- Lithium
- Certain anti-infectives – Vancomycin, Gentamicin
- Cytoxics

D. "Medication – adverse events involving medicines reconciliation"
This is a search for medicine adverse events which occurred as a result of medicine reconciliation problems. Medicines reconciliation is the process of obtaining an accurate list of medications currently taken by the patient, including allergies and adverse reactions.

Medicines reconciliation should occur at all stages of the patients' journey – on admission, transfer and discharge. Inaccurate medicine reconciliation can lead to prescribing errors, and missed or delayed doses. It can also potentially extend patients stay in hospital and cause adverse health outcomes. It is therefore important to highlight where and when these problems are occurring in order to try to improve the accuracy of medicine reconciliation.

E. "Medication – top 5 drugs involved (date prompt)"
This search will provide a department/ward with a list of the top 5 drugs reported in the "drug administered" field. Note: this will not include reports if multiple drugs have been entered in this field.

This is a good search for wards to see which medicines appear to be a problem in their area and teams can then target education/discussions around these medicines to reduce future errors.

3. Use of in-house medicine management projects/toolkits to improve medicine safety

Other data which the ward/department collect around medicine management can be useful as a basis for discussion at Quality Meetings to drive forward improvements in medicine safety. This may include in-house **audits of medicine reconciliation**, or process/outcome measures already incorporated into the relevant **Scottish Patient Safety Programme** for their area.
Further suggestions include:

A. Having a "***Prescribing Huddle'***
This could be a short weekly gathering to quickly highlight any errors or issues that have been revealed during that week. This huddle can include junior doctors, a senior doctor (consultant or registrar), nurses and the ward pharmacist and be used to provide learning points for the Quality, Safety or M&M meetings on the ward.

B. RACH have successfully run "***Zero Tolerance***" weeks
Any error or ambiguity, on drug prescription sheets or discharge prescriptions is immediately brought to the relevant staffs' attention and rectified – this allows staff to identify areas of improvement required in their own practice and evaluate quickly how they are going to address these.
The purpose of "Zero Tolerance" was not to confront staff but to enable staff to engage in a dialogue with colleagues about patient safety issues that affect patients. The Quality Governance and Risk Unit can provide further details.

C. Having a structured "***Ward Round Checklist***"
These include checks on, for example, whether medicine reconciliation has been completed on admission, transfer and preparation for discharge can be introduced and adjusted to suit the team.

Other medicine related checks could include checks on "daily medicine review" or "medicine monitoring performed" for example.

D. Allowing time for a "***Prescribing Pause***"
After reviewing each patient on a ward round a "prescribing pause" will empower the prescriber to clarify with senior team members any medicine changes which are required post patient review, and to allow time for questions by the prescriber. This helps to improve both the accuracy of prescribing and speed of discharge planning.

Lastly, a whole, multidisciplinary team approach is encouraged to identify if any process or systems in the workplace can be changed, and/or resources be directed to improve medicine safety. Shared learning about medicine adverse events, including any departments' success with improving medicine safety, is encouraged both across departments and the organisation, as appropriate. Advice and support about sharing learning can be found under the Quality Governance and Risk Unit (QGRU) pages on the NHS Grampian Intranet.

If your ward or department have other methods for managing medicine adverse events please contact either the QGRU or the Medication Safety Advisor, [redacted] at [redacted]

References:

1. National Patient Safety Agency Safe Medication Practice Team. *Safety in Doses, Improving the use of medicines in the NHS.* National Reporting and Learning Service; 2009.

2. Hamad A, Whittlesea C, Cavell G, Wade P. Incidence of antibiotic adverse drug events among hospitalised patients. *International Journal of Pharmacy Practice* 2012;20 (Suppl.1)

3. Alrwisan A, Ross J, Williams D. Medication incidents reported to an online incident reporting system. *European Journal of Clinical Pharmacology* 2011; 67(5): 527-532.

4. Prevalence and Causes of Prescribing Errors: ThePRescribing Outcomes for Trainee Doctors Engaged in Clinical Training (PROTECT) Study. Dr Sarah Ross et al. *BMJ Qual Saf* doi:10.1136/bmjqs-2012-001175