Medicine Administration in Community Hospitals

Sept – Oct 2016

Purpose of the afternoon

- Increased number of DATIX reports
- Increased number of medication incidents
- Time out to consider improving safety
- Improved processes relating to medicines
- What sort of support can be offered
- Way forward

Plan

- Medicines omissions
  - Are all medicines the same?
  - When is escalation important
- Learning from DATIX reports
- Results of the Missed Dose Audit
- Code of Practice for Medicines
- Way forward

Medicines Omissions

- **2010 NPSA Rapid Response Report:**

- 21478 incident reports on missed or delayed doses between 2006-2009
- 27 were reports of death and 68 of severe harm

- **2013 Francis Report:**

Highlights the role missed medicines play in patient safety

- **Increase in number of Fife DATIX reports**

Common themes about Medicine Omissions

- **Testing Audit Tools:**

Confirmed appropriateness of audit – previously in ASD

Reducing Harm from Delayed or Omitted Medicines

Medicine doses are often omitted or delayed for a variety of reasons. Although only a small percentage of these occurrences may causes harm or have the potential to cause harm, delays or omissions in prescribing or administration of some **critical medicines** can cause serious harm or death. This may be as a result of errors during prescribing, dispensing, supply or administration.

Definition

1. Omitted Medicine

(a) Failure to prescribe a medicine in a timely manner

(b) Failure to administer a dose before the next dose is due or,

(c) For once only (stat) doses, failure to administer a medicine within 2 hours of the time the dose is due (prescribed).

2. Delayed Medicine

Administration of a medicine within ONE HOUR of the prescribed time i.e. an 8am dose should be given between 7am and 9am.

Are all medicines the same?

- Consider the groups of drugs & rank the medicines in order from harm to no harm to the patient with missing doses!
  - Laxido, Baclofen, Clopidrogel, Eurax Cream, Dalteparin Inj
  - Aripiprazole, Fexofenadine, Levothyroxine, Ensure plus juice, Tiotropium
  - Doxycycline, Haloperidol, Mirtazepine, Simvastatin, Fluoxetine
  - Dexamethasone 2mg, Amoxicillin, Rivaroxaban, Co-careldopa 125, Vita-savoury chicken sachet

Are all medicines the same?

- My suggestions!
  - Dalteparin Inj, Baclofen, Clopidrogel, Laxido, Eurax Cream
  - Aripiprazole, Levothyroxine, Tiotropium, Fexofenadine, Ensure plus juice,
  - Doxycycline, Haloperidol, Mirtazepine, Fluoxetine, Simvastatin
  - Co-careldopa 125, Dexamethasone 2mg, Rivaroxaban, Amoxicillin, Vita-savoury chicken sachet

What about if > 1 dose is missed?

- Laxido – 10 doses, Baclofen – 2 doses, Clopidrogel – 1 dose, Eurax Cream – 3 doses, Dalteparin Inj – 1 dose
- Aripiprazole 2.5mg – 2 doses, Fexofenadine 180mg – 5 doses, Levothyroxine – 1 dose, Ensure plus juice – x 10, Tiotropium 18mcg x 1
- Doxycycline 100mg x 1, Haloperidol 0.5mg x 1, Clopidogrel x 3, Fluoxetine 40mg x 3, Dexamethasone 2mg x 1
- Voltarol gel x 3, Amoxycillin 500mg x 3, Haloperidol 0.5mg x 5, Fultium 3,200 x 5, Furosemide 40mg x 5, Co-careldopa 125 x 2

My suggestions - escalation!

- Dalteparin Inj – 1 dose, Baclofen – 2 doses, Laxido – 10 doses, Clopidrogel – 1 dose, Eurax Cream – 3 doses,
- Aripiprazole 2.5mg – 2 doses, Levothyroxine – 1 dose, Tiotropium 18mcg x 1, Fexofenadine 180mg – 5 doses, Ensure plus juice – x 10,
- Dexamethasone 2mg x 1, Doxycycline 100mg x 2, Clopidogrel x 3, Fluoxetine 40mg x 3, Haloperidol 0.5mg x 1
- Co-careldopa 125 x 2, Furosemide 40mg x 5, Amoxycillin 500mg x 3, Haloperidol 0.5mg x 5, Fultium 3,200 x 5, Voltarol gel x 3

Why does it happen?

- themes identified:
- intention to prescribe – not prescribed
  - new medicines or doses for a set course of medicine
  - routine regular medicine;
- medicine – not available – normal working hours;
- medicine – not available – out of hours;
- patient not on ward;
- unfamiliar preparation, administration, method or device;
- route of administration not available;
- medicine administered to wrong patient;
- discharge medicine not supplied.

PREVENTION OF MISSED DOSES

REASON FOR POSSIBLE OMISSION

- **Medicine not available**
- **Prescribing issue** e.g. illegible, not signed, or unclear as to whether to be given or withheld. Possible contraindication or adverse effect
- **Route not available** e.g. Patient nil by mouth / difficulty swallowing / No IV access
- **Patient refused**
- **Patient not available**

ACTIONS - CONSIDER URGENCY AT ALL STAGES

- ✓ Check cupboards, trolley and POD cabinets
- ✓ Can you use patients own supply?
- ✓ Can you borrow from local area / transfer from previous ward?
- ✓ Notify medical staff and clarify if missing one dose is detrimental to the patient
- ✓ Check if drug has been ordered from Pharmacy?
- ✓ Out of hours ask duty co-ordinator:
  - If medicine available from emergency cupboard,
  - If unavailable to contact emergency duty Pharmacist
- ✓ Record on the Kardex as per code on front page

- ✓ Resolve ambiguities promptly with medical staff / prescriber

- ✓ Consider alternate routes/formulations
- ✓ Check dose equivalencies e.g. IV dose not always equivalent to oral, difference in frequency when changing from Sustained Release preparations

- ✓ Assess reasons
- ✓ Symptomatic treatment?
- ✓ Cognitive issues?
- ✓ Correct medication prescribed?
- ✓ No longer required?
- ✓ Adverse effect?

- ✓ Assess urgency and ensure process to follow up once patient is available

It is not acceptable to miss multiple doses of any prescribed medicine

To avoid harm to patient from delayed / omitted medicines:

Notify the Nurse in Charge and contact medical staff, agree plan of action and document. Follow up promptly (at a minimum before next dose is due) then consider:

- Is it appropriate to delay treatment?
- What is the risk to patient of delayed / missed doses? e.g. treatment failure, withdrawal effects etc
- Can an alternative choice of medicine be used?

References:
1. Safe and Secure Handling of Medicines in hospital wards, theatres and departments, April 2008
2. Nursing and Midwifery Council Standards for Medicines Management, 2008
3. NPSA Rapid Response Report. Reducing harm from omitted or delayed medicines in Hospitals, 2010

Consider urgency at all stages.
The list below is not exhaustive – every patient/clinical situation is different.
It is not acceptable for multiple doses of any prescribed medicine to be missed. Doses missed at previous medicine administration times should also be followed up – **do not** assume that someone else has done this.

Urgent/Life Threatening:
Must be given immediately
- Initial treatment of life-threatening conditions e.g. status epilepticus, emergency resuscitation
- Antidotes to medication overdose

Urgent/Life Threatening:
Must be given within 1 hour maximum (also consider critical time window for administration of specific medicines)
- First parenteral dose of anti-infectives
- First parenteral dose of anticoagulants or thrombolytic
- First parenteral dose of Insulin
- First parenteral doses of anticonvulsants including benzodiazepines
- First parenteral dose of medicines used in resuscitation including colloid or crystalloid IV fluids

Critical Category:
Must be given within 2 hours maximum:
- Parenteral doses of anti-infectives (and G-CSF)
- Parenteral doses of anticoagulants and thrombolytics
- Parenteral doses of Insulin
- Parenteral doses of anticonvulsants including benzodiazepines
- Parenteral doses of medicines used in resuscitation
- Parenteral doses of Chemotherapy
- "Stat" doses of any oral, parenteral or nebulised medicine
- Regular Parkinson's Disease medicines
- Regular Opiate analgesics
- Medicines where doses have already been missed
- Transplant medicines

What is a Critical Medicine?

Group one:

- Resuscitation medicines including colloid or crystalloid IV fluids.
- First doses of injected anti-infectives.
- First doses of injected anticoagulants or thrombolytics.
- First dose of injected anticonvulsants including benzodiazepines.
- “Stat” doses of any medicine if the prescriber requires the dose to be administered before the next regular medicine administration round.

What is a Critical Medicine?

Group two:

- Insulin - linked to when food will be actually eaten.
- Strong analgesics.
- Bronchodilators.
- Glyceryl trinitrate.
- Parkinson's disease medicines.
- Anticonvulsants

Some reported DATIX incidents

- Consider the medicine
- Description of the event
- Action taken
- Possible causes

Medicine	Description	Action Taken
dalteparin	Dalteparin not signed for at 1800 hours ?missed dose.	Todays dose given. Datix completed.

Medicine	Description	Action Taken
All meds on one page	On the 11th April one page of the drug kardex had not been initialled as being administered for the drugs @ 08.00am. There were dots in each box, suggestive of the meds being dispensed. Asked the nurse who did that drug round on the 12th about this, she stated that she definitely gave the drugs that is what her dots were for, there were no problems with the patient taking them. We have dated that they were signed in retrospect to document that they had been given.	This Kardex cannot be located following thorough search within ward and other Ward. Discussed with senior nurse, the decision to sign retrospectively was agreed with pharmacy liaison. Kardex with these dates cannot be located. Have requested assistance from ward clerks and doctor who has rewritten it..

Apparent Causes
1) Increased pressure on ward due to patient demand, the staff nurse forgot to go back and administer the drug. 2) Care in using kardex 3) Separate procedure for dispensing & administering meds 4) Lost kardex?

Medicine	Description	Action Taken
phenobarbitol	At 22.45 hours, patient found to be having a seizure by Staff Nurse and NA. Upon checking prescription Kardex at 10pm. Identified that 6pm phenobarbital had been omitted without explanation in nursing notes. Stated in nursing notes that "all meds taken". Once patient stable - controlled drug check carried out and found that drug had definitely not been administered at 6pm as prescribed.	Controlled drug stock check - found drug number not changed since previous evening and drug had not been given tonight. Pces called and discussed with Dr. He advised that since seizure activity had halted, NOT to administer per rectal diazepam. Instead he arranged a ward visit so that a once only dose of Phenobarbital 60mg may be given to patient tonight - instructed 15 minutely observations until GP review. Dr arrived and patient remained stable with FEWS of 0. Once only dose of phenobarbital prescribed and adminsitered by staff nurse.

Apparent Causes

1) Due to increased pressure on ward due to patient demand, the staff nurse forgot to go back and administer the drug. Staff nurse aware of dangers of missing doses of drugs.
2) Procedure around administration of medicines
3) Emphasis on importance of anticonvulsants

Medicine	Description	Action Taken
Insulin	Patient did not receive insulin at 12.00 noon. Patient had BMs done but had said would take insulin after lunch. Patient does this quite often so assumed pt would come and ask member of staff for insulin. Noticed at 16.00 so BMs were done and was 26.9 at this time. Tea time insulin was given which was self done by patient then pt went and got a glass of milk. Will retest again before tea time. Pt has not had any adverse effects and feels fine within self.	Patient is able to self administer his own medications, therefore only 1 nurse was required to supervise insulin administration. Discussed with both trained staff the seriousness of there ommission. Medication incident form completed and full discussion regarding COPM. Nurses involved to attend Safer administration of medication training.

Apparent Causes
1) Need to check self-administration of insulin & record administration 2) Critical nature of medicine

Medicine	Description	Action Taken
Fentanyl patch	patient noted to have missed fentanyl patch 12mcg. scn aware out of hours contacted no compliants of pain prn oxynorm if required. Transdermal patch prescribed which is replaced every 72 hours. Kardex had been re-written and there had been miscount of days by nursing staff. See Kardex. Last dose given did not show on new Kardex. Next dose given was 24 hours early. Kardex then crossed off to match in with previous Kardex. Doctor did not isolate dose due dates on Kardexes. Nurse error when changeover of Kardex.	CD Omission error noted on 1800 medicine round and reported immedidately to SCN. PCES contacted and attended to prescribe once only prescription. Nurse responsible contacted via telephone and realised a miscount of days/hours for administration and confirmed transdermal patch not changed. Medication incident form completed.

Medicine	Description	Action Taken
Fentanyl patch	Staff were assisting patient with personal care, during this a fentanyl patch 100mcg/hr was found stuck to patients foot, this did not belong to patient and was not prescribed.	Removed patch; informed duty charge nurse; contacted out of hours for advice; observations taken

Medicine	Description	Action Taken
Prednisolone	Discovered that patient has not been given prednisolone for the last 3 days.	Patients observations taken fews 3. Contacted PCES.

Medicine	Description	Action Taken
Dalteparin	Patient wakened at 0500hrs on 23/05/16, asked Nurse 'A' why she was not getting her 'jag'. On checking medicine kardex it was noted x2 missed doses of Fragmin 5000 units, 1800hrs, 21/05/16 and 22/05/16.	Discussion with nursing staff involved. Medicine administration is protected task. Dalteparin prescribed on inside cover of Kardex. Medication alert now on nursing handover to highlight patients on Fragmin. Nurse in charge to check Kardex following 6pm medication round. Safety brief updated to include same.

Medicine	Description	Action Taken
Multiple meds	Alerted by patients visitor to medication hidden in glasses case. Patient states that these were his lunch time medications and admits to having hidden them with a view to taking his	Alerted all staff to the need to ensure patient takes all medications. Added alert to ward handover. Drugs discarded, as a result patient has missed a dose

Missed Dose Audit

- Quantify the problem
- Establish a baseline
- Find out the reasons for omissions
- Possible causes / themes
- See if the situation can be improved
- Undertaken by ME

Results of missed dose audit

	Balgonie	Balcurvie	Letham	SGSU	RWMH	Total
No. of kardexs audited.	20	20	14	9	15	78
Total no. of doses over 5 days.	1267	1357	1024	488	1076	5212
Total no. of doses per kardex	63	68	73	54	72	67
Total no. of missed doses over 5 days.	71	121	88	62	52	394
% number of missed doses over 5 days	6.0%	9.0%	8.5%	13.0%	5.0%	7.6%
Average number of doses missed per kardex	3.6	6.1	6.3	6.9	3.5	5.1
No. of missed doses not signed or coded.	3	6	3	3	5	20
No. of missed doses coded as A (Pt Refused)	60	17	55	43	33	208
No. of missed doses coded as B (Pt unavailable)	1	14	0	0	0	15
No. of missed doses coded as D (med unavailable)	0	30	4	0	0	34
No. of missed doses coded as G (withold - clinical)	6	0	15	0	5	26
No. of missed doses coded as I (nausea / vomiting)	0	1	0	0	0	1
No. of missed doses coded as J (unable to swallow)	0	39	0	0	1	40
No. of missed doses coded as L (other)	1	11	11	5	6	34

Intention

- These sessions
- Involve Drs
- ? Use of ‘omissions of medicines’ sheet after each round
- Repeat the audit – measure improvement
- Fewer kardexes?
- Eventually data collection on wards

Omissions of Medicines **Hospital/Ward _____**

Please complete during medicine rounds and reconcile any medicines omitted at the end of the round by discussing with medical staff and agreeing appropriate actions.

Date/Time	Patients Name	Bed/Bay	Medicine Omitted	Reason	Action Taken	Outcome + Date/Time

Code of Practice for Medicines

Medicines Administration & Recording Policy

4.9.6 If a dose is delayed by more than 1 hour for any reason, then this must be discussed with an appropriate prescriber and the guidance contained in Appendix A- Management of Missed Doses must be followed.

If it is still appropriate for the dose to be given, then this may be carried out with the **actual** time of administration noted on the administration record alongside the signature for administration.

It may be necessary to amend the timing of subsequent doses, which would usually be carried out by writing a “one off” prescription(s).

5.2.2 In addition, to above all medication incidents and near misses e.g. missed dose must be reported to the line manager as soon as possible and recorded in accordance with the NHS Fife Adverse Events Policy (GP/I9) on the relevant NHS Fife incident reporting system (Ref 7.6).

Consider, what can we do to improve?

- Improve prescribing
- Improve administration process
- Medicine omission sheet & role of NiC
- Escalate when appropriate
- Make a point of medicine admin at handover
- Repeat the audit – East Div Patient Safety Grp
- Continue to monitor DATIX reports

ANY QUESTIONS?