Reducing Missed Doses of Medication in NHS Fife

• What is the improvement?

Missed doses of medicines have long been associated with adverse events in hospital inpatients (Coleman 2013)[1]. Due to this known harm NHS Fife has made reducing missed doses a priority.

Within the some of our community hospitals it became apparent that there was an increase in the number of DATIX reports regarding missed doses of medicines. Investigation into this highlighted that there was no process of auditing missed doses for assurance of prescribing, administration and record keeping. There was also a lack of clarity around what to do if a dose of medication is missed and how medicines differ in terms of severity if missed.

For that reason two changes were implemented:

1. the sourcing and use of an audit tool, and
2. the development and delivery of education.

• What did we do?

The process started by forming a small multidisciplinary team with senior representation from pharmacy and nursing.

The audit tool previously used in the Acute Division was adapted and trialled in one ward. The tool was found to be fit for purpose and was then used throughout the other wards.

Findings were then discussed by the team and it was agreed it would be useful to gain an understanding of the other community hospitals and some mental health areas. Data regarding missed doses were then collected from both the East Division and Mental Health areas.

Data collection involved the review of twenty patient Kardexes picked at random, looking at the last five days. In areas with less than twenty patients all Kardexes were reviewed. Teams were given immediate feedback both verbally and in written format.

The team then discussed the findings and the way forward. It was decided that the need for education was evident. The education gaps were as follows:

1. Registered nurses were unclear about what to do should they find a blank box on a Kardex and the reporting of incidents.
2. The majority registered nurses could not differentiate between the consequences of missing a dose of paracetamol to missing a dose of Parkinson's medication.

3. Registered nurses were not familiar with the Code of Practice of Medicines.

To address these areas the team worked on developing an education session to be delivered to staff, at one of our sites in the first instance.

Education Sessions

The main learning objectives from the sessions were:

- Time to consider one's own responsibilities in relation to medicines management.
- A forum to discuss with peers ways to improve processes surrounding medicines management.
- To raise awareness of the detail contained in the Code of Practice of Medications, and
- To demonstrate how DATIX can be used for learning

The learning session also allows for group discussion and group learning.

The PowerPoint presentation and quiz used during the education session are available on the SPSP Medicines website.

Eight sessions were delivered with 30 Registered Nurses, 3 student nurses and two medical staff attending.

Collation of the evaluation forms showed the following:

1. 100% stated the education made them think about their practice.
2. 100% stated at least one thing they learnt in the session.
3. 76% stipulated one thing they would do differently following the session.
4. 100% of the respondents stated they would recommend this becomes annual education.

Specific Feedback

One thing that you learned today: "Never presume anything relating to drugs, check everything", " Legislation around consent & capacity".
Anything you will now do differently?: " Think of importance of drugs more" , "get the doctor to review drugs more often" and "ensure drugs are started at 07.00am".

• Did the changes lead to improvement?

Overall there has been an 11% reduction in the number of missed doses from the three wards that took part in the education. This reduction has been noted between July/August to November 2016.

However it has been noted that the audit tool is very sensitive, for example one patient that is on many medications who is continually off the ward due to compliance issues or who refuses medications can really skew the findings. It is unknown how we get around this –

the only intervention that we have found is to give detailed feedback to the nursing teams to reflect findings. The audit tool makes it clear how many medicines were missed for each patient so there can be a bit of narrative around the patients' circumstances rather than labelling that ward with a high missed dose rate.

Other interventions aimed at reducing missed doses include the introduction of red aprons for nurses to wear during medication rounds, and highlighting of medicines that are to be given out with usual medicine rounds on the safety brief.

It will be interesting to see how the other areas who have not engaged in the education have reduced their numbers as a result of the audit tool highlighting the problem and any other noted interventions.

- **What would the team have done differently?**

We would have audited less Kardex record sheets but audited more frequently. This may have given a clearer picture of the impact the audit compared with the education sessions.

- **What are the Next Steps?**

A further test of change is planned for December 2016, with the introduction of an omitted medicines record sheet (see below). The aim of this sheet is to list all medicines not given to each patient at the end of each medicines round, why they have not been given and what action has been taken. This sheet is to be reviewed by a medical practitioner every day.

Omitted medicines record sheet:

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

Data will then be collected and reported every four weeks to monitor the impact of the sheet and the other interventions over time.

The educations sessions are continuing. One of the doctors who attended one of the earlier education sessions has offered to continue delivering the education to nurses and doctors.

We are now looking to review the areas that did not have the education sessions in order to compare results.

Reference:

1. Coleman et al. Missed medication doses in hospitalised patients: a descriptive account of quality improvement measures and time series analysis. Int J Qual Health Care. 2013 Oct;25(5):564-72.

For further information and resources regarding omitted medicines please visit the SPSP website:
http://www.scottishpatientsafetyprogramme.scot.nhs.uk/programmes/medicines/omitted-medicines