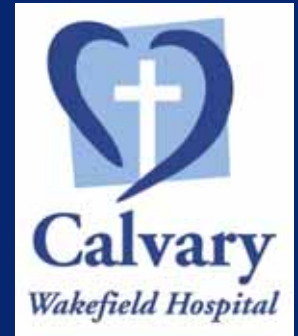




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Improving medication rounds for new graduates

Dr Cath Hall (School of Nursing and Midwifery, University of South Australia)

Ms Loren Madsen (Calvary Health Care Adelaide)



The setting



180 bed private hospital based on one campus – owned by the Little Company of Mary

- 51 medical beds (includes cardiac care and cardiac step down)
- remainder surgical
- busy surgical hospital in Adelaide (1001 joints in 2007)

Graduate nurse program

- 1 year in length, rotating through three areas
- all graduates have a reduced patient ratio during first 4 weeks (1:4)

Graduates 2007/2008

- 17 over 3 intakes in 2008; 15 in 2007
- All female
- 2 Enrolled / Level 2 nurses and 2 assistants in nursing (AIN) – 23.5% (2008); 2 AIN's (2007)-13.3%





Project drivers



Clinical educator recognised the concerning number of REPORTED errors (hospital data) related to 15 new nursing graduates (from 4 different wards)

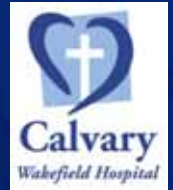
2007 – total 11 errors

- omissions 3
- Incorrect dose 7
- Blood product error 1





Methodology



Development of best practice through evolving practice development

- medication error data collected and analysed
- interviewed (group) 2007 grads about perceived cause of error
- medication competency practice implemented
- focus group of 2007 grads with 9 months experience (focus group questions not piloted)
- 2008 grads surveyed re this intervention (piloted prior)
- medication error data collected and analyzed
- evaluation of change using survey data



Results



Results of interviews (2007 grads) – what they perceived to be the cause of medication administration error

- Lack of time
- Lack of senior support
- Distractions and interruptions from staff
and patients
- Limited resources
- Illegible medicine orders
- Non-availability of medicines.





Planned intervention



2007

- **Series of three supervised medication administration rounds on commencement of graduate program**
(this later reduced to 2, due to time constraints)
- **Followed by practical medication competency assessment medication round**



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Focus group analysis 2007 grads



Five themes uncovered

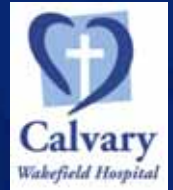
Three of these concurred with the literature (O'Shea 1999)

- **Quality of prescriptions**
- **Distractions and interruptions**
- **Workload and staffing levels**



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Focus group analysis 2007 grads



‘Patient’s drug chart very difficult to read. Patient's bells sounding because 6 patients want to be sat up for breakfast. It’s frustrating when you can’t read the charts. Couldn’t find the MIMs to try and access what drug it is and what it is for because there's only one on the ward. Team leader too busy with doctors to help’.

‘I had patients in the toilet that needed supervision. I had a physio wanting to get a patient up, Bells of my patients were ringing; breakfast came early before I could get to my patients to sit them up. I had a couple of patients with large numbers of medications. I had IV meds and oral meds to give and I had to get medication from the imprest as it was not on the ward’.



Focus group analysis 2007 grads



Plus two other themes - serious concerns were also uncovered from this focus group

- **Near misses** and **poor practice** described by each participant (n= 13)
- ‘ IV Antibiotic - - I got out Cephazolin instead of Cepholaxin, I got it out at the beginning of the shift, however picked up the error when I asked someone to check it with me . Phew!’
- ‘ yea, I cut corners... I’ve left the meds on the over way table for the patient to take later. I know that the drug is an antihypertensive but I don’t know anything more than that’



Development / changes for 2008



2008

- Clinical educator or senior RN checked each grads med chart at end of each shift (for first 2 weeks) - to date 3 omissions noticed and rectified (of 100's)
- Further evaluation using survey



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Grad survey 2008



Survey completed by the graduates (13 responses of 17) two weeks after the commencement of their first shift – i.e. after supervised rounds and medication practice competency assessment

- Questions about their apprehension including likert scale
- issues that caused them to feel apprehensive (prior to commencing work as a Graduate Nurse)
- benefit or not of the supervised medication rounds
- Asked for explanation as to why found beneficial
- Upon commencement of working as a Graduate Nurse was their prior apprehension justified?





Grad survey results



- Response rate 76%
- The length of time they had been a graduate nurse ranged from 2- 15 weeks
- 15% (n =2) had been enrolled nurses, all were female
- 61.5% definitely felt apprehensive before commencing work as a graduate nurse about administering medications

On the Likert scale however graduates were moderate in their apprehension

Apprehension	1 Min	2	3	4	5	6	7	8	9	10 Max
% of perceived apprehension by graduates PRIOR to commencing work	0	15.3%	15.3%	23%	23%	0	7.6%	15.3%	0	0



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Grad survey results



- **Prior to commencing their shifts, the graduates were most concerned with not being able to read the medication chart (84.6%)**
- **92.3% of graduates perceived the two supervised medication rounds, followed by the practical medication round competency to be beneficial (during the supernumerary shifts)**
- **This became 100% when the graduates were working autonomously**
- **Graduates commented on being able to ‘spot areas for improvement’, ‘having the chance to see how other nurses organized their medication rounds’**



Grad survey results

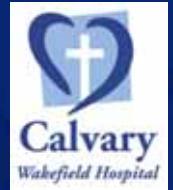


Other comments included:

- **More confidence in own ability to safely administer medications solo (84.6%)**
- **Knowledge of where medications are kept (76.9%)**
- **Able to source resources if unsure of medication actions or effectiveness (61.5%)**
- **Aware of how to order medications (53.8%)**
- **Aware of medication chart layout (53.8%)**
- **Better understanding of medication times (46.1%)**
- **Effective time management skills (46.1%)**



Grad survey results



- 61.5% of graduates felt justified in their prior apprehension

comments included

- It took 3 to 7 days to feel confident
- ‘Sometimes even if you know what you are doing there are still issues, and the doctors are not approachable or don’t care, therefore who do you ask?’



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Issues:

prior to

and on
commencement

Not able to read the writing on the drug chart	84.6%	61.5%
Not able to understand the order as it written incorrectly	46.1%	46.1%
Being responsible for an EN's medications as well as your own	46.1%	53.8%
Medications not available on the ward	23%	46.1%
Interrupted by patients questions or demands	23%	38.4%
Not able to organize time to administer medications safely	23%	30%
Unable to find a second staff nurse to check medications	23%	30.7%
Interrupted by other nursing staff requiring help	15.3%	7.6%
Not able to find a MIMS to look up medications	7.6%	0%



Evaluation of change



- **Medication practice competencies instituted**
- **Series of two supernumerary medication administration rounds, and competency assessment**
- **Focus group themes shared with new graduates to increase awareness of the issue**
- **2008 graduates x 17 current – no reported errors to date**





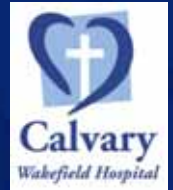
Where to from here: the future

- Will maintain practice competency supernumerary rounds, competency test and checking
- Will continue to investigate, analyse medication data error
- Future graduates will be included in all phases of this evolving practice development





Summary



- **busy predominantly private hospital, errors noticed by new grads in early weeks**
- **small scale study - 15 grads in 2007 and 17 in 2008, all female**
- **practice development – rolling intervention and evaluation**
- **minimal staff time required for practice competency supernumerary rounds, competency test and checking**
- **new graduates report beneficial**
- **no errors to date in 2008**



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References



O'Shea, E. (1999) "Review: Factors contributing to medication errors: a literature review. " Journal of Clinical Nursing 8: 496-504



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Questions?



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