Medication Management
issues for nurses working in rural and remote areas

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Background - the rural and remote challenge

A lack of pharmacy services across the state

- 116 acute QH hospitals
  - 48 have pharmacist/s employed on site
  - 21/48 sole pharmacist

- 68 acute hospitals with no pharmacist/s

- 67+ outpatient/primary health care centres where sole nurse/health worker supply medicines
Background

- In rural and remote services without a pharmacist, nurses are undertaking medication management roles not traditionally seen as nursing roles.

Roles include:
- Supply of medicines
- Medication history
- Medication reconciliation
- Generation and provision of DMR
Aim

- To identify issues associated with medication management for nurses working in rural and remote QLD Health sites, and to identify solutions
Method

- Rural/ remote session focus groups (10th Med Safety Workshop) – July 2007
  - ~50 rural/ remote nurses, sole pharmacists, Directors of Pharmacy
  - Brainstorm issues

  - 32 Rural/ remote (acute & PHC) facilities
  - Northern, Central, Southern AHS
  - DONs, RNs, ENs, QH Rural/ Remote Nursing Relief Program
Results

- Responses from
  - 14 rural hospitals (10 – 30 beds)
  - 2 Primary Health Care Centers

- 39 nurses responded
  - 10 (29%) DONs
  - 20 (57%) RNs
  - 5 (14%) ENs
Nursing hours & levels at rural hospitals

- 2/14 had a full-time pharmacy nurse

<table>
<thead>
<tr>
<th>Number of beds</th>
<th>14</th>
<th>14</th>
<th>17</th>
<th>12</th>
<th>20</th>
<th>30</th>
<th>10</th>
<th>11</th>
<th>15</th>
<th>25</th>
<th>16</th>
<th>23</th>
<th>10</th>
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<td>Nursing hrs per week</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td><strong>40</strong></td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>24</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td><strong>40</strong></td>
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<tr>
<td>Nursing Level e.g. NO1</td>
<td>-</td>
<td>-</td>
<td>NO2</td>
<td>-</td>
<td>DON</td>
<td>NO2</td>
<td>-</td>
<td>All RNs</td>
<td>-</td>
<td>NO1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>NO1</td>
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Orientation to pharmacy role

- 3/14 hospitals - formal orientation program for pharmacy nurse role
- 8/14 hospitals provide orientation program for relief staff
  - iPharmacy (6)
  - eLMS (2)
  - Supervised practice (5)
  - Competency assessment (4)
  - Orientation manual (6)
  - Workplace instruction sheets (1)
Pharmacy Support

- 3/16 (18%) have regular scheduled visits from QH pharmacist

- Frequency of visits
  - 2-3 months; 3 visits in 11 months; 1 annual visit

- Support provided by visiting pharmacist:
  - review supply and storage arrangements
  - information and advice to staff

- Pharmacy support via phone
  - QH pharmacist (16), Central Pharmacy (5), Community Pharmacy (7), Internet & pharmacy nurse at another hospital (2)
Medication management activities undertaken by nurses

**Medication Management: Activities undertaken**

\[ n = 39 \]

- **a** = supply meds for discharge or OPD
- **b** = admission history
- **c** = admission reconciliation
- **d** = provide CMI
- **e** = provide other med information
- **f** = discharge reconciliation
- **g** = prepare & provide DMR
- **h** = provide other healthcare providers with DMR
- **i** = Other (stock mgmt, document ADR, etc)
Should nurses undertake medication management activities in absence of a pharmacist?

- 14 = Yes, all activities
- 14 = Yes, some activities
- 5 = Yes, no comment

1 = Doctor should do this
2 = Trained pharmacy nurse
2 = no comment
Which activities should be undertaken?

If only some, which activities should be undertaken?

n = 14

- a = supply meds for discharge or OPD
- b = admission med hx
- c = admission med reconciliation
- d = provide CMI
- e = provide other med info leaflets
- f = discharge med reconciliation
- g = prepare & provide DMR
- h = provide primary healthcare providers with DMR
- i = Other (stock mgmt, document ADR, etc)
Which activities should be undertaken if pharmacist on site?

Should nurses be assisting with the activities if there is a sole pharmacist employed at the hospital?

\[ n = 39 \]

<table>
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<th></th>
<th>Yes</th>
<th>No</th>
<th>Not applicable</th>
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<tr>
<td>No. of Respondents</td>
<td>25</td>
<td>10</td>
<td>4</td>
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</table>
Major issues identified for rural nurses

- Lack of knowledge and skills (most common)
  - Lack of education programs
  - Drug interactions; Appropriate doses
  - Use of iPharmacy
  - Keeping knowledge current

- Workforce and workload
  - ‘Med supply takes us away from direct patient care for long periods of time’
  - Heavy reliance on agency and relief staff
  - Dispensary allowance inadequate
Major issues for rural nurses

- Issuing of medication
  - Requesting and seeking payment from patients
  - If patient can’t pay, may not process script -> adverse outcomes for patient
  - Filling DAAs – no local community pharmacy

- Dispensary management
  - Lack of standardised procedures for dispensary set up and management
  - Erratic supply, untimely delivery times from Central Pharmacy
  - Limited inventory
  - Need computerised labeling system
Major issues for rural nurses

- Legislative/ regulatory requirements
  - Concerns re: mismatch between legislation and what’s practicable e.g. second check for CDs prior to administration; phone order (RFDS); delay in doctor signing phone orders
  - Lack of understanding

- Others
  - Slow computers
  - Medical staff not writing scripts/ charts properly
What could be done to improve support for rural nurses providing medication management activities?

- Education and training
  - Additional workshops
  - Dedicated medication course for rural nurses
  - iPharmacy; eLMS
  - Pre-placement training for agency/rural relief staff
  - Opportunity to work alongside pharmacist for short periods
What could be done to improve support for rural nurses providing med management activities?

- **Regular site visits by pharmacists**
  - Assistance with med chart audits
  - Review of inpatients medications
  - Assistance with training packages/ modules
  - Medication histories; DMRs
  - Advice on dispensary/ inventory management; legislative requirements
  - Dispensary/ pharmacy manual
  - Inservice
What could be done to improve support for rural nurses providing medication management activities?

- Desired frequency of pharmacy support visits:
  - Once a week
  - Every 2 months
- Videoconferencing (if not possible to visit)
- Telepharmacy
- Formal arrangements of who to contact
Report recommendations

- Establish a rural/remote training & support initiative
  - Coordinate dev. & maintenance of resources, education programs, pharmacy support models for rural/remote nurses

- Multiple modes of delivery of training/education (video conferencing, web, interactive CDs)

- Provide eLMS training at major rural hospitals on regular/ongoing basis
  - New staff, refresher

- Staged roll out of Telepharmacy
Report recommendations

- Review Central Pharmacy’s service delivery model for rural/remote sites
- Establish formal preceptor relationships for new pharmacy nurses with regional QH pharmacists (set period & formalised program)
- Information package for nurses undertaking supply of meds (practical to legislative)
- Establish formal links with rural programs (e.g. Rural/Remote Relief Program, Yangulla Centre, CRANA, etc.)
Achievements Jul 2008 - Sept 2009

eLMS training

- site visits (face-to-face)
  - Training held at 14 rural and regional sites
  - Attendees from 32 hospitals
  - 97 nurses (RNs, EENs) completed training

- videoconference (from Nov 08)
  - 19 sites
  - 104 nurses (RNs, EENs) completed training
Medication Management Workshops

- 1 day workshop (2 SMMU facilitators)

Topics include:

- Overview of medication safety concepts
- eLMS training (new users & refresher)
- Discharge reconciliation training and competency assessment
- Medication History taking training and competency assessment
Medication Management Workshops

- **Site 1 (2 workshops over 2 days)**
  - 1/4 hospital released staff
  - 4 staff attended
- **Site 2 (1 workshop)**
  - 2/3 hospitals released staff
  - 3 attendees
- **Site 3 (2 workshops over 2 days)**
  - 3/4 hospitals released staff
  - 13 attendees
- **Site 4 (1x 2hr session of District workshop)**
  - 10 attendees (Primary Health Care DONs)
  - Focus on medication history
Medication Management Workshops

Telepharmacy sites

- Site 5 (2 workshops over 2 days)
  - 1 hospital
  - 10 staff attended

- Site 6 (2 workshops over 2 days)
  - 1 hospital
  - 9 staff attended

- Site 7 (2 workshops over 2 days)
  - 2 hospitals
  - 8 staff attended
Training and Competency Assessments (08-09)

- Medication History
  - 45 RNs and EENs successfully completed

- Discharge Reconciliation
  - 96 RNs successfully completed
Telepharmacy

- Video case conferencing
  - Cairns to Cooktown – three times a week
  - Ipswich to Laidley – twice a week
  - Mackay to Sarina – once a week

- Technology is available

- Pharmaceutical review remotely trialled and possible through collaboration with nursing and medical staff

- Major barrier funding for pharmacist
Hub Site Pharmacist

- Pharmaceutical Review – Medication Chart, Medication History, Auslab, iPharmacy
- Clinical consult with patient (video conference)
- Medication issues/actions documented MAP (eLMS)
- Consultation with Medical Officer
- Review DMR (eLMS)

Spoke Site Nurse

- Medication History taken & documented (eLMS)
- Fax/scan medication charts
- Daily handover of all inpatient medication issues
- Reconciles and prepares DMR for discharge (eLMS)
Resource Package – Nurses undertaking supply

- provides clear and concise information for RNs working in rural and remote areas, about their role, responsibility and accountability in the supply of medicines
- provides an overview of resources available for RNs - including QHEPS links
- will be distributed to all rural & remote hospitals and primary health care services
The future

- Expand use of videoconference technology for competency assessment training
- Providing additional resources and training packages e.g. dispensary management
- Explore e-learning technology e.g. web based Nurse Risk Awareness Package
- Daily access to a pharmacist via Telepharmacy
Conclusion

MSQ is working

■ to develop programs to support education and training for rural and remote nurses

■ to support access to pharmacist expertise through telepharmacy services