North Dakota Nursing Needs Study: Information about Long-term Care Facilities and the Utilization of Medication Assistants

Patricia Moulton, Ph.D.

North Dakota Department of Health
Division of Health Facilities
Long Term Care Advisory Committee
Bismarck, ND
November 21, 2006

• Overview of the North Dakota Nursing Needs Study
• Year Four Data Collection Projects
• Workplace Characteristics
• Salary
• Utilization of Medication Assistants
• Conclusions
North Dakota Nursing Needs Study

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility Survey</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Licensed Nurse Survey</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Licensed Nurse Focus Groups</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty Survey</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty Focus Groups</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education Technology Assessment</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Survey</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Focus Groups</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School Student Survey</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply and Demand Projections</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Year Four Data Collection Projects

- Healthcare Facility Survey
  200 facilities responded
  96% of counties represented

- Licensed Nurse Survey
  1,457 surveys completed on-line
  30% of Nurses who renewed on-line

- High School Student Survey
  568 students completed the survey online
  19 counties were included
Workplace Characteristics

Statewide Vacancy Trend

- 2003: 5% (LPN), 5% (RN)
- 2004: 5% (LPN), 9% (RN)
- 2005: 5% (LPN), 11% (RN)
- 2006: 7% (LPN), 7% (RN)
LPN Vacancy Rate Map

Note. Vacancy rates include all responding health care facilities within each county (hospital, long-term care, clinic, home health and public health). Also, there is a difference in the numbers of incomplete responses across years. For example, there were 18 counties in 2005 and 23 in 2006 with incomplete data.

RN Vacancy Rate Map

Note. Vacancy rates include all responding health care facilities within each county (hospital, long-term care, clinic, home health and public health). There were similar numbers of counties with incomplete data in 2005 and 2006.
Statewide Turnover Trend

LPN Turnover Map

Note. Turnover rates include all responding health care facilities within each county (hospital, long-term care, clinic, home health and public health). Also, there is a difference in the numbers of incomplete responses across years. For example, there were 18 counties in 2005 and 28 in 2006 with incomplete data.
Note. Turnover rates include all responding health care facilities within each county (hospital, long-term care, clinic, home health and public health). Also, there is a difference in the numbers of incomplete responses across years. For example, there were 11 counties in 2005 and 23 in 2006 with incomplete data.
Average Weeks to Fill Vacancies by Year

Formal Nursing Staff Representation in Decision-making
Nursing Staff Representation in Decision-making 2003 and 2005

Salary Issues
• Starting Salary

Starting Hourly Wage by Education Level

- Diploma LPN
- Associate LPN
- Associate RN
- Bachelor RN

$0.00 $5.00 $10.00 $15.00 $20.00

Statewide Long-term Care


$16.94 $16.69

$12.72 $12.09 $11.12 $12.72 $16.89 $16.46

$16.94 $16.69
• **Average Salary**
### Average Hourly Wage by Nursing level

- **Diploma LPN**: $14.85, $13.72
- **Associate LPN**: $15.14, $15.77
- **Associate RN**: $19.10, $19.19
- **Bachelor RN**: $19.84, $19.10

**Legend**: Statewide vs. Long-term Care

### Average Long-Term Care Wage by Year

- **LPN**: $14.01, $14.47, $15.04
- **RN**: $19.33, $19.24, $19.32

**Legend**: 2004, 2005, 2006
Utilization of Medication Assistants

Shifts that Medication Assistants Work

Day Shift  
- MA 1: 42%
- MA 2: 45%
- MA 3: 12%

Evening Shift  
- MA 1: 80%
- MA 2: 7%
- MA 3: 13%

Night Shift  
- MA 1: 67%
- MA 2: 17%
- MA 3: 17%
Number of Patients Assigned by Medication Assistant Level

Average Weeks to Fill Vacant Medication Assistant Positions
Supervision of Medication Assistants

- LPN: 27%
- RN: 19%
- LPN & RN: 51%
- LPN, RN, MRN: 3%

Training of Medication Assistants

- In-House Class: 51%
- Outside Class: 20%
- Previous Training: 11%
- Competency Tests Given: 9%
- Study Groups or On-Unit Orientation: 6%
Orientation of Medication Assistants

- Nurse: 84%
- CMA or Nurse: 12%
- CMA: 4%

Perception of Safety

- Very Unsafe: 5%
- 2: 0%
- 3: 0%
- 4: 34%
- Very Safe: 53%
Medication Error Protocol

- Error Report Form: 79%
- Reported to Physician: 8%
- Reported to Nurse/Nurse Manager: 10%
- Documented on Chart: 3%

Medication Error Reporting

- Chain of Command/Committee: 35%
- DON/Charge Nurse: 32%
- Charge Nurse/Don & MD: 15%
- Nurse, MD, Family: 9%
- MD: 6%
- Pharmacy: 3%
Medication Error Follow-up

- Process Evaluation: 56%
- Individual Review and Retraining: 44%

Medication Checks and Balances

- 7 or 30 Day Med System: 25%
- 5, 6, 7 Rs Checked: 20%
- Daily Shift Counts: 16%
- Observations/Audits: 14%
- In-Services: 9%
- Double-Check Dose with MD/Pharmacist: 16%
Medication Error Tracking

Conclusions

- Nursing Homes should continue to improve the workplace for nurses including examining salary and nurse representation.
- Nursing Homes should examine their utilization of medication assistants on evening and overnight shifts.
- Nursing Homes should be encouraged to setup formal medication error reporting protocols and to track system-wide medication errors in a non-punitive environment.
For more information contact:

Center for Rural Health
University of North Dakota
School of Medicine and Health Sciences
Grand Forks, ND 58202-9037

Tel: (701) 777-3848
Fax: (701) 777-6779

http://medicine.nodak.edu/crh

Connecting resources and knowledge to strengthen the health of people in rural communities.