

**Health Human Resources (HHR)**

Report from the NHSRU Research Forum held March 31st, 2008

The Production of Critical Care Nurses - A Collaborative Evaluation of College and Hospital Critical Care Nursing Education Programs in Ontario

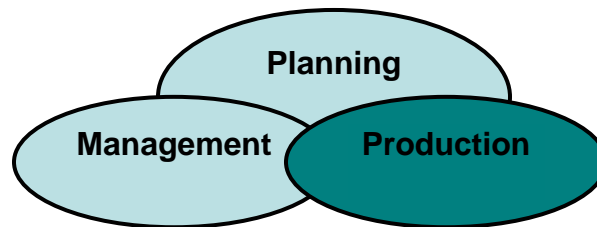
Presenters: Dr Anita Fisher & Jocelyn Bennet

Conclusions/Main Messages

1. Enhance new standards based on stakeholder input.
2. There are gaps in the current education of critical care nurses.
3. Standardization of specialty education curricula with a critical care specialization career path is needed.
4. Standardization requires hospital/college/university/partnerships and multi-sectoral support.

Critical Care: Background Data

- 7,712 critical care nurses in Ontario hospitals (CNO Membership Database, 2007).
- Critical care nursing is the second largest specialty nursing group.
- Largest age cohort is now 50-54 years of age.
- 1800 critical care beds across 90 adult critical care units in Ontario.
- Ministry of Health expansion plans include opening another 130 beds by 2015.
- ICES estimates that the number of critically ill patients requiring mechanical ventilation will double by 2026 (Scales & Gomes, 2007).

Hall's Model of Human Resource Planning***Producing Critical Care Nurses***

- Require a supply/demand/needs balance.
- Supply = number of nurses training & internationally educated nurses.
- Demand is based on service requirements and nurse availability
- Specialty education and experience is just as important as number of nurses.

Purpose of the Evaluation

- Gain stakeholder input into the new critical care nursing standards and the process of evaluation.
- Determine the extent to which the new critical care nursing standards were incorporated into current college and selected hospital-based critical care nursing programs.
- Conduct a gap analysis at the organizational, regional and provincial level and report identified gaps to the Critical Care/Nursing Secretariats.

Evaluation Process

- Focus Groups were conducted across the province with 3-5 people in each group.
- Self-Evaluation Survey was issued so that participants could evaluate their own curriculum and an expert Panel Curricula Review was conducted.

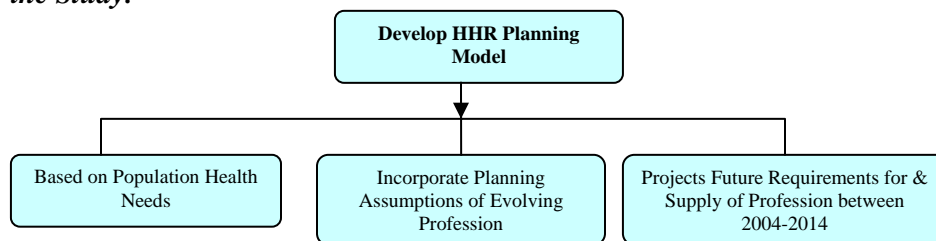
The Way Forward

1. Count critical care nurses currently in the system.
2. Define the current critical care nursing workforce.
3. Understand how critical care nurses are being educated, utilized and managed in the system
4. Use as basis for predictive models to determine future needs

A Needs-Based Human Resources Planning Model for Primary Health Care Nurse Practitioners

Presenters: Dr Gail Tomblin Murphy

Purpose of the Study:



Key Outcome Variables

- The gap (difference between providers supplied & providers required):
 - (+) gap reflects a surplus, (-) gap reflects a shortage.
- What if scenario: Allows adjustment of variables in association with different policy scenarios to test effectiveness of changing the gap in short-term (1-2 years) and long-term (5-10 years).

Number of Activity-adjusted NPs Required, Ontario

- Primary Health Care service requirements converted to # of activity-adjusted PHC NPs required, by accounting for assumed productivity, percent of NP time available for patient/client care, & hrs worked.
- In 2004, Ontario would have required 1,692 activity-adjusted NPs to provide PHC as planned in all sectors
 - 1,121 in the community sector, 145 in LTC, and 427 in ED.
 - If the trend in population health status continues *at half the observed rate of change*, the # required will increase nearly threefold to 4,883 in 2014.

Number of NPs Provided, Ontario

- Ontario had 615 registrants in 2004 in the Extended Class that can provide PHC services.
- Only 337 activity-adjusted NPs providing PHC (due to low participation rate (63.5%) & activity rate (65.6%).
- Low exit rate & high level of enrolments in Ontario will help increase provider stock over time.
- By 2014 it is estimated there will be 1,228 activity-adjusted NPs providing PHC, increasing by 260% in the 10-year period.

Number of Activity-adjusted NPs Provided & Required, Ontario

Projected Shortfall, Ontario

- Growth in # of activity-adjusted PHC NPs does not match growth in requirement for PHC NPs in Ontario.
- 2004, # of activity-adjusted PHC NPs required (1,692) was 5x the # available in labour market (337), with a shortfall of 1,355.
- By 2014, estimated shortfall will increase to
 - 3,574 if population health needs remain unchanged.
 - 3,655 if declining trend in the population's health status continues at half the rate observed in the past 8 years.
 - 3,736 if same declining trend observed in the past 8 years continues.

Key Recommendations for Policy Makers

- Combination of all 5 moderate scenarios has a significant impact on alleviating shortfall, but policy scenarios in isolation don't:
 - i. Increase activity level to 90% by 2014.**
 - ii. Increase enrolment by 100% by 2014.**
 - iii. Increase participation rate to 90% by 2014.**
 - iv. Increase productivity by 10% by 2014.**
 - v. Decrease trends in use of emergency care.**
- By implementing all 5 policy scenarios, projected shortfall in 2014 reduced by 43% to 2,082 from 3,655.

The Research Forum was hosted by the Nursing Health Services Research Unit (NHSRU), in co-operation with the Ontario Ministry of Health and Long-Term Care (MOHLTC) Research Unit and the Nursing Secretariat. Participants from the MOHLTC Nursing Secretariat were in attendance.

This report was prepared by the NHSRU.

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This event has been generously supported by a grant from the Government of Ontario. The views expressed in this report do not necessarily reflect those of the Government of Ontario.