

December 31, 2007

To: Idaho Nursing Workforce Center Advisory Council
From: Roger B. Madsen, Committee Chair, Data Subcommittee
Subject: Preliminary Data Subcommittee Report

Guiding Principal:

Define, locate and prepare the data and research necessary for policy makers to make informed decisions about nursing education and retention issues in Idaho.

Priority Research Questions:

Three main categories encompass the data and informational needs of the committee. Research questions have been developed within each of these topic areas to identify specific issues and data needs. The primary research categories are:

1. Supply and demand of Idaho's nursing work force by region, licensure level and skills;
2. Nursing program capacity and regional demand for new graduates; and
3. Supply and demand of nursing faculty and the impact of salaries, workload and recruitment strategies on supply.

Progress:

- The subcommittee's goal is to produce a June/July report for presentation during the 2009/2010 legislative session. Primary research questions relating to a potential nursing shortage have been identified and prioritized in conjunction with the other subcommittees' research recommendations. Data sources and gaps relating to each priority have been documented and a preliminary feasibility study examining each of the priority questions in terms of long and short term data collection, costs and accessibility has been conducted. The early stages of data collection are underway.
- The second phase of the subcommittee's work will include:
 1. Identifying the cost, available funding and which institution has access to the data and the ability to complete each element;
 2. Adjusting the data elements based on available resources (financial and logistical); and
 3. Assigning the data elements out for completion.

Pending Issues:

- Basic operational definitions need to be agreed upon in order to ensure accurate and consistent data collection and reporting.
- The committee needs to develop a schematic that will allow salary discussions to focus on professional annual salaries rather than occupational hourly wages.
- The committee also needs to keep in mind that critical needs shift over time and a long-term rather than a short-term approach to problem solving might provide better and more cost effective outcomes.
- If funding is available, consider prioritizing implementation of goals at the regional level so changes can be employed based on areas of greatest need.

Nursing Advisory Board's Ultimate Goal

Produce enough nurses to care for the citizens of Idaho.

Guiding Principal

- Anticipate the needs of policy makers (Legislators, Idaho State Board of Education, Idaho State Board of Nursing) and be prepared to provide insightful information they can use to make informed decisions when addressing issues regarding the supply and demand for nurses in Idaho.

Data Subcommittee Members' Recommendations to Idaho Nursing Advisory Board

We need to:

- Agree upon operational definitions in order to ensure accurate and consistent data collection.
- Develop a schematic that allows salary discussions to focus on professional annual salaries rather than occupational hourly wages.
- Keep in mind critical needs shift over time and a long-term rather than a short-term approach to problem solving might provide better and more cost effective outcomes.
- Consider prioritizing by region so that changes are implemented based on areas of greatest need.

Data Subcommittee High Priority Research Questions

Red = Data we have available or may be able to access or leverage. ~Cost estimates will be included in the next phase. Although the data is available, in some cases data will need to be programmed, extracted, culled and/or manipulated in order to answer the specific questions.

Blue = Data that are missing. ~Cost estimates will be included in the next phase.

Nursing Workforce Supply and Demand by Geographic Location, Licensure and Skills

1. What is the current and projected supply and demand by region for LPNs, AS RNs, BS RNs, MS and PhD prepared RNs? *Nursing work force has current supply by type of employee (RN, LPN.) and self reported projection. The Idaho Department of Labor will have current and projected demand (2006-2016) from occupational projections for RNs and LPNs (sometime in late March/early April). We will be able to look at RNS and LPN by region, just not by education level. May have a problem getting supply data to the regional level, might have to do some weighting. Will have a problem dividing up demand side into education degrees since all RNs and advance practice are considered RNs by BLS. Social Security Numbers are necessary for breaking demand out in this fashion.*
2. What work force is necessary to meet Idaho's current nursing demands? *Includes education and level of prep needed based on different practice settings and level of credentialing, specialized knowledge and experience, licensure level, geographic location, etc. Projections are available through the HRSA model, and from the state's occupational projections. Licensure information is accessible through the*

State Board of Nursing. Level of educational prep needed for credentialing can be found online. Educational prep and KSA's needed for the workforce and practice setting would require a survey to obtain.

3. What work force is necessary to meet Idaho's future nursing demands? (Note: Not only nursing workforce, could include EMT, paramedic, CNA, medication asst, etc.) *State occupational projections using Bureau of Labor Statistic's Standard Occupational Codes. There may be a problem with the RN information through this source (any registered type of nurse is lumped into the RN category), we could potentially solve it by looking at the raw data submitted and see if we can obtain permission to use it from each employer.*
4. Work force salaries by educational attainment, practice setting, licensure (pick up advance practice nursing here) and geographic region. *The National Sample Survey of Registered Nurses has data on the number of RNs living and working in the United States. The educational background of RNs, including state or country of initial education and specialty area, employment status including type of employment setting, position level and salary, and how many are employed in or out of the nursing field.*
5. What trends can we identify that impact future work force needs: population growth, social issues, health services changes (assisted living vs. long term care). *This information is out there somewhere in some sort of demographic paper or even nursing paper and may be available through a literary review. If not we would need to consult with a specialist on social issues.*

Nursing Programs

1. Number of potential nursing students denied admission to nursing programs due to lack of space? *The National Center for Educational Statistics has data on the number of first-time, degree/certificate-seeking undergraduate students who applied, were admitted and enrolled (full or part time) at each institution. The American Association for Colleges in Nursing has aggregate percents of the number of students turned away from nursing programs and the reasons why. From this we may be able to obtain a ratio of number enrolled, admitted and turned away.*
2. What is the capacity potential for nursing programs, both currently and in the future? (Physical plant, background course work, faculty, clinical placements, distance education) i.e., how to expand? Do we need entire new programs vs. expanding current programs? *Would have to conduct a survey of educational institutions.*
3. Are we producing graduates (number and type) in the regions in which they are needed? Where are the students graduating and where are they working? *If we have the Social Security Numbes of new graduates we can track their employment and mesh it with the projections data to see if the current location of employment for new graduates is meeting the demand.*
4. What factors determine where new graduates seek work? Find work? *Would have to conduct a survey of individuals.*

Faculty

Faculty Salaries:

1. How do faculty salaries compare to practice salaries (same educational preparation and experience). *RN salaries are available through the Milliman Northwest Healthcare Salary Survey which gives us wage and count, pay range, percentiles, percentage of incumbents receiving additional cash compensation and amount of cash compensation. This data includes a full breakdown of nurse salaries by specialty area and certification. Idaho wages can be obtained by pinpointing the Idaho respondents. This does not include a breakdown on education preparation and experience. Faculty salaries for Idaho are available through the National Center for Educational Statistics which provides salaries of full-time instructional faculty, by contract length, gender and academic rank. The Idaho Nursing Workforce Center also has information on nursing faculty salaries.*
2. How do salaries for nursing faculty and staff nurses compare with those in surrounding states? *Faculty salaries for surrounding states are available through the National Center for Educational Statistics which provides salaries of full-time instructional faculty, by contract length, gender, and academic rank. We have school codes so we can identify all of the schools in the surrounding states.*
3. How do nursing faculty salaries compare with faculty salaries across higher education institutions in professional programs? (Pharmacy, engineering, etc.) *Faculty salaries for other institutions (throughout the US) are available through the National Center for Educational Statistics which provides salaries of full-time instructional faculty, by contract length, program, gender and academic rank.*
4. What does the workload look like for nursing faculty? How many hours per week do they work? What about during academic breaks and summers (if on less than a 12-month contract)? *Would have to conduct a salary survey among other educational institutions/programs.*
5. How does nursing faculty workload compare with the workload of faculty in other higher education programs? *The Idaho Nursing Workforce Center in its Survey of Nursing Program Directors collected the number of nursing faculty and what kind of responsibilities they have (clinic only, clinic+class). Note this data does not cover number of hours worked.*

Faculty Recruitment:

1. What is the turnover of nursing faculty? *The Idaho Alliance for Leaders in Nursing has some aggregate information on faculty turnover.*
2. What are the projected retirements? *The Idaho Nursing Workforce Center has the average age of nursing faculty in Idaho which we could use to project retirements.*
3. What is the cost of turnover for nursing faculty? *Requires a survey among institutions, including recruitment costs and the cost of having a temporary replacement.*
4. How much are schools paying for recruitment costs for unsuccessful searches? *Requires a survey among educational institutions.*
5. What is the average number of applicants per open faculty position? How does this compare with faculty openings in other disciplines in higher education?

Requires a survey of human resource personnel at each educational institution to run aggregate applicant data (they may not be able to track it).

6. How many nursing educators from out of state have we attracted over the last five years? *Requires a survey of human resource personnel at each educational institution to run aggregate applicant data. This may mean looking into the employment background of every new hire over the last five years.*
7. How many nurse educators from out of state have offers been made to and not accepted? *Requires a survey of human resource personnel at each institution to run aggregate applicant data (they may not be able to track it).*

Faculty Numbers

1. What is the current number of qualified faculty? (Those who meet credentialing requirements) *The Idaho Board of Nursing has the number of nursing faculty at each school. A survey of institutions is necessary for obtaining the number of faculty meeting the requirements for teaching.*
2. What is the number of faculty not currently classified as "qualified"? (Those who do not meet the credentialing requirements) *Obtaining the number of faculty not currently meeting the requirements for teaching requires a survey among institutions.*
3. What is the number of faculty based on the current student population? *The Idaho Board of Nursing has the number of nursing faculty at each school. The National Center for Educational Statistics may have number of students enrolled in each program.*
4. How many faculty members are needed in the future to account for growth? Replacement? *The number of future students due to growth & replacement might be obtained by using the current student enrollment and number denied admission in order to obtain an estimate of supply and demand for faculty.*

Complete List of Questions (includes high priority questions)

Nursing Supply & Demand

Students & Programs

Admission

1. Number of potential nursing students denied admission to nursing programs due to lack of space? How do we keep those students interested in nursing? May also address diversity issues (ethnicity second career).
2. What is the diversity of nursing students by region? Race, ethnicity, gender.
3. How many high school and junior high school students are interested in nursing as a career? What is the diversity of that population?
4. Pipeline issues: grade school/high school students' perspectives and needs (academic prep)

Retention

1. What is attrition from nursing programs and from college? Diversity of dropouts? Why do they drop out? (Ability: can't address. Financial: Can add scholarships, loans, etc. Preparation: May need ways to beef up science/math preparation). Selena noted the national dataset is different from data collected in Idaho, which may mean a disconnect between reports about Idaho based on state data vs. national data.
2. What types of support systems are needed to enable diverse students to succeed in nursing programs? Diverse support systems needed for different types of students.

Capacity

1. What is the capacity potential for nursing programs: current, future? (Physical plant, background coursework, faculty, clinical placements, distance education) i.e., how to expand? Do we need entire new programs vs. expanding current programs? Decrease duplication of courses – develop common platform (to maximize utilization of current faculty, expand capacity of current faculty). E.g. course in evidence based practice could be statewide.
2. Are we producing the graduates (number and type) in the regions where they are needed?

Cooperation

1. What are barriers/incentives to cooperation between programs? (Look at Nexus program)

Alternative Financing

1. What employer subsidized educational programs exist across the state to help nurses continue their education and how are they utilized?

Faculty

Salaries

1. How do faculty salaries compare to practice salaries (same educational preparation and experience)
2. How do salaries for nursing faculty and staff nurses compare with those in surrounding states?
3. How do nursing faculty salaries compare with faculty salaries across the higher education institutions in professional programs such as pharmacology and engineering?

Recruitment:

1. What is the turnover of nursing faculty? What are the projected retirements?
2. What is the cost of turnover for nursing faculty?
3. How much are schools paying for recruitment costs for unsuccessful searches?
4. What is the average number of applicants per open faculty position? How does this compare with faculty openings in other disciplines in higher education?
5. How many nursing educators from out of state have we attracted over the last 5 years?
6. How many nursing educators from out of state have we made offers to and not been successful in hiring?

Workload

1. How does workload of nursing faculty compare with workload of faculty in other programs in higher education?
2. What does the workload look like for nursing faculty? How many hours per week do they work? What about during academic breaks and summers (if on less than a 12 month contract)?

Other issues

1. How many MS and PhD prepared nurses does Idaho have and how does this compare with other states (per capita)? Where are the MS and PhD prepared nurses in Idaho working?
2. How long have nursing faculty been teaching?
3. Do we have adequate nursing faculty mentors?
4. Are nursing students considering becoming nursing educators? What factors are associated with students who are considering going into nursing education? How does this compare with national data?

Nursing Practice**Retention**

1. Average salaries in practice of LPNs, AS RNs, BS RNs, MS RNs, and PhD RNs? Note that this is not asking for the hourly wage, but the salary as this would include differentials that are paid.
2. Post-residency transition programs, ways to reduce early attrition from practice and/or the profession
3. What is the cost of turnover for an LPN, RN, and APRN? (Range and average costs)
4. What are the factors associated with decreasing turnover in nursing? How are we doing with these factors in Idaho?
5. What is the economic cost to Idaho for filled and unfilled nursing positions (direct and indirect costs)?
6. How effective is the nurse refresher program in getting nurses back to work? Is the nurse refresher program cost effective?

Skills

1. What work force is necessary to meet Idaho's current nursing demands? Includes education prep needed, specialized knowledge and experience, licensure level, geographic location, etc. Level of education prep needed for different practice settings/and level of credentialing
2. What work force is necessary to meet Idaho's future nursing demands? (Note: In addition to nursing work force, this could also include EMT, paramedic, CNA, medication asst, etc.)

Practice Settings

1. What is the turnover of LPNs and Registered Nurses by work setting (LTC, acute care) and region? Also what is the turnover of LPNs and RNs across the state urban versus rural?

Provider	Long-term care		Community Clinic		CAH/Rural		Etc.	
	Current	Projected	Current	Projected	Current	Projected	Current	Projected
Non-license Assistive								
CNA								
LPN								
AD-RN								
BS-RN								
EMT								
Paramedic								
Medication Assistant								
Etc.								

Geographic Location and Licensure

1. What is the supply/demand projection for each type of nurse by region for the next 5 years, 10 years, 15 years and 20 years?
2. What is the supply and demand by region (possibly using health districts as regions) for LPNs, AS RNs, BS RN, and MS prepared RNs. Once we know this, we need to know the gap (between supply and demand) for each type of nurse by region.

Health Care Trends

1. What trends can we identify that would impact future work force needs: population growth, social issues, health service changes (assisted living vs. long term care)

Along the Way

- How do we get to the point where the data from various agencies and other sources can be shared and “talk” to each other? Budget needed to create/adapt databases to share information.
- Finally, the group would like to know how soon we can expect answers to the questions we have asked. Is there a timeline for data collection so we can plan our future meetings and conversations?

