

# Alaska Health Workforce Coalition: Issue Paper #3 Health Workforce Data

July 2011

<https://sites.google.com/site/alaskahealthworkforcecoalition/>



Authored by Ellen Maling, Coordinator Alaska Health Workforce Coalition, Jan Harris, University of Alaska Anchorage, Office of Health Programs Development, and Alice Rarig, Ph.D, Department of Health and Social Services, Division of Public Health, Section of Health Planning and Systems Development with assistance from Department of Labor and Workforce Development.

---

## Introduction

This issues paper provides a high level overview of the data landscape for conducting health workforce planning. It includes a summary of available datasets that contain information about the health workforce and reviews the current processes for analyzing that information to determine health workforce supply and demand. The paper also reviews the current obstacles to creating a comprehensive picture of the health workforce and identifies new opportunities to generate more accurate tracking and more reliable projections of workforce needs that might be tied to specific assumptions about demographic change and how health services are delivered and paid for.

Alaska is not alone in the nationwide struggle to adequately define health workforce needs. The number and variety of state, federal and private entities involved in data collection in Alaska is similar to that of states with larger populations. Health workforce planning involves projecting an adequate number of health workers with the appropriate competence to meet the service needs of the population. Health workforce data provide essential advice to government, relevant regulatory bodies, educational entities, and the health profession itself around supply and demand issues and the policy implications for addressing those. Having an adequate understanding of the training and educational preparation models, career patterns, turnover rates, and mobility facilitates planning for education, recruitment and retention for educational institutions, government and the industry. Lastly, the Affordable Care Act (ACA), the projected growth in the number of elder Alaskans, and Alaska's community health disparities have impact on the needs for health workers that are not easily quantifiable at this time.

## The Basics of Health Workforce Planning

Workforce planning requires an understanding of *supply* of the workers that are available to perform the duties needed and *demand* created through economic drivers. Workforce planning is related to workforce development, but they are not one and the same. In general, workforce development encompasses a much broader approach that uses human resources policies such as training, pay, skills, recruitment and retention. Workforce planning is a part of overall workforce development that focuses specifically on supply and demand. The dynamic and complicated drivers in the health industry and the sophisticated nuances present in the credentials and skill sets of healthcare workers present significant challenges to creating a clear and accurate picture useful to both health workforce development and health workforce planning.

In general terms, workforce supply comprises those currently working in an occupation and those with the requisite skills, but for various reasons, not employed in an occupation, including recent graduates of professions. The losses to the supply often occur from retirement, transition to another career or migration out of Alaska. Retirement ages and other factors impacting the attrition of health workforce are another component of the supply equation. Projecting the supply of the health workforce is influenced by national and state policies around training and education programs and the geographic and climatic realities of Alaska itself. Supply indicators can be determined from primary data such as surveys or licensing data, or through secondary data such as demographics, where the ages, residences and numbers of Alaska's population may determine capacity to supply workers.

The demand for health workforce is assessed in several ways. One principal method uses provider to population ratios for specific occupations, such as dentists, physicians and nurses. These can indicate broad rules of thumb for projecting demand, but do not take into account the health needs of a specific population and their ability to access services. Determining vacancies in current established positions provides a sense of immediate demand, with related questions to discover useful details about each occupation and profession surveyed. Another more sophisticated technique includes measuring previous service utilization and projecting forward based on future population or demographic estimates. Lastly, the economic demand methods review changes in populations or other trends and project those forward. As an example, the increase in the number of single adults qualifying for Medicaid under the ACA is a predictive factor in future needs for primary care providers.

When imbalances between supply and demand exist, Alaskans have significant challenges accessing basic health care services. This is where the issues of health workforce planning resonate with many individual Alaskans.

### **Data available across the health workforce continuum: an overview**

In this briefing, the term “health” is used to describe the broad industry that provides for both the physical and mental health of the population. The term “healthcare” refers to the industry classification that covers individuals employed by facilities or other locations where individuals receive medical services. The Social Assistance (Social Service) category includes a number of occupations that are part of the overall health equation (such as behavioral health, long-term care or support services for seniors). This issue can be overcome by looking at the Standard Occupational Classification codes on specific occupations, counting Registered Nurses in general regardless of their employment with a specific industry. Alaska’s Health Workforce Plan prepared in May 2010 addresses strategies that covered occupations that were located in both the healthcare and social assistance categories, but at this point there is not an easy way to compile the economic impact data for the occupations that are working in the broad field of health. And, for an occupational group like the Direct Care Workers, whose employment occurs in medical facilities, community settings and social industries, planning can be challenging.

There are many different sources and individual datasets that depict the scope and breadth of health workforce on a National and State level. Unfortunately for planners and analysts, this information is located in a myriad of sources and is collected in different ways using various taxonomies.

### ***Federal Datasets***

An extensive set of information exists under the U.S. Department of Health and Human Services (DHHS), which includes efforts conducted on behalf of the Health Resources Services Administration (HRSA), Center for Medicaid and Medicare Services (CMS), Indian Health Services (IHS), and Center for Disease Control (CDC). The DHHS Assistant Secretary for Planning and Evaluation has a comprehensive summary of datasets relating to health, including workforce, facilities, programmatic activities, research, public health services and the performance of those, and physical and mental health status.

HRSA has a number of funding programs specific to health workforce. The Agency also maintains The Area Resource File, which is a collection of data from more than 50 sources, including American Medical Association, American Hospital Association, US Census Bureau, Centers for Medicare & Medicaid Services, Bureau of Labor Statistics and the National Center for Health Statistics. This dataset has information organized by year and type of metric (ranging from types and specialties of providers). The information was last updated in 2009. HRSA also organized a project to orchestrate health workforce data specific to each state in 2000. This data has not been updated since. Many of HRSA offices, including the Bureau of Primary Care, have specific datasets on workforce. The Center for Disease Control and Prevention also maintains a database for objectives relating to Healthy People 2010, the first

of which is Access to Health Care and The National Center for Health Statistics tracks a number of metrics (mortality, morbidity) relating to the physical health of the population and conducts a number of health care surveys on a variety of topics. Home Health Aides, as an example, were surveyed in 2007.

### ***Alaska Datasets***

Alaska Department of Labor and Workforce Development, Research and Analysis (DOLWD/RA) is the main repository for health workforce information in Alaska. Workers are tracked by industry and occupational title using a Standard Occupational Classification Code. The State's unique capacity to cross-check employment records with the Alaska Permanent Fund Division records provides an opportunity to track the status of health care and social services industry workers and analyze industry trends. In its labor force analysis, DOLWD uses the nonresident penetration rate as a proxy for an inadequate supply of trained and available workers by occupation and industry.

The Department of Health and Social Services (DHSS) is a major employer of health workforce in Alaska, including employees of Alaska Pioneer Homes, Public Health and the Alaska Psychiatric Institute. DHSS is the key funder of the behavioral health and community based employer system through a competitive grant process. In addition, the Section of Health Planning and Systems Development (HPSD) analyses workforce locations and trends within the state for identifying health professional shortage areas, analyzing trends in distribution or longevity and for monitoring field strength of state and federal loan repayment assistance recipients. The Department of Commerce and Economic Development, Division of Occupational Licensing attributes approximately half of its entire occupational licensing activity to health-related occupations. Additional information is collected by the individual licensing boards and is available by special request.

Since 2000, the University of Alaska embarked on a major expansion of health training and educational programs. This has resulted in a 91% increase in health majors over the past decade. This state university system conducts extensive research before launching new academic programs for specific occupations, especially degree programs at the undergraduate and graduate level.

The Alaska Center for Post-Secondary Education collects information about students who are receiving loans from this entity, tracking both program of study and collaborative post-secondary education programs such as the WWAMI medical school and the WICHE schools that offer health occupation education. AVTEC, the state's vocational training program, has health training programs, in addition to several private providers that are generating students with certificates or degrees related to the health care industry.

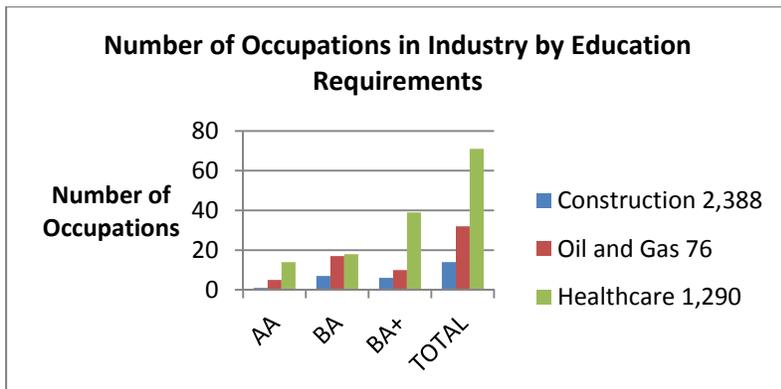
### ***Private Datasets***

Many national professional associations conduct surveys and data compilation efforts on behalf of their profession. The efforts of the Alaska chapters may use a subset of national information to make assumptions about Alaska. If available, the information can be purchased or requested, however it is not generally shared publicly. Salary surveys are often used as a proxy to gauge demand data as professions in high demand are often paid higher wages. Private consulting groups occasionally provide analysis of datasets and generate reports on specific occupations that can inform the components of health workforce planning.

## **Supply: Drilling Down to the Data**

Workforce supply is defined by current workers, those with adequate training but not currently working and includes recent graduates of training and education programs. According to the DOLWD's Industry

Reports, Alaska's healthcare industry has a greater number of occupations that require a post-secondary education than oil and gas or construction.



SOURCE: Alaska Department of Labor and Workforce Development, Research and Analysis Section, 2008.

#### *Training and education program graduates*

One source of tracking is the dataset maintained by the DOLWD Division of Business Partnerships (DBP), which collects information on training programs and participants supported through the State Training and Employment Program (STEP). STEP is funded by a set aside from the Unemployment Insurance Trust Fund for job training and employment assistance. In SFY 2009, there were 99 participants in health related training with 42 of those completing the training with total expenditures of nearly \$299,000. The Workforce Investment Act (targeting adult and dislocated workers through individual training accounts) provided funding for training programs to 140 individuals in state fiscal year 2009 with expenditures of \$526,000. DBP tracks workforce investments through a current MIS system but does not easily generate reports specific to industry at this time; the Division is in process of developing a new Workforce Investment Performance System (WIPS) which may provide this information as a supply indicator.

The University of Alaska maintains extensive data on the number and characteristics of enrolled students in all their occupational endorsement, certificate and degree programs. An innovative model for student persistence projections is in use. Targeted studies and analyses are done to further develop useful data about students and programs, including tracking of non-enrolled participants in health pathways and continuing education programs. There has been significant work over the past ten years to develop and implement programs relevant to the health industry. Currently, there are 90 programs state-wide in allied and behavioral health, emergency services, health management, medical office, nursing, primary care, public health and wellness, therapies and direct services.

A number of other private educational providers, nonprofit agencies and public entities operate post-secondary training programs for specific occupations such as medical coding and billing, medical assistant, licensed practical nurse and personal care attendants. The DOLWD, Research and Analysis Section, maintains and publishes information about most training programs in the state, including the number of exiting participants and employment and earnings outcomes for those participants. The information is presented in several reports including the Annual Training Program Performance Report for the Alaska Workforce Investment Board and through the DOLWD website as part of the Training Clearinghouse. The Clearinghouse allows users to identify healthcare related training programs through online filters.

The Alaska Commission on Post-Secondary Education also maintains records of Alaska students. The data includes students who are enrolled in the Western Interstate Commission on Higher Education

institutions for health careers and those who are enrolled in the WWAMI program (an interstate partnership at the University of Washington). Another program is Alaska Advantage, a grant program specifically designated to provide support for students demonstrating exceptional academic performance and entering high priority occupations such as allied health science and community and social services.

**WWAMI Expenditures by Year**

Year	2008	2009	2010	2011
Count of Students	30	40	50	59
Expended	\$720,120	\$1,025,660	\$1,286,770	\$1,257,162
Avg/Std	\$24,004	\$25,642	\$25,735	\$21,308

*Source, Alaska Commission on Post-Secondary Education, 2011.*

**WICHE Student Funding by Healthcare Occupation, 2000-2011**

Occupation	Dentistry	Optometry	Occupational Therapy	Physician's Assistant	Pharmacy	Podiatry	Physical Therapy
Count of Students	18	4	7	4	12	1	22
Expended (\$)	1,101,550	201,100	146,800	73,334	193,631	\$ 26,600	447,031
Avg/Std (\$)	61,197	50,275	20,971	18,334	16,136	26,600	20,320

*Source, Alaska Commission on Post-Secondary Education, 2011.*

*Resident and Nonresident Hire*

Alaska, with the ability to cross-check Alaska Permanent Fund Dividend recipients with payroll records, is in a unique position to measure the nonresident penetration rate. However the use of “locum tenens” by the health industry can generate misleading data. Locum tenens are itinerant health professionals employed to fill a specific need in a facility when that need is unable to be filled locally. They may be managed by an out of state human resource firm, which would classify them as non-resident. The use of locums may inflate the number of non-residents employed in the health care industry if several short-term, non-resident workers are used to fill one position.

For many other occupations in the health industry, DOLWD compares the identifiers of individuals collecting yearly permanent fund dividends with the employment records to generate a very accurate depiction of where employers are hiring non-residents. Though there are multiple reasons an employer may choose to hire a nonresident, lack of an available, skilled workforce rises to the top of the list. Thus, the nonresident penetration rate, by occupation, acts as both a supply and demand indicator.

*Licensed and Unlicensed Professions*

The Department of Commerce and Economic Development, Division of Corporate, Business and Professional Licensing (CPBL) collects information from applicants for new license applications and renewals. As of the FY 2010 report, licensed health providers comprise 49% of the entire licensing board activity, with the majority of those licenses issued by the Board of Nursing. In total, BPOC licensed 28,271 health care professionals in 2010. The information is published as an annual report from the Division. Some occupational licensing boards maintain an electronic data base that is accessible to the public. The professional license on-line search reflects real time license information as it relates to License Number, License Type, Expiration Date, Current Issue Date, and First Issue Date. Additional information is collected by licensing boards about location of practice and specialties, but access to this information requires specific cooperation agreements with other State of Alaska departments.

Unlicensed supply data is a combination of those currently working in their occupation, individuals collecting unemployment insurance who had previously worked in the occupation and workers with prior

work experience in the target occupation but currently working in another field. DOLWD maintains the dataset with this information and is able to generate it by Industry.

### **Demand, Vacancies, Shortages: The Devil is in the Details**

As mentioned earlier, collecting information to understand the true nature of demand for health workforce is a complicated process that does not lend itself to easy interpretation or projections under the current system of data collection. As mentioned previously, Alaska is not alone in struggling to develop a comprehensive data picture from which considered workforce planning can be done. The demand for a particular type of health care worker is influenced by the level of training, types of practice, geography and the different models of delivery deployed in the health system. As an example, while the actual number demand for pharmacists may not be significant to the state as a whole, the functions that pharmacists perform are critical for health care delivery and also support other positions such as Pharmacy Technician. Registered Nurses, educated at both the Associates and Bachelor's Level, are commonly thought to be in high demand. However, most current shortages in Alaska are in specialty nursing fields and those positions requiring extensive work experience. Reaching this level of detail enables appropriate choices in devising workforce strategies. Despite the foibles, Alaska is projecting demand in Alaska using a number of different datasets.

#### *Department of Labor and Workforce Development*

DOLWD projects demand using Bureau of Labor Statistics (BLS) data to estimate openings. DOLWD applies the BLS replacement rates to the Alaska projections to make an estimate of replacement openings. For 2008-2018, DOLWD compiled an "Alaska's Top Jobs" list which considers absolute and percent growth, openings and wage quartiles. It is important to note that the retirement factor needs to be accounted for not as a definition of churn or turnover, but simply as attrition. One interesting component to demand data is the economic circumstances. In the current recession, workforce planners are accounting for workers staying in their jobs beyond typical retirement age for a period of another 3-5 years.

With the assistance of a number of partners including the Alaska Mental Health Trust Authority, the Alaska Center for Rural Health/Alaska's AHEC conducted Vacancy Studies in 2007 and 2009 that involved extensive surveying of Alaskan health service organizations to assess health manpower shortages based on budgeted staff positions and their vacancies. These studies are construed as "point in time" cross sectional studies. Another iteration of the research will be conducted in 2012.

DOLWD also maintains a data bank of vacancies through the Alaska Job Bank, Alexsys system. Positions are posted by Department of Labor staff, who classify the positions according to an O\*NET Standard Occupational Classification Codes, which is also the standard for classifying unemployment claimants. Industry leaders, such as Alaska Native Tribal Health Consortium and Providence Health and Services Alaska, frequently conduct vacancy analyses to determine trends and implications for recruitment and retention. This information is not generally considered public.

#### *Health Resources and Services Administration*

HRSA uses "population to provider" ratios to issue broad statewide recommendations, However, the rural woman flying to Anchorage to wait out the remainder of her high risk pregnancy may likely disagree with the national benchmarks established about Alaska's capacity to provide obstetrical care. The demographics of a community itself can often create a demand for certain kinds of health care providers. As an example, in a community where high rates of obesity exist there will be a need for practitioners that have specialty dealing with diabetes and other related chronic illnesses. This information is not currently factored into demand equations, but the needs exist. Clearly, Alaska's unique circumstances require a collaborative and focused approach to understanding the scope of the problems.

With a common understanding of the issues, Alaska can foster a resourceful and innovative approach to meeting the health care needs of Alaskans.

## **Alaska's Health Workforce Data: Problems and Opportunities**

### *Why National Data doesn't Fit*

- National DOL formulas applied to Alaska's small numbers tend to skew the results and introduce uncertainty into DOLWD projections.
- The occupational titles used by DOLWD (based on a required national taxonomy) are not a good fit with labels used by the health care industry and workforce for its many occupations and professions. As an example, the Registered Nurse title used by DOLWD is a much too broad category that does not reflect the nuances that are needed to conduct accurate workforce planning. Another factor specific to Alaska is that Tribally-specific roles such as Community Health Aides and Practitioners, Dental Health Therapists and Aides and Behavioral Health Aides are assigned by the employer under a number of occupational codes, and are not part of the federal taxonomy at all. This information is available through the Tribal Health Systems, but requires an additional level of data gathering. Health Informatics is an emerging field, but there are no consistent job titles used to determine demand. Attempts to synchronize titles through crosswalks is of value but don't entirely solve the labeling dilemma.
- The occupation-specific salary information provided by DOLWD has been questioned by those that employ health care workers, generally complaining that they seem too low. The hourly wage does not include signing bonuses and other special compensation types.
- Licensure data available to coalition partners does not include all relevant fields such as specialties.

### **Opportunities to generate cost-effective collaboration**

- Ensure that licensing information include location of practice and specialties that is easily and readily available to the public.
- Promote use of health and service industries using Alexsys system to generate additional data on Alaska's demand for the entry-level/STOJT/MTOJT positions. DOLWD is able to provide information on turnover in particular occupations, an important data type heretofore missing.
- Provide community-based demographic and health status information as a backdrop for ascertaining the health workforce needed by that community. DHSS is adopting use of IBIS and Atlas and will eventually be able to provide this information can provide the

Collaboration and communication are the most critical elements needed to generate comprehensive, accurate and relevant data to guide health workforce planning. Alaska has an opportunity to integrate information resources in a more strategic manner by fostering active project management among the key players in health workforce. Given the past sustained, substantial and projected additional growth of the Health sector within Alaska's economy, The Trust, DOLWD, DHSS, UAA Office of Health Programs Development and the Industry have a vested stake in continuing the efforts.

### **References**

- Alaska Department of Labor and Workforce Development, website accessed June 17, 2011.
- Planning framework for the Public Health workforce Discussion Paper. National Public Health Partnership, June 2002. Australia