

Executive Summary

In 2005, the Wyoming Healthcare Commission (WHCC), under the direction of the Wyoming State Legislature, initiated a project to develop an accurate, continuously updated health workforce information system that would assist policymakers, educators, and health care professionals in addressing workforce shortages, measuring the success of workforce enhancement programs, and forecasting future trends. The WHCC contracted with the Health Professions Tracking Center™ (HPTC) of the University of Nebraska Medical Center for assistance in collecting and analyzing the Wyoming workforce data.

Over the past two years, the HPTC conducted a series of surveys with physicians, physician assistants (PAs), advanced practice nurses (APNs), dentists, pharmacists, practice locations, hospitals, and pharmacies. *The Wyoming Healthcare Commission Statistical Handbook* is a snapshot of the current information contained in the database developed by HPTC.

The WHCC believes these data represent the most comprehensive source of information available on health professionals in Wyoming. A multi-level survey process involving (1) identification of active professional licensees practicing in Wyoming, (2) distribution of up to three surveys to those licensees, and (3) phone verification of basic practice information when surveys were not completed, resulted in an overall practice verification rate of 97% and a survey return rate of 67%, both exceptionally high numbers in this context. In the case of doctors, dentists, and pharmacists, the verification rates were 99%, 98%, and 98%, respectively.

The overall results of the study indicate that the health care workforce of Wyoming currently consists of 996 physicians, 146 physician assistants (PAs), 182 advanced practice nurses (APNs), 254 dentists, and 403 pharmacists. The state also has 632 practice locations that employ physicians, PAs, and APNs, including hospital clinics, with Natrona and Laramie counties having the greatest number (15% and 13% and the state total, respectively). Some of the key findings related to each of these groups follows:

Physicians

- 36% of physicians with active licenses in Wyoming (996) are currently practicing here. This figure represents 194 physicians per 100,000 population, which is only 69% of the national average.
- Laramie County has the most practicing physicians (20% of the state total) and Niobrara County the fewest (0.2%).
- Although 71% of Wyoming physicians work 40 or more hours per week, nearly one-fifth work 29 or fewer hours per week.
- Less than 20% of Wyoming physicians are female (19%), which is lower than the national average (28%). Percentages are highest in the younger age group (35% in the 40 or younger age group as compared with 6% in the 61 or older age group).
- The vast majority of Wyoming physicians (88%) report their ethnicity as white/Caucasian.
- Nearly half of currently practicing Wyoming physicians (49%) are 51 years of age or older.
- Wyoming is well below the national average in primary care physicians per capita (67.6% vs. 75% per 100,000 population).

Physician Assistants

- Wyoming's 146 practicing PAs represent a distribution of 28 per 100,000 population, well above the national average (19 per 100,000).
- Natrona County has the most practicing PAs, while Niobrara County does not have a PA. Combined, Laramie and Natrona counties employ 36% of the PAs in the state.
- Almost three-quarters of Wyoming PAs (74%) work 40 or more hours per week.
- Nearly half of Wyoming PAs (49%) are female, below the national average of 61%.
- Almost the same percentage of Wyoming PAs are forty years of age or younger (35%) as are 51-60 years of age (36%).

Advanced Practice Nurses

- Wyoming's 184 practicing APNs represent a distribution of 35 per 100,000 population, slightly above the national average (34 per 100,000).
- Laramie County has the most practicing APNs in the state (35% of the total), while several counties—Crook, Johnson, Niobrara, and Weston—have only one.
- The majority of Wyoming APNs (67%) work 40 or more hours per week, though almost one fifth (17%) work 29 hours or fewer per week.
- The vast majority of Wyoming APNs are female (87%) and white/Caucasian (92%).
- Over half of Wyoming APNs (52%) report being over 51 years of age.
- Over half of Wyoming APNs (52%) specialize as Family Nurse Practitioners.

Dentists

- Wyoming's 254 practicing dentists represent 49 dentists per 100,000 population, well below the national average (66 per 100,000).
- Laramie County has the most practicing dentists (17% of the state total), while Niobrara County does not have a dentist.
- Laramie and Natrona counties have the largest number of practicing dentists (18 and 14 percent of the state total, respectively).
- Less than half of all practicing dentists (48%) reported working 40 or more hours per week.
- The vast majority of Wyoming dentists (88%) are male (higher than the national average of 78%) and are white/Caucasian (96%).
- Over half of Wyoming dentists (56%) are over the age of 51.
- 14% of Wyoming dentists reported plans to change practice within five years.

Pharmacists

- Wyoming's 403 pharmacists represent 78 pharmacists per 100,000 population, slightly higher than the national average (75 per 100,000).
- Laramie County has the most practicing pharmacists in the state (29% of the total), while Niobrara County has the fewest (0.2%).
- Nearly three-quarters of Wyoming's practicing pharmacists (71%) report working 40 or more hours per week.
- 48% of Wyoming pharmacists are female, slightly above the national average (45%).
- One-third of practicing pharmacists are 40 years of age or younger, while 41% are 51 years of age or older.
- Wyoming has 154 pharmacy locations, with the most being located in Natrona County (19).
- The top three pharmacy-related issues as identified by Wyoming's practicing pharmacists were reimbursement, third-party payers, and a shortage of pharmacists.

Hospitals

- Wyoming currently has twenty-six acute-care community hospitals, one state psychiatric hospital, one private behavioral health hospital, two Veterans Affairs hospitals, and one federal hospital located within Yellowstone National Park.
- Wyoming's averages 2.7 hospital beds per 1,000 population, slightly less than the national average of 2.8.
- Twenty-two Wyoming hospitals—thirteen Critical Access Hospitals—have agreements that allow them to use their beds for either acute care or skilled nursing facility care.

Current and future uses of the workforce database information include planning for the future health care needs of the state's population, assessing the outcomes of programs aimed at workforce recruitment and retention, monitoring workforce trends, and improving the coordination of referral services.

Foreword

The Wyoming Healthcare Commission (WHCC) was created by House Bill 46 during the 2003 legislative session. It was charged with examining a wide range of health care issues and drafting specific recommendations to improve access to and quality of health care in Wyoming communities. Over the past five years, the Wyoming Healthcare Commission has worked diligently with national and state experts to research Wyoming's health care needs and develop recommendations for health policymakers. Their extensive research and deliberations have produced substantive recommendations for achieving the following goals identified by the state legislature: (1) reducing the number of Wyoming citizens without adequate health insurance, (2) reducing the cost of private health insurance, (3) enhancing the quality of health care delivered in Wyoming, (4) reducing medical errors, and (5) addressing health care workforce shortages.

To address the latter goal, the WHCC, under the direction of the Wyoming State Legislature, began a project in 2005 to establish a health care information system that would house data related to the size and nature of Wyoming's health care workforce. The purpose of this project was to develop and maintain an accurate, continuously updated database to assist policymakers, educators, and health care professionals in addressing workforce shortages, measuring the success of workforce development programs, and forecasting future workforce trends. The two primary goals of the data collection and analysis for the project were to obtain an accurate count of professionals currently practicing in Wyoming and to understand the demographics and service capabilities of the Wyoming provider community.

In order to collect and analyze the workforce data, the WHCC contracted with the Health Professions Tracking Center™ (HPTC) at the University of Nebraska Medical Center. During 2006 and 2007, the HPTC conducted a series of initial surveys with Wyoming physicians, physician assistants, advanced practice nurses, dentists, pharmacists, practice locations, hospitals, and pharmacies. This data collection is ongoing, and the information system is updated continuously with data from surveys and site visits.

The Wyoming Healthcare Commission Statistical Handbook provides a snapshot of the current information contained in the database developed by HPTC. The WHCC believes this information is best shared with those who plan for improvements in our health care system and provide quality health care across our state.

The uses of the information in the database are wide-ranging. Among immediate uses, it can play a key role in planning to meet the needs of a growing population by tracing information related to provider specialties, retirement/relocation plans, language fluency and geographic distributions of professionals, and practice locations and hospital capabilities. As the database continues to develop, the information may also help in such areas as (1) assessing the outcomes of federal and state programs implemented to aid workforce recruitment retention efforts; (2) monitoring health care trends in areas like workforce movement, service delivery, and patient activity; and (3) improving the coordination of referral services.

About the Statistical Handbook

Over the past two years, the WHCC and the HPTC have worked hard to locate and survey health professionals in Wyoming and analyze the findings. We believe the data represent the most comprehensive source of information available on Wyoming's health workforce.

The handbook is divided into four sections, whose contents provide a full representation of the system's capabilities. The first is a general introduction aimed at providing the reader with an overview of health care in Wyoming. It includes a summary of recent reports released by the WHCC that establish a context for understanding why Wyoming needs a health care information system. The second section is a statewide snapshot of the five surveyed professions and their corresponding practice locations. The third section provides greater detail on each of the surveyed populations, based on categories such as physician specialties, services, age, work status and plans to change practice. The final section presents county profiles, rounding out the picture of the system's capabilities. An appendix is included

that provides copies of the various surveys that were distributed and links to reports discussing Wyoming health care. The WHCC survey data is supplemented by U. S. Census data, national data from the Kaiser Family Foundation, and state data from the Wyoming Office of Healthcare Licensing and Surveys and from the Wyoming Behavioral Risk Factor Surveillance System maintained by the Wyoming Department of Health.

Overview of Data Collection Process

The objective of the data collection phase of this project was (and is) to populate the system with full, accurate, and continuously updated health workforce information. The data collection process involves a unique multi-step survey program through which Wyoming health care professionals and facilities are surveyed multiple times per year, thereby maintaining the most accurate and current data. It consists of three major activities, which occurred consecutively during the development period and will be repeated annually: preparation for data collection, data collection, and verification of data.

Phase 1

Preparation for the survey effort began with gathering licensee data for physicians, physician assistants, advanced practice nurses, dentists, pharmacists, pharmacies, medical clinics, acute care centers, and hospitals. These data were obtained from the Wyoming Boards of Medicine, Nursing, and Pharmacy and the Wyoming Dental Licensing Board. Based on these data, a brief, initial survey was sent in late 2005 and early 2006 to each licensee and practice location in the state, asking if these active licensees were currently practicing in the state, at least part-time. Its purpose was to eliminate the names of professionals who are licensed in Wyoming, but not practicing, so that the data collected in Phase 2 of the project would focus on practicing professionals to produce a more accurate picture of Wyoming's health workforce landscape.

Phase 2

Phase 2 of the project, the initial workforce data collection phase, involved a second cycle of surveys sent to practicing professionals in mid-2006. At its outset, questionnaires, ranging from one to three pages in length and accompanied by cover letters, were sent to all practicing licensees. If this initial survey was not completed and returned within one month, a second survey was sent to the individual or practice location. Finally, from among those who had not at this point responded to the surveys, two populations—physicians and practice locations—received a third survey in an effort to increase their response rate.

Throughout the process, whenever a survey was returned, HPTC mailed a thank you letter to the respondent. When it was clear that all the surveys likely to be returned had been returned, HPTC made a final attempt to acquire basic information on individuals who had not responded to the surveys: they contacted them by phone to verify practice location, work status, and other demographic data. They used this same protocol for determining which health care facilities were providing patient care in Wyoming.

The remainder of the verification process involved sorting the returned surveys by profession or facility type. Surveys were marked as “received” in the interface to the Wyoming database, referred to as DataTrac. If there were any updates to information from previous surveys, they were entered into the database, reviewed, and marked as “verified”. Surveys that did not require updates were also marked as “verified.” (The verification portion of the data collection process is likely to involve significantly more effort in future iterations of the survey series as changes in work and location naturally occur.) The paper surveys were then filed and stored.

Phase 3

Phase 3 is the first annual iteration of the survey process detailed in Phase 2 above. In February 2007, the first of a third series of surveys was sent to both practicing professionals identified in the initial phase of the project and newly licensed professionals identified through updated licensure data. (Previously licensed, but inactive professionals who began practicing since the last survey were identified through data from institutional surveys.) Those who had already completed the survey in a previous phase of the project (2005 and 2006) received a pre-populated survey for review.

During the initial phase, a total of 5,583 surveys were distributed to Wyoming licensed providers and practice locations; in 2007, 3,253 were distributed. In the event that a provider or location did not respond to the mailed surveys, the HPTC again made telephone calls to obtain as much survey information as possible or acquired basic practice location information from practice location surveys, Internet research and news clippings. Table 1 details the response rate by population and type of response in 2007.

One technique developed to increase response rates was to give professionals and facilities the option of calling HPTC to update or to verify survey data in lieu of returning the paper survey. Updates from verbal responses are entered into DataTrac, and the records marked "verified-telephone" to ensure the ability to differentiate between them and written survey responses.

A critical feature of this research methodology is its ability to cross-reference data from provider surveys and practice location data. For example, if a clinic labels a physician as working part-time at his/her location but the physician does not, the HPTC is able to conduct telephone research to correct the data. The ability to identify and correct discrepancies in the data ensures its accuracy and effectiveness for decision-making.

For the purpose of this publication, the WHCC differentiates between survey responses (returning the mailed paper survey) and practice verification (locating and confirming the work status of professionals and practices through the various means available to HPTC). The overall response rate to the 2007 survey was 67%, while the overall verification rate was 97%. We believe exceptional measures have been taken to locate all professionals practicing in Wyoming.

Table 1: 2007 Survey Response Rates by Field and Response Type

Provider	Survey Response Rate		Practicing in WY	Practice Verification Rate		Practicing in WY
	N=	Percent		N=	Percent	
Physicians	795	65%	693	1218	99%	996
Physician Assistants	121	68%	109	168	95%	146
Advanced Practice Nurses	152	53%	124	222	78%	182
Dentists	227	72%	199	311	98%	254
Pharmacists	257	60%	260	415	98%	403
Facilities	Survey Response Rate			Practice Verification Rate		
	N=	Percent		N=	Percent	
Pharmacies	119	73%		162	100%	
Hospitals	29	100%		29	100%	
Practice Locations	473	73%		632	98%	
Total	2173	67%		3157	97%	

About the Health Professions Tracking Center™ (HPTC)

The Health Professions Tracking Center™ (HPTC) has worked in the area of health care workforce information monitoring systems since 1995. Headquartered at the University of Nebraska Medical Center in Omaha, Nebraska, the HPTC plays a key information management role by collecting, maintaining and disseminating primary source health care provider information.

In addition to the information it collects for Wyoming, the HPTC maintains information on physicians, physician assistants, advanced practice nurses, practice locations, hospitals, dentists, pharmacists, pharmacies, behavioral health providers, infectious disease nurses, laboratory directors, microbiology coordinators, residency programs, and administrative positions in Nebraska and Western Iowa.

Recently, the Nebraska Department of Health and Human Services designated the HPTC as the Project Manager for Nebraska's Emergency System for Advanced Registration of Volunteer Health Professionals (ESAR-VHP) project, a role it will fulfill while continuing to provide information for Nebraska's Health Alert Network. The Center also partners with other states on projects similar to the health care professional tracking project in Wyoming. For more information about the HPTC, please visit them on the Internet at <http://www.unmc.edu/hptc>.

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Disclaimer

This data handbook contains the most current and accurate data available on the status of the Wyoming health care workforce as of publication. While we believe the data to be an accurate depiction of Wyoming health care, we rely on returned and completed surveys to form conclusive information. Therefore, the data in this handbook may vary considerably with respect to each survey question due to response rates for each question.

For Veteran's Affairs facilities, we included only those professionals who are also licensed and practicing in Wyoming. However, for all other practice locations, we included professionals practicing in Wyoming with either a state or federal license.

We encourage you to examine the data with a critical eye. We also ask that health care professionals help us gather complete information by completing surveys and returning them in a timely manner. The preponderance of the data presented in the detailed tables, charts, and graphs are the result of the ongoing partnership between the Wyoming Healthcare Commission and the Health Professions Tracking Center™. We appreciate feedback and welcome the opportunity to enhance our data.

Please address comments to Ryan Sandefer, Project Manager, by phone at (307) 262-3131 or by email at rsandy22@uwyo.edu.

For more information, please visit the WHCC at <http://www.wyominghealthcarecommission.org>.

Definitions

APN: Advanced Practice Nurse

BRFSS: Behavioral Risk Factor Surveillance System

CDC: Centers for Disease Control; agency in the federal Department of Health and Human Services

COGME: Council on Graduate Medical Education

DataTrac: Proprietary interface to the Wyoming database used to add or update database

HPSA: Health Professional Shortage Area

HPTC: Health Professions Tracking Center™

HRSA: Health Resources Services Administration; agency in the federal Department of Health and Human Services

Locum Tenens: Temporary substitute; relief worker

LSO: Wyoming Legislative Service Office

MUA: Medically Underserved Area

PA: Physician Assistant

Relief Pharmacist: Temporary substitute

Verified: HPTC was able to verify status through survey, telephone, or other means

WHCC: Wyoming Healthcare Commission

WHCNP: Women's Health Care Nurse Practitioner

Work Status: The number of hours survey respondents reported working in an average week

WY: State of Wyoming