

Health Workforce Data and Policy: Using Data to Evaluate the Need for New Educational Programs

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Background

Most decisions about how to improve the recruitment, geographic distribution and retention of health professionals are made at the state level.¹ Decisions about whether to start or expand schools of medicine, nursing, pharmacy or other health professions are primarily made by states and, if they are public institutions, entail a considerable investment of public dollars. States also invest significant funding for scholarship and loan repayment programs to incentivize graduates to enter certain types of health careers or to practice in certain underserved geographic areas². Access to accurate and reliable health workforce data is essential to make evidence-based policy decisions and to justify funding requests for new programs to legislative bodies or private foundations. High quality health workforce information is also necessary to evaluate existing programs and to plan for future needs.

The Program on Health Workforce Research and Policy houses the North Carolina Health Professions Data System (HPDS), a statewide health workforce data system which has housed, maintained and disseminated health professions licensure data since 1979. The Program has designed a series of briefs to describe how HPDS data have been used to inform state policy decisions. This brief describes how data have been used to determine whether or not new health professions education programs are needed in the state.

How are data used to document the need for new health professional educational programs in North Carolina?

In a state with a rapidly growing population such as North Carolina, there is a perception that the growing demand for health care requires comparable growth in the number of graduates across the health professions. Both public and private colleges and universities in the state use data from the HPDS to demonstrate need for new educational programs or schools or to expand existing programs. Likewise, the University of North Carolina General Administration (UNC GA) and the North Carolina General Assembly (NCGA) rely on data from the HPDS to approve or deny proposals for new programs and funding changes. At times, the debates over the need for new professionals are contentious, and the availability of objective data to support or reject anecdotal evidence is critical to making evidence-based decisions.

Data from the NC HPDS have been used to inform the following policy questions:

Does North Carolina need a new state-supported dental school as one effort to improve access to better oral health care?

- *Answer: Yes.*
- *Description of work:* In 2006, the UNC General Administration and the NC General Assembly requested data as they deliberated whether to approve a request to build a new dental school at East Carolina

University (ECU). The NC HPDS produced a series of slides³, maps, tables and a fact sheet⁴ on the supply, distribution and demographic, training and practice characteristics of dentists actively practicing in NC. These data showed that four counties in Eastern North Carolina did not have a dentist, and three of those counties (at the time) hadn't had an active dentist since at least 1989. The materials were reviewed by UNC GA, an outside group of consultants brought in to evaluate ECU's proposal, and the NCGA. Ultimately, these groups determined that there was a need to train additional dentists within the state. Funds were appropriated to develop a new school of dental medicine at ECU, as well as to expand UNC's existing dental school in Chapel Hill. Data from the HPDS were cited in the enabling legislation and, more recently, have been used by ECU to inform their decisions about where to locate the schools' service learning centers.

- *Fiscal implications:* NCGA appropriated \$89.6 million for new dental school at East Carolina University and \$96 million for expansion at UNC-CH.

Does North Carolina need a new state-supported pharmacy school?

- *Answer: No.*
- *Description of work:* In the early 2000s, North Carolina and other states were facing a perceived shortage of pharmacists. New schools of pharmacy were developed across the nation in an effort to train more pharmacists to enter the workforce and address the needs of the population. At the request of the North Carolina AHEC Program and the UNC General Administration, HPDS staff produced a fact sheet⁵, including slides, maps, tables, on the supply, distribution and training and practice characteristics of pharmacists actively practicing in NC. These data were used by UNC General Administration and consultants to weigh a proposal from UNC-Greensboro to develop a new stand-alone school of pharmacy and a proposal by UNC-Chapel Hill to expand its existing school of pharmacy to Asheville as a satellite campus. The report showed that the supply of pharmacists in NC exceeded national benchmarks and that new graduates were having increasing difficulty in finding desirable jobs, while disparities between rural and urban counties remained. Based in part on these data, UNC GA determined that the most cost-effective decision was to deny the request from UNC-Greensboro for a new school and to approve UNC-CH's expansion to Asheville, which required no new appropriations.
- *Fiscal implications:* Potential savings to state of nearly \$80 million in startup costs.

Does North Carolina need a new medical school?

- *Answer: Yes and no.*
- *Description of work:* In 2006, the Association of American Medical Colleges (AAMC) called for increasing medical school enrollment by 30% by 2015 to alleviate physician shortages. This resulted in the expansion of current class sizes and the development of new medical schools across the nation.

In response, Campbell University, a private institution in the rural community of Buies Creek, North Carolina, established a new school of osteopathic medicine. Its mission is to produce physicians to care for rural and underserved populations in NC, the Southeast and the nation; a mission shared with and successfully carried out by the Campbell University School of Pharmacy. Admitting its first class in 2013, the focus of the new school is on producing primary care physicians, and students complete most of their clinical training in community-based settings, rather than in a large academic medical center. Each class has 160 students, making it the second largest medical school in the state. Campbell University leaders,

including the Vice President for Health Programs and the founding Dean of the medical school, have reported that NC HPDS data were extremely useful as they compiled their feasibility study and made the case for developing their new school.

In 2010, the UNC Chapel Hill School of Medicine partnered with Carolinas Healthcare System to create a satellite campus in Charlotte, NC. There have been ongoing efforts to establish an independent medical school in Charlotte, and HPDS data have been used in feasibility studies commissioned by community and business leaders. In 2015, state and university leaders used other HPDS data⁶ to argue against the need for a new medical school in Charlotte, arguing that a stronger focus on graduate medical education expansion would have greater payoff for the state. Additional analyses are underway in 2016 as Charlotte continues to seek approval for a medical school.

- *Fiscal implications:* North Carolina chose not to appropriate funds for a new medical school but to expand existing programs.

Does North Carolina need an optometry school?

- *Answer: No.*
- *Description of work:* The budget passed by the North Carolina General Assembly in August 2014 included language directing the Board of Governors of the University of North Carolina to evaluate the feasibility of establishing a school of optometry at one of eight UNC system campuses in the state. In September of 2014 the UNC General Administration asked the Sheps Center to conduct a study of the optometrist workforce in the state. The study⁷ included an analysis of the supply, distribution and employment patterns of optometrists, their demographic characteristics, and the education of the optometrist workforce in the state. Data from the HPDS, along with other state and national data sets, were used to conduct the study. A group of optometrist experts from across the state was convened to review the findings and provide advice on potential recommendations. The study found that North Carolina's supply of optometrists per population ratio matches the national average. The state has a reputation for progressive optometry practice and has steadily attracted optometrists to the state to practice over the past 30 years. Though North Carolina does not have an optometry school, there are a number of schools in surrounding states and three more in the planning stages. North Carolina provides scholarship support for NC students attending out of state schools, which provides a steady pipeline of new optometrists. As a result of the study, the UNC Board of Governors decided not to proceed with planning for a state university optometry school at this time.
- *Fiscal implications:* Potential savings to state of \$12-\$40 million in initial start-up costs and an estimated \$8-19 million in annual operation costs

What strategies can the North Carolina Community College System (NCCCS) employ to increase the number of baccalaureate-trained nurses?

- *Answer:* In 2015, the NCCCS Board used HPDS data and input from an ad hoc committee to decide against a proposal to offer BSN degrees at selected community colleges. The Board chose to support continued collaboration between the community college and university systems to provide numerous options for ADN graduates to complete baccalaureate degrees.
- *Description of work:* In 2010, the national Institute of Medicine released its Future of Nursing report, which recommended increasing the proportion of baccalaureate prepared nurses (BSNs) nationally to eighty percent by 2020. In light of this, the President of the NC Community College System (NCCCS)

appointed an ad hoc committee in the fall of 2014 to examine the structure and role of the community college nursing programs. The committee's charge was to examine the impact of the national report and changes in hospital staffing requirements on the demand for nurses with various educational backgrounds, and to determine what, if any, additional efforts NCCCS should make to encourage and facilitate the education of more BSNs, including the option of having some community college ADN programs converting to BSN granting status. HPDS data⁸ were analyzed and presented on the current nursing workforce in the state, and the differences in practice location and work settings among nurses with different educational preparation. The analysis showed that ADNs, compared to those educated at the baccalaureate level or higher, are more likely to practice close to where they were educated, more likely to practice in rural communities, and more likely to practice in long term care and home health settings. In further comparing nurses who have an initial ADN, but go on to complete a BSN, referred to as "mobility nurses", it was further noted that once they complete the higher degree, they are then more likely to practice in settings like other BSN nurses, such as hospitals and public health, but still remain much more likely to stay close to where they were educated and more likely to practice in rural and other underserved settings.

- *Fiscal implications:* North Carolina has chosen to develop better pathways for students to move from two-year to four-years programs in favor of building new four year programs

Conclusions

Timely, accurate and objective data can prove or disprove the need for new health professional education programs. These data allow policymakers to make decisions based on evidence rather than anecdote or other motivations, so they can more wisely direct funding to where it is most needed. This brief has provided detailed examples of how data have been used in this way in North Carolina, and can serve as an example for other states as they persuade stakeholders to fund and support state health workforce data systems.

References and Notes

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