
Mandated Self-Reporting of Workforce Data Collected During Medical License Application or Renewal: A Case Study of Obstetrician-Gynecologists in New Mexico

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ABSTRACT: Surveys required of licensed medical practitioners under the 2011 New Mexico Health Care Work Force Data Collection, Analysis and Policy Act produce knowledge useful for state health care workforce planning. As a case example, we examined responses to the mandatory survey from all obstetrician-gynecologists (ob-gyns) licensed and actively practicing in New Mexico between 2013 and 2015. In 2015, there were 389 licensed ob-gyns in New Mexico; two-thirds (254, 65.3%) practiced in the state. Eleven of 33 counties had no ob-gyn and no inpatient maternity services. More than half of all ob-gyns were female (54.1%), and females were younger than males (median age: 48.2 versus 61.4 years). Very few providers stated that their practice was too full to accept new patients. Most ob-gyns were employed (rather than practice owner-operators), and few worked in independent practices. The 28.7% of all ob-gyns who worked in non-metropolitan counties were more likely to be male, white, older, and work more hours. In conclusion, mandated self-reporting of workforce data provided a rich information source for use in evaluating medical specialty trends in New Mexico. Longitudinal observations will identify trends, along with an ability to isolate factors that either determine or are determined by these trends.

Keywords: obstetrician-gynecologists, licensure, practice patterns, survey, workforce

Introduction

Nationally, there is an urgent and increasing need to address Americans' access to physicians, particularly primary care physicians and critical specialists, such as obstetricians and gynecologists and general surgeons. Recent work on the locations of obstetrician-gynecologists (ob-gyns) has shown that these physicians are maldistributed relative to the populations they serve. Nearly half of U.S. counties have

and cost control, improved tools for workforce planning are needed.

Health care workforce planning requires that the right number of professionals be available when and where they are needed to meet a population's health care needs.⁵ An adequate workforce is closely tied to the aims of U.S. health care reform, i.e., improving access and patient experience, improving the population health, and reducing cost.⁶ Furthermore, it is important to know whether there are sufficient providers to care for the growing number of newly insured individuals taking advantage of the 2010 Patient Protection and Affordable Care Act's health insurance mandate and subsidies.⁷ The need to expand any physician workforce requires careful planning using accurate and up-to-date data.

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no ob-gyn.¹ One in eight U.S. reproductive-aged women must drive more than 30 minutes to the nearest hospital providing maternity care; in New Mexico, more than one in three must do so.² At the same time, obstetrics units in rural hospitals are at risk of closure due to the costs associated with labor and delivery services and the specialized staff necessary to meet standards of care.^{3,4} In order to address the competing demands of patient access

How many professionals are available, where and how they practice, and whom they serve are factors important to understand. Despite the federal role, many aspects of health workforce analysis and planning occur at the state level.⁵ Indeed, state-to-state health care workforce comparisons are not always possible due to differences between states in medical licensing, the complexity of the U.S. health care system, and inconsistencies in data collection.

To address these issues, New Mexico has implemented by statute rigorous health workforce data collection and analysis. Enactment of the New Mexico Workforce Data Collection, Analysis, and Policy Act of 2011 and its 2012 amendment (collectively termed “the Act” hereafter) required all practitioners to provide demographic and practice information during initial licensing or relicensing.^{8,9} New Mexico studies its health care workforce using uniform required data collection, a centralized data management infrastructure, and stakeholder engagement for conducting analyses and making recommendations. Data management and analysis at the University of New Mexico Health Sciences Center enabled a committee of stakeholders and the New Mexico Center for Health Care Workforce Analysis to study practitioner distribution, along with projecting workforce adequacy as a basis for legislative interventions.

In this report, we describe implementation of the New Mexico health workforce survey and how ongoing analyses of data could serve as a model for other states in health policy initiatives aimed at workforce development. As an example, we chose to examine workforce data about a single medical specialty. Provider-to-population ratios, demographics and practice patterns of ob-gyns were evaluated, since there was believed to be a maldistribution of ob-gyns in this large, predominantly rural state with maternity services either closing or being absent from certain rural counties.

Methods

The Act specifies that each health professional licensing board collect from its licensees a core essential data set, including demographics (race, ethnicity, and languages spoken), practice status (practice type, size, and whether in New Mexico), education and training, specialties (for appropriate professions), hours worked per week and weeks per year, percent of time in direct patient care, near-future practice plans (such as retirement), and professional liability costs. This provision applies to all 36 licensed health professions in the state, including medical doctors, doctors of osteopathy, nurses, pharmacists, counselors and social workers, and more. For medical doctors, the New Mexico Medical Board requires completion of a 57-question survey that includes the core essential data set at license renewal, every three years.

The Act designated the University of New Mexico Health Sciences Center (UNM HSC), the state’s only academic health center, to be the steward of the survey data. Each practitioner’s information was

bound to confidentiality. UNM HSC was well-versed in health systems research, with ample data storage capacity for the voluminous data gathered on all practitioners. The Act also established a New Mexico Health Care Workforce Committee representing state agencies, medical systems, professional associations, and community groups. The Committee was tasked to report annually on the state’s health workforce and make recommendations about workforce recruitment and retention, conduct short-

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and long-term workforce planning, and recommend policies to build healthier communities. The Committee’s findings are disseminated as annual reports to the state legislature by October 1, prior to the annual legislative session.

For this analysis, survey data were analyzed only for ob-gyns who were actively licensed and reported active practice in New Mexico during the most recent three-year period (2013–2015). The state’s 33 counties were designated as frontier (15) by the criterion of fewer than six people per square mile, rural (12) by population density above this threshold and rural classification by the Office of Rural Health Policy, or metropolitan (6) if neither criterion applied.¹⁰ Complete data for ob-gyns were aggregated into either metropolitan or non-metropolitan (rural or frontier) counties using their self-reported practice address. For those ob-gyns who had not yet renewed their license, and thus had not yet been surveyed, practice county was estimated from the licensure address. Data regarding type of practice and outpatient workload were available only from surveyed ob-gyns who renewed their licenses in 2013, 2014, or 2015.

This descriptive study was conducted after an exemption was granted from the University of New Mexico Human Research Review Committee (HRRC 13-329). The national provider-to-population averages of ob-gyns per 10,000 women aged 16 or older (2.7) and 16 to 44 years (5.5) were used for comparisons at the state and county levels.¹¹ All statistical analyses were performed using Stata 14.1 (StateCorp,

College Station, TX, 2015). Student t-tests were used to compare the means of metropolitan and non-metropolitan ob-gyns' responses to survey questions on demographics (sex, age, race, and Hispanic ethnicity), practice type (e.g., hospital, outpatient), practice size (e.g., four or fewer MDs), hours worked, percent of time spent in direct patient care, and practice capacity. Logistic regression analysis was used to examine the impact of age and metropolitan status on physicians' likelihood of working full time (40 hours or more per week) or part time (fewer than 40 hours weekly). A p-value of less than 0.05 was considered significant.

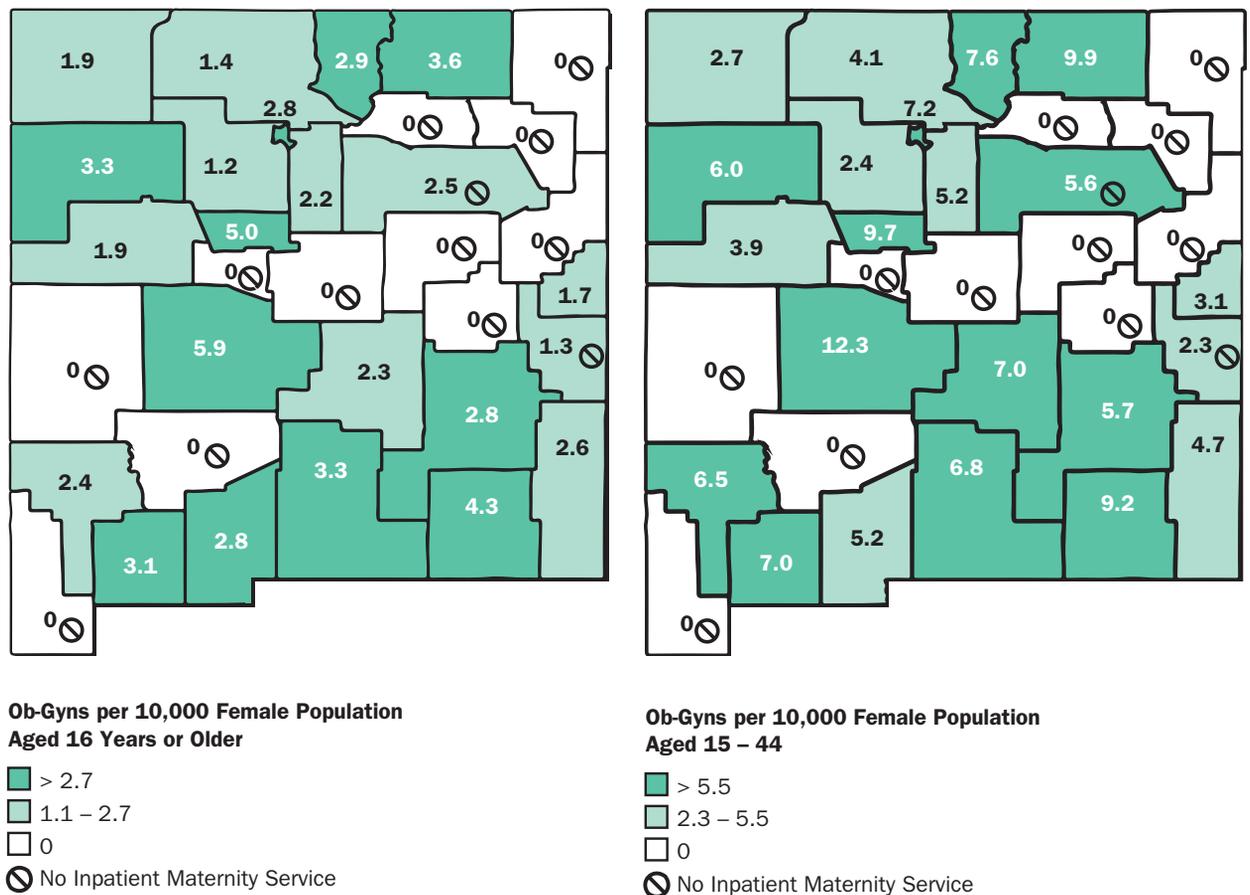
Results

In 2015, there were 389 licensed ob-gyns in New Mexico, with only 254 (65.3%) of these reporting a

New Mexico practice address. Of those, data were obtained when initially obtaining a license (n = 15) or from the mandated survey completed for relicensure (n = 239). More than half of all ob-gyns were female (54.0%). Females had a lower median age than males (48.2 versus 61.4 years). The percentages age 55 or older were 67.9% for male and 34.1% for female ob-gyns. Only six ob-gyns were doctors of osteopathy.

Figure 1 displays the number of ob-gyns per 10,000 female population aged 16 or older (Figure 1A) and 15 to 44 (Figure 1B). Those counties with no ob-gyns also contained no inpatient maternity service; 11 of the 13 counties with no inpatient maternity services were low-populated frontier counties. This was most apparent in the northeast portion of the state. Two of the six metropolitan counties and nine of the 27

Figure 1
New Mexico ob-gyns per female population aged 16 and older (a) or 15 – 44 (b)



Numbers indicate the ratio of ob-gyns per 10,000 female population, which varied sharply by county in 2015. Colors highlight county-level differences, with white indicating no ob-gyn, light green indicating a provider-to-population ratio below the national average (2.7 ob-gyn per 10,000 female population aged 16 and older (a), 5.5 ob-gyn per 10,000 female population aged 15–44 (b)). The placement of the “no” symbols indicates there is no inpatient maternity service in the county.

non-metropolitan counties had more than the national average of providers per population. The most populous county, which included Albuquerque, contained one-third of the state's adult female population and more than one half (134, 52.8%) of the total ob-gyn physicians. However, the provider-to-population ratios above the national average were driven in many counties by low population density rather than large numbers of providers; one such county had more than double the national provider-to-population ratios (5.9 ob-gyns per 10,000 females 16 or older, 12.3 ob-gyns per 10,000 females 15 to 44), but only two ob-gyns. In addition, many of these counties were adjacent to those with no ob-gyns or fewer providers per population.

Several significant differences were observed between ob-gyns who practiced in either metropolitan (n = 181) or non-metropolitan (n = 73) counties. Male ob-gyns were more inclined than females to practice in a rural county, with males making up 63.9% of non-metropolitan and only 38.3% of metropolitan ob-gyns (p < 0.001). Non-metropolitan practitioners were more likely to be 60 years or older (47.2% vs. 33.5%; p = 0.045) and less likely to be younger than 45 years (18.1% vs. 33.5%; p = 0.015). Hispanic practitioners were less common among non-metropolitan ob-gyns (5.6% vs. 17.4%; p = 0.015).

Compared with ob-gyns in metropolitan counties, rural providers were more likely to report working 40 hours or more weekly (85.5% vs. 68.7%; p = 0.011) and spend all of their work hours in direct patient care (62.5% vs. 42.8%; p = 0.008). From the results of our logistic regression, age was a strong predictor of working full time. Senior ob-gyns (60 years or older) were less likely to work full time

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relative to those aged 45 to 49 (age/metropolitan combined model: O.R. 0.305, p = 0.001; age only model: O.R. 0.357, p = 0.003). Ob-gyns in metropolitan areas were less likely to work full time only in the age/metropolitan combined model (O.R. 0.471, p = 0.021). Taken together, these

observations indicate that non-metropolitan physicians' longer work hours are driven by younger physicians, even though they constituted a smaller proportion of the workforce in those areas.

Practice types varied significantly between ob-gyns in metropolitan and non-metropolitan settings. Practice as an employee or staff was the most

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common practice type, albeit significantly less frequent in non-metropolitan than metropolitan counties (26.2% vs. 61.0%; p < 0.001). Hospital outpatient practice was more frequent in non-metropolitan counties (21.4% vs. 3.0%; p < 0.001), as was locum tenens practice (21.4% vs. 2.0%; p < 0.001). Non-metropolitan ob-gyns practiced less frequently with 10 or more MDs (8.3% vs. 37.9%; p < 0.001), and more often with four or fewer providers (66.7% vs. 44.1%; p = 0.004).

Regardless of location, few ob-gyns reported their practice capacity as being full (3.9% of non-metropolitan and 3.8% of metropolitan physicians). When asked about any practice changes in the next 12 months, most stated that they had none planned. The likelihood of retiring, reducing their patient load, or moving was very low, regardless of county location.

Discussion

This retrospective observational study was undertaken to illustrate the insights into the statewide workforce of a medical specialty made possible using data gathered from a mandated self-reported survey of all health care providers renewing a license. We chose to focus upon the demographics and practice patterns of ob-gyns because of the known national shift of providers being female, preference toward locating in metropolitan areas, and retiring earlier.¹¹ We confirmed that physician supply estimates based on license counts alone are overestimates, since only two-thirds of ob-gyns licensed in New Mexico actually practiced in the state.

One would expect there to be a maldistribution of ob-gyns in this large, predominantly rural Western state.¹ Provider-to-population ratios exceeded the

national average in several counties. One such county was home to the state's most populous city, only medical school, and headquarters of three large health systems. Practitioner-to-population ratios greater than the national average also resulted from small numbers of ob-gyns in low-population counties: e.g., two counties exceeded the national average with only two ob-gyns each.

Counties above national provider-to-population ratios were adjacent to counties with fewer or no resources (physicians, inpatient maternity services). This signals the regionalization of care, in which ob-gyns in better-supplied counties serve patients beyond their county borders; this is further demonstrated by closures of two inpatient maternity services in rural New Mexico communities during this study period. Counties without ob-gyns also had no inpatient maternity facilities, an important factor to consider when interpreting physician maldistribution.

Slightly more than half of all ob-gyns in New Mexico were female, which is comparable to national standards.¹¹ Compared with males, characteristics of female ob-gyns in New Mexico were similar to that reported nationally (i.e., being younger, more in metropolitan counties, employed rather than being partners or owners of an independent private practice).¹¹ Some researchers warn that more physicians will be needed to compensate for the presumed likelihood that female physicians will work reduced hours and take career breaks for childrearing.^{1,12}

New Mexico has the nation's highest percentage of actively licensed physicians over 60.¹³ Older physicians tend to practice in less populated areas. This suggests that New Mexico ob-gyns may delay retirement when working in largely rural areas. In contrast, female ob-gyns who practice at metropolitan areas are more inclined to quit delivering babies earlier and retire earlier than most physicians.¹⁴

A limitation of this study is the lack of inclusion of certified nurse midwives (CNMs). Compared with other states, New Mexico has a higher percentage of deliveries performed by CNMs than any other state.¹⁵ Workforce data for those practitioners are available from the nurse midwifery board at the state health department. Given the insufficient number of ob-gyns in certain counties, provision of women's health care would also need to be assumed more by non-physician clinicians or adult primary care physicians. The survey did not query

about specific types of patients seen by family physicians or general internists in ambulatory settings. Another limitation was that we were unable to observe changes beyond this initial three-year period due to the short timeframe since statutory institution of the survey. Lastly, our data depended on self-reporting of health care providers. The Licensing Board and Workforce Committee were unable to verify the accuracy of the information provided by each practitioner, yet it was clear to the respondents that his/her name would not be identified and there was no known reason to misunderstand a question or fabricate an answer.

In summary, licensing of health care providers in New Mexico mandates completion of a self-reported survey at license renewal. The workforce data collection and analysis for a specific medical specialty, population group, or community should enable policy makers to better anticipate needs and effects from changes in health care delivery. Knowing who is practicing where could be instrumental in providing evidence needed to better appropriate state funding for specific health professional training, recruitment, and retention. The New Mexico Healthcare Workforce Committee has

KNOWING WHO IS PRACTICING WHERE COULD BE INSTRUMENTAL IN PROVIDING EVIDENCE NEEDED TO BETTER APPROPRIATE STATE FUNDING FOR SPECIFIC HEALTH PROFESSIONAL TRAINING, RECRUITMENT, AND RETENTION.

successfully advocated for a number of initiatives: for example, legislative funding has been offered to expand the number of residency positions in specific training programs at the state medical school. The committee has further recommended that financial aid programs can be increased and loan repayment programs prioritized over loan-for-service due to indications that the former are more effective for recruitment.¹⁶ More efforts at tele-mentoring could permit practitioners in remote areas to improve patient care in their non-metropolitan community or foster more appropriate and timely transfers of care. The data set will continue to grow with each passing year, enabling refined questions about the interplay of health professional supply, demand, and need for the state in general and the counties in particular. ■

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Note

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