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Competitive effects of scope of practice restrictions: Public health or public harm?

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ABSTRACT

The demand for healthcare professionals is predicted to grow significantly over the next decade. Securing an adequate workforce is of primary importance to ensure the health and wellbeing of the population in an efficient manner. Occupational licensing laws and related restrictions on scope of practice (SOP) are features of the market for healthcare professionals and are also controversial. At issue is a balance between protecting the public health and removing anticompetitive barriers to entry and practice. In this paper, we examine the case of SOP restrictions for certified nurse midwives (CNMs) and evaluate the effects of changes in states' SOP laws on markets for CNMs and on maternal and infant outcomes. We find that SOP laws are neither helpful nor harmful in regards to health outcomes but states that have no SOP-based barriers have lower rates of induced labor and Cesarean section births. We discuss the implications for state policy.

Introduction

As a result of population growth, the aging of the population, and the continued altering of national health care policy, the demand for health care and healthcare professionals is predicted to grow tremendously over the next decade. The Bureau of Labor Statistics (BLS) estimates that the collective healthcare occupation will be one of the fastest growing, far outpacing the growth in other industries and adding 2.3 million new jobs by 2024 (BLS, 2015). At the same time, others predict that demand for workers will outpace supply, leading to a shortage of 35,000–52,000 adult primary care physicians by 2025 (Petterson et al., 2012). In the face of this changing landscape, securing an adequate health care workforce is of primary importance to ensure the health and wellbeing of the population, as well as meeting national goals of improving the efficiency of the healthcare system (Heisler, 2013).

The trajectory of the healthcare workforce is shaped by a variety of factors, with one of the most important being issues related to occupational licensing. The Bureau of Labor Statistics estimates that 72.2% of healthcare practitioners (6.33 million workers) are licensed and subject to laws regulating those licenses (BLS, 2016). Healthcare practitioners are licensed by the states in which they practice, earning their license by completing the required years of education and practical training, and passing national exams. In general, occupational licenses exist to ensure that practitioners are knowledgeable and competent, and therefore protect the public from potential harm (Bryson and Kleiner, 2010). However, certain provisions of licenses can also generate significant barriers to workforce entry, restrict competition, raise prices, and protect guilds.

Beyond the initial licensing requirements guiding entry into the profession, many health care practitioners, generally non-physicians, face additional "scope of practice" license restrictions after entry. These scope of practice (SOP) laws are set by the states and define the range of tasks legally allowed for a given provider, within state boundaries. Physicians generally have no restrictions on their SOP, are free to practice medicine as they see fit, and perhaps earn economic rents. Other practitioners, including physician assistants, advanced practice registered nurses (APRNs), dental hygienists, and optometrists, often face restrictions on their SOP. It is these restrictions that have become a source of controversy in recent years as it is argued that they may generate unnecessary barriers to practice, block patients' access to care and restrict the achievement of efficiencies in the overall health care system. Lifting restrictions is seen as one solution to primary care shortages that can also result in improved access to care and cost savings. Indeed, the current movement among states is to lift SOP restrictions and

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move towards "fully enabled" SOP for many types of health practitioners.

The controversy surrounding SOP regulation of healthcare practitioners is particularly acute in the market for APRNs. Critics contend that quality of care may suffer under an APRN's direction, citing the shorter length of training and clinical experience required. Proponents argue that APRNs improve efficiency of the system by providing care that is similar in quality to that of physicians while reducing costs substantially (AAFP, 2012; Schiff, 2012). The heart of the controversy lies in the determination of the costs and benefits. What remains unknown is whether SOP restrictions complement licensing requirements in a way that protects the public from potential harm, or if these restrictions simply generate artificial barriers and protect physician rents. Indeed, the Federal Trade Commission has advised state legislators "to avoid imposing restrictions on APRN scope of practice unless those restrictions are necessary to address well-founded patient safety concerns." (FTC, 2014 pg. 2).

This line of inquiry is important for a subset of APRNs, Certified Nurse Midwives (CNMs) whose education allows them to manage women's health during pregnancy, birth, and the postpartum period. The costs of births at delivery equaled about $39 billion in 2013 (based on authors' calculations of the Medical Expenditure Panel Survey (MEPS)), with almost half of that paid by taxpayers through the Medicaid program; the largest driver of the costs of delivery is whether it is vaginal or by C-section.

In this paper, we examine this controversy and evaluate the effects of varying levels of SOP restrictions on health outcomes relevant to the CNM practice. CNMs are APRNs whose practice is defined as the independent management of women's health care. Their practice focuses on pregnancy, childbirth, postpartum care, newborn care, and the family planning and gynecological needs of women. We use the natural experiment of states' changes in laws affecting the SOP for CNMs over the 1994–2013 time period to evaluate the effect of the laws on the markets for CNMs and their services, and on related maternal and infant outcomes. We focus on SOP laws that pertain to physician oversight requirements and prescribing rules, and examine the effects of SOP laws in geographic areas designated as medically underserved. We estimate a reduced form equation that links the laws directly to health outcomes and to the intermediary mechanisms of CNM employment levels and consumers' choice of provider.

The results of this study inform the debate surrounding the movement to fully enabled SOP for APRNs in general, but specifically, as it pertains to CNMs. We show that states that allow for CNMs fully enabled practice, have on average, little or no differences in maternal health behaviors or infant health outcomes as compared to states with more restrictive SOP. There are however, noticeable differences in rates of labor inductions, elective labor inductions, C-sections and elective C-sections, with fully enabled SOP states having lower probabilities of these procedures. The results point to the conclusion that restrictions on CNM SOP primarily serve as barriers to practice and removing these restrictions has the potential to improve the efficiency of the health care system for delivery and infant care.

Background

Scope of practice laws are the legal authority given to health care providers to provide medical services. For nurses, these laws specifically "define nurses' roles, articulate oversight requirements, and govern practice and prescriptive authorities." (Naylor and Kurtzman 2010, p. 896). The two most common and broad reaching of these laws pertaining to practice oversight requirements and prescription authority. The SOP laws pertaining to practice authority specify the degree of practice independence, which range from no specific requirements to collaborative or consultative arrangements with physicians, to supervisory relationships. SOP laws regarding prescription authority dictate whether or not an APRN can write prescriptions, and if so, for which types of drugs, and whether physician involvement is required.

The current regulatory environments for APRNs (including CNMs) vary tremendously by state and range from restrictive supervisory relationships to complete independence. Restrictive practice laws generate barriers to practice by requiring additional documentation (e.g., co-signatures on charts and orders), delays in care for patients receiving treatments and medications (such as those that occur when physicians must be contacted to order medications or treatments), and disruptions of care continuity (when medical results or consultation reports are sent to the physician of record and not the actual care provider). Restrictive SOP laws can also add to provider costs when physician chart reviews and oversight meetings are legally required. In addition, APRNs may have to pay fees to physicians to participate in collaborative practice agreements (Westat, 2015; FTC, 2014).

The relevant public policy question surrounding these laws is whether states should allow APRNs to practice to the full extent of their training with no physician oversight. Full practice authority is recommended for these practitioners by groups like the Institute of Medicine (IOM), Robert Wood Johnson Foundation (RWJF), and National Governors Association (NGA) based on conclusions from academic research comparing health care quality among the different providers. The most common comparison in these studies is that of nurse practitioners (NPs), who provide primary care services, to physicians. Newhouse et al. (2011) and the National Governers Association (Schiff, 2012) provide comprehensive reviews of this literature and conclude that the quality of care provided by NPs is similar to that of physicians. The quality measures include patient satisfaction, time spent with patients, prescription accuracy, and changes in physiological measures. The Newhouse et al. study also compared CNM to physician care and found CNM groups show lower rates of episiotomy, cesarean sections, epidural use, perineal lacerations, and neonatal intensive care unit admission. They also show comparable rates of APGAR score, labor augmentation, labor induction, low birth weight, vaginal operative delivery, and vaginal birth after caesarian section (Newhouse et al., 2011).

The consensus of this literature finding comparable or superior outcomes for the APRNs is compelling but almost all of the outcome-based comparisons were conducted without regard to the scope of practice environment in which the study is undertaken. Thus, the existing quality comparisons do not inform the debate surrounding the movement by a state from restrictive to fully enabled SOP. Consider for example, the list of U.S.-based studies shown in Table 1 below, drawn from a review article by Johantgen et al. (2012) that is often cited as evidence supporting the use of CNMs. We list the "high quality" studies identified by Johantgen et al. for which we could identify the geographic area and the practice environment under which the data were collected. We show that the practice environments differ by state but are dominated by restrictive SOP laws. While the article draws the conclusion that "the findings provide evidence that care by CNMs is safe and effective", given the different practice environments under which the studies are conducted, a more accurate conclusion is that CNM care is safe and effective under several types of practice environments, including physician oversight. The literature leaves the main question unanswered. It does not provide information as to whether changing the SOP laws protect the public's health and this is the gap in the literature we fill.

There exists a modest academic literature on the effects of occupational licensing (for example, Gittleman et al., 2015; Kleiner and

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