



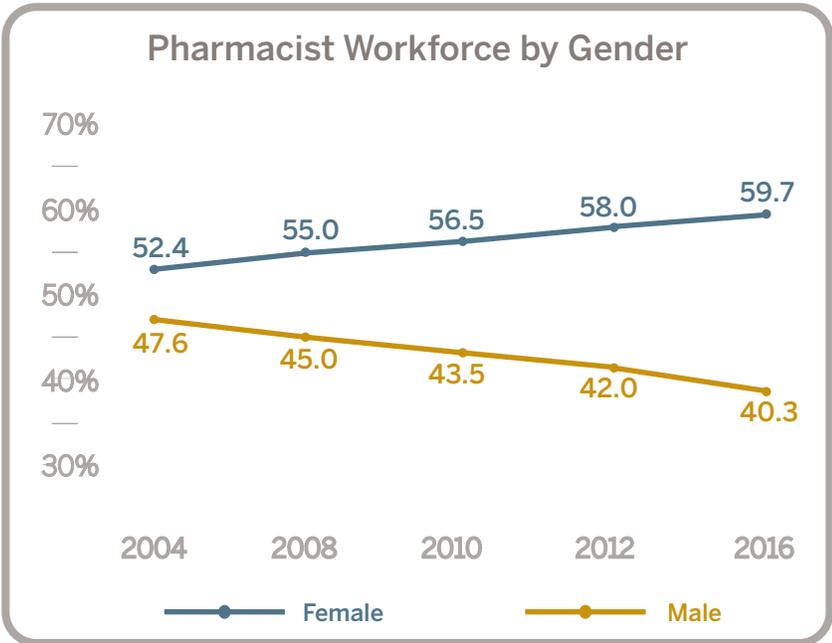
# Pharmacist Workforce

Publication Date: June 2017

### Background

More than half of all Americans used prescription drugs between 2011 and 2012.<sup>1</sup> In order to obtain these prescriptions, they likely interacted with a pharmacist. As health care providers, pharmacists' primary responsibilities include dispensing and managing medications and educating patients on medication use.

In addition to traditional responsibilities, pharmacists are also taking on new roles delivering patient services in various health care settings as a part of care teams. As the pharmacy profession evolves, policymakers, educators, and health administrators will need to have a good understanding of the workforce to inform effective policy development and implementation.<sup>2</sup>



**21.2%**  
of pharmacists are over the age of 55

**9/10** reported being White and non-Hispanic

### Demographics

Feminization of the pharmacist workforce is a national trend.<sup>3</sup> In Indiana, the proportion of female pharmacists has increased every year since 2004. Data from 2016 demonstrates that there are approximately 20% more female pharmacist than males in Indiana.

Previous studies have shown that this increase may be attributable to the flexibility of the pharmacist schedule, affording women the ability to practice part-time while assuming family responsibilities.<sup>4</sup>

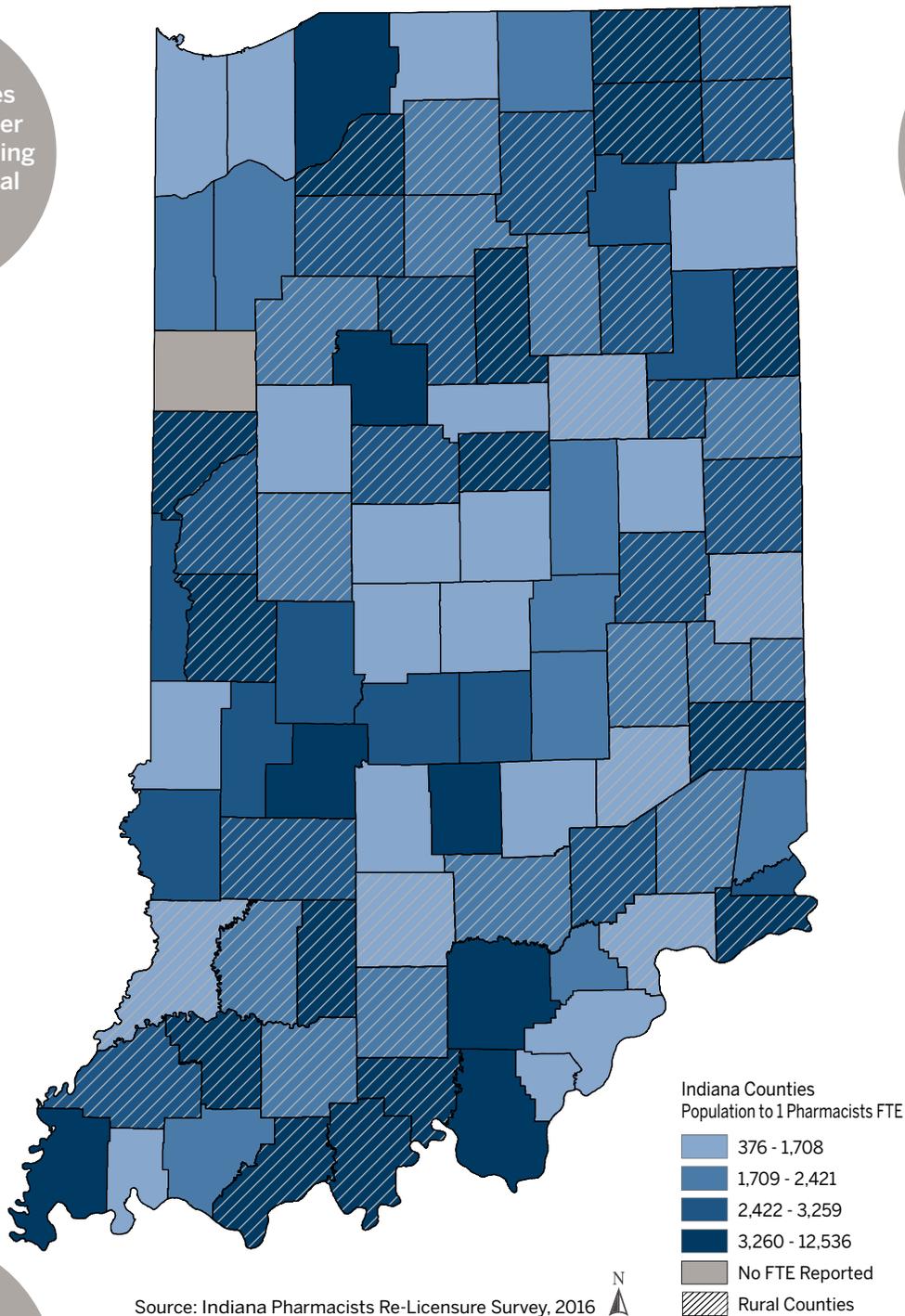
Aging of the pharmacy workforce is a concern among policymakers and those in workforce planning. Nationally, nearly one third of pharmacists were over the age of 55 in 2014.<sup>5</sup> Indiana fares better with 21.2% of active pharmacists in Indiana were over the age of 55.

# Pharmacist Workforce

Community pharmacies may experience increased difficulty in recruiting pharmacists as the rural pharmacy workforce ages into retirement.

1 Fewer pharmacies may lead to greater difficulty in accessing medication in rural America<sup>6</sup>

2 Pharmacy closures may increase travel times for rural Americans<sup>7</sup>



4 Failure to comply with treatment plans may lead to poor health outcomes<sup>8</sup>

3 Barriers to pharmacy access could effect medication adherence<sup>6</sup>

# Pharmacist Workforce

## Practice Characteristics

Indiana pharmacists work in a variety of settings. The greatest proportion of pharmacists reported working in a setting classified as an outpatient pharmacy, followed by one fifth of pharmacists that reported working in a hospital inpatient setting.

The role of the pharmacist has expanded in recent years to include patient services such as medication management.<sup>9</sup> Increases in the entry-level educational requirements for individuals seeking licensure as a pharmacist are among the factors driving expansion of practice. Previously, the entry-level requirement was a bachelor's degree, but in 2000 this was changed to a doctoral degree.<sup>10</sup> Half of Indiana pharmacists (49.8%) currently report doctoral-level training and the other half (49.4%) report a baccalaureate-level training in pharmacy.

The curriculum for PharmD degrees includes additional education in pharmacotherapy, patient care, and extended training in clinical skills.<sup>11</sup> With the transition in education to PharmD, it is not surprising that the role of the pharmacist has transitioned as well.

## Pharmacist Primary Practice Setting



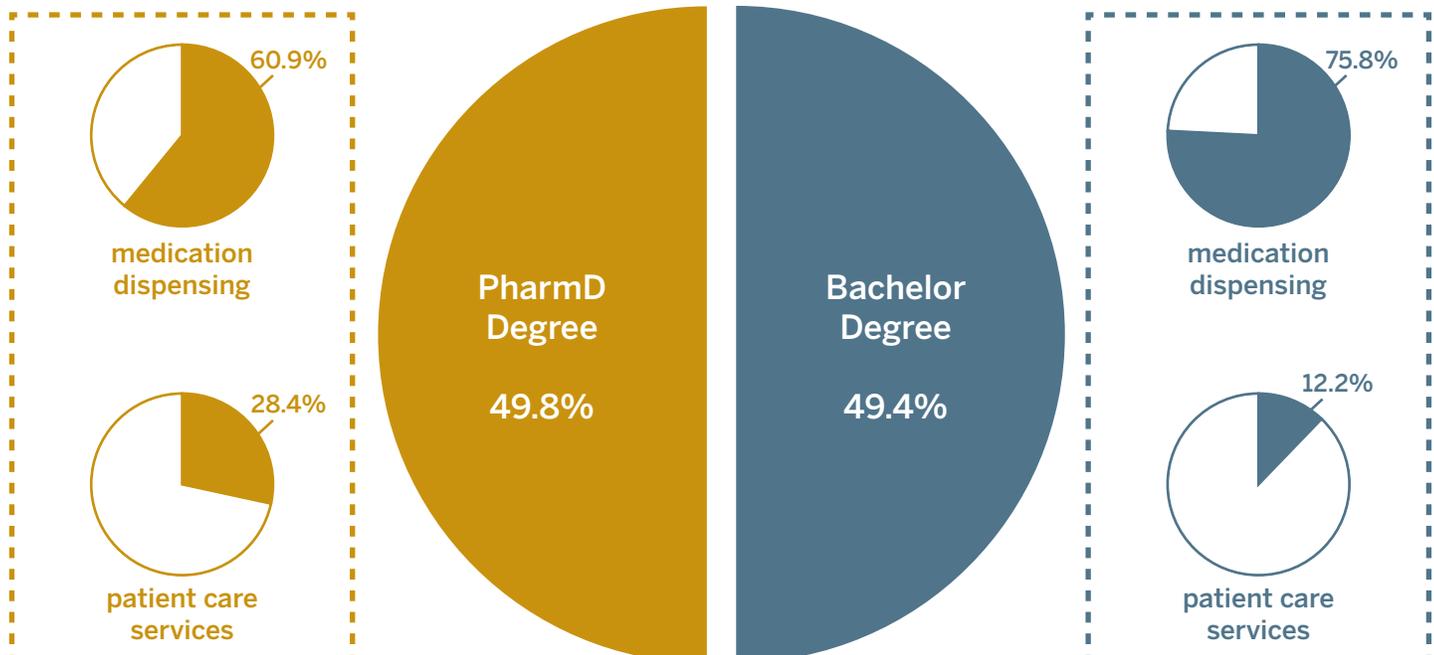
22.2%  
Hospital



41.7%  
Outpatient

## Education

The number of pharmacy students that graduate each year in the United States has more than doubled over the last 20 years.<sup>12</sup> This expansion has created a higher demand for pharmacy faculty to train this influx of students. Pharmacy faculty have experienced the same educational transition as the overall pharmacist workforce. Educational institutions are placing higher value on doctorally-trained pharmacist faculty. The majority of open pharmacy faculty positions require or prefer applicants with a doctoral degree in order to meet the current and future pharmacist student education needs.



**1 in 5  
pharmacists  
>55**

**49.8%**  **PharmD  
Degree** | **49.4%**  **Bachelor  
Degree**

**2/3** of pharmacist faculty in Indiana  
are trained at the doctoral level

**52.4%**  
2009



**59.7%**  
2016

**women in pharmacy**

**References:**

1. Kantor ED, Rehm CD, Haas JS, Chan AT, Giovannucci EL. Trends in prescription drug use among adults in the United States from 1999-2012. *Journal of the American Medical Association*. 2015;314(17):1818-1830.
2. See Data Report: 2016 Pharmacist Licensure Survey for full inclusion/exclusion criteria and survey methodology. To access the full document visit: <https://scholarworks.iupui.edu/handle/1805/11836>
3. Hawthorne, N. and C. Anderson (2009). "The global pharmacy workforce: a systematic review of the literature." *Hum Resour Health* 7(1): 48.
4. Neena L. Chappell, G. E. B. (1981). "Women in Pharmacy." *Contemporary Pharmacy Practice*.
5. Midwest Pharmacy Workforce Research Consortium. 2014 National Pharmacist Workforce Survey. 2015.
6. RUPRI Center for Rural Health Policy Analysis (2013). *Causes and Consequences of Rural Pharmacy Closures: A Multi-Case Study*
7. Tierney, W. M., et al. (2000). "Restricting Medicaid payments for transportation: effects on inner-city patients' health care." *The American journal of the medical sciences* 319(5): 326-333.
8. Musey, V. C., et al. (1995). "Diabetes in urban African-Americans. I. Cessation of insulin therapy is the major precipitating cause of diabetic ketoacidosis." *Diabetes care* 18(4): 483-489.
9. Ramalho de Oliveira, D., et al. (2010). "Medication therapy management: 10 years of experience in a large integrated health care system." *Journal of Managed Care Pharmacy* 16(3): 185-195.
10. American Association of Colleges of Nursing. *Nursing Faculty Shortage Fact Sheet*. 2015.
11. David H. Kreling PhD, William R. Doucette PhD, Elizabeth H. Chang PharmD, Caroline A. Gaither PhD, David A. Mott PhD, Jon C. Schommer PhD, (2010). "Practice Characteristics of Bachelor of Science and Doctor of Pharmacy Degreed Pharmacists Based on the 2009 National Workforce Survey." *American Journal of Pharmaceutical Education*.
12. Brown, D. L. (2013). "A looming joblessness crisis for new pharmacy graduates and the implications it holds for the academy." *American Journal of Pharmaceutical Education* 77(5): 90.