Pharmacy Technician Ratio Requirements

James Broughel and Yuliya Yatsyshina

MERCATUS CENTER
George Mason University
3434 Washington Blvd., 4th Floor, Arlington, Virginia 22201
www.mercatus.org

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ABSTRACT

The COVID-19 pandemic has drawn attention to the regulatory framework that governs the US healthcare system, and in particular to regulations affecting healthcare workers. This paper focuses on one type of occupational regulation imposed in the pharmacy setting, known as ratio requirements. Many states limit the number of pharmacy technicians permitted to work under the supervision of a licensed pharmacist. The paper provides a background on pharmacy technicians, who assist pharmacists in a variety of roles, and also reviews the current landscape of ratio regulations that exists across the various states. A number of states have changed ratio requirements in recent years, including during the COVID-19 pandemic, and some of these cases are discussed. The paper concludes that the current trend seems to be toward relaxing ratio requirements on pharmacy technicians. All told, the evidence seems to suggest that pharmacists and pharmacy technicians are both capable of performing more tasks, and that increasing their responsibilities could be an important way to advance public health in the years ahead.

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Author Affiliation and Contact Information

James Broughel
Senior Research Fellow
Mercatus Center at George Mason University
jbroughel@mercatus.gmu.edu

Yuliya Yatsyshina
Program Manager
Mercatus Center at George Mason University
yyatsyshina@mercatus.gmu.edu

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The COVID-19 pandemic has drawn attention to the regulatory framework that governs the US healthcare system, and in particular to regulation of healthcare professionals, including occupational licensing and scope of practice regulations. Licensing regulations create a credentialing system that determines who can perform certain tasks legally, while scope of practice regulations govern what tasks various professions are authorized to perform. This paper focuses on one type of occupational regulation, imposed in the pharmacy setting, known as ratio requirements. Specifically, many states impose ratio requirements that mandate the number of pharmacy technicians permitted to work under the supervision of a pharmacist at any given time.

Pharmacy technicians assist pharmacists in a variety of roles, ranging from administrative duties to providing basic medical care for patients. They are a vital resource in the running of day-to-day operations of pharmacies around the United States, and in recent years the role of pharmacy technicians has been expanding. In part, this is because the role of pharmacists has been evolving, too. As pharmacists have taken on greater responsibilities in the management of patient care, technicians have stepped up to take on duties once expected of pharmacists. As roles and responsibilities evolve, the regulatory environment governing how these healthcare professionals work will be of increasing importance.

BACKGROUND ON PHARMACY TECHNICIANS

According to researcher Charles Myers, a pharmacy technician is "an individual who has been trained to assist in pharmacy activities that do not require the judgment of a pharmacist and who performs those activities under the supervision

of a licensed pharmacist."[1] Pharmacy technicians work in a variety of settings, such as community pharmacies, hospitals, pharmacy clinics, telepharmacy settings, ambulatory care centers, and other practice settings across the country.[2] Their role is both patient-facing and supporting the operations of the pharmacy behind the scenes. For example, as support staff, pharmacy technicians work directly with patients filling prescriptions and collecting and maintaining medical history information. They also work with pharmacists, preparing, measuring, counting, and dispensing prescription medications. Technicians maintain accurate records; they assist with management functions such as inventory, insurance claims, and billing operations; and they ensure compliance with regulations, among other functions.[3] Some pharmacy technicians take on more advanced roles, such as conducting technology-assisted product verification, handling hazardous drugs, assisting with medication therapy management, and training or managing other pharmacy technicians.[4] Duties of pharmacy technicians can include conducting point-of-care tests, compounding intravenous medications, or working on research clinical trial teams. Technicians also play a role administering vaccinations, including for COVID-19.[5] In March 2017, Idaho became the first state to expressly allow pharmacy technicians to administer vaccines under the supervision of an immunizing pharmacist.[6] Roles and responsibilities vary across the states; however, communication, problem-solving, and organizational and mathematical skills are required for the role.

Regulatory requirements for pharmacy technician training, certification, and registration vary significantly from state to state. While some states have relatively minimal pharmacy technician employment requirements, most states have license or registration requirements for workers, which can involve passing an exam, registering with the state, meeting certain educational standards, or

1. Charles E. Myers, "Opportunities and Challenges Related to Pharmacy Technicians in Supporting Optimal Pharmacy Practice Models in Health Systems," *American Journal of Health-System Pharmacy* 68, no. 12 (June 15, 2011): 1128–36.
2. Pharmacy Technician Certification Board, "Practice Settings," accessed September 24, 2020, https://www.ptcb.org/i-want-to-be-a-cpht/practice-settings.
3. American Society of Health System Pharmacists, "Pharmacy Technician Career Overview," accessed September 24, 2020, https://www.ashp.org/Pharmacy-Technician/About-Pharmacy-Technicians/Pharmacy-Technician-Career-Overview?loginreturnUrl=SSOCheckOnly.
4. American Society of Health-System Pharmacists, "ASHP Statement on the Roles of Pharmacy Technicians," *American Journal of Health-System Pharmacy*, 2016, https://www.ashp.org/-/media/assets/policy-guidelines/docs/statements/roles-of-pharmacy-technicians.ashx.
5. Department of Health and Human Services, "Guidance for PREP Act Coverage for Qualified Pharmacy Technicians and State-Authorized Pharmacy Interns for Childhood Vaccines, COVID-19 Vaccines, and COVID-19 Testing," October 20, 2020.
6. David Bright and Alex J. Adams, "Pharmacy Technician–Administered Vaccines in Idaho," Idaho State Board of Pharmacy, 2017.

all of the above, before receiving permission to start working.[7] Candidates often register with the state as a pharmacy technician trainee and then complete an exam such as the Pharmacy Technician Certification Exam (PTCE). National certification is often allowed in place of state certification, which can involve passing the PTCE exam, completing a recognized education program, or having equivalent work experience.[8]

According to one study from 2018, "among the 50 states and the District of Columbia, 86% (44 of 51) required pharmacy board registration and/or licensure in order to practice as a pharmacy technician, 55% (28 of 51) required no education/training or certification, 8% (4 of 51) required education/training only, 10% (5 of 51) required certification only, 14% (7 of 51) required education/training and certification, and 14% (7 of 51) required either education/training or certification."[9] In states with fewer requirements, training is often performed on the job under the supervision of an overseeing pharmacist.[10] Six states choose not to mandate licensing. These states are Colorado, Hawaii, Delaware, New York, Pennsylvania, and Wisconsin.[11]

According to the Bureau of Labor Statistics, pharmacy technician employment is predicted to increase 4% over the 10-year period from 2019 to 2029.[12] This is about the average rate of growth expected for all occupations. Notably, the scope of pharmacy technicians' duties also appears to be expanding,[13] which may stem from increased demand for health services as chronic illnesses

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7. Pharmacy Technician Certification Board, "State Regulations and Map," December 21, 2020; Ryan Marotta, "Pharmacy Technician License Requirements by State," *Pharmacy Times*, September 16, 2015.
8. Pharmacy Technician Certification Board, "Certified Pharmacy Technician (CPhT)," accessed February 6, 2021, https://www.ptcb.org/credentials/certified-pharmacy-technician.
9. Ashlee N. Mattingly, "Entry-Level Practice Requirements of Pharmacy Technicians across the United States: A Review," *American Journal of Health-System Pharmacy* 75, no. 14 (July 15, 2018): 1057–63.
10. Lucinda L. Maine, Katherine K. Knapp, and Douglas J. Scheckelhoff, "Pharmacists and Technicians Can Enhance Patient Care Even More Once National Policies, Practices, and Priorities Are Aligned," *Health Affairs* 32, no. 11 (2013): 1956–62; Philip J. Schneider, Craig A. Pedersen, Michael C. Ganio, and Douglas J. Scheckelhoff, "ASHP National Survey of Pharmacy Practice in Hospital Settings: Workforce—2018," *American Journal of Health-System Pharmacy* 76, no. 15 (August 2019): 1127–41.
11. Dick M. Carpenter II, Lisa Knepper, Kyle Sweetland, and Jennifer McDonald, *License to Work*, 2nd ed. (Arlington, VA: Institute for Justice, 2017), 182.
12. Bureau of Labor Statistics, "Pharmacy Technicians: Job Outlook 2019–2029," *Occupational Outlook Handbook*, accessed October 26, 2020, https://www.bls.gov/ooh/healthcare/pharmacy-technicians.htm#tab-6.
13. "The role of a pharmacy technician has expanded with the increasingly clinical and patient-driven focus of pharmacy practice." See Kristy Malacos, "Pharmacy Technician Regulation," *Pharmacy Times,* June 16, 2016.

become more prevalent and, by extension, the need for preventive services expands, in addition to medication use becoming more complex over time.[14]

PHARMACY TECHNICIAN RATIO REQUIREMENTS

One of the most common forms of pharmacy technician regulation is a ratio requirement, which sets a limit on the number of technicians who can work with each licensed pharmacist at any given time. There is considerable variation in these laws across states, with some states having no ratio requirement at all and others having a requirement as strict as 1:2, meaning a single pharmacist can oversee no more than 2 technicians at one time.

The required ratio of pharmacists to pharmacy technicians is a topic that has been actively debated in many states in recent years.[15] One factor that states consider is whether the legislature should set the ratio in statute or instead provide flexibility to the state Board of Pharmacy (BOP) to set the ratio as it sees fit.[16] A number of states have also temporarily modified or eliminated their ratio requirement as a result of the COVID-19 pandemic, which will be discussed in more detail later.

The goal of ratio laws is presumably to maintain a minimum level of quality of service, and to protect the public and ensure patient safety. However, these requirements could have either beneficial or adverse effects on quality. On the one hand, allowing technicians to perform complex tasks that require significant education and training could bring with it increased risks. In this sense, relying too heavily on pharmacy technicians could lower the quality of services, since some tasks are presumably better performed by licensed pharmacists. On the other hand, if pharmacists are forced to perform routine tasks because they do not have adequate support staff, and these tasks do not require a high level of expertise, pharmacists could end up being distracted from higher-value activities, thereby lowering overall quality. Technicians also earn considerably less than pharmacists, so restrict-

14. Maine, Knapp, and Scheckelhoff, "Pharmacists and Technicians Can Enhance Patient Care Even More Once National Policies, Practices, and Priorities Are Aligned."
15. D. Todd Bess, Jason Carter, Lindsey DeLoach, and Carol L. White, "Pharmacy Technician-to-Pharmacist Ratios: A State-Driven Safety and Quality Decision," *Journal of the American Pharmacists Association* 54, no. 6 (November–December 2014): 648-51.
16. Todd Bess et al., "Pharmacy Technician-to-Pharmacist Ratios."

ing pharmacies' ability to utilize lower-cost labor may increase the cost of patient care.[17]

Table 1 shows ratio requirements by state, current as of mid to late 2020, as well as the requirements as they existed in early 2016. Currently, California, North Carolina, and New York are examples of states that allow one pharmacist to oversee no more than 2 pharmacy technicians under certain conditions,[18] whereas Alaska, Illinois, New Hampshire, and Maryland are examples of states having no state-mandated ratio requirement.

As of 2020, there are 22 states without a ratio requirement as compared to 18 in 2016. The states that removed their ratio requirement in the intervening years are Idaho, Utah, Washington, and Wisconsin. The state of Washington is notable because it eliminated its ratio requirement, which in this case was a 1:3 pharmacist-to-pharmacy technician ratio prior to the change (Code § 246-901-130).[19] A state commission that reviewed the requirement concluded that "setting ratios based simply on the practice setting is arbitrary and may create barriers to innovative practices and the use of technicians, as well as the ability of a pharmacy to meet its patients' needs."[20] Washington State's new rules specify it will be up to "the responsible pharmacy manager" to "ensure that the number of pharmacy technicians on duty can be satisfactorily supervised by the pharmacist(s) on duty."[21]

There were 9 states with a required pharmacist-to-pharmacy technician ratio of 1:2 in 2016 and 7 states with such a ratio in 2020. Six of the 7 states have additional provisions that allow for adding one or more technicians under certain special circumstances and/or conditions. In 2016, Idaho was the only state with the ratio as high as 1:6, while in 2020, Colorado, Florida, and Indiana set a ratio that high (and Idaho has since removed its requirement). Additionally, Florida now allows for the highest ratio of 1:8 for non-dispensing pharmacies.

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17. Bureau of Labor Statistics, "Pharmacy Technicians," *Occupational Outlook Handbook*, accessed October 26, 2020, https://www.bls.gov/ooh/healthcare/pharmacy-technicians.htm; Bureau of Labor Statistics, "Pharmacists," *Occupational Outlook Handbook*, accessed February 6, 2021, https://www.bls.gov/ooh/healthcare/pharmacists.htm.
18. New York makes an exception for up to 4 technicians "in the performance of the activities that do not require licensure." Consolidated Laws of New York, title 8 § 137-A-6841.
19. Washington State Department of Health, Pharmacy Quality Assurance Commission, "Pharmacist to Pharmacy Ratio Exemption: Application Guidance," February 2018.
20. Washington State Pharmacy Quality Assurance Commission, "News," August 2019, https://nabp.pharmacy/wp-content/uploads/2020/10/Washington-Newsletter-August-2019.pdf.
21. Susan B. Trujillo, Nicholas H. Meza, and Luis J. Lanz, "Washington Eliminates Technician to Pharmacist Ratio," Quarles and Brady LLP, September 12, 2019.

TABLE 1. MAXIMUM PHARMACIST-TO-PHARMACY TECHNICIAN RATIOS BY STATE, 2016 AND 2020

State	Required Ratio as of 2016	Required Ratio as of 2020	2020 Source
Alabama	1:3	1:3 (one must be certified)	Alabama Board of Pharmacy, "Frequently Asked Questions," accessed August 28, 2020, https://www.albop.com/FAQ.aspx
Alaska	None	None	Written communication from Alaska Board of Pharmacy, June 6, 2020
Arizona	None	None	Written communication from Arizona State Board of Pharmacy, June 5, 2020
Arkansas	1:3	1:3	Arkansas State Board of Pharmacy, "News," May 2019, https://nabp.pharmacy/wp-content/uploads/2016/06/Arkansas-Newsletter-May-2019.pdf
California	1:2	1:2 (with exceptions for certain state-run pharmacies)	California Code of Regulations 16 CA ADC § 1793.7
Colorado	1:3	1:6 (the majority must be certified by the state BOP if more than 3 technicians are on duty)	Colorado Revised Statues § 12-280-122
Connecticut	1:3 (institutional) 1:2 (retail)	1:2 (increases to 1:3 if one technician is certified or in the context of sterile compounding)	Regulations of Connecticut State Agencies, title 20 § 20-576-36
Delaware	None	None (at least one technician is required to assist a pharmacist, but no maximum number is prescribed)	Delaware Administrative Code, title 24 § 2500-3.8
Florida	1:4	1:1 (general supervision provision; 1:3 is allowed for sterile compounders; 1:6 when not engaged in sterile compounding; 1:8 for non-dispensing pharmacies or dispensing pharmacies with a physically separate area of the pharmacy from which medicinal drugs are not dispensed)	Florida Administrative Code, 64B16-27.410
Georgia	1:2 (unless 2 are certified, then 1:3)	1:3 (one must be certified; ratio can exceed 1:3 in a hospital setting upon application and approval from state BOP)	Georgia Board of Pharmacy, "Pharmacy Technician FAQs," accessed August 28, 2020, https://gbp.georgia.gov/faqs-other-information/pharmacy-technician-faqs
Hawaii	None	None	Written communication from Hawaii Board of Pharmacy, June 6, 2020
Idaho	1:6	None	Idaho State Board of Pharmacy, "FAQ for COVID-19 Declaration of Emergency," March 13, 2020, https://bop.idaho.gov/wp-content/uploads/sites/99/2020/04/FAQ-COVID-03312020.pdf
Illinois	None	None	Written communication from Illinois Department of Financial and Professional Regulation, June 22, 2020
Indiana	1:4	1:6 (includes interns, technicians, and technicians in training)	Indiana Code 25-26-13-18.5; see also State of Indiana, Executive Order 20-12, March 26, 2020
Iowa	None	None (however 1:2 proposed by BOP)	Iowa Administrative Code, title 657, Practice of Pharmacy, chapter 40; Pharmacy Board, Notice of Intended Action, accessed February 6, 2021, https://rules.iowa.gov/Notice/Details/4291C

TABLE 1 *(continued)*

State	Required Ratio as of 2016	Required Ratio as of 2020	2020 Source
Kansas	1:2	1:4	Kansas Board of Pharmacy, "Board Increases Pharmacy Technician Ratio [Kansas Administrative Regulations KAR 68-5-16]," January 21, 2020, https://pharmacy.ks.gov/home/news-details/2020/01/21/board-increases-pharmacy-technician-ratio
Kentucky	None	None	Written communication from Kentucky Board of Pharmacy, June 5, 2020
Louisiana	1:3	1:3	Louisiana Administrative Code, title 46, chapter 9 § 907
Maine	None	None	Written communication from Maine Board of Pharmacy, June 11, 2020
Maryland	None	None	Written communication from Maryland Board of Pharmacy, June 5, 2020; see also Maryland Board of Pharmacy, "Pharmacy Practice and Compliance," accessed August 31, 2020, https://health.maryland.gov/pharmacy/Pages/practice.aspx
Massachusetts	1:4	1:4	Massachusetts Board of Registration in Pharmacy, 247 CMR 8.06
Michigan	None	None	Written communication from Michigan Bureau of Professional Licensing, June 18, 2020
Minnesota	1:3 (unless one is certified, then 1:4)	1:3 (unless one is certified, then 1:4; the BOP may, by rule, set greater ratios for the functions specified in rule)	Office of the Revisor of Statutes, "2019 Minnesota Statutes § 151.102 Pharmacy Technician"
Mississippi	1:2	1:3	Mississippi Administrative Code, title 30, part 3001, Mississippi Pharmacy Practice Regulations
Missouri	None	None	Written communication from Missouri Board of Pharmacy, June 5, 2020
Montana	1:3	1:4	Montana Board of Pharmacy, "Application for Institutional Pharmacy," January 2020, http://boards.bsd.dli.mt.gov/Portals/133/Documents/pha1/dli-bsd-pha009.pdf
Nebraska	1:3	1:3	Nebraska Revised Statutes § 38-2866.01
Nevada	1:3	1:3	Nevada Administrative Code NAC 639.250, Restrictions on Supervision
New Hampshire	None	None	Written communication from New Hampshire Office of Professional Licensure and Certification, June 22, 2020
New Jersey	1:2 (unless one is certified, then 1:3)	1:2 (1:3 if one is registered)	New Jersey Administrative Code § 13:39-6.15
New Mexico	None	None	Written communication from New Mexico Board of Pharmacy, June 8, 2020

(*continued*)

TABLE 1 *(continued)*

State	Required Ratio as of 2016	Required Ratio as of 2020	2020 Source
New York	1:2	1:2 (for responsibilities requiring a license; 1:4 for responsibilities not requiring a license)	Consolidated Laws of New York, title 8 § 137-A-6841
North Carolina	1:2 (unless BOP gives approval)	1:2 (unless BOP approval gives approval and each additional technician is certified)	North Carolina General Statues GS § 90-85.15A
North Dakota	1:3 (retail) 1:4 (hospital)	1:4 (in retail and hospital) 1:5 (in a closed-door pharmacy that does not deal directly with patients)	North Dakota Administrative Code § 61-02-07.1-04
Ohio	None	None	Written communication from Ohio Board of Pharmacy, June 5, 2020
Oklahoma	1:2	1:2	Oklahoma Administrative Code OAC 535:15-13-5, Supervision of Pharmacy Technicians
Oregon	None	None	Written communication from Oregon Board of Pharmacy, June 5, 2020
Pennsylvania	None	None	Written communication from Pennsylvania State Board of Pharmacy, June 5, 2020
Rhode Island	None	None	Rhode Island Code of Regulations, title 216, 40-15-1.5-E
South Carolina	1:3	1:4 (1:3 for institutional pharmacies)	South Carolina Code of Laws § 40-43-86 (B)(4)(b)
South Dakota	1:3 (retail, none for hospital)	1:3	South Dakota Administrative Code 20:51-29-19
Tennessee	1:3 (unless one is certified, then 1:4)	1:2 (may be increased to 1:4 in some cases)	Effective Rules and Regulations of the State of Tennessee § 1140-02-.02
Texas	1:4	1:4 (1:5 for certain "Class A" pharmacies)	Texas Administrative Code, title 22, chapter 291.32
Utah	1:3	None	Utah Administrative Code R156-17b-603(3)(r); written communication from Utah Division of Occupational and Professional Licensing, October 20, 2020
Vermont	None	None	Written communication from Vermont Board of Pharmacy, June 5, 2020
Virginia	1:4	1:4	Virginia Board of Pharmacy, Guidance Document 110-33, December 2018, https://www.dhp.virginia.gov/pharmacy/guidelines/110-33.pdf
Washington	1:3	None	Washington State Legislature, Washington Administrative Code WAC 246-901-130
West Virginia	1:4	1:4	West Virginia Code of State Rules § 15-7-5.3; West Virginia Board of Pharmacy, "FAQ WV BOP for COVID-19," April 9, 2020, https://www.wvbop.com/article.asp?id=50

TABLE 1 *(continued)*

State	Required Ratio as of 2016	Required Ratio as of 2020	2020 Source
Wisconsin	1:4 (BOP can approve higher ratio)	None (removed in 2019)	Wisconsin Administrative Code Phar 7.01 (3), repealed September 25, 2019, https://docs.legis.wisconsin.gov/code/register/2019/765b/register/emr/emr1915_rule_text/emr1915_rule_text.pdf; https://docs.legis.wisconsin.gov/code/admin_code/phar/7.pdf
Wyoming	1:3	1:3	Wyoming Administrative Rules § 059-10-16

Source: The 2020 data were collected from the sources cited; 2016 data are from Kristy Malacos, "Pharmacy Technician Regulation," *Pharmacy Times*, June 16, 2016.

Note: Official state websites that contain pharmacy laws and regulations or the websites of state Boards of Pharmacy were consulted. In circumstances where official data were not readily available or did not contain clear and specific language, the state's Board of Pharmacy was contacted with a request to confirm the ratio requirements mandated by the state. Representatives from the following states have confirmed that their states do not require specific ratios: Alaska, Arizona, Hawaii, Illinois, Kentucky, Maine, Maryland, Michigan, Missouri, New Hampshire, New Mexico, Ohio, Oregon, Pennsylvania, Utah, and Vermont. At the time of this writing, Delaware, Rhode Island, and Wisconsin had not yet responded. Since Delaware and Rhode Island did not have a set ratio requirement in 2016, and no evidence has been found to indicate that the states have introduced any changes since then, we assume they continue to have no ratio requirement in 2020. In Rhode Island, "all pharmacies shall maintain an adequate number of pharmacists and pharmacy technicians to meet pharmacy workload demands, provide for adequate rest periods for personnel, and maintain public safety." Additionally, Wisconsin repealed its ratio requirement rule by issuing an emergency order in September 2019.[23] In the updated version of the statute, no ratio is specified. We assume this means the ratio was repealed, but no confirmation has been received in written communication from the state of Wisconsin.

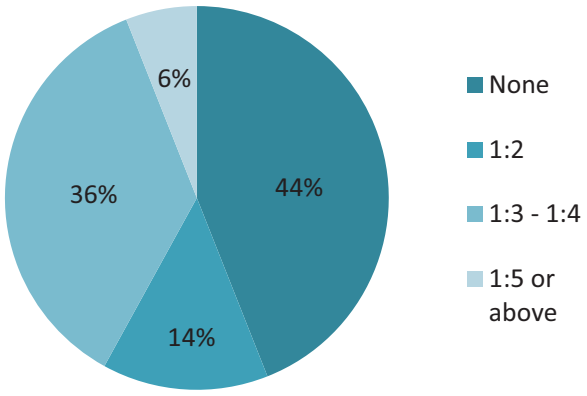
All told, 14 states appear to have implemented policy changes since 2016. Of these, 9 states (Colorado, Florida, Georgia, Indiana, Kansas, Mississippi, Montana, North Dakota, and South Dakota) have relaxed their ratio requirements, while 4 states (Idaho, Utah, Washington, and Wisconsin) have removed the ratio requirement entirely. Colorado and Florida doubled the allowance of technicians by going from 1:3 to 1:6 and 1:4 to 1:8, respectively, in certain instances. Tellingly, only Tennessee has made the ratio requirement stricter in recent years, although exceptions allowed for a ratio of up to 1:4 in 2016, which remains the maximum allowed. State Boards of Pharmacy initiated proposals for changes in policy regarding ratio rules but have yet to finalize them. Iowa's state Board of Pharmacy proposed an increase to a 1:2 ratio.[23] Figure 1 shows the breakdown of states' ratio requirements as of late 2020.

COVID-19 EMERGENCY MEASURES

During the COVID-19 pandemic, at least 7 states made changes to their existing pharmacist-to-pharmacy technician ratio requirements as part of the states'

22. State of Wisconsin, Pharmacy Examining Board, Emergency Rule 1915, September 25, 2019.
23. Iowa Board of Pharmacy, "Notice of Intended Action ARC 4291C," accessed October 15, 2020, https://rules.iowa.gov/Notice/Details/4291C.

FIGURE 1. BREAKDOWN OF STATE REGULATIONS GOVERNING PHARMACIST-TO-PHARMACY TECHNICIAN RATIO IN 2020



Source: Authors' calculations based on table 1.

Note: Primary ratio requirement used, except for Florida, which was assumed to be 1:5 or higher. Some states allow for higher ratios under certain special circumstances and/or conditions.

emergency response. In all cases, the states reacted to the COVID-19 pandemic by either increasing their ratio requirement, granting authorization to increase the ratio in certain circumstances, or suspending the ratio or suspending enforcement for the time of the emergency (see table 2). For example, California, Indiana, and Louisiana increased the state ratio requirement, while Massachusetts, South Dakota, and Tennessee suspended the enforcement of the staffing ratio. Minnesota authorized increases in circumstances where pharmacy staff members became affected by COVID, such as when they needed to quarantine.[24] Changes were issued through executive orders or emergency waivers of various kinds.[25]

CONCLUSION

This paper has sought to provide an overview of the responsibilities of pharmacy technicians, as well as a snapshot of the regulatory landscape that they work within. In the domain of staffing ratio requirements, the trend in the United States seems to be toward less restrictive regulation of pharmacy technicians. This is perhaps not surprising, due to the strains that the American healthcare

24. Minnesota Board of Pharmacy, "Frequently Asked Questions: COVID-19," February 10, 2021, https://mn.gov/boards/assets/FAQ%20COVID%2019%2002102021_tcm21-467875.pdf.
25. See also National Alliance of State Pharmacy Associations, "COVID-19: Information from the States," June 9, 2020.

TABLE 2. EXAMPLES OF COVID-19 RELATED CHANGES TO PHARMACY TECHNICIAN RATIO REQUIREMENTS

State	Normal Pharmacy-to-Pharmacy Technician Ratio Policy (as of 2020)	COVID-19 Related Emergency Changes	Source
California	1:2	1:3	Staffing Ratio of Pharmacists to Pharmacy Technicians (BPC § 4115(f)(1) and 4127.15(c)(2); and Title 16, California Code of Regulations, § 1793.7), accessed September 6, 2020, https://www.pharmacy.ca.gov/licensees/waivers/4115_f_1_and_4127_15_c_2_and_1793_7.shtml
Indiana	1:6	1:8	State of Indiana, Executive Department Indianapolis, Executive Order 20-12 4(a), March 26, 2020, https://www.in.gov/gov/files/EO_20-12_Further_Directives_Helping_Hoosiers.pdf
Louisiana	1:3	1:4	Louisiana Board of Pharmacy Memorandum, April 3, 2020, http://www.pharmacy.la.gov/assets/docs/EmergencyCommunications/2020-1_COVID-19/COVID-19_BoardGuidance_2020-0403_FlexibleStaffingRevised.pdf
Massachusetts	1:4	Suspended	Board of Registration in Pharmacy, "Coronavirus Disease 2019 (COVID-19), Frequently Asked Questions," accessed October 12, 2020, https://www.mass.gov/news/coronavirus-disease-2019-covid-19-frequently-asked-questions
Minnesota	1:3 (1:4 if one is certified)	Authorization to increase	Minnesota Board of Pharmacy, "Frequently Asked Questions: COVID-19," February 10, 2021, https://mn.gov/boards/assets/FAQ%20COVID%2019%2002102021_tcm21-467875.pdf
South Dakota	1:3	Suspended	South Dakota Office of the Governor Executive Order 2020-16, April 15, 2020, p. 3, https://doh.sd.gov/boards/pharmacy/assets/Executive%20Order%2020-16.pdf
Tennessee	1:2 (may be increased to 1:4)	Suspended	State of Tennessee Executive Order by the Governor No. 20 § 8.1, March 26, 2020, https://publications.tnsosfiles.com/pub/execorders/exec-orders-lee20.pdf

Note: Table represents a sample of changes and is not meant to be a comprehensive listing of all changes made to staffing ratios in all states during the COVID-19 pandemic.

system is experiencing. Given the extensive skills of both technicians and pharmacists, one might expect these skills would be tapped to address the increasing healthcare needs of Americans.

Some have raised concerns about relaxing regulation of pharmacy technicians, including ratio requirements. For example, one concern is that pharmacies might staff as many pharmacy technicians as possible at the expense of customer safety.[26] Another concern has been for pharmacist technician safety during the

26. The Emily Jerry Foundation, "New Mexico Eliminates Pharmacy Technician Ratio Mandate Putting Thousands of Residents at Risk of Deadly Medication Errors," Emilyjerryfoundation.org, press release, July 3, 2013.

pandemic.[27] In general, increased risks to patients do not seem to have materialized, either in states that eliminated or relaxed their ratios permanently or in states that did so temporarily during the pandemic. Certainly, health and safety of pharmacy personnel is a concern during the pandemic. In this sense, pharmacists and the staff at pharmacies are playing a heroic role.[28] That said, there are reasonable precautions that pharmacy staff can take to reduce risks to themselves and others. The Centers for Disease Control and Prevention has issued guidance for pharmacies during the pandemic, for example.[29]

A useful way to think about pharmacy technician regulation might be to compare these rules to those governing other medical professions. Do states regulate how many medical assistants or nurses a physician can oversee or have working on a medical team? Giving pharmacists the autonomy to use their professional judgment seems less punitive and fairer when one considers how practitioners in other medical fields are regulated.

In general, there is little or no academic evidence to support claims that ratio requirements are needed to protect the public. Notably, in states that have no ratio currently or have not had one in the past, pharmacies do not appear to be less safe. With many pharmacists and pharmacies now overloaded with work and taking on new responsibilities during the pandemic, burnout is a concern. One might argue that ratio caps could be hampering patient safety because they are limiting the amount of help one can have working in a store at any given time.

The evidence seems to suggest that pharmacists and pharmacy technicians are capable of performing more tasks, not fewer, and that increasing their responsibilities could be an important way to advance public health. Relaxing ratio requirements is one way of expanding the ability of these healthcare professionals to serve their patients in a responsible manner.

27. Gabrielle Ientile, "NPTA Survey: Pharmacy Technicians Feel Unprotected from COVID-19," *Drug Topics*, April 21, 2020.
28. James Broughel and Yuliya Yatsyshina, "In Coronavirus Fight, Your Pharmacist Could Be an Unexpected Hero," Fox Business, May 1, 2020.
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