

Wisconsin Pharmacy Workforce Study Final Report

2020



Research Team



Brianne K. Bakken, PharmD, MHA

Assistant Professor
Medical College of Wisconsin School of Pharmacy
Milwaukee, WI 53226
bbakken@mcw.edu



Aaron N. Winn, PhD

Assistant Professor
Medical College of Wisconsin School of Pharmacy
Milwaukee, WI 53226
awinn@mcw.edu



Megan Ose, PharmD, MHA

Pharmacy Manager
Children's Wisconsin
Milwaukee, WI 53226
mose@chw.org



David A. Mott, PhD

Professor
University of Wisconsin – Madison School of Pharmacy
Madison, WI 53705
david.mott@wisc.edu



Erin Walcheske, MS

Program Manager for Assessment & Analytics
Medical College of Wisconsin School of Pharmacy
Milwaukee, WI 53226
ewalcheske@mcw.edu

TABLE OF CONTENTS

ACKNOWLEDGMENTS	1
REPOSITORY FOR PROJECT MATERIALS AND DATA	1
BACKGROUND	2
OBJECTIVES	2
METHODS	3
RESULTS	4
CHARACTERISTICS OF THE PHARMACY WORKFORCE	5
Figure 1.1.1 Distribution of Pharmacist & Technician Respondents	5
Table 1.1.2 Pharmacist & Technician Age, Gender, and Race/Ethnicity	6
Figure 1.1.3 Gender Composition of Wisconsin Pharmacists and Technicians in 2020 ...	7
Figure 1.1.4 Age Distribution of Pharmacists and Technicians in 2020	7
CHARACTERISTICS OF WISCONSIN PHARMACISTS	8
Demographics of Licensed Pharmacists	8
Table 2.1.1 Pharmacists’ Employment Status By Age	9
Table 2.1.2 Pharmacists’ Employment Status By Gender Identity	9
Table 2.1.3 Pharmacists’ Employment Status By Race/Ethnicity	9
Practicing Pharmacists	10
Figure 2.1.1 Practicing Pharmacists’ Employment Characteristics	11
Table 2.2.2 Practicing Pharmacists’ Practice Settings	12
Table 2.2.3 Practicing Pharmacists’ Employment Position By Gender	12
Table 2.2.4 Pharmacists’ Age, Gender Identity & Race/Ethnicity By Practice Setting ...	13
Table 2.2.5 Pharmacists’ License, Degrees & Residency Training By Practice Setting ...	14
Figure 2.2.6 Practicing Pharmacists’ Pharmacy Degrees	15
Figure 2.2.7 Pharmacists’ Student Loan Debt	15
CHARACTERISTICS OF WISCONSIN TECHNICIANS	16
Demographics of Technicians	16
Figure 3.1.1 Pharmacy Technicians’ Employment Characteristics	17
Table 3.1.2 Technicians’ Age, Gender Identity & Race/Ethnicity By Practice Setting	18
Table 3.1.3 Technicians’ Education, Training & Certification By Practice Setting	19
PHARMACY WORKFORCE SUPPLY & DEMAND	20
Table 4.1.1 Ratings of Supply/Demand For Pharmacists In Wisconsin	20
Table 4.1.2 Ratings of Supply/Demand For Technicians In Wisconsin	20

Acknowledgments

We first want to thank the pharmacists and technicians that received and responded to this survey. We greatly appreciate their time and effort in providing the requested information. Without their participation, this study and report would not be possible.

Second, we would like to acknowledge the contributions of several people who provided input and advice as we developed and conducted the survey, including the Pharmacy Society of Wisconsin, Sarah Sorum, Erica Martin, Miranda Peek, along with members of the Midwest Pharmacy Workforce Research Consortium, William Doucette, Mathew Witry, David Kreling, Caroline Gaither, Jon Schommer, and Vibhuti Arya for this historical research and ongoing contributions to the study of the pharmacy workforce.

Finally, we would also like to thank Scott Egerton for his technical support and guidance with developing the online survey and preparing the data for analysis.

Repository for Project Materials and Data

Project materials and data are stored at the Medical College of Wisconsin School of Pharmacy 8701 Watertown Plank Road, Milwaukee, Wisconsin 53226.

Please direct any questions and inquiries to the Principal Investigator, Brianne Bakken, Assistant Professor, Medical College of Wisconsin School of Pharmacy, bbakken@mcw.edu.

BACKGROUND

Pharmacists are integral practitioners in assuring safe, effective and affordable medication therapy for millions of patients in the U.S. They are able to provide expertise to patients, providers, payers and policymakers. As the healthcare system evolves toward value-based payments and greater care coordination across the providers and settings, pharmacists are being asked to develop and deliver new services, even as their practice settings evolve. As pharmacists take on new, expanded services, the roles and responsibilities of pharmacy technicians have also started to evolve. Pharmacy technicians are taking on more operational responsibilities, participating in expanded “tech-check-tech” activities, and are being integrated into new patient care services. While this evolving pharmacy landscape is creating new opportunities for both pharmacists and technicians, it also may have challenges such as stress, burnout and job turnover.

Given this dynamic situation, it is vital to assess the demographics, workplace characteristics, work activities, and quality of work life of both pharmacists and technicians. There is a history of conducting national pharmacist workforce studies, which have been conducted in 2000, 2004, 2009, 2014, and 2019 by the Midwest Pharmacy Workforce Research Consortium (MPWRC). This work, supported by the Pharmacy Workforce Center (previously the Pharmacy Manpower Project), is the only national systematic workforce study focused on licensed pharmacists. A focused Wisconsin Workforce Survey will allow for focused questions that are specific to pharmacy practice characteristics, trends and issues specific to the state of Wisconsin. Given the recent unprecedented pandemic of COVID-19, the Wisconsin Workforce survey will also ask questions to explore the impact of COVID-19 on pharmacists and technicians and their work environments.

OBJECTIVES

The purpose of this study was to conduct a Wisconsin Pharmacy Workforce Survey using a study design similar to the 2019 National Pharmacist Workforce Survey. The Wisconsin iteration was distributed to both pharmacists and technicians and will include new survey questions designed to measure relevant workforce demographics and practice characteristics for the profession of pharmacy in Wisconsin.

METHODS

An online, cross-sectional, descriptive survey design was used to collect and analyze data obtained from pharmacists and technicians in the state of Wisconsin. Data was collected using an online Qualtrics survey (Qualtrics, Provo, UT, USA).

Survey Questionnaire

Questions comprising each section of the survey were primarily based on questions used in previous iterations of the National Pharmacy Workforce Survey and from other published work. New questions were created to assess the impact of the COVID-19 pandemic on the pharmacy workforce, as no previously validated or published questions were available. The survey questionnaire included the following topic areas: (1) Demographics, (2) Education and Training, (3) Employment Status and Work Environment, (4) Supply and Demand, (5) Technician Regulations, and (6) Impact of COVID-19. Survey respondents were required to select their role as a Pharmacist or Technician, but were otherwise allowed to skip any of the other questions if they did not wish to answer or disclose the information requested.

Survey Administration

The email addresses of licensed pharmacists living in the state of Wisconsin were obtained from the Wisconsin Department of Health and Professional Services (WDHPS) database of in-state pharmacy licenses. Pharmacists with email addresses available in the database received three emails containing a hyperlink to the online survey. Pharmacists were asked to click on the survey link to access the survey. The three email prompts to pharmacists were distributed on the following dates: (1) August 25, 2020 (2) September 8, 2020 and (3) September 22, 2020.

Given there is no centralized organization that maintains a database of pharmacy technicians in Wisconsin, they were recruited using an alternative process. The email addresses of pharmacy license holders were obtained from the Wisconsin Department of Health and Professional Services (WDHPS) database. Pharmacy license holders received three emails informing them of the survey and asking their willingness to participate in the research study. Pharmacy license holders were asked to report the total number of technicians employed at their organization and were asked to send the hyperlink to those technicians. The three email prompts to pharmacy license holders were distributed on the following dates: (1) August 25, 2020 (2) September 8, 2020 and (3) September 22, 2020.

Data Analysis

Submitted surveys were available to researchers at the Medical College of Wisconsin through their Qualtrics account. On October 17, 2020 the survey data files were downloaded from Qualtrics and uploaded to SPSS Statistics Software (IBM Corp., Armonk, NY, USA) and Stata MP 15.0 (Stata Corp., College Station, TX, USA) for further analysis.

RESULTS

Response Rate

The list of Wisconsin licensed pharmacists was obtained from WDPHS on July 23, 2020. The list included a total of 6,651 individuals of which 1,347 (20.3%) had email addresses provided. During survey distribution, 47 email addresses were determined to be faulty and were not able to be reached. A total of 1,300 pharmacists ultimately received the email containing the survey link.

The list of in-state pharmacies was also obtained from WDHS on July 23, 2020. The list included a total of 1,036 in-state pharmacy licenses of which 579 (55.9%) had email addresses provided. After removing duplicate email addresses and email addresses determine to be faulty, 252 license holders were in the sample that received emails regarding the survey. A total of 360 technicians ultimately received the email containing the survey link from the license holder at their organization.

Following the first email distribution on August 25, 2020 a total of 183 pharmacist and 46 technician responses were received. Following the second email distribution on September 8, 2020 an additional 170 pharmacist and 74 technician responses were received. Following the third and final email distribution on September 22, 2020 an additional 86 pharmacist and 22 technician responses were received. A total of 439 pharmacist responses and 142 technicians responses were received, resulting in an overall response rate of 35% (33.8% pharmacists, 39.4% technicians).

Sample

Pharmacists and technicians were included in the sample for analysis if they provided responses to demographic questions for age, race, and gender. The resulting sample included 412 pharmacists (31.7%) and 132 technicians (36.7%).

CHARACTERISTICS OF THE PHARMACY WORKFORCE

Figure 1.1.1 provides an overview of the locations of Wisconsin pharmacists and technicians. Table 1.1.2 contains a summary of pharmacists and technicians working in Wisconsin by age, gender, and race/ethnicity.

By gender in 2020, 58.5% of licensed pharmacists responding to the survey identified as female, 41.5% identified as male and 0% identified as non-binary. Among technicians responding to the survey 84.4% identified as female, 14.4% identified as male and 0.8% identified as non-binary. (Figure 1.1.3) In 2020, 31.8% of technicians were age 30 years or younger. Approximately, 58.5% of pharmacists in 2020 were age 45 years or younger. (Figure 1.1.4)

By race in 2020, 90.3% of pharmacists were white, 4.1% were Asian, 2.2% Black, 1.2% American Indian, and 2.2% "Other". The racial diversity of licensed pharmacists in Wisconsin underrepresents the racial diversity of the general population in the United States. For technicians in 2020, 81.8% were White, 5.3% were Black, 3.8% were Asian, 0.8% were American Indian, and 8.3% were "Other". The proportion of the pharmacy workforce that identified as Hispanic included 0.7% of pharmacists and 7.6% of technicians in 2020.

Figure 1.1.1 Distribution of Pharmacist & Technician Respondents

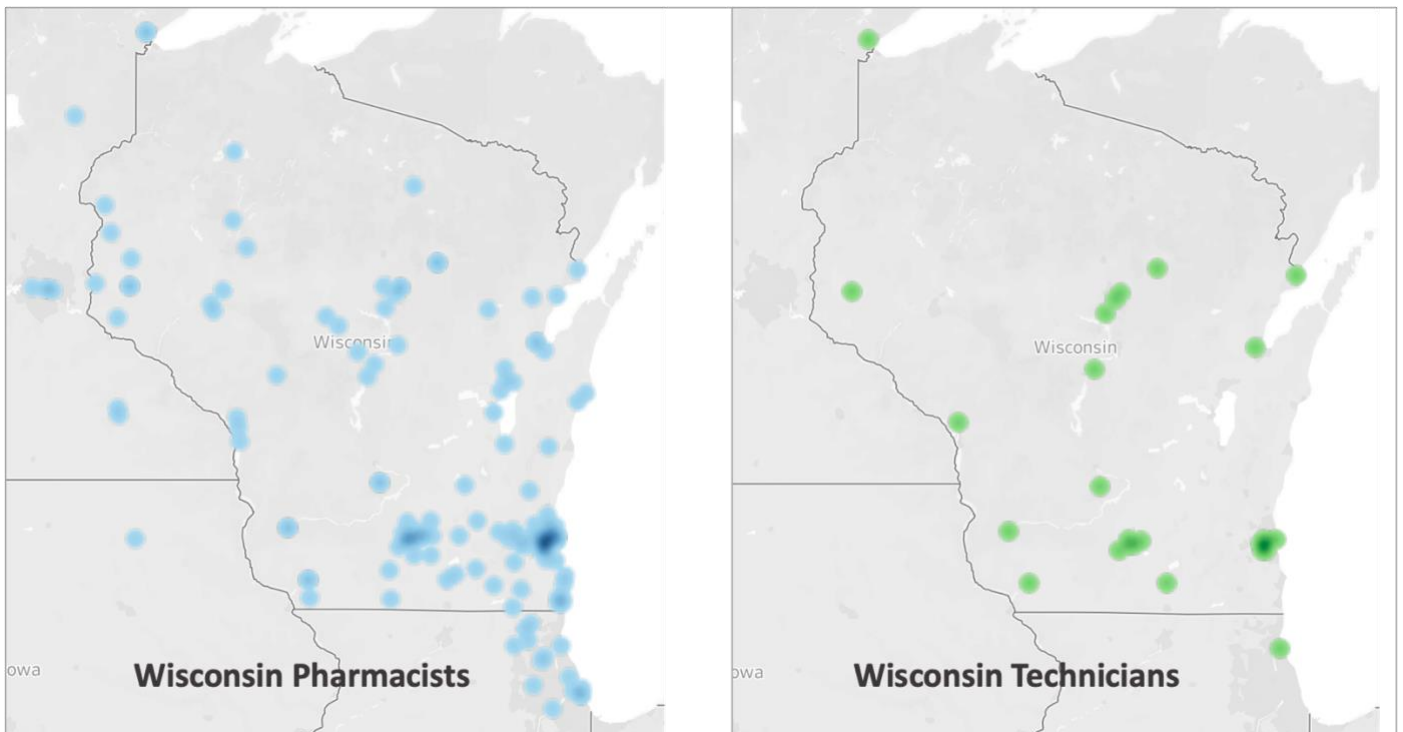


Table 1.1.2 Pharmacist & Technician Age, Gender, and Race/Ethnicity

	Pharmacists		Technicians		Total	
Age Category	n	Column %	n	Column %	n	Column %
<30	84	20.4	42	31.8	126	23.2
31-35	56	13.6	24	18.2	80	14.7
36-40	53	12.9	13	9.8	66	12.1
41-45	48	11.7	20	15.2	68	12.5
46-50	39	9.5	9	6.8	48	8.8
51-55	37	9.0	9	6.8	46	8.5
56-60	25	6.1	7	5.3	32	5.9
61-65	22	5.3	8	6.1	30	5.5
66-70	33	8.0	0	0.0	33	6.1
>70	15	3.6	0	0.0	15	2.8
Total	412		132		544	
Gender Identity	n	Column %	n	Column %	n	Column %
Male	171	41.5	19	14.4	190	34.9
Female	241	58.5	112	84.8	353	64.9
Non-Binary	0	0.0	1	0.8	1	0.2
Total	412		132		544	
Race/Ethnicity	n	Column %	n	Column %	n	Column %
American Indian	5	1.2	1	0.8	6	1.1
Asian	17	4.1	5	3.8	22	4.0
Black	9	2.2	7	5.3	16	2.9
White	372	90.3	108	81.8	480	88.2
Other*	9	2.2	11	8.3	20	3.7
Total	412		132		544	
Hispanic, Spanish or Latino/Latina	3	0.7	10	7.6	13	2.4

Figure 1.1.3 Gender Composition of Wisconsin Pharmacists and Technicians in 2020

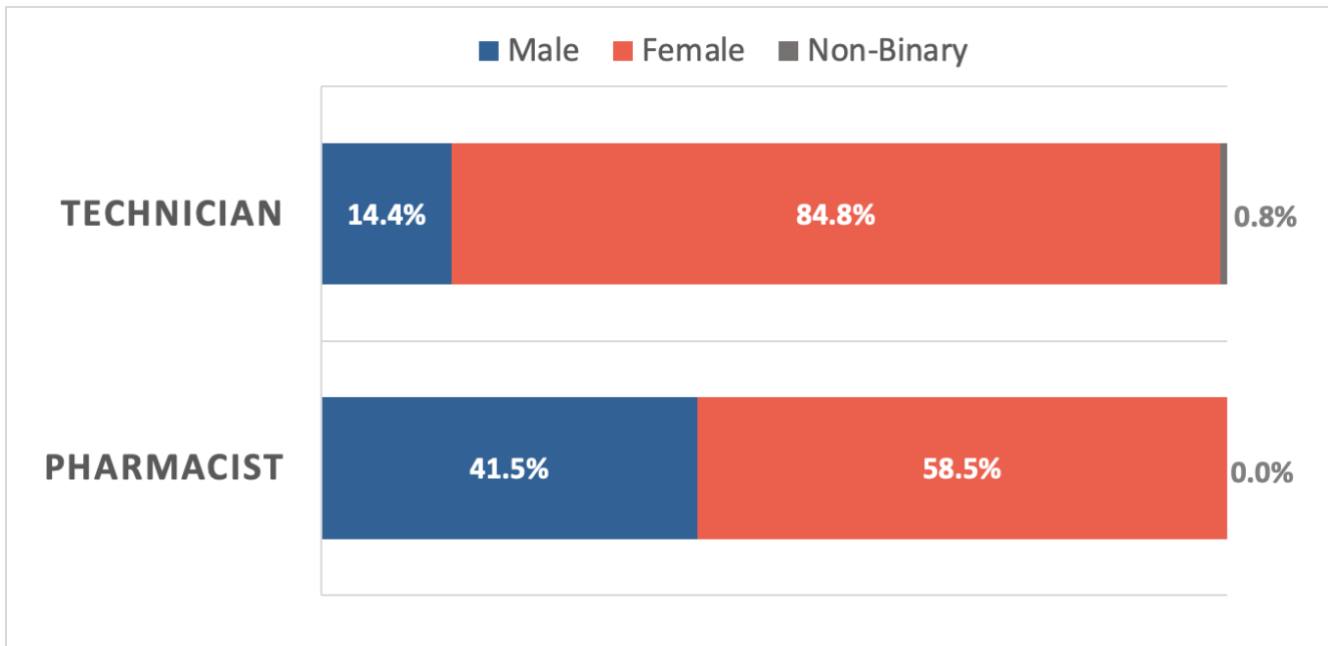
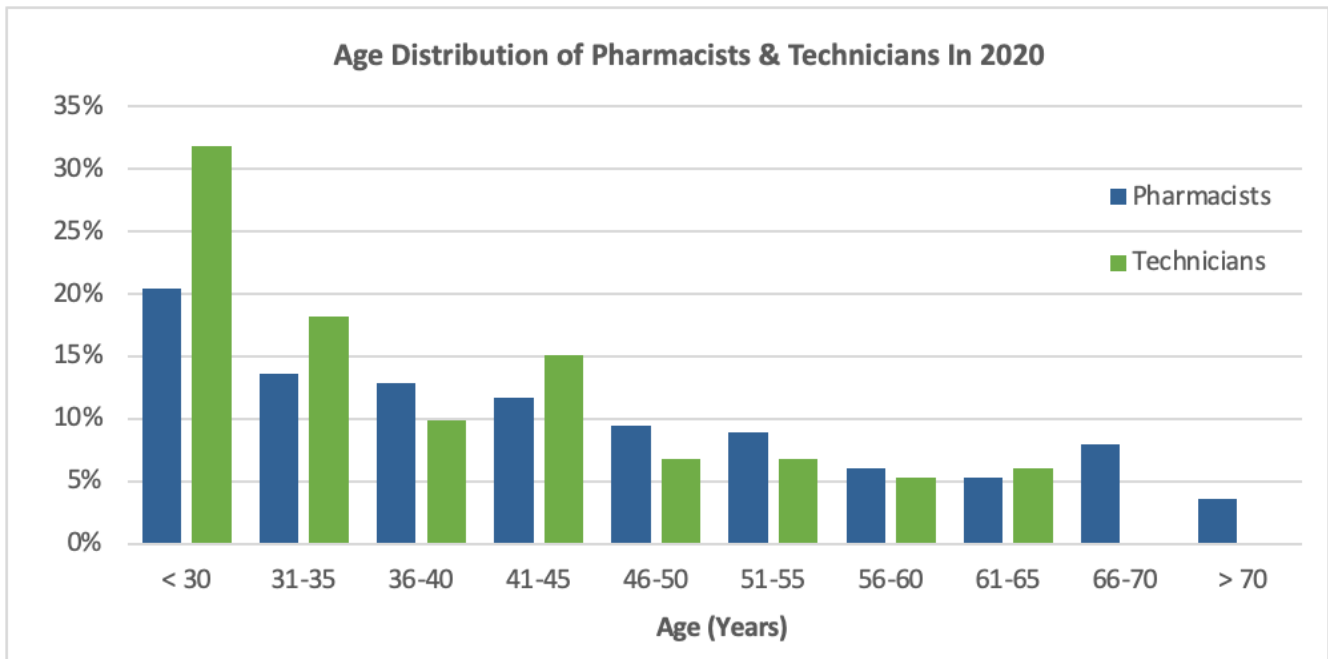


Figure 1.1.4 Age Distribution of Pharmacists and Technicians in 2020



CHARACTERISTICS OF WISCONSIN PHARMACISTS

Demographics of Licensed Pharmacists

Tables 2.1.1 through 2.1.3 contain summaries of Wisconsin licensed pharmacists based on their employment status. Overall, 90.9% of licensed pharmacists responding to the survey in 2020 were practicing as a pharmacist or working in a pharmacy-related field. The remaining 9.1% of pharmacists responding in 2020 included 5.4% retired pharmacists, 2.0% unemployed pharmacists, and 1.7% pharmacists working in fields other than pharmacy. Overall, 46.9% of licensed pharmacists were age 40 years or younger and 53.1% were age 41 years or older. In 2020, licensed pharmacists were 60.8% female, 39.2% male, and 0% non-binary. Overall in 2020, licensed pharmacists were 92.0% White, 3.7% Asian, 2.0% Black, 1.4% “Other”, and 0.9% American Indian or Alaska Native. Approximately 0.9% of licensed pharmacists identified as Hispanic.

Table 2.1.1 displays the age distribution of Wisconsin licensed pharmacists by employment status. In 2020, 50% of practicing pharmacists were age 40 years or younger, and 50% of practicing pharmacists were age 41 years or older. Furthermore, 11.9% of practicing pharmacists were age 61 years or older. In 2020, 66.7% of pharmacists practicing in fields other than pharmacy or healthcare were age 41 years or older. The number of unemployed pharmacists responding in 2020 was low (n=7) and the age of unemployed pharmacists was variable. Of the 5.4% of retired pharmacists that responded in 2020, 89.5% of retired pharmacists were age 61 years or older.

Table 2.1.2 provides the gender identity of Wisconsin licensed pharmacists by employment status. In 2020, 64.1% of practicing pharmacists identified as female, 35.9% identified as male, and 0% identified as non-binary. Of the pharmacists that indicated they were unemployed in 2020, 71.4% identified as female and 28.6% identified as male. Of the pharmacists that indicated they were retired in 2020, 94.7% identified as male and 5.3% identified as female.

Table 2.1.3 shows the racial diversity of Wisconsin licensed pharmacists by employment status. Practicing pharmacists in 2020 were 91.3% White, 4.1% Asian, 2.2% Black, 1.6% “Other”, and 0.9% American Indian or Alaska Native. Unemployed pharmacists responding in 2020 were 100% White. Retired pharmacists responding in 2020 were 100% White.

Table 2.1.1 Pharmacists' Employment Status By Age

Age	Practicing Pharmacy	Not Practicing Pharmacy	Unemployed	Retired	Total	
2020	Column %				n	Col %
<30	21.3	0.0	0.0	0.0	68	19.3
31-35	14.1	16.7	14.3	0.0	47	13.4
36-40	14.7	16.7	28.6	0.0	50	14.2
41-45	13.1	0.0	14.3	0.0	43	12.2
46-50	11.3	0.0	14.3	0.0	37	10.5
51-55	8.4	50.0	0.0	0.0	30	8.5
56-60	5.3	16.7	14.3	10.5	21	6.0
61-65	5.3	0.0	14.3	21.1	22	6.3
66-70	4.4	0.0	0.0	42.1	22	6.3
>70	2.2	0.0	0.0	26.3	12	3.4
Total (n)	320	6	7	19	352	

Table 2.1.2 Pharmacists' Employment Status By Gender Identity

Gender Identity	Practicing Pharmacy	Not Practicing Pharmacy	Unemployed	Retired	Total	
2020	Column %				n	Col %
Male	35.9	50.0	28.6	94.7	138	39.2
Female	64.1	50.0	71.4	5.3	214	60.8
Non-Binary	0.0	0.0	0.0	0.0	0	0.0
Total (n)	320	6	7	19	352	

Table 2.1.3 Pharmacists' Employment Status By Race/Ethnicity

Race	Practicing Pharmacy	Not Practicing Pharmacy	Unemployed	Retired	Total	
2020	Column %				n	Col
American Indian	0.9	0.0	0.0	0.0	3	0.9
Asian	4.1	0.0	0.0	0.0	13	3.7
Black	2.2	0.0	0.0	0.0	7	2.0
White	91.3	100.0	100.0	100.0	324	92.0
Other	1.6	0.0	0.0	0.0	5	1.4
Total (n)	320	6	7	19	352	
Hispanic, Spanish or Latino/Latina	0.9	0.0	0.0	0.0	352	0.9

Practicing Pharmacists

Tables and figures 2.2.1 through 2.2.7 contain characteristics of Wisconsin licensed pharmacists responding to the survey in 2020 that were practicing as a pharmacist or working in a pharmacy-related field. In 2020, 81.3% of practicing pharmacists were working full-time and 18.7% were working part-time (<30 hours per week). (Figure 2.1.1) The payment structure for practicing pharmacists in 2020 included annual salaries (61.1%) and hourly wages (38.9%). In 2020, 91.6% of practicing pharmacists were primarily working during first shift (between 6:00 AM to 6:00 PM). Only 5.5% of practicing pharmacists were primarily working second shift (between noon and midnight) and 2.9% were primarily working third shift (between 6:00 PM to 6:00 AM).

Table 2.2.2 shows the practice settings of respondents that reported they were currently practicing as a pharmacist or in pharmacy-related field or position. Of the pharmacists actively practicing in 2020, 41.6% reported employment in hospital/health-system practice settings (e.g. government and non-government hospitals and health-systems), 33.8% reported employment in community practice settings (e.g. independent, chain, supermarket), and 10.1% reported employment in ambulatory care practice settings (e.g. outpatient clinics, primary care clinics).

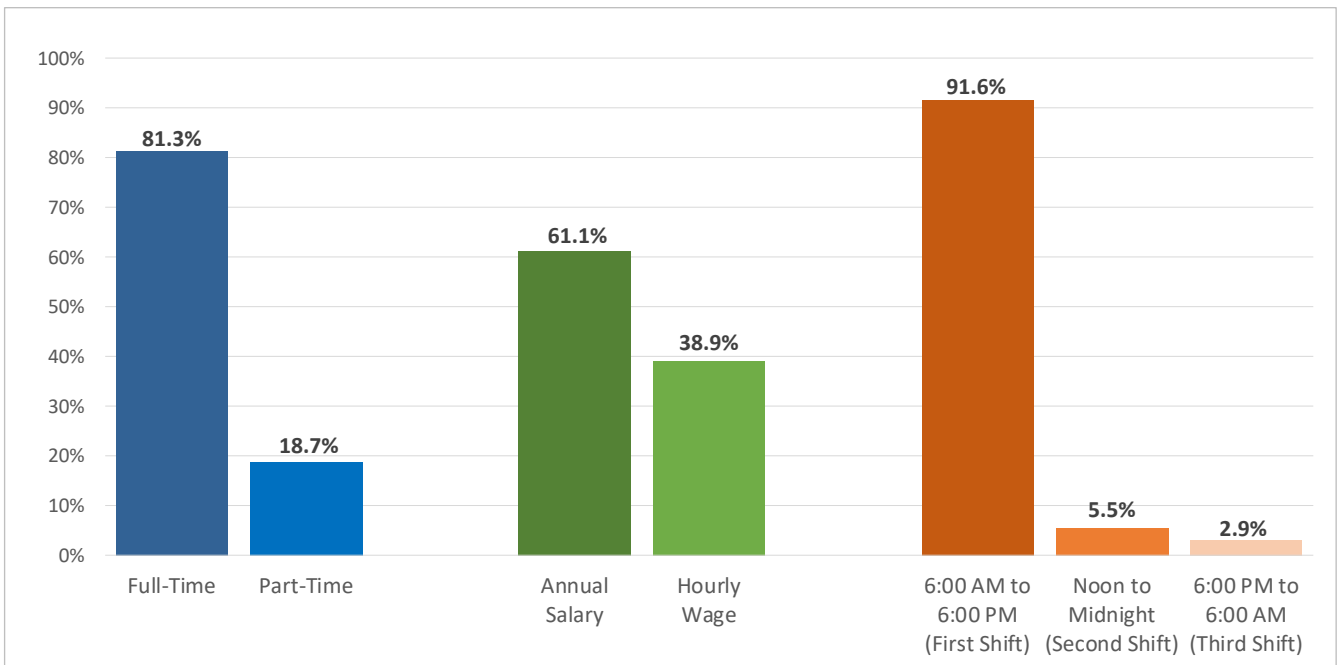
Table 2.2.3 shows the breakdown of actively practicing pharmacists' employment position by gender. In 2020, actively practicing pharmacists in staff positions were 63.9% female and 48.7% male. Pharmacists in management positions (e.g. Director, Assistant Director, Manager, Coordinator, etc.) were 31.3% male and 25.4% female. Respondents in pharmacy owner/partner positions included 10.4% male pharmacists and 4.4% female pharmacists. Respondents in faculty positions included 2.6% male pharmacists and 1.5% female pharmacists.

Table 2.2.4 shows the breakdown of actively practicing pharmacists by age, gender, and by race/ethnicity categories. We find that among actively practicing pharmacists in 2020 ambulatory care were more likely to be younger with 43.8% of pharmacist being age 35 compared to hospital (35.6% are under age 36), community (32.7% are under age 36) and other (32.6% are under age 36). By gender identity in 2020, 75.0% of ambulatory pharmacists were women, 65.9% of hospital pharmacists were women, 63.0% of other pharmacists were women, and 57.9% of community pharmacists were women.

Table 2.2.5 shows the breakdown of actively practicing pharmacists' year of first license, degree, residency training, and board certification by practice setting. Overall in 2020, 63.8% of pharmacists had obtained a PharmD degree and 36.2% had obtained a BS Pharm degree. In community settings, 55.1% of pharmacists obtained a PharmD degree, 5.6% completed a PGY1 residency (any kind), 0% completed a PGY2 residency (any kind), and 4.7% completed BPS Board Certification (any kind). In hospital/health-system settings, 80.3% obtained a PharmD degree, 46.2% completed a PGY1 residency (any kind), 9.8% completed a PGY2 residency (any kind), 8.3% completed a PGY1/PGY2 residency (any kind), and 36.4% completed BPS Board Certification (any kind).

Figure 2.2.7 shows pharmacists' student loan debt at graduation and at the time of the survey in 2020 by year graduated from pharmacy school. Overall, pharmacist student loan debt is higher for those that graduated more recently and average student loan debt at graduation continues to increase over time. As expected, pharmacists loan burden decreases over time as they begin to pay down their debt. Those that most recently graduated between 2011 to 2020 have very high student loan debt that is still over 90% of their initial student loan debt. Pharmacists graduating between 2011 and 2020 had an average student loan debt at graduation of \$135,271 and a current loan debt of \$123,765. Pharmacists graduating between 2001 and 2010 had paid down over 70% of their student loan burden.

Figure 2.1.1 Practicing Pharmacists' Employment Characteristics



Note: Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment.

Table 2.2.2 Practicing Pharmacists' Practice Settings

Practice Settings	Column %
Hospital / Health System	41.6
Community Pharmacy	33.8
Ambulatory Care / Outpatient Clinic	10.1
Other	5.0
Nursing Home / Long-Term Care	4.4
Academia	2.2
Industry	0.9
Mail Order Pharmacy	0.9
Managed Care / Pharmacy Benefit Manager	0.6
Home Health	0.3
Total (n)	317

Table 2.2.3 Practicing Pharmacists' Employment Position By Gender

Position	Male	Female	Non-Binary	Male	Female	Non-Binary	Total	
	Column %			Row %			n	Column %
2020	Column %			Row %			n	Column %
Staff Pharmacist	48.7	63.9	0.0	29.9	70.1	0.0	187	58.4
Faculty	2.6	1.5	0.0	50.0	50.0	0.0	6	1.9
Owner/Partner	10.4	4.4	0.0	57.1	42.9	0.0	21	6.6
Management	31.3	25.4	0.0	40.9	59.1	0.0	88	27.5
Other	7.0	4.9	0.0	44.4	55.6	0.0	18	5.6
Total (n)	115	205					320	

Note: Management includes pharmacists who are executives, directors, assistant directors, managers, assistant managers, coordinators, and supervisors.

Table 2.2.4 Pharmacists' Age, Gender Identity & Race/Ethnicity By Practice Setting

	Community	Hospital	Ambulatory Care	Other
Age Category	Column %			
<30	17.8	20.5	28.1	23.9
31-35	15.0	15.2	15.6	8.7
36-40	8.4	21.2	6.3	15.2
41-45	14.0	15.2	3.1	13.0
46-50	11.2	12.9	18.8	0.0
51-55	11.2	4.5	9.4	15.2
56-60	7.5	4.5	3.1	4.3
61-65	7.5	3.8	12.5	0.0
66-70	6.5	0.8	3.1	10.9
>70	0.9	1.5	0.0	8.7
Total (n)	107	132	32	46
Gender Identity	Column %			
Male	42.1	34.1	25.0	37.0
Female	57.9	65.9	75.0	63.0
Non-Binary	0.0	0.0	0.0	0.0
Total (n)	107	132	32	46
Race/Ethnicity	Column %			
American Indian	1.9	0.0	0.0	2.2
Asian	3.7	3.0	3.1	6.5
Black	4.7	0.8	0.0	2.2
White	88.8	93.9	93.8	89.1
Other	0.9	2.3	3.1	0.0
Total (n)	107	132	32	46
Hispanic, Spanish or Latino/Latina	1.9	0.0	3.1	0.0

Note: Other included less common practice settings with less than 10% of pharmacists respondents, including nursing home/long-term care, academia, industry, mail order, managed care/PBMs, home health, and "other".

Table 2.2.5 Pharmacists' License, Degrees & Residency Training By Practice Setting

	Community	Hospital	Ambulatory Care	Other
Year of First License	Column %			
1961 to 1970	0.0	0.0	0.0	4.3
1971 to 1980	11.2	3.0	6.3	8.7
1981 to 1990	15.9	7.6	15.6	10.9
1991 to 2000	20.6	21.2	21.9	17.4
2001 to 2010	12.1	25.8	18.8	19.6
2011 to 2020	38.3	40.2	37.5	34.8
Total (n)	107	132	32	46
Degrees Obtained	Column %			
BS Pharm	48.6	28.8	40.6	43.5
PharmD	55.1	80.3	68.8	65.2
Master's Degree (e.g. MS, MBA, MHA, MPH)	0.0	0.0	0.0	0.0
PhD	0.0	12.1	3.1	15.2
Total (n)	107	132	32	46
Residency Training	Column %			
PGY1	5.6	46.2	31.3	15.2
Pharmacy Practice	0.0	41.7	21.9	10.9
Community	5.6	4.5	9.4	4.3
Managed Care	0.0	0.0	0.0	0.0
PGY1/PGY2	0.0	8.3	0.0	0.0
Health-System Pharmacy Administration	0.0	5.3	0.0	0.0
Pharmacotherapy	0.0	2.3	0.0	0.0
Specialty Pharmacy Administration	0.0	0.8	0.0	0.0
PGY2	0.0	9.8	12.5	21.7
Ambulatory Care	0.0	0.0	9.4	6.5
Critical Care	0.0	3.0	0.0	0.0
Health-System Pharmacy Administration	0.0	2.3	0.0	0.0
Infectious Diseases	0.0	0.0	0.0	2.2
Internal Medicine	0.0	0.8	0.0	0.0
Oncology	0.0	0.8	3.1	0.0
Pediatric Pharmacy	0.0	3.0	0.0	2.2
Psychiatric Pharmacy	0.0	0.0	0.0	10.9
Total (n)	107	132	32	46
Board Certification	Column %			
BPS Board Certification (Any Kind)	4.7	36.4	28.1	32.6
Total (n)	107	132	32	46

Note: Other included less common practice settings with less than 10% of pharmacists respondents, including nursing home/long-term care, academia, industry, mail order, managed care/PBMs, home health, and "other".

Figure 2.2.6 Practicing Pharmacists' Pharmacy Degrees

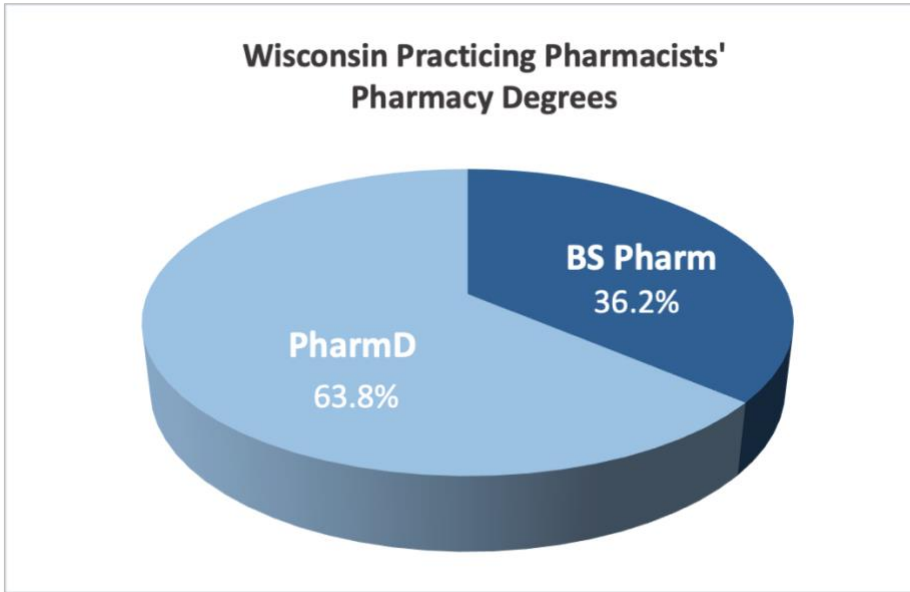
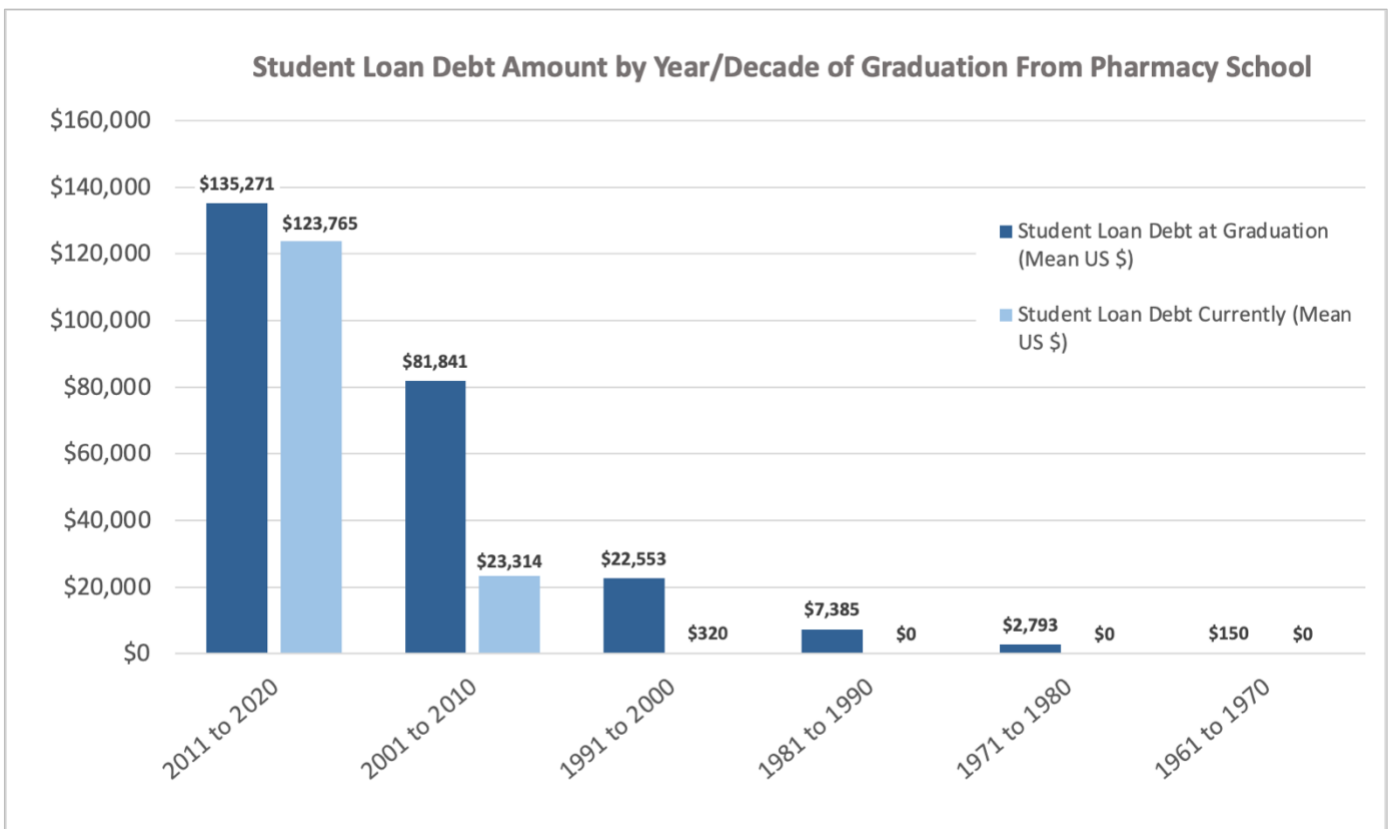


Figure 2.2.7 Pharmacists' Student Loan Debt



CHARACTERISTICS OF WISCONSIN TECHNICIANS

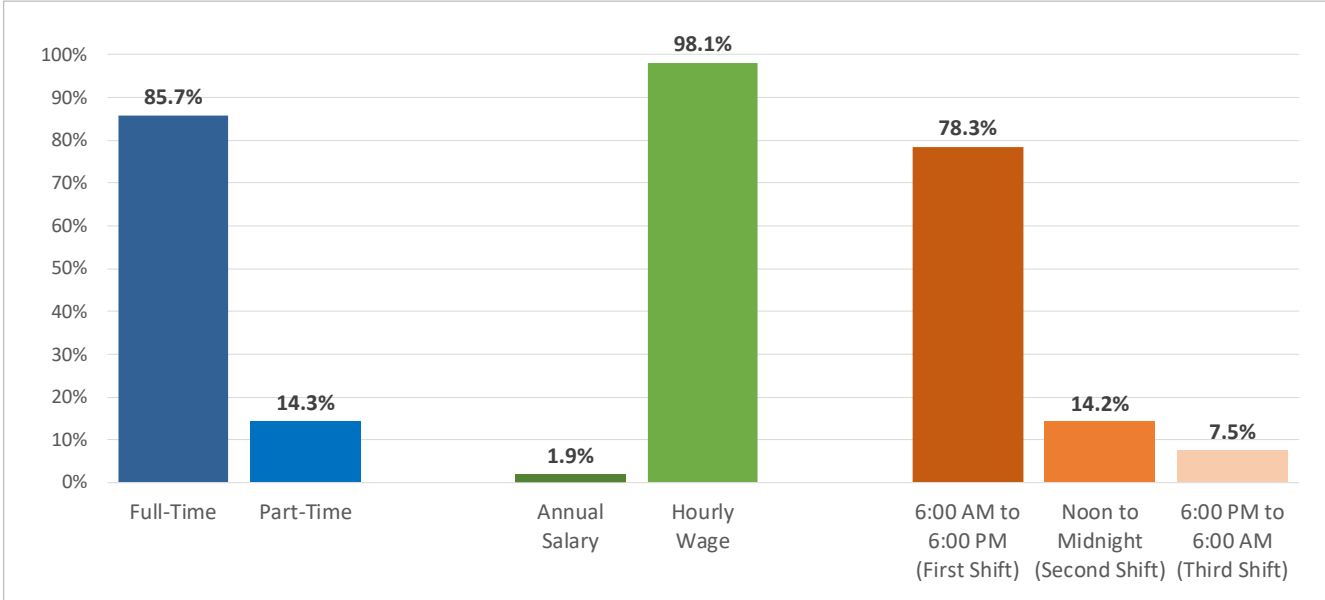
Demographics of Technicians

Tables and figures 3.1.1 through 3.1.3 contain characteristics of Wisconsin pharmacy technicians responding to the survey in 2020. Overall, 85.7% of pharmacy technicians were working full-time and 14.3% were working part-time. (Figure 3.1.1) The payment structure for pharmacy technicians in 2020 included primarily hourly wages (98.1%) and very few with annual salaries (1.9%). In 2020, 78.3% of pharmacy technicians were primarily working during first shift (between 6:00 AM to 6:00 PM), while 14.2% of pharmacy technicians were primarily working second shift (between noon and midnight) and 7.5% were primarily working third shift (between 6:00 PM to 6:00 AM). In 2020, 84.3% of pharmacy technicians responding to the survey reported employment in hospital/health-system practice settings (e.g. government and non-government hospitals), 9.3% reported employment in community practice settings (e.g. independent, chain, supermarket), and 6.5% reported employment in other practice settings. (Table 3.1.2)

Table 3.1.2 shows the breakdown of pharmacy technicians' age, gender, and race/ethnicity by practice setting. In 2020, 60.2% of pharmacy technicians were age 40 years or younger, and 39.8% of pharmacy technicians were age 41 years or older. Furthermore, only 5.6% of pharmacy technicians were age 61 years or older. In community settings, 70% of pharmacy technicians were under the age of 40 years. In hospital and health-system settings, 59.3% of pharmacy technicians were under age 40 years. By gender in 2020, 86.1% of pharmacy technicians identified as female, 13.0% identified as male, and 0.9% identified as non-binary. By race in 2020, pharmacy technicians self-identified as 81.5% White, 10.0% "Other", 3.7% Asian, 3.7% Black, and 0.9% American Indian or Alaska Native. Overall, 7.4% of pharmacy technicians identified as Hispanic.

Table 3.1.3 provides a summary of the pharmacy technicians' education and training by practice setting. Overall in 2020, 60.2% of pharmacy technicians had received a high school diploma and 10.2% had completed a GED. Furthermore, 35.2% had completed some college, 23.1% received an Associate Degree, 16.7% received a Bachelor's Degree, and 2.8% received a Master's Degree. Overall, 24.1% of pharmacy technicians had completed a technician training program, 69.4% had completed basic technicians certification, and 10% had completed advanced Pharmacy Technician Certification Board (PTCB) certification.

Figure 3.1.1 Pharmacy Technicians' Employment Characteristics



Note: Technicians were classified as working part-time if they worked 30 hours or less per week in their primary employment.

Table 3.1.2 Technicians' Age, Gender Identity & Race/Ethnicity By Practice Setting

	Community	Hospital	Other
Age Category	Column %		
<30	0.0	36.3	28.6
31-35	30.0	15.4	28.6
36-40	40.0	7.7	0.0
41-45	10.0	14.3	14.3
46-50	10.0	6.6	0.0
51-55	10.0	7.7	0.0
56-60	0.0	6.6	14.3
61-65	0.0	5.5	14.3
66-70	0.0	0.0	0.0
>70	0.0	0.0	0.0
Total (n)	10	91	7
Gender Identity	Column %		
Male	10.0	14.3	0.0
Female	90.0	84.6	100.0
Non-Binary	0.0	1.1	0.0
Total (n)	10	91	7
Race/Ethnicity	Column %		
American Indian	0.0	1.1	0.0
Asian	0.0	4.4	0.0
Black	10.0	3.3	0.0
White	90.0	81.3	71.4
Other	0.0	9.9	28.6
Total (n)	10	91	7
Hispanic, Spanish or Latino/Latina	10.0	7.7	0.0

Table 3.1.3 Technicians' Education, Training & Certification By Practice Setting

	Community	Hospital	Other
Education	Column %		
High School Diploma	40.0	61.5	71.4
GED	0.0	5.5	85.7
Some College, No Degree	40.0	35.2	28.6
Associate Degree	40.0	20.9	28.6
Bachelor's Degree	20.0	16.5	14.3
Master's Degree	0.0	3.3	0.0
Total (n)	10	91	7
Technician Training	Column %		
College-Based Technician Training Program	10.0	13.2	14
ASHP-Accredited Technician Training Program	0.0	6.6	0.0
Online Technician Training Program	20.0	4.4	0.0
Total (n)	10	91	7
Technician Certification	Column %		
National Healthcareer Association Certification	0.0	4.4	0.0
Pharmacy Technician Certification Board (PTCB) Certification	80.0	60.4	28.6
Other	10.0	5.5	0.0
Total (n)	10	91	7
Advanced Technician Certification	Column %		
PTCB Certified Compounded Sterile Preparation Technician	0.0	3.3	0.0
PTCB Advanced Certified Pharmacy Technician	0.0	0.0	0.0
PTCB Medication History Certificate	0.0	1.1	0.0
PTCB Technician Product Verification Certificate	30.0	2.2	0.0
PTCB Hazardous Drug Management Certificate	0.0	1.1	0.0
PTCB Billing and Reimbursement Certificate	10.0	0.0	0.0
Total (n)	10	91	7

PHARMACY WORKFORCE SUPPLY & DEMAND

Survey respondents were asked to reflect on the labor market for their practice locality. Respondents rated the supply/demand for generalist/staff pharmacists in their local area as well as pharmacy technicians, using the following scale: 1 = very low demand; 2 = low demand; 3 = in balance; 4 = moderate demand; and 5 = high demand.

In 2020, the overall rating for pharmacist demand was between “low” and “in balance with supply” as rated by both pharmacists and technicians (2.41 and 2.69, respectively). The overall rating for technician demand was between “in balance” and “moderate demand” by pharmacists (3.84) and “moderate demand” by technicians (4.08).

Table 4.1.1 Ratings of Supply/Demand For Pharmacists In Wisconsin

Role & Practice Setting	Average Demand Rating For Pharmacists By Area
Pharmacists	2.41
Mail Order Pharmacy	4.00
Community Pharmacy	2.64
Hospital / Health-System	2.38
Ambulatory Care	2.23
Industry	2.00
Nursing Home / Long-Term Care	1.70
Academia	1.50
Managed Care / Pharmacy Benefit Manager	1.50
Home Health	1.00
Technicians	2.69
Community Pharmacy	3.00
Hospital / Health-System	2.68

Table 4.1.2 Ratings of Supply/Demand For Technicians In Wisconsin

Role & Practice Setting	Average Demand Rating For Technicians By Area
Pharmacists	3.84
Mail Order Pharmacy	5.00
Academia	4.20
Home Health	4.00
Hospital / Health-System	3.94
Ambulatory Care	3.92
Community Pharmacy	3.76
Nursing Home / Long-Term Care	3.50
Managed Care / Pharmacy Benefit Manager	3.00
Industry	2.00
Technicians	4.08
Hospital / Health-System	4.06
Community Pharmacy	3.78