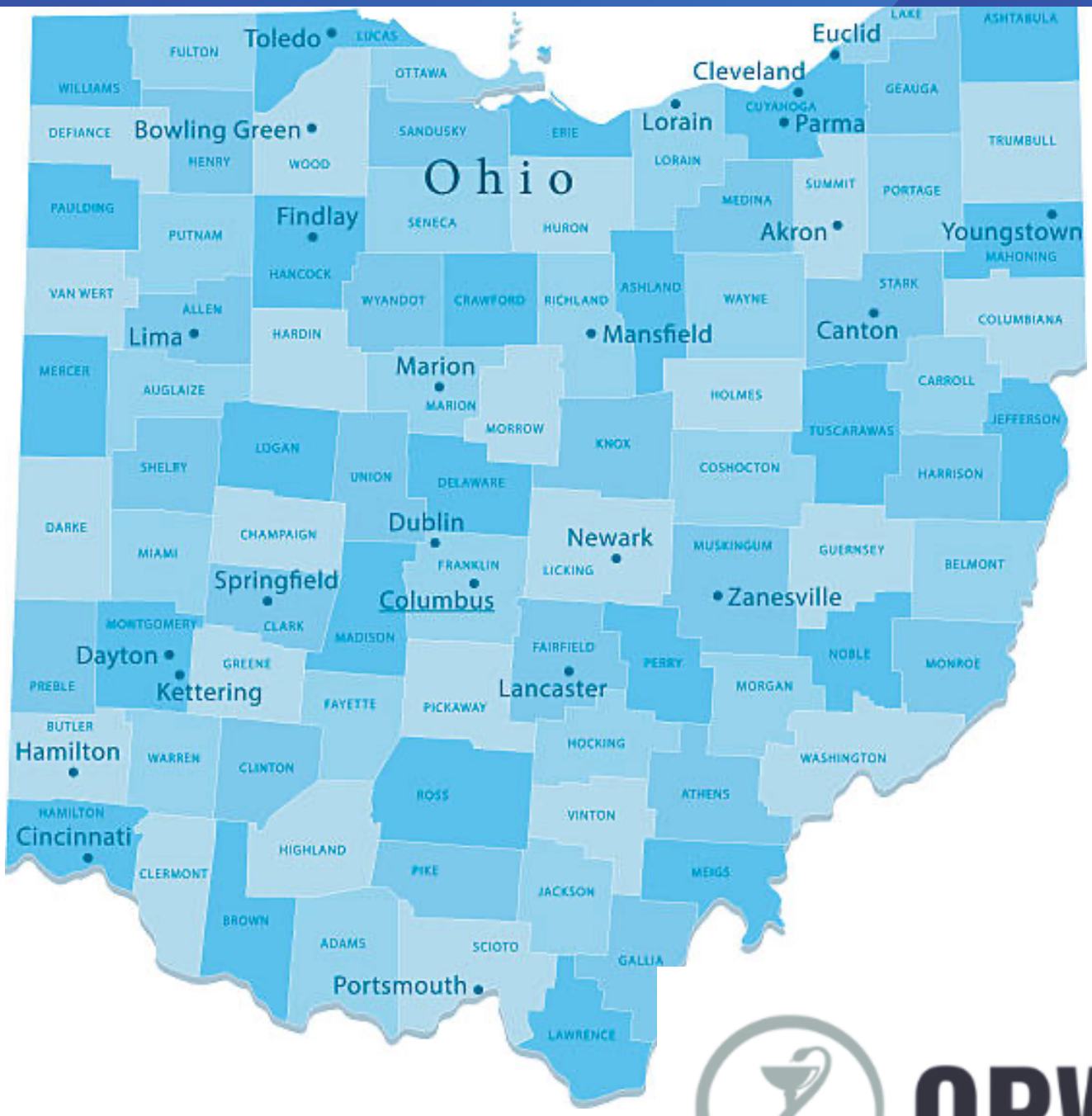
Ohio Pharmacy Workforce Consortium Final Report 2023



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2023

Ohio Pharmacy Workforce Consortium Study

Final Report

July 1 2024

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Repository for project materials and data

Project materials and data have been deidentified and are stored on a private, password-protected cloud-drive. Questions or inquiries may be directed towards principal investigators, Ben Aronson, Stefanie Lehmier, or Emily Eddy.

Background

Pharmacists ensure medications are indicated, effective, safe, affordable, and adhered to, providing expertise to patients, providers, payers, and policymakers. As the healthcare system undergoes transformation, pharmacists are being asked to take on new roles, deliver new services, and face significant change within established practice settings. In Ohio, pharmacist provider status has ushered in payment mechanisms for pharmacists to provide new services to ensure the health and welfare of patients. The pharmacy practice landscape is evolving, resulting in new opportunities as well as new challenges.

The National Pharmacy Workforce Study collects data from a sample of pharmacists in the United States every 3 to 5 years (i.e., 2000, 2004, 2009, 2014, 2019, 2022).[1,2] These data reveal practice trends over time that help us understand the profession, and provide insight on professional issues of the day. The relevance and impact of this data cannot be understated; it provides a vital mirror to see pharmacy practice as it evolves and meets new challenges. A few other Midwest states supplement the national survey with biennial surveys of their own. For instance, Schommer and colleagues have collected data on a biennial basis from Minnesota pharmacists for well over a decade.[3] A research group in Wisconsin is in their second iteration collecting data from licensees in the state.[4,5] This practice allows for more frequent collection of data to spot trends, compare to national benchmarks, and address state-specific and timely practice issues.

Aside from these states, other pharmacist workforce research exists in a more isolated fashion. For instance, the State of Ohio Board of Pharmacy (Board) recently collected data from Ohio pharmacists to assess workload and working conditions.[6] The Ohio Pharmacists Association historically administers a salary survey every 2 years. And other pockets of one-off workforce research do exist elsewhere.[7,8,9] However, no formal group has existed to date to systematically study the pharmacy workforce in Ohio.

This gap in understanding the pharmacy workforce in Ohio more broadly has potential detriment. Said alternatively, armed with data, stakeholders in pharmacies around the state could be prepared, could act, and could advocate for the profession. These stakeholders include the Board, Ohio colleges of pharmacy, state associations including the Ohio Pharmacists Association, Ohio Society of Health-System Pharmacy, and the Ohio College of Clinical Pharmacy.

In addition to understanding our local landscape, the implications of workforce research on pharmacists in the state of Ohio extends to influence broader workforce trend analyses. There are many questions that can be asked and answered. Compared to other health professions, there is a relative paucity of workforce research for pharmacists. Due to this lack of literature, there are many unanswered questions about the pharmacy workforce and the current state of pharmacy workplace environments. One of our main purposes for commencing this research focused on using theory and concepts of organizational psychology to uncover opportunities and challenges within the profession that are specific to Ohio.

This project unites several stakeholders across the state of Ohio to form the Ohio Pharmacist Workforce Consortium, and launches a biennial collection of data from Ohio pharmacists. The long-range goal of this line of research is to monitor trends in the profession over time, and provide just-in-time data and analysis of contemporary issues among Ohio pharmacists in order

to provide practice, policy, and educational insight to stakeholders in and outside the profession. The objective of this proposal is to provide a first data point in the trend series and propose potential solutions to buffer negative job-related issues and stimulate positive outcomes.

Objectives

The goal of this study was to conduct a survey characterizing and analyzing the pharmacist workforce in the state of Ohio similar to the 2019 National Pharmacist Workforce Survey.

Methods

A list of email addresses of pharmacist licensees in Ohio was provided by the Ohio Board of Pharmacy. On March 21, 2023, a random sample of 5,000 Ohio licensed pharmacists were emailed invitations to participate in an online survey (Qualtrics, Provo, UT). The survey was open for 35 days, with two tailored reminders sent to non-responders on days 14 and 21.

The survey contained sections addressing work setting and characteristics, job conditions and outcomes, compensation and debt, and demographic characteristics. Questions from each section were based on questions from the National Pharmacy Workforce Survey, the Ohio Pharmacists Association Salary Survey, and from other published works. Once the survey was closed, the data were downloaded from Qualtrics and uploaded to SPSS Statistics Software (IBM Corp., Armonk, NY, USA) for analysis.

Results

Results Section 1: Response Rate, Demographics, Characteristics of the Workforce

Response Rate

The effective sample was 4,868 after excluding those emails that were not delivered (n=125) and those indicating they should be excluded (n=7). A total of 619 pharmacists opened the survey, and 597 provided responses to more than 1 question in the survey (12.3% response rate). A total of 423 individuals who were practicing as a pharmacist and 38 who were in healthcare or another field but not practicing as a pharmacist in Ohio are included in this report.

Demographics

The majority of respondents identified as mid-career with an age range of 30-49 years. The range of ages included folks 20-29 and one individual identifying in the category of 80-89 years (Figure 1). Gender demographics demonstrate a majority of respondents (58.8%) identify as female, 39% respondents identified as male, 1.8% preferred not to answer, and < 1 % selected transgender, non-binary, or gender non-conforming (Figure 2). The majority selected race identification for respondents was 'White' at 89.7%. Almost 3% preferred not to answer this question (Figure 3).

Figure 1: Age of Respondents (n=429)

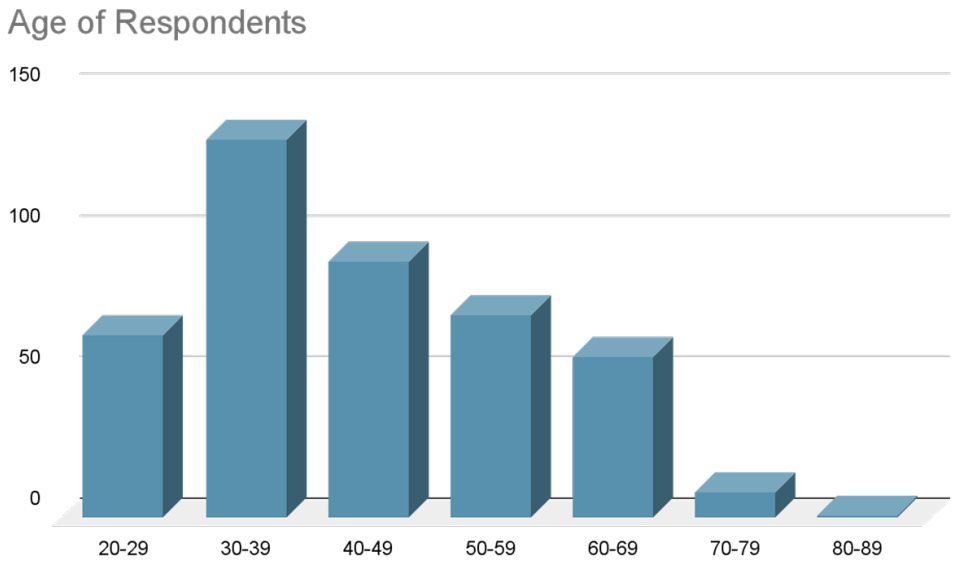


Figure 2: Gender of Respondents (n=449)

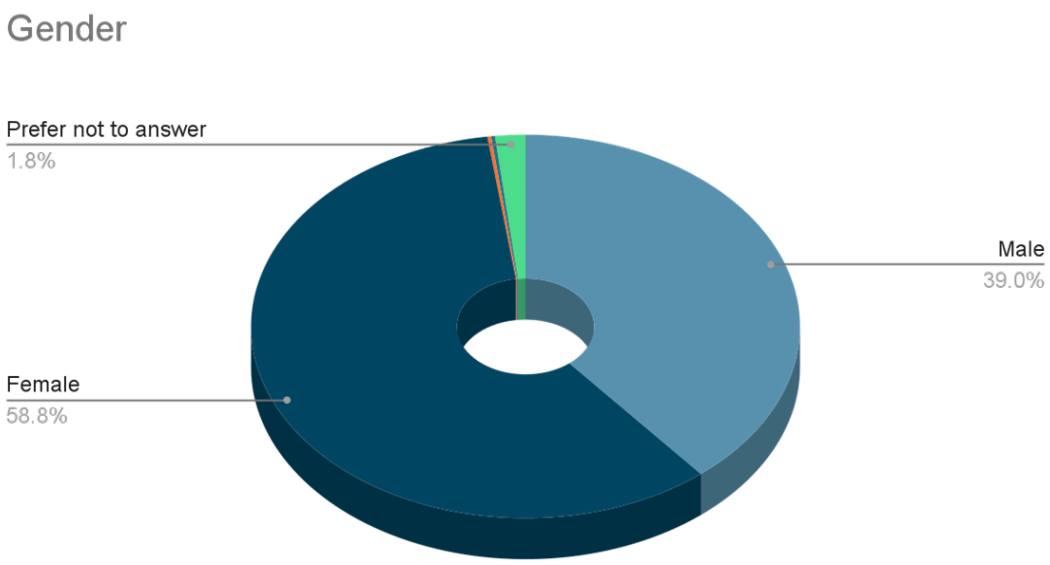
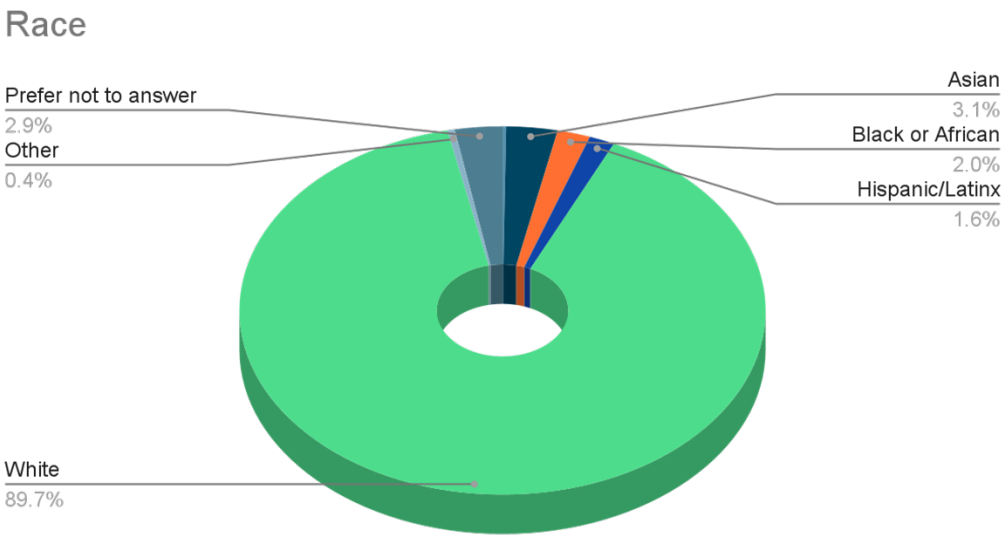
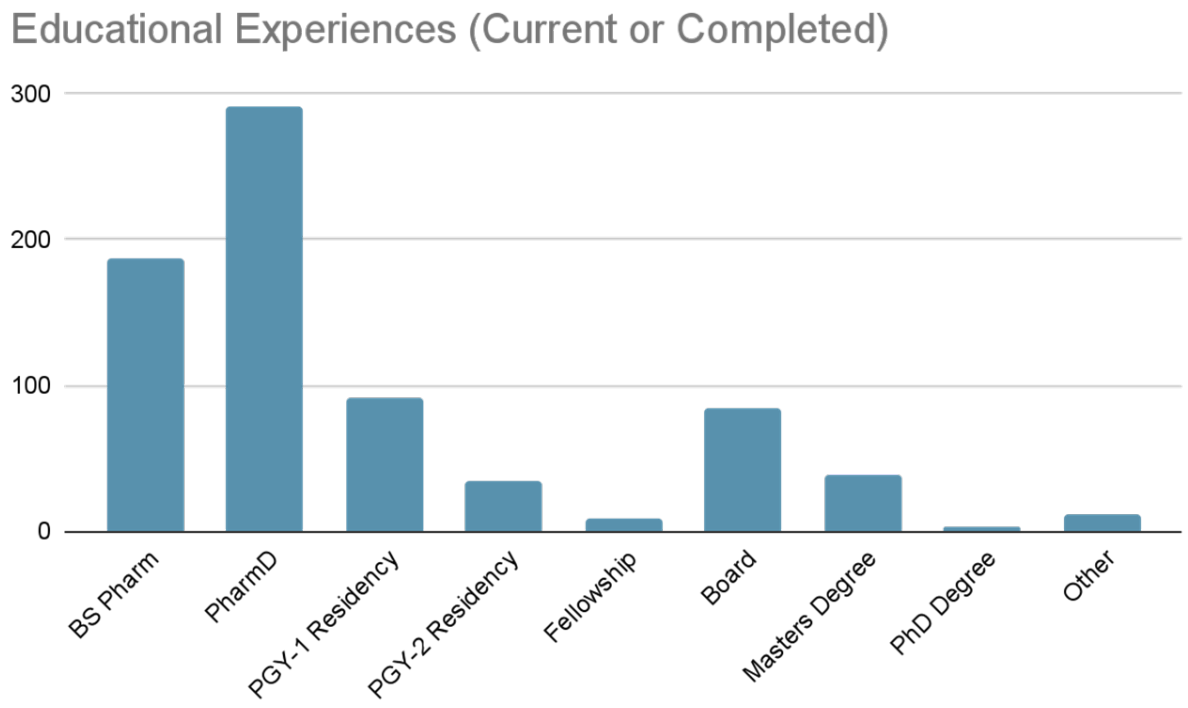


Figure 3: Race/Ethnicity of Respondents (n=445)



Most respondents selected PharmD as their pharmacy degree with approximately 20% completing PGY1 Pharmacy Practice Residency training and about 8% a PGY2 Residency. Board Certification was completed by about 19% of survey participants. It is notable that 84 respondents (~19%) had completed a Master's degree (Figure 4).

Figure 4: Educational Experiences of Respondents (n=438)



Other miscellaneous demographics include number of years licensed, number of years in current role or position, percentage trained in Ohio versus out of state, percentage who are licensed in other states, and languages frequently spoken. Among all respondents, the average number of years since first licensed as a pharmacist was 18.6, ranging from 1 to 53 years. Approximately 15% of those responding to the survey had been in their current position for less than 1 year, 11% for 2 years, and 2% for 40+ years. Overall, 52.9% of respondents had been in their position for 5 or fewer years, 19.4% between 6 and 10 years, 14.7% between 11 and 20 years, and 13% greater than 20 years. When it came to training, 79.6% graduated from an Ohio college of pharmacy, and 20.4% graduated from a college of pharmacy outside of Ohio. As far as licensure in other states, 31.2% of those responding had at least one other pharmacy license from a U.S. state or territory. Pharmacists (n=382) spoke a variety of languages proficiently including: English (100%), Arabic (2.1%), French (1.6%), and Spanish (2.1%), with other languages not spoken as common but still used, such as Chinese, German, Armenian, Croatian, Farsi, Greek, Gujarati Hindi, Malayalam Hindi, Korean, Russian, and Urdu (<1% each).

Results Section 2: Employment Status, Title and Location

Five hundred and two (84.1%) respondents identified themselves as practicing pharmacists with 50 (8.4%) working in a pharmacy-related career and 3 (<1%) working in a career unrelated to pharmacy. About 5% were retired and 10 (1.7%) were unemployed. Specific details and results on those selecting 'unemployed' are provided in Section 3 of the report. (Figure 5) When asked about position or title, the most common position selected by participants was 'Staff/Clinical Pharmacist' (59.3%), followed by 'Manager' (17.9%), then 'Other' (10.7%) (see Figure 6). The 'Other' category included informatics, pharmacy resident, industry/research, and accreditation/regulatory, just to name a few (see Table 1).

Figure 5. Employment Status of Respondents (n=597)

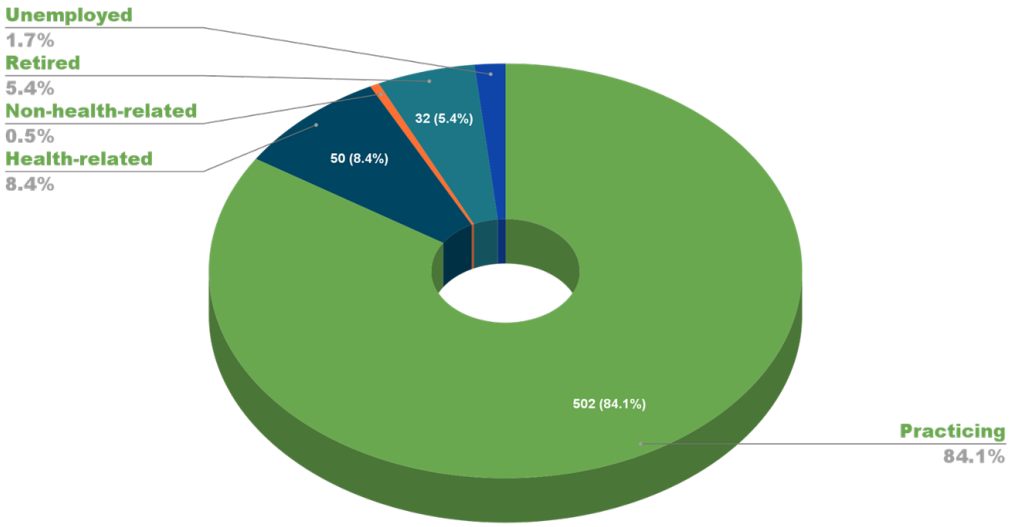


Figure 6. Position/Title of Respondents (n=580)

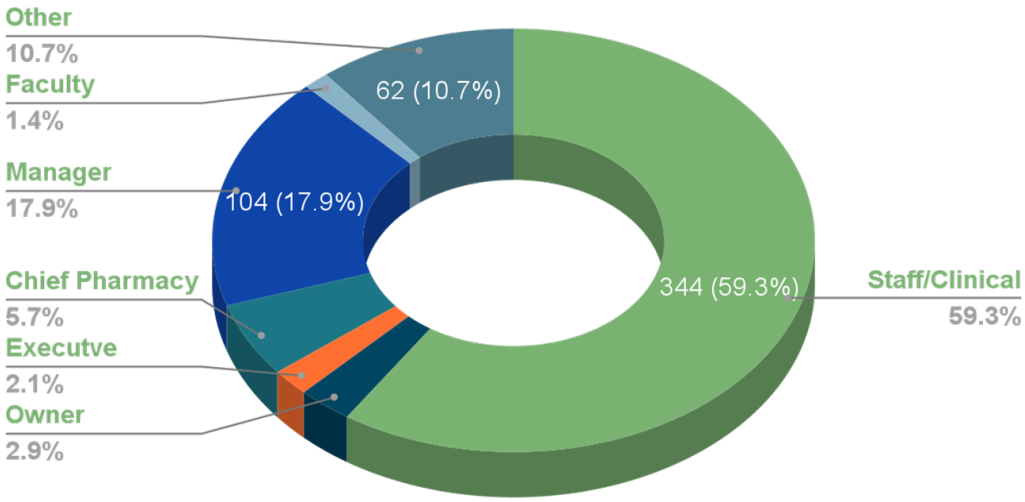
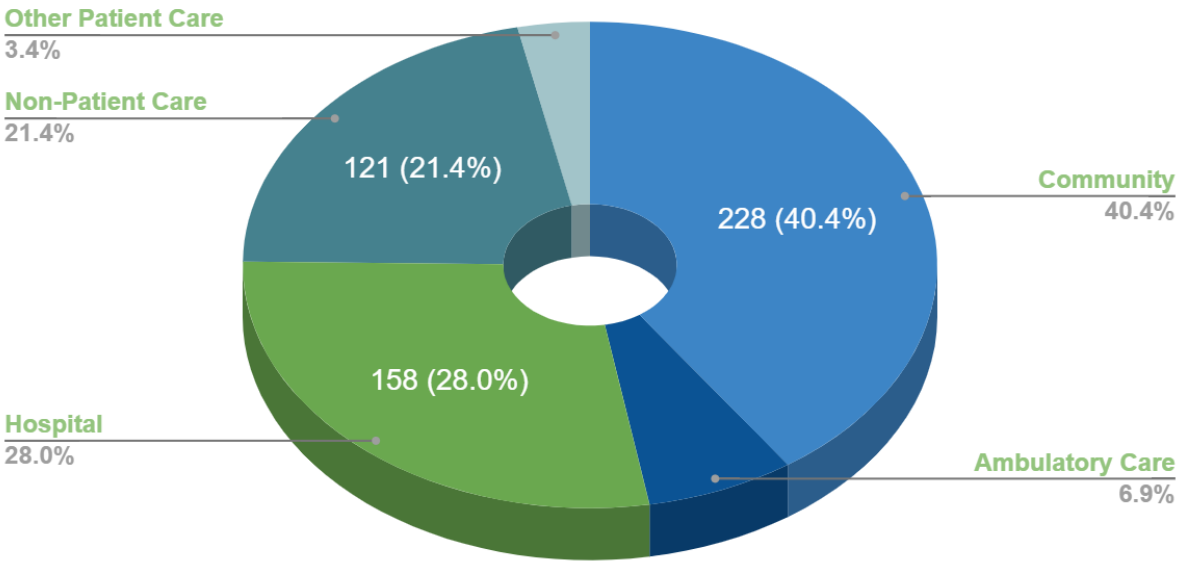


Table 1. Other Positions Held by Respondents (n=62)

Other Position Identified	Number of Respondents
Informatics:	8 respondents
Medical Science Liaison:	3 respondents
Pharmacy Resident:	5 respondents
Industry / Research:	5 respondents
Medical Cannabis Director:	1 respondent
Accreditation / Regulatory:	4 respondents
Part-Time / Floater:	3 respondents

The most commonly selected employment category/work setting was 'Community' (39.9%), with 'Hospital' (27.6%) being second, and 'Other' (8%) and 'Ambulatory' (6.8%) next most common (see Figure 7). Those who selected 'Other' had the opportunity to share their setting via free text. These included nuclear, nonprofit, consulting, and technology. More details/results on specific work settings and job characteristics can be found in Section 4 of the report.

Figure 7. General Work Setting of Respondents (n=565)



Respondents worked in a variety of geographic regions across the state with metropolitan cities accounting for 66.5% and other areas at 33.5% (Table 2). Some of the larger regions included Columbus (18.3%), Cleveland (13.9%), and Cincinnati (12.6%).

Table 2. Working Respondents by Geographic Region of Ohio (based on zip code) (n= 597)

Metropolitan Area	**Respondents n (%)**
Akron/Canton/Youngstown	59 (9.9)
Dayton	44 (7.4)
Cleveland	83 (13.9)
Cincinnati	75 (12.6)
Toledo	27 (4.5)
Columbus	109 (18.3)
Other	200 (33.5)

Results Section 3: Unemployment and Retirement

A total of 10 individuals indicated they were unemployed (1.7%), and 32 were retired (5.4%). Among those stating they were unemployed, all 10 had been employed as a pharmacist. Half decided to leave the workforce voluntarily based on workplace factors (e.g., work environment/culture), two left voluntarily due to personal reasons (e.g., health), two left for involuntary reasons (e.g., downsizing), and one left due to a move and was unable to secure a new position in the new location. Prior to unemployment, the 10 individuals had been employed between 1 and 37 years, and their period of unemployment ranged from 1 month to 5 years. They were split between seeking a job in pharmacy, seeking a job outside of pharmacy, and not currently seeking a job.

Among those indicating they were retired and provided their age of retirement, most reported retiring between ages 65-69 years old (40%). A high majority of the respondents indicated their retirement was completely voluntary (62.5%) (Table 4). Some of the top reasons respondents decided to retire was a desire to have more personal or family time (77.4%) followed by having established financial security (63.3%) and experiencing heavy demands of the job/symptoms of burnout (38.7%) (see Table 5). Most respondents were employed in the community pharmacy/health-system retail setting prior to retirement (40.6%) followed by the hospital setting (21.9%) (see Table 6). The 'Other' category was third highest with 12.5% (charitable pharmacy, industry, faculty and owner) (see Table 6).

Table 3. Retirement Age of Respondents (n= 25)

Age at Retirement	**% (n)**
< 60 years old	8% (2)
60- 64 years old	24% (6)
65- 69 years old	40% (10)
70-74 years old	20% (5)
≥ 75 years old	8% (2)

Table 4. Voluntary Nature of Retirement (n = 32)

To what extent was the decision to retire voluntary	n (%)
Not at all voluntary	1 (3.1)
Somewhat voluntary	2 (6.3)
Mostly voluntary	9 (28.1)
Completely Voluntary	20 (62.5)

Table 5. Respondents' Reasons for Retirement (n = 31)

Retirement Reason	% (n) of Respondents Indicating 'Very Important'	% (n) indicating 'Somewhat Important'
Own health/medical condition	19.4% (6)	25.8% (8)
Demands of job/burnout	38.7% (12)	45.2% (14)
Negative interpersonal relationships at work	19.4% (6)	22.6% (7)
Culture or philosophical environment at work	22.6% (7)	45.2% (14)
Overall dissatisfaction with pharmacy	16.1% (5)	35.5% (11)
Desire to have more personal or family time	77.4% (24)	16.1% (5)
Need to care for and assist partner or family member	16.1% (5)	19.4% (6)
Had an opportunity elsewhere	3.2% (1)	3.2% (1)
Established financial security	58.1% (18)	29% (9)

Table 6. Employment Setting Prior to Retirement (n= 32)

What best describes where you were employed as a pharmacist prior to retirement?	**% (n)**
Community Pharmacy/Health-System Retail	40.6% (13)
Hospital Pharmacy	21.6% (7)
Mail Order Pharmacy	9.4 % (3)
Managed Care/Pharmacy Benefit Manager (PBM)	3.1 % (1)
Nursing Home/Long Term Care	6.3% (2)
Specialty Pharmacy	3.1% (1)
Other	12.5% (4)
No response	3.1% (1)

Thirty-two respondents answered if they have continued to work for pay after retirement. Of those that answered the question, 28.1%, n= 9 stated that they have continued to work for pay. Of those who have continued to work for pay (n=9), 7 (77.8%) of them are working in pharmacy-related work.

The number of hours worked per month by retired respondents ranged from 4 to 40 hours (see Table 7). The biggest primary factors that led retirees to go back to work included the financial need to supplement their incomes and the feelings of obligation or the urge to contribute their talents and efforts to the pharmacy profession (9.4% each, respectively) (see Table 8). Of those who went back to work as a pharmacist, the majority worked in the community pharmacy/health-system retail setting (see Table 9).

Table 7. Hours Worked Per Month for Retired Respondents (n = 9)

About how many hours a month do you work?	**% (n)**
4 hours	11.1% (1)
5 hours	11.1% (1)
8 hours	11.1% (1)
15 hours	11.1% (1)
40 hours	33.3% (3)
60 hours	11.1% (1)
72 hours	11.1% (1)

Table 8. Primary Factors for Retired Respondents to Work (n=9)

What are the primary factors that lead you to work in retirement?	**% (n)**
Financial (I need or want to supplement my income)	33.3% (3)
Meaningful (I felt the need to contribute my talents/efforts)	11.1% (1)
Obligation (I was urged/requested to contribute my talents/efforts)	33.3% (3)
Desire (I wanted to keep busy or have something to do)	11.1% (1)
Other	11.1% (1)

Table 9. Where Retired Respondents Still Work (n= 7)

What best describes the setting in which you still work?	**% (n)**
Community Pharmacy/ Health-system retail	57.1 % (4)
Industry	14.2% (1)
Consulting	14.2% (1)
Academia	14.2% (1)

Of those who were retired, 56.3% volunteered some of their time in a service capacity (see Table 10). The majority felt led to volunteer because they believed it was meaningful and felt they needed to contribute their talents and efforts to their community (see Table 11).

Table 10. Retired Respondents Volunteer Time to Serve (n= 32)

Do you volunteer your time in a service capacity?	**% (n)**
No	43.8 % (14)
Yes	56.3% (18)

Table 11. Factors for Retired Respondents to Volunteer (n= 18)

What is the primary factor that leads you to volunteer in retirement?	**% (n)**
Meaningful (I felt a need to contribute my talents/efforts)	61.1% (11)
Obligation (I was urged/requested to work and contribute my talents/efforts)	16.7% (3)
Desire (I wanted to keep busy, needed something to do)	16.7% (3)
Other: Appreciation (I wanted to give back to institutions that have been good to me in the past)	5.6% (1)

Results Section 4: Job Characteristics

Results Section 4a: Roles and Responsibilities

Respondents were asked to outline a distribution of how their time is spent on a daily basis. (Table 12) In reviewing the predominant three responsibilities by job type, the data demonstrated that pharmacists focus on different types of activities based on their practice setting. Community pharmacist respondents described that most of their time is spent on patient care associated with dispensing, then patient care not associated with dispensing, and then business/organization management skills. Ambulatory care pharmacists and hospital pharmacist respondents predominantly spend their time within patient care not associated with dispensing, patient care associated with dispensing, and business/organization management tasks. Non-patient care-oriented respondents predominantly reported focusing on business/organization management tasks, patient care not associated with dispensing, and patient care associated with dispensing activities. Interestingly, this group reported a proportionally higher percentage of tasks falling into the 'other' category. Finally, the 'Other-patient care' respondents noted that their tasks were predominantly patient care associated with dispensing, patient care not associated with dispensing, and business/organization management, respectively.

Table 12. Mean percent of time spent on job tasks by area of practice. (N=439)

	Patient care associated with dispensing	Patient care not associated with dispensing	Business/ organization management	Research/ scholarship	Education	Other
Community (n=168)	73.2%	10.5%	9.8%	0.3%	4%	2.2%
Am care (n=31)	25.3%	51.8%	10.4%	2.3%	8.2%	2.1%
Hospital (n=129)	30.8%	34.5%	13.4%	4.2%	8.2%	8.9%
Non-patient care (n=95)	22.4%	23.7%	24.3%	9.2%	5.4%	15.2%
Other-patient care (n=16)	50.9%	18.8%	13.4%	1.3%	6.9%	9.3%

Among those who indicated they work in community, ambulatory, and hospital practice settings, individuals were asked a variety of questions regarding billing and the services they provide. (Table 13) Most individuals in ambulatory and hospital settings indicated that they were able to prescribe or modify medications on behalf of a prescriber (78.9% and 71.8% respectively), while only 16% of those in community practice indicated they prescribed or modify medications on behalf of a prescriber. In reviewing billing practices by practice settings, there were variances by practice setting. About 30% of community pharmacist respondents noted that they were billing as a provider, with the second highest response being that they

were using medication therapy management or evaluation/management codes. Ambulatory care pharmacists reported the highest % of billing practices in place, with billing as a provider and billing incident-to a provider as the two most common practices. While not many hospital respondents report billing practices overall, the most common practices were billing as a provider, disease state management codes, and incident-to provider services (all <10%).

Table 13. Pharmacist billing by setting (n=413)

	Community (n=219)	**Ambulatory Care (n=38)**	**Hospital (n=156)**
Bill as provider	27.4%	36.8%	6.4%
Pharmacy Codes (Medication Therapy Management, Evaluation/management)	17.4%	15.8%	1.9%
Nonpharmacy Codes (Annual Wellness Visit, Transitional Care Management)	2.3%	7.9%	0.6%
Disease State Management Codes (Chronic Care Management, Diabetes Self-management Training)	3.2%	10.5%	2.6%
Incident to physician services (Physician or hospital-based clinic, facility fee, Anticoagulation)	0%	26.3%	2.6%
Traditional provider codes (Professional and technical components)	2.7%	10.5%	0%
I am not sure	5.9%	0%	0.6%
My institution nor I are billing for patient care services	0.5%	0%	0%
Other	1.8%	0%	0%

Pharmacists are providing a variety of services for patients and these responsibilities do vary by practice setting. (Table 14) In considering the top three services reported by each area of practice, the following results were reported by our respondents:

- Community pharmacist respondents report 1) administering vaccinations/immunizations, 2) medication education or counseling and 3) providing patient medication assistance
- Ambulatory care pharmacists report 1) providing medication education or counseling 2) medication reconciliation and 3) device education/training and
- Hospital pharmacists report 1) drug level monitoring 2) therapeutic drug interchange and 3) providing other laboratory tests as their three most common services provided.

Table 14. Services provided by pharmacists in various settings (n=413)

Service	Community (n=219)	Ambulatory Care (n=38)	Hospital (n=156)
Start, modify, or stop drug therapy independent from a patient-specific order	10.5%	52.6%	45.5%
Therapeutic drug interchange	27.9%	47.4%	76.3%
Administer vaccinations/immunizations	79.9%	15.8%	12.2%
Administer drugs (i.e., non-vaccines) by injection	6.8%	0%	0%
Comprehensive medication management	41.6%	57.9%	23.7%
Disease state management	17.4%	63.2%	21.2%
Device education/training	56.2%	65.8%	16.7%
Drug level monitoring	5.5%	36.8%	76.9%
Medication education or counseling	74.9%	86.8%	53.8%
Medication reconciliation	32.9%	71.1%	65.4%
Opioid deprescribing	8.2%	2.6%	7.7%
Order laboratory tests	2.3%	55.3%	68.6%
Patient medication assistance (e.g., access to medication coupons, discounts)	62.6%	63.2%	25.6%
Pharmacogenomic testing and/or counseling	0.5%	7.9%	1.3%
Physical assessment (e.g., blood pressure, auscultation of the lungs,	13.2%	26.3%	3.8%

diabetic foot exam)			
Point of care testing (e.g., strep, INR, glucose testing, lipid panel)	15.5%	26.3%	7.1%
Remote patient monitoring, (i.e., digital health monitoring)	1.8%	31.6%	5.1%
Skin testing	0.5%	0%	0.6%
COVID-19 testing	27.9%	0%	0%
Other	0%	2.6%	5.8%

When asked about modality of patient care provision, most community pharmacists report that drop-in (unscheduled) face-to-face visits, scheduled visits, and then consultations during scheduled face-to-face visits to be most common. This differs from ambulatory care pharmacists who report scheduled visits, telephonic telehealth visits, and consultations during a scheduled face-to-face visit with another provider to be the most common ways of providing care. Further, most hospital pharmacists report visiting with a patient on a hospital floor, drop-in (unscheduled) face-to-face visits, and consultations during a scheduled face-to-face visit with another provider to be the typical modalities of care provision.

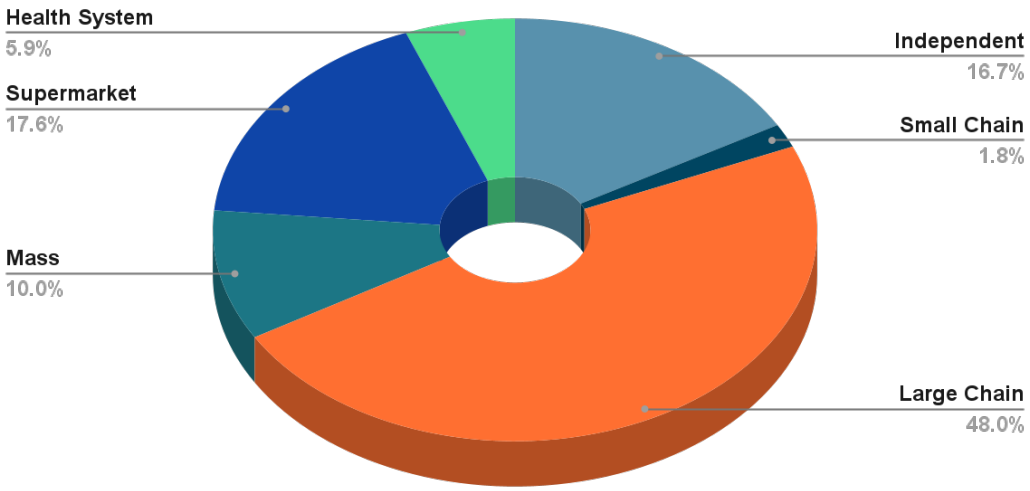
Table 15. How pharmacists in various settings are providing care (n=413)

How are they providing care	Community (n=219)	Ambulatory Care (n=38)	Hospital (n=156)
Drop-in (unscheduled) face-to-face visit with the pharmacist	74%	34.2%	17.3%
Scheduled face-to-face visit with the pharmacist	37.9%	57.9%	9.6%
Consulted during a scheduled face-to-face visit with another provider (e.g., physician, nurse practitioner)	5.5%	44.7%	16%
Video telehealth visits	0.5%	34.2%	0.6%
Telephonic telehealth visits	5%	55.3%	4.5%
Visit with patient on the hospital floor	0.9%	0%	51.3%
Group education/visits	0.5%	10.5%	2.6%
Home visit	2.3%	2.6%	0%
Other	0.5%	0%	12.2%

Results Section 4b: Community Pharmacy Characteristics

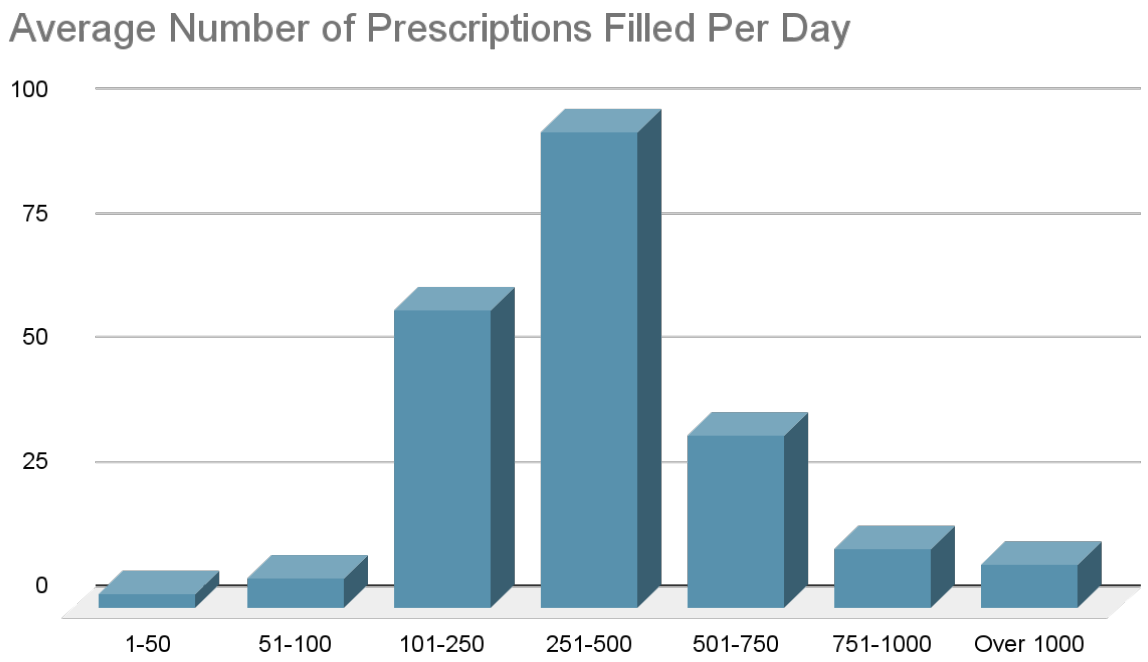
Most community practice respondents stated that they worked in a large chain (more than 10 units under same ownership (48%), followed by supermarket (17.6%), independent (fewer than 4 stores under the same ownership) (16.7%), mass merchandiser (10%), and fewer respondents noted that their community setting was within a health-system or small chain. (Figure 8)

Figure 8 - Community Practice Work Setting (n=221)



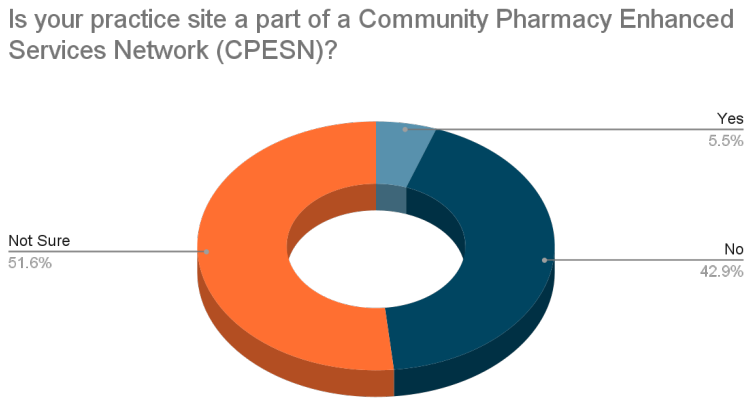
Most respondents report filling 251-500 prescriptions per day on average, with 101-250 selected as the next most common average number of prescriptions filled per day, then 501-750 per day. (Figure 9)

Figure 9. Average Number of Prescriptions Filled Per Day (n=221)



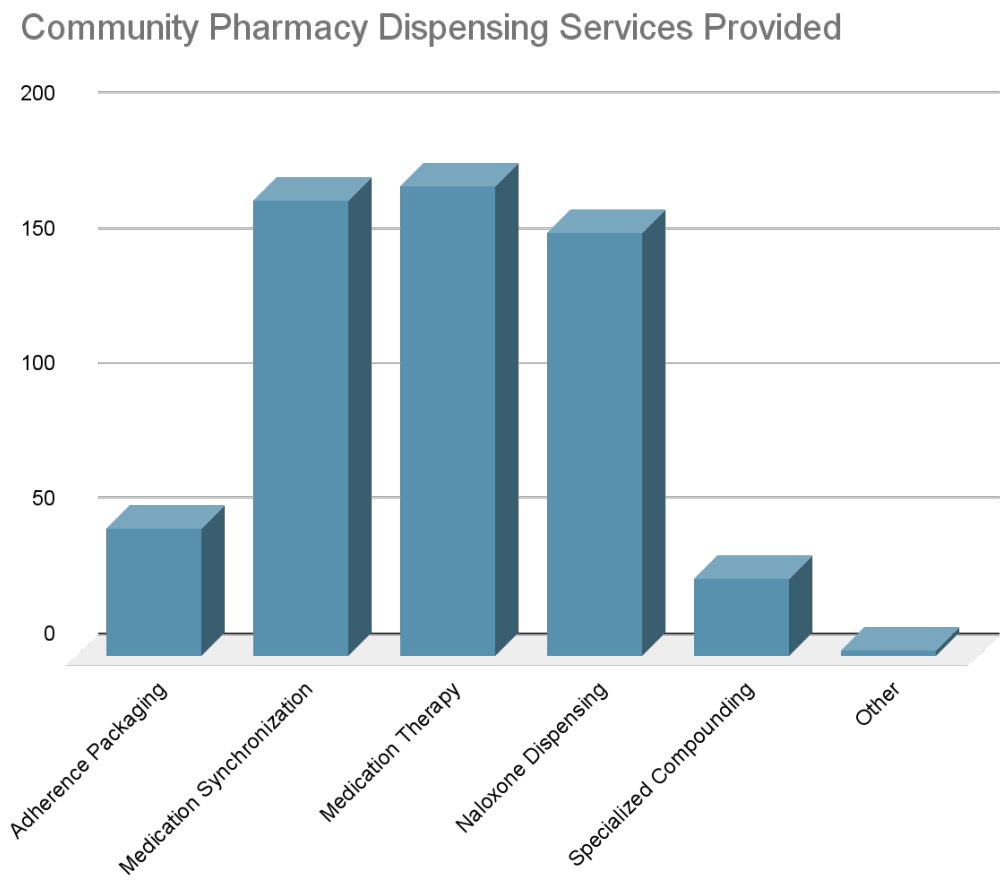
We then asked if individuals were involved in the Community Pharmacy Enhanced Services Network (CPESN) (https://cpesn.com/). Very few respondents answered yes (5.5%), while most respondents answered 'no' (42.9%) or 'unsure' (51.6%). (Figure 10)

Figure 10: Participation in Community Pharmacy Enhanced Services Network (n=219)



Of 221 community pharmacy respondents who answered the question related to what types of dispensing services are offered within their setting, many respondents listed that medication therapy management (MTM), medication synchronization, and naloxone dispensing were provided at their location. (Figure 11)

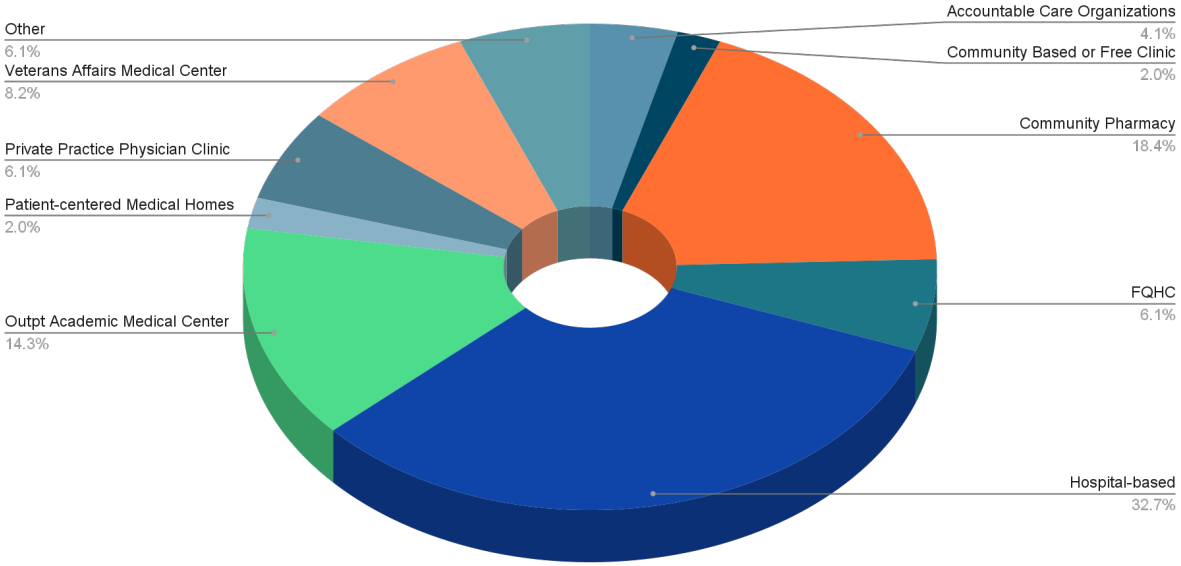
Figure 11: Dispensing services (n=221)



Results Section 4c: Ambulatory Care Pharmacy Characteristics

Within the ambulatory care setting, a majority of respondents reported working in hospital-based practice settings (32.7%), community pharmacies (18.4%), and outpatient academic medical centers (14.3%).

Figure 12. Practice setting location of ambulatory care pharmacists (n = 49)



Of 413 respondents, most (56.4%) of the pharmacists reported not prescribing or modifying medications on behalf of a prescriber. (Figure 12) Most pharmacists (79.2%) also reported not billing insurance as a provider of services. (Figure 13)

Figure 13. Prescribing or Modifying Medications on Behalf of a Prescriber (n=413)

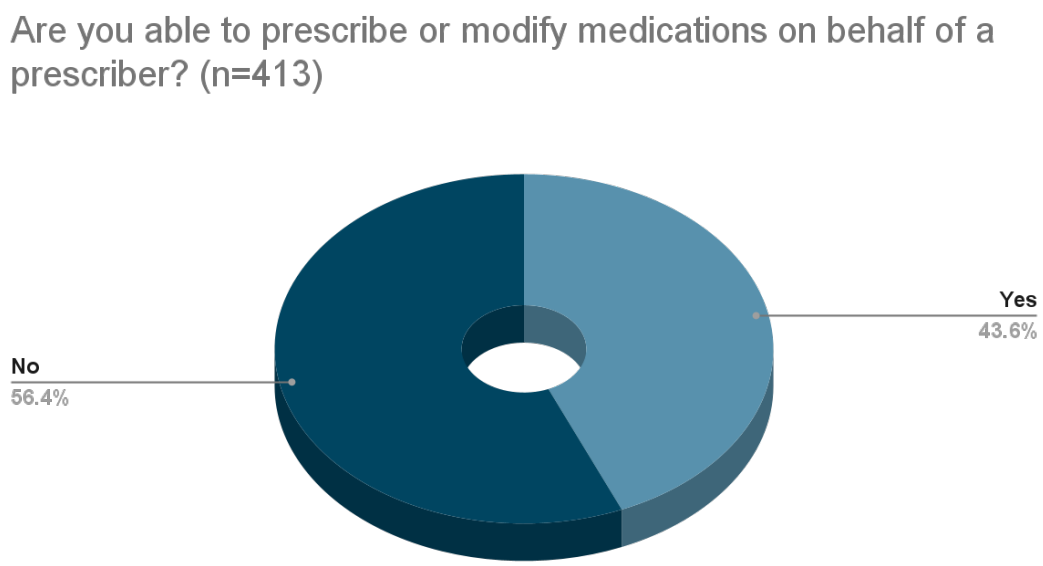
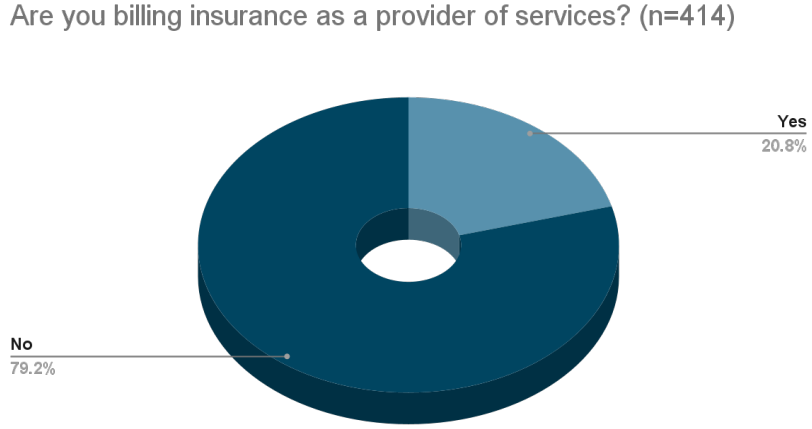


Figure 14. Billing Insurance as a Provider of Services (n=414)



Results Section 4d: Hospital Pharmacy Characteristics

Most pharmacists who responded that they were working in a hospital were predominantly working in a medium-sized (200-500 bed) hospital (29.7%) or small hospital (25.8%) (fewer than 200 beds) with 17.4% of respondents working in large hospital (more than 500 beds) settings. Other respondents noted that they were working in an academic medical center (20%). A small number of pharmacist respondents note working in critical access/safety net hospitals or government hospitals (See Table 16).

Table 16. Hospital Practice Setting (n= 155)

Hospital Practice Setting	**% (n)**
Critical access/safety net hospital	3.2% (5)
Small hospital (fewer than 200 beds)	25.8% (40)
Medium hospital (200-500 beds)	29.7% (46)
Large hospital (more than 500 beds)	17.4% (27)
Academic medical center	20% (31)
Government hospital	3.9% (6)

Results Section 5: Remote work

Figure 14 showcases where Ohio pharmacists (n=518) specifically worked during the COVID-19 pandemic, either in-person, remote, or a hybrid between both of them. A majority of respondents (74.7%) were working in person during the COVID-19 pandemic. A minority of respondents were working in a hybrid (11.6%) or fully remote (13.7%) work environment. Figure 15 represents the current work environment following the pandemic. Interestingly, when asked about current work conditions, results mirrored that of the COVID-19 pandemic for 519 respondents, with a majority (77.5%) reporting working in person, 11.4% reporting working in a hybrid work environment, and 11.2% reporting that they currently work in a fully remote work environment. Figure 16 provides a visual of the amount of flexibility Ohio pharmacists are receiving in the current workplace by their employers, with a majority of respondents (71.3%) indicating that they are allowed no flexibility in the location of where they conduct their work.

Figure 15: Work Environment During the COVID-19 Pandemic (n=518)

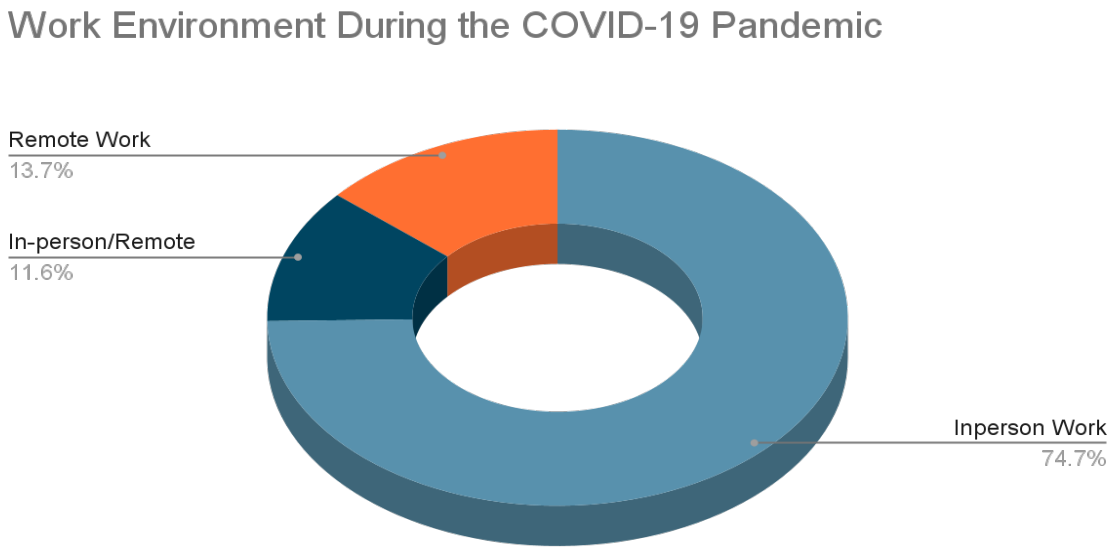


Figure 16: Current Work Environment (n=519)

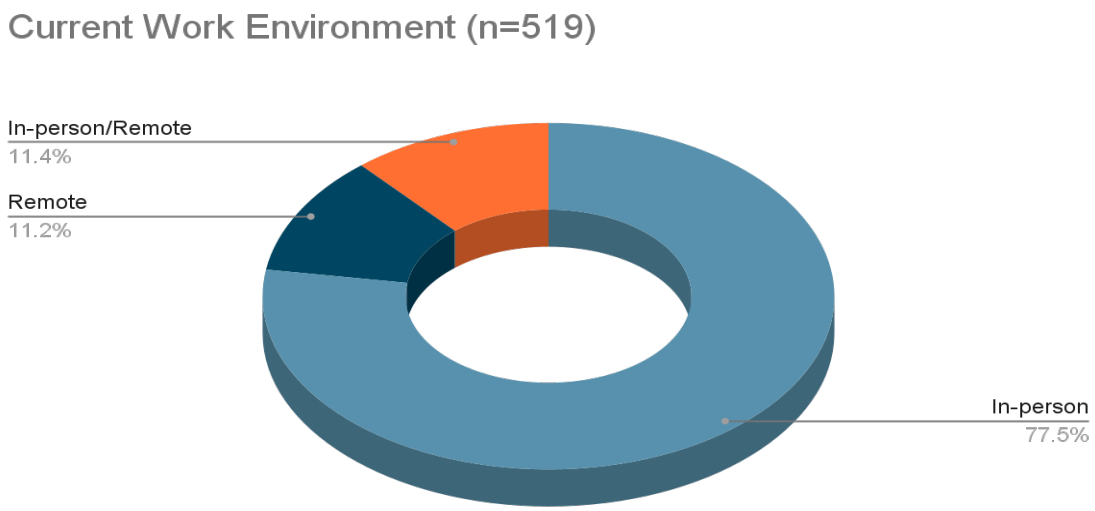
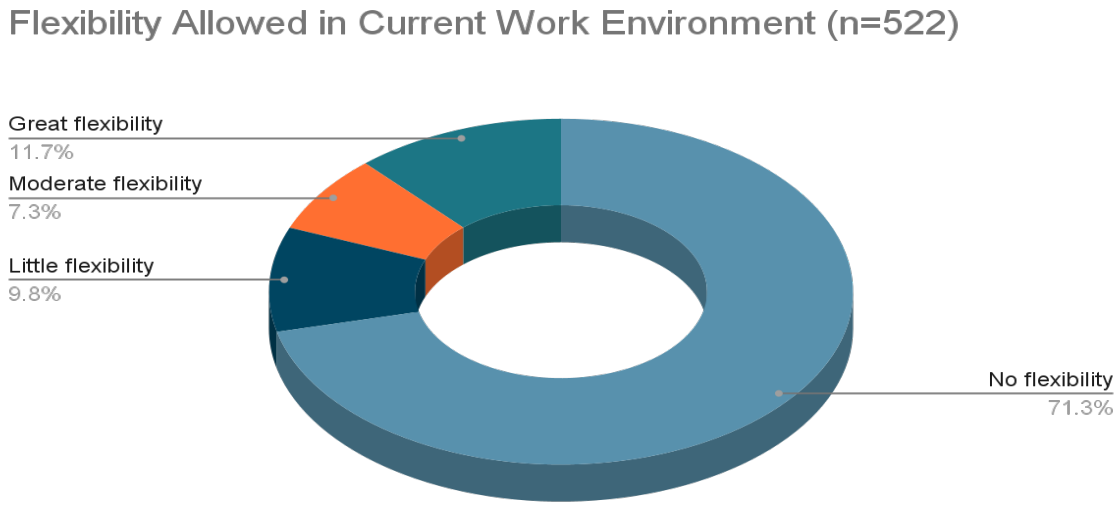


Figure 17. Flexibility Allowed in Current Work Environment (n=522)



Results Section 6: Current work conditions and outcomes

Following are the results from Ohio pharmacists related to questions about the work environment and important personal and professional considerations associated with pharmacists' experience at work.

Figure 17 displays some of the general work conditions and outcomes of Ohio pharmacists in 2022. Pharmacists were asked about their average work day and the work conditions/outcomes at their places of employment. While a majority of pharmacist respondents noted that they have time to address basic physiologic needs and maintain a positive outlook on their job, a majority of respondents noted that they do not feel in control or have autonomy over their work. When it comes to work outcomes, one particular hot button issue and topic of conversation among pharmacists and pharmacy employers alike is the concept of burnout. Figure 18 exhibits the level of burnout Ohio pharmacists are currently experiencing at their workplaces (n=462). While a majority of respondents (53%) do not identify as being burned out, a large number of respondents (47%) report one or more symptoms of burnout. Another work outcome that is concerning to pharmacists and pharmacy employers and organizations is turnover intention. Figure 19 presents data on how often Ohio pharmacists have seriously considered quitting their current job (n=464). The data revealed that an estimated 45% of Ohio pharmacists have rarely or never thought about quitting their job. Additionally, the data showed approximately 28% of pharmacists have often considered quitting and 27% sometimes considered quitting under today's working conditions and climate.

Figure 18. Basic Physiological Needs (n=469)

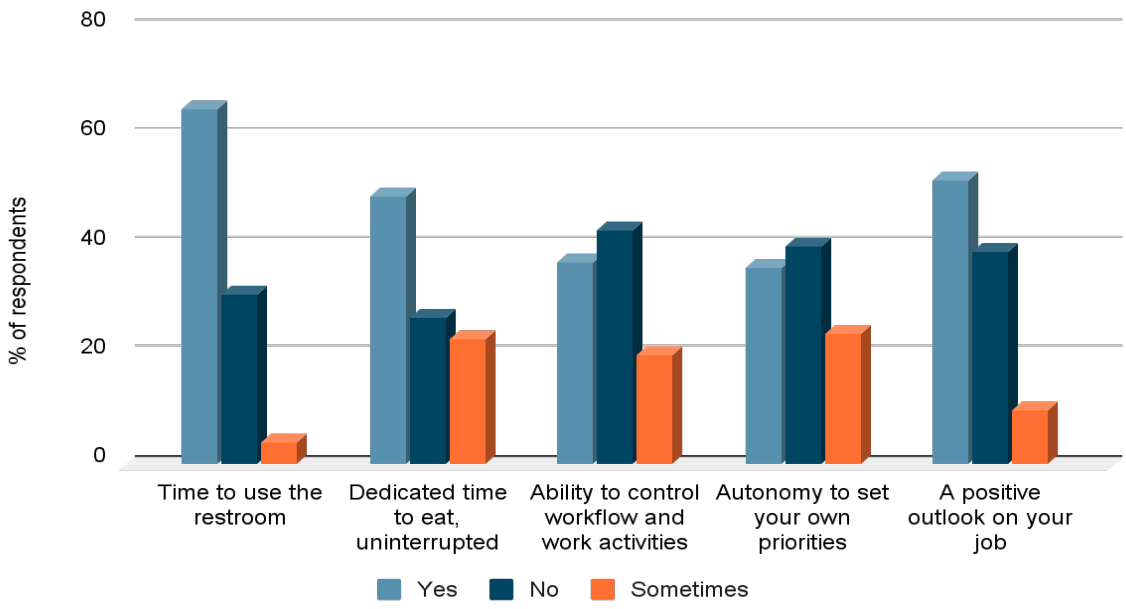


Figure 19: Burnout Assessment (n=462)

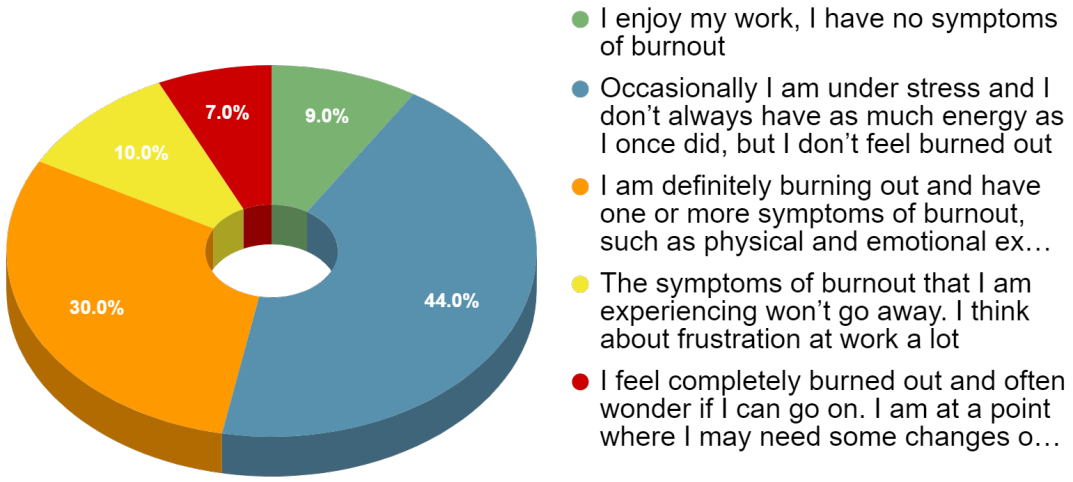
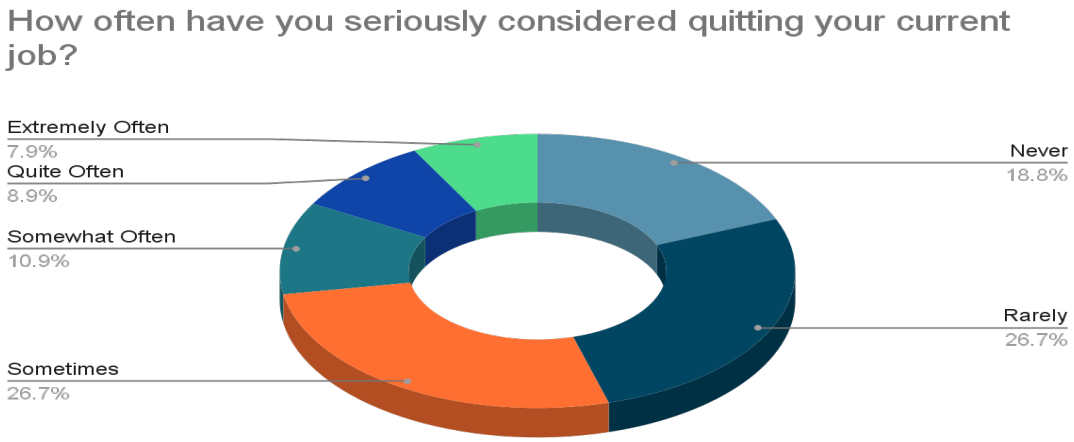


Figure 20: Intention to Leave Current Job (n=464)



Results Section 7: Salary and Debt

The mean annual salary estimate for full-time, non-trainee Ohio pharmacists was $131,474, with a median of $130,000. Assuming a 40-hour work week, this translates to a mean hourly rate of $63.21. This can be compared to the 2022 U.S. Bureau of Labor Statistics (BLS) national estimate for median pharmacist salary of $132,750 per year, or $63.82 per hour.[1] When including those working part-time, the gross yearly income for pharmacists in Ohio was $126,114. Among the 70 full-time pharmacists who reported being an hourly employee in 2022, the mean hourly rate was $62.05.

This updated data may be compared to the 2015 and 2019 Ohio Pharmacist Association (OPA) Salary Survey estimates of $58.10 and $59.67, respectively. (Table 16). While the hourly increase in wages represents a 5.9% raw increase from 2019, and a yearly salary increase of approximately 2%, salary increases over time have failed to keep pace with the rate of inflation as defined by Consumer Price Index (CPI). This aligns with reported data from this survey, where over 20% of pharmacists reported no raise in the prior year, and only one-eighth of the respondents reported a pay raise of 3% or greater. This survey describes gross pay has increased among all workers from $118,763 to $126,114. Of particular interest is the distribution of full-time pharmacist annual salaries, which has become more dispersed while also trending up; nearly a quarter of respondent Ohio pharmacists are making greater than $145,000. It is important to note that this study was not designed to quantify total compensation that includes non-salary benefits and income, which may impact comparisons with other years and inflation considerations.

Data for full-time pharmacists, excluding pharmacy trainees, are shown in Table 16, along with comparisons to past OPA Salary Surveys.

Table 16. Average Gross Annual Salary Ranges of Full-Time Pharmacists (n= 461 [2023], 319 [2019], 545 [2015])

Salary Range ($)	2015 % of respondents	2019 % of respondents	2022 % of respondents
Up to 75,000	1.2	4.1	1.0
75,001 to 85,000	0.6	3.0	0.3
85,001 to 95,000	4.7	5.7	2.0
95,001 to 105,000	11.8	13.2	7.6
105,001 to 115,000	19.0	22.0	7.9
115,001 to 125,000	24.9	15.2	20.5
125,000 to 135,000	20.8	14.9	16.2
135,001 to 145,000	10.3	10.8	19.5
Greater than 145,000	6.6	11.2	24.8
145,001 to 155,000	–	–	10.3
155,001 to 165,000	–	–	4.0
Greater than 165,000			10.6

There was variation in salary by position, with staff pharmacists having numerically lower mean annual salary than those in managerial and administrative positions. Pharmacists in the hospital setting, ambulatory care setting, and supermarket community practice reported the highest mean annual salary ($134,000), whereas those working in large chain community practice and with mass merchandisers reported the lowest mean annual salary ($127,000). Annual wages appeared to increase with both time in position and with years since licensure. Those pharmacists who identified their gender as male had a mean annual salary of $136,000, whereas females had a mean annual salary of $129,000. Consistent with the 2019 OPA survey, there was variation in salary across geographical areas of the state with those practicing in the Cleveland metropolitan statistical area and Toledo metropolitan statistical area reporting the highest values ($135,000). Gross annual salary across titles, settings, and demographic characteristics are shared in Table 17.

Table 17. Estimated Gross Annual Salary among Full-Time Pharmacists Across Titles, Setting, and Demographic Characteristics (n= 423)

Characteristic		**Mean Annual Salary Estimate^ ($)**
Sample		131,000
Position	Owner	120,000
	District Manager/Director	153,000
	Manager/Pharmacist in Charge	140,000
	Staff/Employee Pharmacist	126,000
	Other*	135,000
Practice Setting	Independent/small chain community practice	129,000
	Large chain community practice	127,000
	Mass merchandiser community practice	127,000
	Supermarket community practice	134,000
	Ambulatory care practice	134,000
	Hospital practice	134,000
	Other non-patient care practice	133,000
	Other patient care practice	132,000
Years in current position	Less than 3	127,000
	3-10	133,000
	10 or more	135,000

Year first licensed	2020-2022	123,000
	2010-2019	128,000
	2000-2009	139,000
	1990-1999	133,000
	Prior to 1990	139,000
Gender	Male	136,000
	Female	129,000
	Transgender, non-binary/non-conforming	#
	Prefer not to say	#
Metropolitan Area	Akron/Canton/Youngstown	129,000
	Cincinnati	129,000
	Cleveland	135,000
	Columbus	129,000
	Dayton	130,000
	Toledo	135,000
	Other areas	134,000

* Other positions include clinical pharmacist, academician, product manager, informaticist, ambulatory care practitioner; # due to low sample sizes, caution is advised when interpreting these mean hourly salaries; # Due to very low sample size, mean values are not provided here; ^ Values estimated by using the center point of the selected income range, and values here are rounded to the nearest thousand. To provide an estimate of full-time gross annual salary across various practice and demographic characteristics, all individuals in a given range were assigned the midpoint of the range.

Non-Salary Compensation

Most pharmacists (50.3%) reported less than $1,000 of additional pharmacy-related income in addition to their base pay, with 22.3% reporting an additional $1,001 to $10,000, and 18.3% reporting greater than $10,000.

The most common benefits offered were medical insurance and paid vacation time,which were reported to be offered by 92.2% of responding pharmacists. Some of the less common benefits offered included stock options (23%), malpractice insurance (22.4%), flexible work times (18.9%), and profit sharing (16.1%). Regarding paid time off and leave, 61.5% of pharmacists report paid sick time, 52.8% paid family leave, and only 16.8% report being offered paid professional leave.

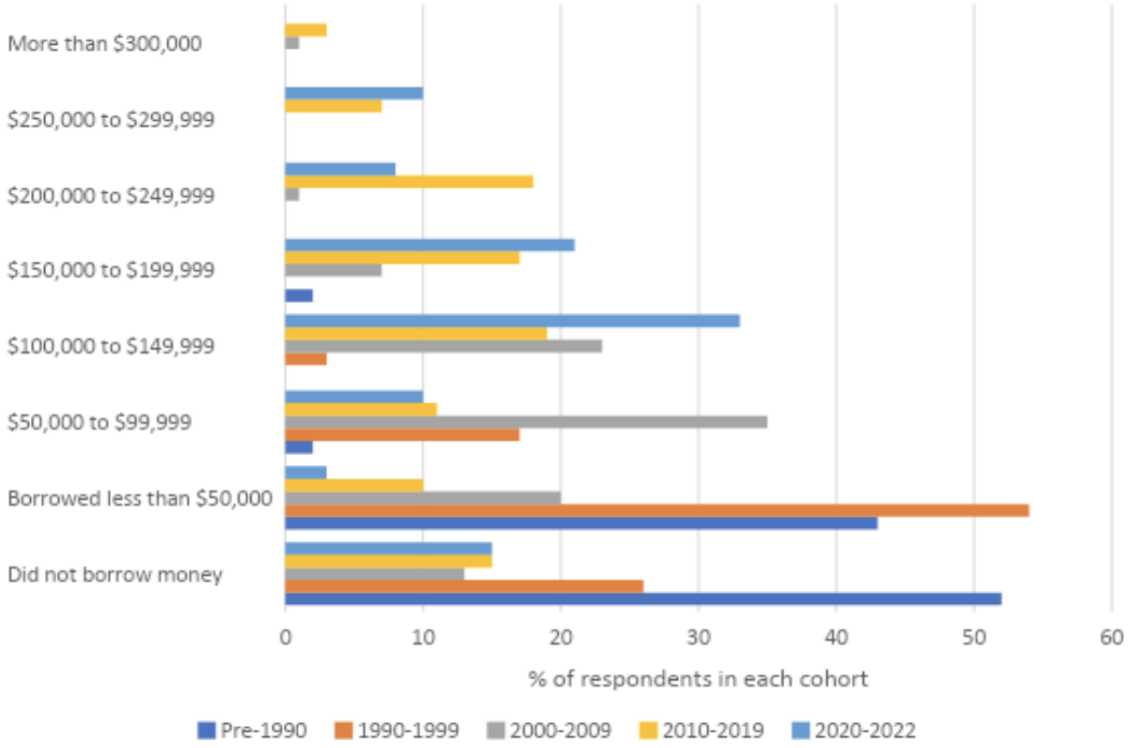
Debt

The total and current amount of student loan debt owed by pharmacists is detailed in Table 18 and Figure 20. In general, pharmacists who have been licensed in recent years report higher debt at graduation. Most pharmacists licensed before 2010 report no remaining debt, as do greater than 50% of pharmacists licensed from 2010-2019. Public Service Loan Forgiveness is being pursued by 16.5% of responding pharmacists.

Table 18. Debt load for pharmacy school by year of first license (n= 333)

	% from cohort				
	Pre-1990	1990-1999	2000-2009	2010-2019	2020-2022
Did not borrow money	52	26	13	15	15
Borrowed less than $50,000	43	54	20	10	3
$50,000 to $99,999	2	17	35	11	10
$100,000 to $149,999		3	23	19	33
$150,000 to $199,999	2		7	17	21
$200,000 to $249,999			1	18	8
$250,000 to $299,999				7	10
More than $300,000			1	3	

Figure 20. Debt load for pharmacy school by year of first license (n= 332)



Further sub-analyses will be conducted to consider intersecting demographic influences such as gender and post-graduate training on salary, benefits, and debt load to guide compensation considerations for Ohio pharmacists and employers moving forward.

Limitations:

There are several limitations to our findings. First, results are based on self-reported items and represent a snapshot in time. Additionally, this is the first administration of the Ohio Pharmacy Workforce survey, so comparisons are not yet available. Another limitation is in non-response bias given the small response rate (random sample of 5,000 pharmacists in Ohio), and therefore there may be limited generalizability of findings in this report as our findings may not be representative of all pharmacists in the state of Ohio.

Conclusions:

There were several opportunities and challenges presented in the findings from the first Ohio Pharmacy Workforce Study. Respondents note a low unemployment rate, and the continued expansion of pharmacists roles and responsibilities. While we see variability across practice settings related to pharmacist responsibilities in community, ambulatory care, and hospital settings, pharmacist respondents in Ohio are predominantly conducting patient care tasks that are associated with or not associated with dispensing activities. Aside from tasks, there is also variability within the type of services offered by practice setting, and it would be interesting to investigate the common challenges or enabling factors that lead to the variability in service offerings by practice setting as well. For example, community and ambulatory care pharmacists report patient education at higher rates relative to their hospital counterparts. However, hospital pharmacists report higher rates of therapeutic interchange and lab monitoring relative to community and ambulatory counterparts. Additionally, pharmacists modality of care provision varies by practice setting, with scheduled and unscheduled visits, as well as consultation during a scheduled provider visit being fairly common modalities of care delivery, although the frequency varies by practice setting.

In regards to expanding practice in the community setting, there is a great opportunity to bring education to Ohio pharmacists about the benefits of becoming a part of the Community Pharmacy Expanded Services Network (CPESN). Further, as provider status legislation was passed in 2019 in the state of Ohio, it seems that more progress could be made in helping pharmacists bill and receive reimbursement for the provision of patient care services. In reviewing billing practices that are in place, only a little over ⅓ of all respondents reported any sort of billing practice, regardless of practice setting. Despite flexible work changes implemented during the COVID-19 pandemic, opportunities for remote work appear to have not changed substantially since the pandemic has subsided.

In considering working conditions and associated outcomes, Ohio pharmacists report generally positive results related to having clear work expectations and work/life balance. Despite these results, pharmacists report having mixed feelings about their level of autonomy and control over the work that they are responsible for. Approximately 50% of Ohio pharmacist respondents also report 1 or more symptoms of burnout, presenting an opportunity for organizations to devote more resources towards prevention of burnout symptoms. When asked, approximately 30% of Ohio pharmacists are considering leaving their current position ‘somewhat often’ to ‘extremely often’.

Full-time pharmacist salaries in Ohio are trending slightly behind national data from BLS ($129, 410 vs. $131, 474), though this could be impacted by geographic differences. approximately 25% of Ohio pharmacists report salaries > $145,000. Relative to 2019 Ohio pharmacist salary data, hourly wages demonstrated an increase of 5.9% from 2019 to 2022, however, this increase is not keeping pace with inflation. There appears to be a gender pay gap existing in Ohio as well; these results warrant further sub-analysis and investigation. One limitation specific to Ohio compensation data was the omission of a direct question about whether respondents were currently in post-graduate training; assumptions were needed to determine which respondents were likely to be reporting post-graduate salaries. Most pharmacists licensed prior to 2010 report no remaining student debt. Over 60% of pharmacists licensed after 2020 reported > $100,000 remaining in student debt at the time of survey administration; for reference, the median debt load for the class of 2023 was $158,000 as reported in the AACP Graduating Student Survey. Public Service Loan Forgiveness is being pursued by 16.5% of respondents.

Strengths

This study has several strengths. This is the first study of the Ohio Pharmacy Workforce, expanding on the work of the National Pharmacy Workforce Study. Documenting workforce trends specific for Ohio can be supportive for those with vested interest in the state of the pharmacy profession specifically within Ohio, including learners/prospective learners, trainees, practicing pharmacists, employers, and other interest groups.

Future Directions

The Ohio Pharmacy Workforce Consortium Study Group plans to administer this survey on a biennial basis. With future administrations, comparisons, trends, and potential forecasting of data can be achieved. Additionally, there are several topics that are of interest for subanalysis to determine if various demographics or practice settings are correlated with specific items. The authors also plan to benchmark against the National Pharmacist Workforce Study to draw comparison and contrast to national or other state-level results.

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