2022

NATIONAL PHARMACIST WORKFORCE STUDY

FINAL REPORT

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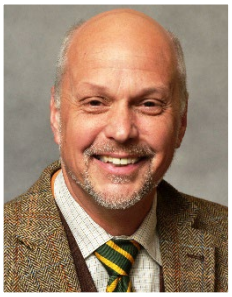
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This current investigation was commissioned by the Pharmacy Workforce Center, Inc. (PWC). The PWC Board of Directors is comprised of American Association of Colleges of Pharmacy (AACP), American College of Clinical Pharmacy (ACCP), American Pharmacists Association (APhA), American Society of Health-System Pharmacists (ASHP), Board of Pharmacy Specialties (BPS), Hematology/Oncology Pharmacy Association, National Alliance of State Pharmacy Associations (NASPA), National Community Pharmacy Association (NCPA) and Pharmacy Technician Certification Board (PTCB). PWC Observer organizations include Health Resources & Services Administration (HRSA) Bureau of Health Workforce (BHW).

Repository for Project Materials and Data

Project materials and data are stored at the University of Wisconsin, School of Pharmacy, Social and Administrative Sciences Division, 777 Highland Ave, Madison, WI 53715.

Acknowledgments

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I. BACKGROUND

In 2020 and 2021, COVID-19 and subsequent federal and state policies changed pharmacy practice, pharmacy work systems, and the quality of work life of pharmacists in many ways. Changes in practice activities likely differed across practice settings as pharmacists were utilized in different ways to meet short term needs and achieve longer term goals of employers. Pharmacy work systems (i.e., practice setting characteristics) changed due to COVID-19 to ensure pharmacists remained critical access points for patient care. A significant change in pharmacy work systems throughout the pandemic was a shortage of pharmacy technical personnel to accomplish tasks designed to free pharmacists' time to accomplish clinical tasks in pharmacy work systems. Pervasive and repetitive racial injustice during the pandemic resulted in more employees reporting anger, stress, and fear. Organizations acted and looked inward to assess and develop policies and activities to improve diversity, equity, and inclusion in their work systems. The quality of work life of pharmacists was affected by COVID-19. Like other health professionals, pharmacists experienced high levels of burnout, stress, and fatigue while providing care to patients during the pandemic.

By March 2022, approximately two years into the pandemic, pharmacists proved to be vital health care providers whose quality of work and health had to be sustained to improve public health. Our central hypothesis is that COVID-19 affected pharmacists and their work systems and that it is important to understand how and the degree to which the pandemic influenced pharmacists and pharmacy work systems.

II. STUDY OBJECTIVES

By documenting changes related to the pandemic, we anticipated being able to add insight into preparing pharmacists and pharmacy work systems for future pandemics, developing strategies to sustain positive pharmacist practice change, and reducing the negative impacts of the pandemic on pharmacists' work life. Accordingly, the study aims were:

Aim 1: To describe current pharmacist work activities and assess the prevalence and degree of changes in work activities since March 2020.

Aim 2: To describe a set of work system characteristics that have been barriers or facilitators to changing pharmacist activities and the degree to which the work system characteristics were associated with changing pharmacist roles during the pandemic and how the work system characteristics will allow for activities to be sustainable or not in the future.

Aim 3: To determine the prevalence of licensed pharmacists changing their employment status (i.e., leaving the workforce, leaving an employer, changing job positions) since March 2020, to explore motivations for and characteristics of changes in employment status, and to assess perceived costs and benefits to pharmacists of changes in employment status.

Aim 4: To assess pharmacist work life issues including burnout, job stress, work-home conflict, job satisfaction, and job and career turnover intention.

Aim 5: To assess issues related to the pharmacy technician shortage.

Aim 6: To explore pharmacists' assessment of diversity/equity/inclusion efforts implemented in their practice settings.

III. METHODS

Study Design: To meet the aims of the project, a mixed-methods design was used that consisted of: (1) pharmacist stakeholder focus groups and (2) an online cross-sectional descriptive survey. The stakeholder focus groups were conducted to elicit comments that would inform development of sections and items for the survey.

Conceptual Framework: The Systems Engineering Initiative for Patient Safety 2.0 (SEIPS) conceptual framework provided a basis for domains of the survey content. The SEIPS 2.0 Model is structured to determine the characteristics of components in a work system that influence work system processes and outcomes. Within the model, the five key components of the work system are: (1) people, (2) tools and technology, (3) tasks that are performed, (4) organization, and (5) both the internal and external work environments. These components were used to organize the content for focus groups and the survey.

Stakeholder Focus Groups: A series of four semi-structured focus groups were conducted with practicing pharmacists, each group representing one of four pharmacy practice settings: (1) clinic/ambulatory care pharmacies, (2) inpatient (or hospital) pharmacies, (3) independent community pharmacies, and (4) retail chain pharmacies. Each focus group lasted about one-and-a-half hours and had 4 to 7 participants. The goals of the focus groups were to identify concepts related to and examples of work system characteristics and practice activities, information about causes and consequences of the pharmacy technician shortage, and the status of diversity, equity and inclusion (DEI) initiatives planned and/or implemented in work systems. The focus groups were audio-recorded and transcribed verbatim. The transcripts were examined to identify concepts to serve as the basis for survey questions.

Survey Questionnaire: Building on the initial SEIPS model components and results from the focus groups, a survey questionnaire was created to illustrate the work issues that practicing pharmacists encountered since the onset of the COVID-19 pandemic. The survey was designed to address the study aims listed above.

The survey included six broad topic areas: (1) Current employment status, including changes in status, (2) diversity, equity, and inclusion, (3) demographics, and (4) work activities and work system characteristics related to the pharmacist's primary work setting (including time spent on and satisfaction with the activities, how time in work activities changed since March 2020, the presence of work system characteristics, how work system characteristics changed since March 2020, and how work system characteristics have affected patient medication safety), (5) the technician shortage situation, and (6) pharmacist work life issues. When available, previously used survey items were utilized, while new items were developed as needed. The survey questionnaire underwent usability testing to change item wording and add or delete items.

Sampling Strategy: The National Association of Boards of Pharmacy Foundation (NABPF) drew a systematic random sample of 93,990 persons from its unduplicated list of licensed pharmacists across all states, territories, and the District of Columbia. The survey sample represents 22.6% of licensed U.S. pharmacists.

Survey Administration: Data collection for the main survey distribution included sending sample members four emails (one initial and three follow-ups, that contained a link to the Qualtrics online survey. The email waves were sent out on November 17, 2022, November 22, 2022, December 7, 2022, and December 20, 2022. All emails were sent by NABPF. Sample

members were asked to click on the survey link to access the survey. The questionnaire was piloted tested with a national sample of 2,000 licensed pharmacists prior to the main survey distribution to determine the feasibility of the proposed methods.

Data Analysis. Surveys were available to researchers at the University of Wisconsin through their Qualtrics account. On January 2, 2023, data were downloaded from Qualtrics. Data are presented in this report in a manner that allows comparison to the 2019 NPWS whenever possible.

IV. RESULTS

About one-half of sample members opened the email for the first, second, third, and fourth email waves, with a mean open rate of 46.8% across the four email waves. The average rate for clicking on the survey link once the email was opened was 4.0%. There were very few unsubscribe requests and complaints resulting from NABPF sending the emails.

A total of 4,947 usable responses was received, which meant they contained responses for the current employment status variable. The maximum number of emails delivered was 93,990. This resulted in a traditional usable response rate of 5.3%. A total of 6,545 pharmacists clicked on the survey link. Using that number as a denominator, 75.6% of pharmacists who clicked on the survey link provided a usable response.

Work Participation

Overall, 78.5% of responding pharmacists in 2022 were working and practicing as a pharmacist, compared to 79.8% in 2019. The proportion of responding pharmacists who were working, but not practicing as a pharmacist was 6.8%, slightly higher than estimates from National Workforce Surveys (NPWS) from 2009, 2014, and 2019. Of note is that 2.9% of respondents were unemployed in 2022 compared to 4.9% in 2019. In 2022, 35.1% of unemployed pharmacists were not seeking employment (i.e., dropped out of the labor market) compared to 15.7% in 2019. In 2022, 65.7% of unemployed respondents stated their unemployment was voluntary, compared to 38.9% in 2019.

By gender in 2022, 59.7% of responding pharmacists identified as female, 39.9% identified as male and 0.2% identified as non-binary. In 2019, 61.8% of responding pharmacists were female. Also, 68.9% of male and 81.2% of female responding pharmacists were practicing pharmacy in 2022. This compares to 72.7% of males and 84.1% of females in 2019. In 2022, the proportions of licensed male and female respondents that were retired was 22.8% and 7.8%, respectively. This compares to 16.8% and 5.5% of male and female respondents, respectively, that were retired in 2019.

In 2022, approximately, 37.0% of respondents working as pharmacists were 40 years old or younger, which is lower than 2019 (41.2%). In 2022, 78.8% of respondents were white, slightly higher than the respondents in the 2019 NPWS (78.2%). In contrast, there were fewer Asian respondents in 2022 (9.6%) compared to 2019 (11.1%). The proportion of black respondents in 2022 was 3.9%, compared to 4.9% in 2019. The racial diversity of licensed pharmacists continues to underrepresent the racial diversity of the general population in the United States.

In terms of practice setting for respondents practicing pharmacy, in 2022, a greater percentage of pharmacists in all practice settings was female pharmacists. The proportion of licensed

quarter (27%) of respondents practicing in chain community pharmacies reported being satisfied with the amount of time spent in work activities.

In terms of changes in time spent in work activities for respondents practicing in independent community pharmacies, the largest proportion of respondents reporting increases in time spent in administering vaccines (50.0%), documenting information about services provided (39.5%), consulting with patients about coordination and use of prescription drug coverage (35.6%) and providing medication synchronization services (32.3%). The greatest proportion of respondents reported a decrease in time spent since March 2020 in the following work activities: providing medication therapy management (MTM) services (13.4%), providing point-of-care testing (COVID and non-COVID testing) (9.7%), and administering vaccines (9.2%).

For chain settings, the largest proportion of respondents reported no change in time spent for all the work activities, except administering vaccines. Administering vaccines (86.5%), documenting information about services provided (48.8%), providing patient medication assistance (e. g. locating coupons, discounts, etc.) (46.6%), providing point-of-care COVID testing (36.1%), and consulting with patients about coordination and use of prescription drug coverage (35.6%) were work activities that the largest proportion of respondents reported an increase in time spent since March 2020. The greatest proportion of respondents practicing in chain community pharmacies reported a decrease in time spent since March 2020 in the following work activities: providing medication therapy management (MTM) services (29.3%), providing medication synchronization services (21.4%), and providing point-of-care COVID testing (10.0%).

Respondents practicing in community settings, regardless of independent or chain designation, were asked about work characteristics. The largest proportion of responding independent pharmacists at least somewhat agreed that they had a high level of autonomy (85.1%), compared to 52.4% of responding chain pharmacists. Over 85% of responding chain pharmacists at least somewhat agreed that the number of work activities performed at their job extends beyond what they were originally hired to do, compared to 62.9% of responding independent pharmacists.

For work setting characteristics asked only of respondents practicing in independent community pharmacies, having a strong focus on public health and the community (89.9%) and an attitude of “let’s make this work” (83.2%) were the two work setting characteristics with the largest proportion of respondents agreeing at least somewhat.

For work setting characteristics asked only of respondents practicing in chain community pharmacies, 65.9% of responding chain pharmacists strongly agreed that their work setting would benefit from regulations limiting pharmacist workload.

The largest proportion of responding independent pharmacists (25.7%) reported that the level of autonomy to accomplish their work activities significantly improves patient medication safety. Comparatively, 5.9% of responding chain pharmacists reported that the level of autonomy significantly improves patient medication safety. In terms of reducing patient medication safety, a total of 40.6% of responding pharmacists practicing in chain pharmacies reported that the number of activities that they perform in their job significantly reduces patient medication safety, compared to 8.0% of responding independent pharmacists.

Ambulatory Care & Inpatient Hospital Settings: Work Activities and Work Setting Characteristics

Of the responding licensed pharmacists that reported practicing in ambulatory care settings and reported their gender, 75.3% were female. A somewhat lower percentage (69.1%) of responding licensed pharmacists that reported practicing in inpatient hospital settings were female. In terms of age, 45% and 41% of respondents practicing in ambulatory care and inpatient hospital settings, respectively, were 40 years old or younger. The largest percentage of respondents in ambulatory care and inpatient hospital practice settings was White (75.4% and 77.3%, respectively), and the second largest percentage was Asian (11.5% and 10.9%, respectively).

Responding pharmacists practicing in ambulatory care reported spending almost one-half (48.2%) of their time each week on patient care services not associated with medication dispensing and slightly over one-quarter of their time (28.4%) on patient care services associated with medication dispensing. Over one-quarter of respondents spent more than 20 hours each week in five work activities: providing primary care to patients (35.2%), dispensing medications (26.6%), starting, modifying, or stopping drug therapy independent from a patient-specific order (30.3%), providing comprehensive medication management (30.3%), and providing disease state management (34.9%). About 70% of respondents practicing in ambulatory care were at least satisfied with time spent on work activities and 20% reported being very satisfied.

Responding pharmacists practicing in inpatient hospital pharmacies reported, on average, spending almost equal percentages of their time each week on patient care services not associated with medication dispensing (37.3%) and on patient care services associated with medication dispensing (35.7%). At least one-quarter of respondents reported spending at least 11 hours each week providing direct patient care to inpatients on a unit (26.2%), engaging in hands-on drug preparation (26.3%), engaging in hands-on drug distribution (26.2%), drug level monitoring (30.7%), comprehensive medication management (36.5%), and management activities (25.3%). About 41% of responding inpatient hospital pharmacists reported they were “more than satisfied” or “very satisfied” with the amount of time spent in work activities. However, 35% reported they were “not at all” or “partially satisfied” with the amount of time spent in work activities.

The majority of responding pharmacists practicing in ambulatory care reported no change in time spent weekly on most activities since March 2020. Work activities with the greatest percentage of responding pharmacists in ambulatory care reporting increased time spent included coordinating patient access to medications (38.1%), discussing mental health needs with patients (28.8%), and performing activities typically performed by pharmacy technicians or medical assistants (28.6%).

Like respondents in ambulatory care, the majority of responding inpatient hospital pharmacists reported no change in time spent since March 2020 for all but one of the listed work activities. The greatest percentage of responding inpatient hospital pharmacists reported a decrease in time spent since March 2020 in the following work activities: rounding with a health care team on a unit (13.9%) and providing direct patient care to inpatients on a unit (12.1%).

Respondents practicing in ambulatory care and inpatient hospital pharmacies were asked about the same 9 work characteristics. The largest proportion of responding ambulatory care pharmacists strongly agreed that they had a high level of autonomy (59.6%), compared to

42.2% of responding inpatient hospital pharmacists. The largest proportion of responding inpatient hospital pharmacists strongly agreed that their organization was not doing enough to deal with the actual causes of employee stress and burnout (44.6%), compared to 33.6% of responding ambulatory care pharmacists.

For work setting characteristics specific to ambulatory care, the largest percentage of ambulatory care pharmacists reported they strongly agreed that they had a high level of collaboration with health care providers with whom they work (56.8%).

For work setting characteristics specific to inpatient hospital pharmacists, the largest percentage of respondents reported they strongly agreed that pharmacists are consistently overlooked and underappreciated at their organization (31.8%)

Nearly 90% (87.3%) of responding ambulatory care pharmacists reported that the level of autonomy they had in how they accomplished their work activities improves or significantly improves patient medication safety. At least one-fifth of responding inpatient hospital pharmacists reported that the number of work activities and the level of autonomy significantly improve patient medication safety.

Pharmacists' Work Life & Intention to Leave

Less than 19% of responding pharmacists reported a lot of job control, with Latinos/a/x reporting the least control in their ability to take time away during the workday. Twenty-eight percent of responding Blacks and American Indians reported having a lot of control in time spent in various work activities. On average, 26% of responding pharmacists reported that it was true (i.e., very true or completely true) that they felt happy at work. Less than 14% and 17% of American Indians and Latinos/a/x, respectively, reported it was true that they felt happy at work. In terms of burnout, more than 40% of responding pharmacists who reported being American Indians, Asians or Latinos/a/x, felt a sense of dread "a lot or totally" over the past two weeks when they think about the work they have to do. Almost 60% of responding American Indians and Latinos/a/x, felt physically exhausted at work.

In general, any employment status change (ESC) since March 2020 tended to have a positive effect on responding pharmacists' evaluation of the work life items. A greater proportion of responding pharmacists who did not experience an ESC since March 2020 rated each of the job stress items except "possessing inadequate information regarding a patient's medical condition" and "fearing a patient would be harmed by a medication error" as highly stressful compared to respondents that did experience an ESC since March 2020. A greater proportion of respondents who experienced an ESC since March 2020 responded more positively to job control items and job satisfaction items. A greater proportion of responding pharmacists that experienced an ESC since March 2020 reported that they felt happy and worthwhile at work and that their work was more satisfying compared to respondents that did not experience an ESC since March 2020.

For most of the job stress items, a greater proportion of responding female pharmacists rated items as highly stressful compared to male or non-binary responding pharmacists. For each of the job control items, a greater proportion of responding male pharmacists rated that they had a lot of job control compared to responding female pharmacists. A greater proportion of responding male and non-binary pharmacists reported being satisfied with their jobs compared to responding female pharmacists. Almost one-half of responding female pharmacists felt

physically (45%) and emotionally (47%) exhausted at work. These were larger percentages compared to male pharmacists.

Overall, 36% of respondents reported that they likely (i.e., likely or very likely) would search for a different job in the next year and 25% reported that they likely would leave their job within the next year. Approximately 43% of responding Latino/a/x pharmacists and 39.4% of responding Blacks compared to 23% of responding Whites reported that they were likely to leave their current employer within the next year. In terms of leaving pharmacy within the next 3 years, less than 20% of all respondents reported that they were likely to engage in any of the items describing leaving pharmacy practice.

There was very little difference in the percentage of respondents who reported that they likely would leave their job by whether they experienced an ESC since March 2020. A greater percentage of respondents who experienced an ESC since March 2020 reported that they likely would stop practicing pharmacy to take time off (17.6%), pursue a different career in a health care field (15.5%), or pursue a career outside of health care (17.5%) within the next 3 years compared to respondents who did not experience an ESC since March 2020.

A greater percentage of responding female pharmacists (38.3%) reported that they were likely to search for other employment within the next year compared to responding male (33.4%) and non-binary pharmacists (25.0%). There was very little difference across gender in terms of leaving the pharmacy profession to pursue a different career in a health care field.

Diversity, Equity & Inclusion

In terms of items related to diversity, less than 46% of responding pharmacists agreed (i.e., somewhat or strongly agreed) that the process for career advancement/promotion is transparent to all employees and that they felt supported in their careers. Less than 50% agreed that people from all backgrounds and identities have equitable opportunities to advance in their careers and have access to appropriate benefits and representation. Over 70% of respondents agreed that they felt respected by their employer. Overall, 34% and 40% of respondents where neutral in their response that leadership was prioritizing DEI and that the culture at their primary employer, as it relates to DEI, needs improvement, respectively.

Generally, Black respondents were less likely to agree with the items related to diversity compared to the other racial/ethnic groups. Black respondents (42.9%) and Latinos/a/x respondents (39.6%) were less likely to agree that people from all backgrounds and ranges of identities have equitable opportunities to advance their careers. Similar percentages (51%-60%) of all racial/ethnic groups except for those who identified as “Other” agreed that they felt a sense of belonging at their primary employer. Less than 35% of Whites, Others, and those whose race/ethnicity was missing agreed that the culture at their primary employer as it relates to DEI needs improvement, while greater than 55% of Black and American Indian respondents agreed that the culture needs improvement.

Only 39.1% of responding pharmacists between 24-35 years old agreed that the process for career advancement/promotions is transparent to all employees. A smaller percentage of responding pharmacists 46-55 years old agreed that their unique background and identity are valued by their employer (45.8%) relative to younger respondents. A greater percentage of younger responding pharmacists (41%) agreed that the culture at their primary employer needs improvement compared to other age groups. Only 33% of responding pharmacists 24-35 years

old agreed that their employer was conducting employee focus groups to learn what is needed in terms of DEI. Also, a smaller percentage of responding pharmacists' 24-35 years old agreed that their employer was successful in hiring a more diverse provider population (55.9%) compared to other age groups.

A relatively smaller percentage of respondents working in community pharmacies (49.3%) agreed that their employer invests time and energy into building a diverse work staff. Approximately 37% of respondents working at hospital inpatient pharmacies agreed that the process for career promotion was transparent compared to 62% of respondents working in non-patient care settings. In terms of inclusion items, 40% of responding community pharmacists agreed that their unique background was valued by their employer and 49.8% agreed that they felt a sense of belonging at their primary employer compared to respondents working in other settings. A greater percentage of respondents working in ambulatory care (44.1%), non-patient care settings (44.9%) and other settings (40.0%) agreed that the culture, in terms of DEI, at their primary employer needs improvement.

Pharmacy Technician Shortage

Approximately one in 10 respondents reported that they perceived no shortage of technicians and nearly two-thirds of respondents who perceived a shortage rated the degree of technician shortage as severe or very severe. In the most common practice settings (community and hospital/health system), the highest proportion of respondents reporting "no shortage" were in independent and small chain settings and the smallest proportion reporting "no shortage" were in chain pharmacies.

Nearly 80% of respondents practicing in chain pharmacies considered the technician shortage as severe or very severe. Respondents in hospital inpatient settings also tended towards higher proportions of such severe shortage ratings with nearly 70% of staff and managers giving those ratings. Across employment positions, there was a tendency overall for staff pharmacists to have higher proportions of severe and very severe shortage ratings compared to managers.

Overall, most respondents disagreed that providing technicians flexibility to work from home was a way for their workplace to deal with the technician shortage or a reason why they did not perceive a shortage. Flexibility in scheduling was the item most respondents agreed with as an approach to deal with or a mechanism to avoid a technician shortage in their workplaces. Nearly 70% of respondents reporting no technician shortage agreed with schedule flexibility as a reason for not having a technician shortage. Respondents in independent/small chain pharmacies most often agreed that flexible scheduling and increased pay were strategies to deal with the shortage followed by respondents in chain settings. For respondents reporting they were not experiencing a shortage, those in community settings had higher proportions agreeing that flexible scheduling and pay were effective strategies.

More than 80% of respondents that reported a technician shortage agreed that technicians were unhappy due to being overworked, that pharmacists were unhappy with their jobs, and that pharmacists were spending too much time in dispensing activities. However, at least 25% of respondents disagreed that patient safety or quality of care is significantly compromised by a technician shortage. Respondents practicing in chain settings had the highest proportions of strongly agree perceptions across the technician shortage impact items and all the items had 90 percent or more of chain pharmacists agreeing with all the statements except for medication safety being compromised significantly.

V. LIMITATIONS

The findings of this study should be considered considering its limitations. The results are based on respondents' self-reports, which could be influenced by intent to make socially desirable responses or simple misinterpretations of questions. We tried to limit misreading by having practice setting experts review and modify, where necessary, questionnaire items. Additionally, we pilot tested the questionnaire prior to the main questionnaire distribution. We used an online survey mode like the approach used in the 2019 NPWS. As such, comparisons of the current findings with those previous results could be valid, however, comparisons with results from NPWSs prior to 2019 should be done with caution.

The low response rate raises concerns about non-response bias. Our analyses of survey responses showed some differences in the respondents compared to the random sample pulled by the NABPF from their population of licensed pharmacists. As a group, NPWS 2022 respondents had a high percentage of older pharmacists and had a lower percentage from the West and higher from the Midwest. Whether and how these differences cause bias in the interpretation of the findings is unknown and consideration of bias resulting from response differences should be considered.

VI. CONCLUSIONS

Although the purpose of the current NPWS was not to study the characteristics of the pharmacist workforce as was the case with the NPWS in 2000, 2004, 2009, 2014 & 2019, the data provide an update about the workforce approximately 33 months after the start of the COVID-19 pandemic in March 2020. A notable difference in terms of current employment status is that a smaller proportion of respondents were unemployed in 2022. This result is meaningful as it suggests that a significant proportion of respondents are not still unemployed after the pandemic. However, a greater proportion of unemployed respondents reported being permanently out of the workforce in 2022 relative to 2019. One explanation for this is the effect of COVID, but more research is needed about this topic. Also, the proportion of respondents working part-time as a pharmacist was higher in 2022 compared to 2019. The reasons for part-time work and the implications of part-time work for pharmacists could be examined in the 2024 NPWS.

Overall, the results suggest that approximately 14.9% of licensed pharmacists in 2022 experienced an employment status change at some time since March 2020 that resulted in pharmacists being unemployed. Given estimates from NABPF about the number of licensed pharmacists in the US in 2022 (416,044), the results suggest that 61,990 licensed pharmacists were unemployed at some time after March 2020. Fortunately, the results suggest that most pharmacists returned to the workforce after their time unemployed and many reported returning to a work situation that was better than their work situation prior to March 2020.

Future research could explore, in more detail, why pharmacists experienced an employment status change and their motivations and their search process for different employment. Additionally, it is important to learn why pharmacists did not leave an employment situation even if an opportunity was presented to them. Employment status changes could be very important to improve work life for pharmacists in the future. Focusing this area of study on younger pharmacists is particularly important, given the percentage of pharmacists that are age 40 or less.

A strength of this study is that we identified work activities and work setting characteristics unique to individual work settings. Data from respondents about changes in work activities since March 2020 show that generally, time spent in work activities in December 2022 returned to pre-COVID levels. We did not collect information about how time spent in work activities changed immediately after March 2020 and the length of time that it took for time spent in activities to return to pre-COVID levels. Unfortunately, the results suggest that in many practice settings, a large percentage of pharmacists have reduced the time that they spent in work activities that require them to work directly with patients to potentially improve patient care. Identifying current and future pharmacist work activities that are unique to specific work settings and documenting time spent in specific work activities is important for future study.

A primary goal of the 2022 NPWS was to collect information about work characteristics across individual pharmacy work settings and work life variables for pharmacists practicing in different work settings. Broadly, the results showed a connection between work setting characteristics and work life outcomes. Future research could associate work characteristics with work life variables to better understand whether and how individual work setting characteristics improve pharmacists' work life. Pharmacy organizations and other stakeholders could continue to work together to identify the sources of work setting problems and identify ways to improve work environments for pharmacists.

The results showed variation across work settings in terms of work setting characteristics. A benefit of the results is that many pharmacists are working in very positive work settings, they are engaged in work activities that impact patient outcomes, and their work life outcomes are better. Given the decrease in individual applicants to schools of pharmacy in the US, information about the positive impacts on pharmacists of work setting characteristics and their work activities could be communicated to young people and their parents thinking about pursuing pharmacy as a career to counter negative perceptions of pharmacy as a career.

Pharmacists and researchers can work together to study and learn from work settings that are more positive for pharmacists and share best practices across all work settings. Pharmacy organizations have developed workplace reporting portals that allow pharmacists to share how characteristics of their work setting, both positive and negative, are impacting them and their work. By identifying and prioritizing specific best practices, pharmacists and researchers can work together to design, implement, and evaluate modifications to work settings to improve pharmacist performance, work life, and ultimately patient outcomes, such as medication safety, in work settings that are not as beneficial for pharmacists or patients. Purposeful modification of leadership, management, access to and use of technology are examples of work setting characteristics that could be considered in the future. We feel this is an important area for future study.

More active and creative strategies are needed to address the lack of diversity, equity and inclusion activities implemented in pharmacy. The 2022 NPWS collected baseline information on pharmacists' perceptions regarding this topic. It is our hope that with this information, we, along with others can delve more deeply in this area to provide greater insight into what is needed to make a significant impact in the diversity of our profession and improve pharmacists' perceptions of equity and inclusion.

Given the impact of COVID on pharmacists, it is important that studies of the pharmacist workforce continue to document information about pharmacists and their work. We think it is

important for pharmacy organizations and researchers to identify events external to pharmacy work settings that are impacting pharmacy practice and pharmacists. Workforce studies could gather information about how the external events are impacting pharmacists, their work, and their work life. Studying such events could allow the profession to develop strategies to help pharmacists thrive as the health care landscape continues to change.

Section 1: Background, Study Objectives, Methods, and Response Rate

1.1 Background

In 2020 and 2021, COVID-19 and subsequent federal and state policies changed pharmacy practice, pharmacy work systems, and the quality of work life of pharmacists in many ways.[1-8] Examples of practice change included COVID-19 vaccine administration, COVID-19 testing, and discussing vaccine hesitancy.[1-4,6] There are reports of pharmacists changing work activities as part of a broader strategy to establish new services/revenue streams such as enhanced MTM services, greater monitoring of safety and effectiveness of medications, and coordinating/providing care, especially primary care, to divert patients away from overburdened health systems.[1,2,4,6] Changes in practice activities likely differed across practice settings as pharmacists were utilized in different ways to meet short term needs and achieve longer term goals of employers. Many of the practice changes are poorly documented as are adjustments in the amounts of time pharmacists spend in different practice activities across practice settings. Also, pharmacists' satisfaction with work activities is unknown, as is whether changes in practice activities will continue into the near future.[2-4,6]

Pharmacy work systems (i.e., practice setting characteristics) changed due to COVID-19 to ensure pharmacists remained critical access points for patient care. It is unknown which work system characteristics changed, the degree to which they changed, how the changes were associated with adjustments in pharmacist practice activities, and whether work system changes will act as barriers or facilitators to sustained change in pharmacist activities.[1,3,4,6]

A significant change in pharmacy work systems throughout the pandemic was a shortage of pharmacy technical personnel to accomplish tasks designed to free pharmacists' time to accomplish clinical tasks in pharmacy work systems. The prevalence of a pharmacy technician shortage and the impacts of the shortage on pharmacy work systems into the near future is unknown.

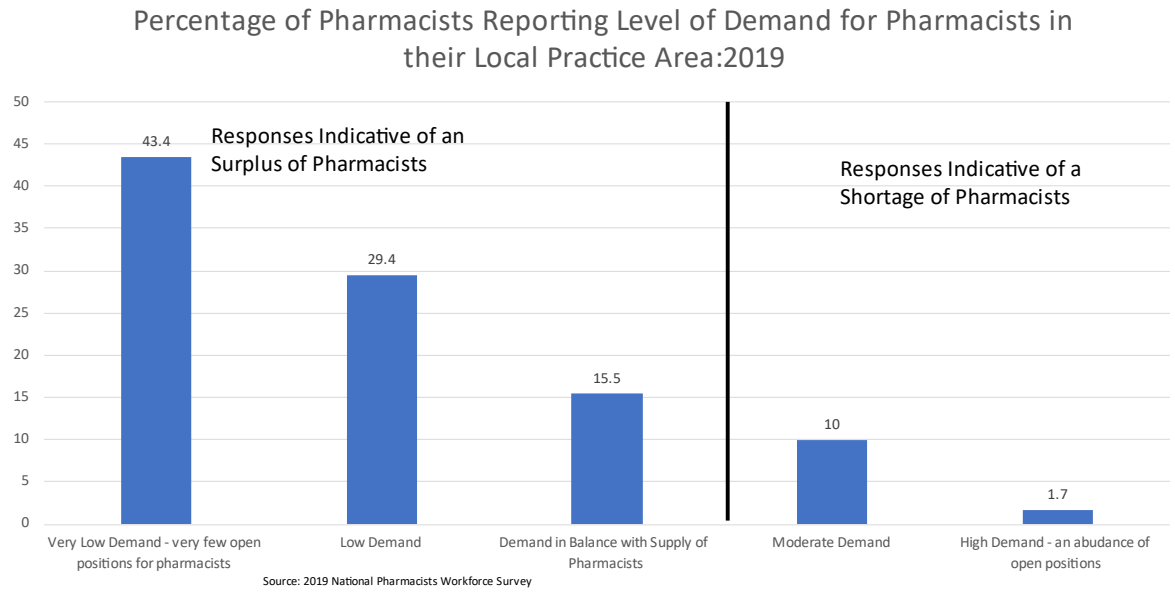
Pervasive and repetitive racial injustice during the pandemic resulted in more employees reporting anger, stress, and fear.[9,10] As a result, organizations assessed and developed policies and activities to improve diversity, equity, and inclusion (DEI) in their work systems. Additionally, health care organizations tried to address racial and ethnic inequities in access to health care among vulnerable populations. The perceptions of pharmacists, across all practice settings, about how their employing organization handled or will handle DEI issues into the near future is unknown.

The quality of work life of pharmacists was affected by COVID-19. Similar to other health professionals, pharmacists experienced high levels of burnout, stress, and fatigue while providing care to patients during the pandemic.[5,7,8] For pharmacists, these factors were problematic prior to the pandemic and COVID-19 exposed and amplified pharmacist burnout.[11] What is unknown, however, is the degree to which pharmacists changed their employment status (e.g. dropped out of the workforce) or changed jobs to work in less stressful practice environments or to work in different ways (e.g. virtually) to avoid stress and burnout. Additionally, it is unknown how pharmacist work life will be impacted into the near future.

Several characteristics of the pharmacist workforce before and during the COVID-19 pandemic provide important context for the current project. First, according to data collected in the 2019 NPWS, 88.3% of pharmacists reported working in an area where the supply of pharmacists was

meeting demand.[11] (Figure 1.1.1) Despite some likely geographic imbalance, at a minimum, the results provide a signal of a pharmacist surplus or a reduction in a pharmacist shortage in the US in 2019. The 2019 NPWS results are consistent with projections of pharmacist supply and demand to 2025 made by the National Center for Health Workforce Analysis (NCHWA) in 2012 & 2016.[12] Current projections suggest that in 2025, there will be a surplus (i.e., supply number – demand number) of 26,130 pharmacists.[13]

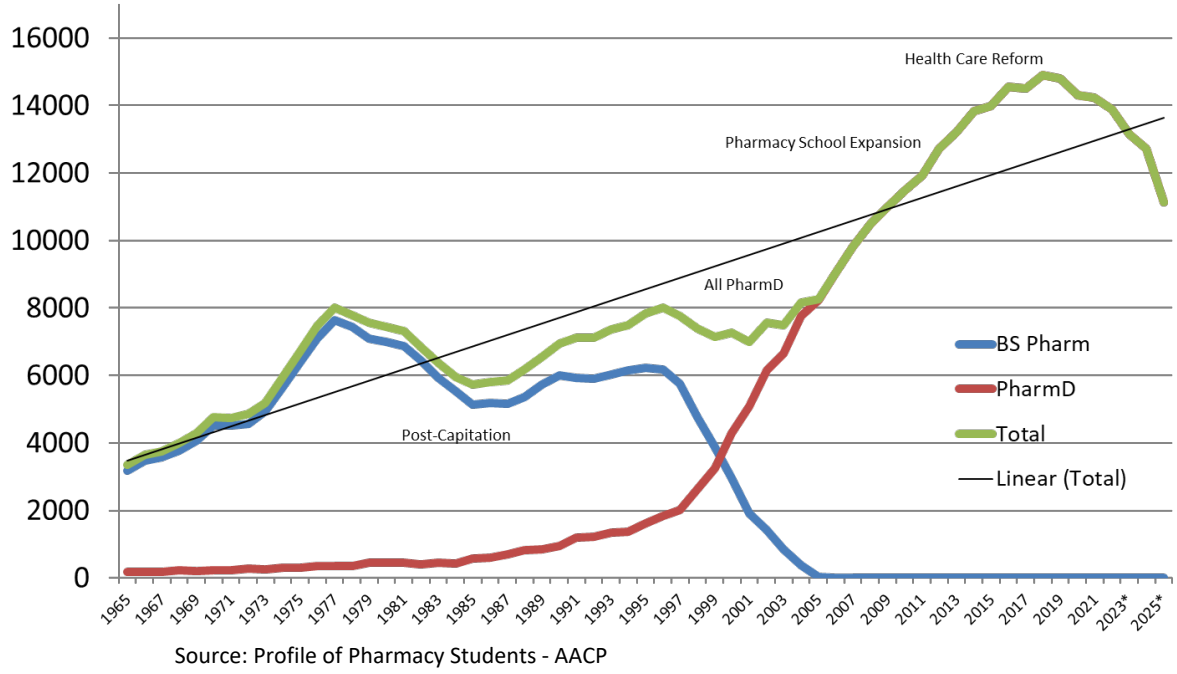
Figure 1.1.1



National projections of a surplus of pharmacists between 2012 and 2025 likely were influenced by the 2-fold increase in the annual number of graduates from US schools and colleges of pharmacy between 2001 (7,000 graduates) and 2021 (14,223 graduates). (Figure 1.1.2) The annual number of graduates reached a high of 14,905 in 2018. It is estimated, however, that the number of graduates will decrease in the coming years. The primary reason for the decrease is the drop in applicants to US schools and colleges of pharmacy. In 2005, there were 14,438 individual applicants to US schools and colleges of pharmacy and the number of individual applicants increased to 21,843 in 2011. Between 2019 and 2021 the number of individual applicants dropped from 18,029 to 15,019. Consequent to the drop in individual applicants, first-year enrollment across the 142 US schools and colleges of pharmacy was 14,274 in 2014 and dropped to 11,135 in 2021. Based on numbers of individual applicants and first-year enrollments, it is estimated that US pharmacy graduates will drop to 11,135 in 2025. (Figure 1.1.2)

Because of the growth in the annual number of graduates from US Schools and Colleges of Pharmacy since 2001, the pharmacist workforce is getting younger. Between 2009 and 2019, the proportion of licensed pharmacists responding to the National Pharmacist Workforce Survey (NPWS) that was age 45 years or younger increased from 34.6% to 48.4%.[11] It is unknown how the COVID-19 pandemic impacted younger (i.e., age 45 years or younger) pharmacists or how

Figure 1.1.1 Pharmacy Degrees Conferred as First Professional Degree (1965–2021; 2022-2025est.)



Source: Profile of Pharmacy Students - AACP

decisions about work (i.e., how much to work, choice of work setting, satisfaction with work activities, and work life) will be made in the future.

Prior to the COVID-19 pandemic, quality of work life for pharmacists was impacted by their work environments. Based on results from the 2019 NPWS, full-time pharmacists' quality of work-life was lower in 2019 compared to 2014.[11] In terms of burnout, full-time pharmacists working in community independent and hospital settings reported higher levels of professional fulfillment, and lower levels of work exhaustion, compared to full-time pharmacists working in community chain, mass merchandiser, and supermarket work settings.[11] It is unknown how the pandemic impacted pharmacist work life generally, and by practice setting and demographic characteristics.

Study Objectives

By March 2022, approximately two years into the pandemic, pharmacists proved to be vital health care providers whose quality of work and health had to be sustained to improve public health. Our central hypothesis is that COVID-19 affected pharmacists and their work systems and that it is important to understand how and the degree to which the pandemic influenced pharmacists and pharmacy work systems. The research team's meetings with leaders from ASHP, APhA, PTCB, NASPA, and AACP confirmed that there was a need to systematically study the impacts of COVID on pharmacy practice, pharmacy work systems and pharmacists.

A mixed methods approach was used to identify how pharmacist work activities changed, how work system characteristics influenced practice change, how and why difficulties in attracting and maintaining pharmacy technicians was influencing pharmacy work systems, and how

diversity, equity and inclusion activities were impacting pharmacy work systems since the start of the COVID-19 pandemic in March 2020. Focus groups with pharmacists in the four most common pharmacy practice settings (i.e., independent community, chain community, ambulatory care, and hospital/health system inpatient) were conducted and a subsequent survey was developed and administered to a national random sample of licensed pharmacists.

By documenting changes related to the pandemic, we anticipated being able to add insight into preparing pharmacists and pharmacy work systems for future pandemics, developing strategies to sustain positive pharmacist practice change, and reducing the negative impacts of the pandemic on pharmacists' work life. Accordingly, the study aims were:

Aim 1: To describe current pharmacist work activities and assess the prevalence and degree of changes in work activities since March 2020.

Aim 2: To describe a set of work system characteristics that have been barriers or facilitators to changing pharmacist activities and the degree to which the work system characteristics were associated with changing pharmacist roles during the pandemic and how the work system characteristics will allow for activities to be sustainable or not in the future.

Aim 3: To determine the prevalence of licensed pharmacists changing their employment status (i.e., leaving the workforce, leaving an employer, changing job positions) since March 2020, to explore motivations for and characteristics of changes in employment status, and to assess perceived costs and benefits to pharmacists of changes in employment status.

Aim 4: To assess pharmacist work life issues including burnout, job stress, work-home conflict, job satisfaction, and job and career turnover intention.

Aim 5: To assess issues related to the pharmacy technician shortage.

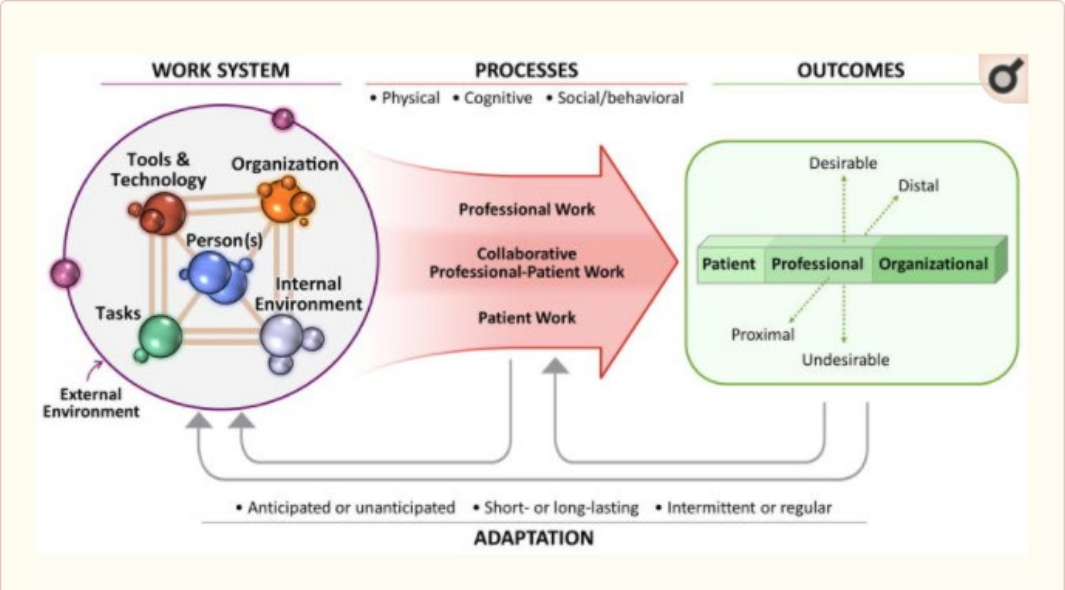
Aim 6: To explore pharmacists' assessment of diversity/equity/inclusion efforts implemented in their practice settings.

1.2 Methods

To meet the aims of the project, a mixed-methods design was used that consisted of: (1) pharmacist stakeholder focus groups and (2) an on-line cross-sectional descriptive survey. The stakeholder focus groups were conducted to elicit comments that would inform development of sections and items for the survey.

Conceptual Framework. The Systems Engineering Initiative for Patient Safety 2.0 (SEIPS) conceptual framework provided a basis for domains of the survey content. (Figure 1.2.1) The SEIPS 2.0 Model is structured to determine the characteristics of components in a work system that influence work system processes and outcomes. Within the model, the five key components of the work system are: (1) people, (2) tools and technology, (3) tasks that are performed, (4) organization, and (5) both the internal and external work environments. These components were used to organize the content for focus groups and the survey.

Figure 1.2.1: SEIPS 2.0 Model



Source: Ref 14

Stakeholder Focus Groups. A series of four semi-structured focus groups were conducted with practicing pharmacists, each group representing one of four pharmacy practice settings: (1) clinic/ambulatory care pharmacies – held in May 2022, (2) inpatient (or hospital) pharmacies – held in June 2022, (3) independent community pharmacies – held in August 2022, and (4) retail chain pharmacies – held in August 2022. Each focus group lasted about one-and-a-half hours and had 4 to 7 participants. The goals of the focus groups were to identify concepts related to and examples of work system characteristics and practice activities, information about causes and consequences of the pharmacy technician shortage, and the status of DEI initiatives planned and/or implemented in work systems. Focus group discussions were facilitated using an interview guide containing seven discrete items, with 17 sub-items. The Systems Engineering Initiative for Patient Safety 2.0 (SEIPS) conceptual framework was used to guide the creation of the focus interview guide.

Research team members used each of the SEIPS model components to generate the topics for questions about the overall work system, which then were used to design an instrument to guide the discussions during the focus groups. This initial qualitative instrument development phase was used to identify, define, and validate concepts and constructs underlying identified work system characteristics and pharmacist practice activities and how best to operationalize verified concepts and constructs.

To expedite the focus group discussions, the interview guide was shared with each participant before the focus groups were held so that the participants would be familiar with the type of information that was to be elicited. As a result, participants came to the interview having already thought about the content and how it relates to their practice. This approach allowed for the comprehensive discussions about the various influences of COVID-19 on such issues as changes to the work setting, practice activities, services provided, pharmacist and pharmacy technician staffing levels, responses to the pandemic, extent of virtual work, job turnover intention, job satisfaction, burnout, and diversity/equity/inclusion issues. Through the

discussions, it also was determined how these activities and issues changed over the course of the pandemic. The focus groups were audio-recorded and transcribed verbatim. The transcripts were examined to identify concepts to serve as the basis for survey questions.

Since the focus groups with pharmacists represented the varied practice settings, the elicited information informed an expansion of the list of practice activities that have been evaluated in past workforce surveys, as well as participants' perceptions of those activities. That is, feedback provided during the focus groups was used to develop novel questions for this survey.

Cross-Sectional Descriptive Survey. A descriptive survey research design was used for collecting and analyzing data. Data were collected using an online survey hosted at the University of Wisconsin – Madison.

Survey Instrument. Building on the initial SEIPS model components and results from the focus groups, a survey was created to illustrate the work issues with which practicing pharmacists have been dealing since the onset of the COVID-19 pandemic. The survey was designed to address the study aims listed above.

The survey included six broad topic areas: (1) Current employment status, including changes in status, (2) diversity, equity, and inclusion, (3) demographics, and (4) work activities and work system characteristics related to the pharmacist's primary work setting, including time spent on and satisfaction with the activities, how time in work activities changed since March 2020, the presence of work system characteristics, how work system characteristics changed since March 2020, and how work system characteristics have affected patient medication safety, (5) the technician shortage situation, and (6) pharmacist work life issues. Cumulatively, these topics illuminate influences of the pandemic on variables such as work status, reasons for leaving a job, work setting, practice activities, technician staffing levels, job turnover intention, job satisfaction, burnout, and diversity, equity, and inclusion issues

We used survey methods similar to those used for the 2019 National Pharmacist Workforce Survey (NPWS). From the focus groups we constructed new instrument items to achieve this survey's unique purpose. However, when available and within the objectives of this project, selected items from the 2019 NPWS survey were included in the survey, which allowed for direct comparison of pre-COVID-19 values with those during COVID-19. The structure of the online survey allowed branching and skip logic to be used to allow respondents to see questions tailored to their work setting and situation.

Members of the research team and members of pharmacy organizations comprising the Pharmacy Workforce Center, Inc. conducted questionnaire useability testing. Item wording as well as item deletion and addition resulted from the useability testing. Research team members tested the appropriateness of various questionnaire response paths.

Survey Administration The questionnaire was pilot tested with a sample of 2,000 licensed pharmacists using a one-time email from the NABF using a format consistent with what would be used in the survey distribution to the entire sample. The research team assessed the response rate as well as questions that were skipped or appeared burdensome based on the location in the questionnaire where respondents stopped. Based on results of the pilot test, research team members modified question formats and removed items to reduce the length of the questionnaire.

Data collection for the main survey distribution included sending subjects four emails (one initial and three follow-ups), that contained a link to the Qualtrics online survey. The email waves were sent out on November 17, 2022, November 22, 2022, and December 7, 2022, and December 20, 2022. All emails were sent by the National Association of Boards of Pharmacy Foundation (NABPF). Subjects were asked to click on the survey link to access the survey.

Sampling Strategy. The NABPF drew a systematic random sample of 93,990 persons from its unduplicated list of licensed pharmacists across all states, territories, and the District of Columbia. The survey sample represents 22.6% of licensed U.S. pharmacists.

Data Analysis. Surveys were available to researchers at the University of Wisconsin through their Qualtrics account. On January 2, 2023, data were downloaded from Qualtrics. Data are presented in this report in a manner that allows comparison to the 2019 NPWS whenever possible.

Results

1.3 Response Rate

A total of 4,947 usable responses were received, which meant they contained responses for the current employment status variable. The maximum number of emails delivered was 93,990 (See Table 1.2.1). This resulted in a traditional usable response rate of 5.3%. A total of 6,545 pharmacists clicked on the survey link. Using that number as a denominator, 75.6% of pharmacists who clicked on the survey link provided a usable response.

In 2019, the National Pharmacists Workforce survey was emailed to 94,803 (maximum across three email waves) licensed pharmacists. The traditional usable response rate in 2019 was 5.8%. A total of 8,466 pharmacists clicked on the survey link in 2019. Using that number as a denominator, 64.6% of pharmacists who clicked on the survey link provided a usable response.

Summary of Email Waves

Table 1.2.1 shows characteristics from the four email waves sent out by NABPF. About one-half of respondents opened the email for the second, third, and fourth email waves, with a mean open rate of 46.8% across the four email waves. The average rate for clicking on the survey link once the email was opened was 4.0%. There were very few unsubscribe requests and complaints resulting from NABPF sending the emails.

Table 1.3.1 Characteristics of Four Email Waves Sent for Data Collection

Wave Date	Total Recipients	Email Opens Frequency (%)	Survey Link Clicks Frequency (%)	Unsubscribes Frequency (%)	Complaints Frequency (%)
11/17/2022	93,990	35,823 (38.1)	1,764 (4.9)	294 (0.3)	56 (0.06)
11/22/2022	89,685	47,981 (53.5)	1,623 (3.4)	199 (0.2)	17 (0.02)
12/7/2022	89,385	41,650 (46.6)	1,781 (4.3)	178 (0.2)	24 (0.03)

12/20/2022	89,144	43,671 (49.0)	1,377 (3.2)	199 (0.2)	29 (0.03)

Evaluating the responses from the first email wave showed that a significant number of respondents did not answer some of the questions relating to demographic characteristics. As a result, the research team moved the age and gender questions to the first section of the survey to facilitate a response to these two demographic questions.

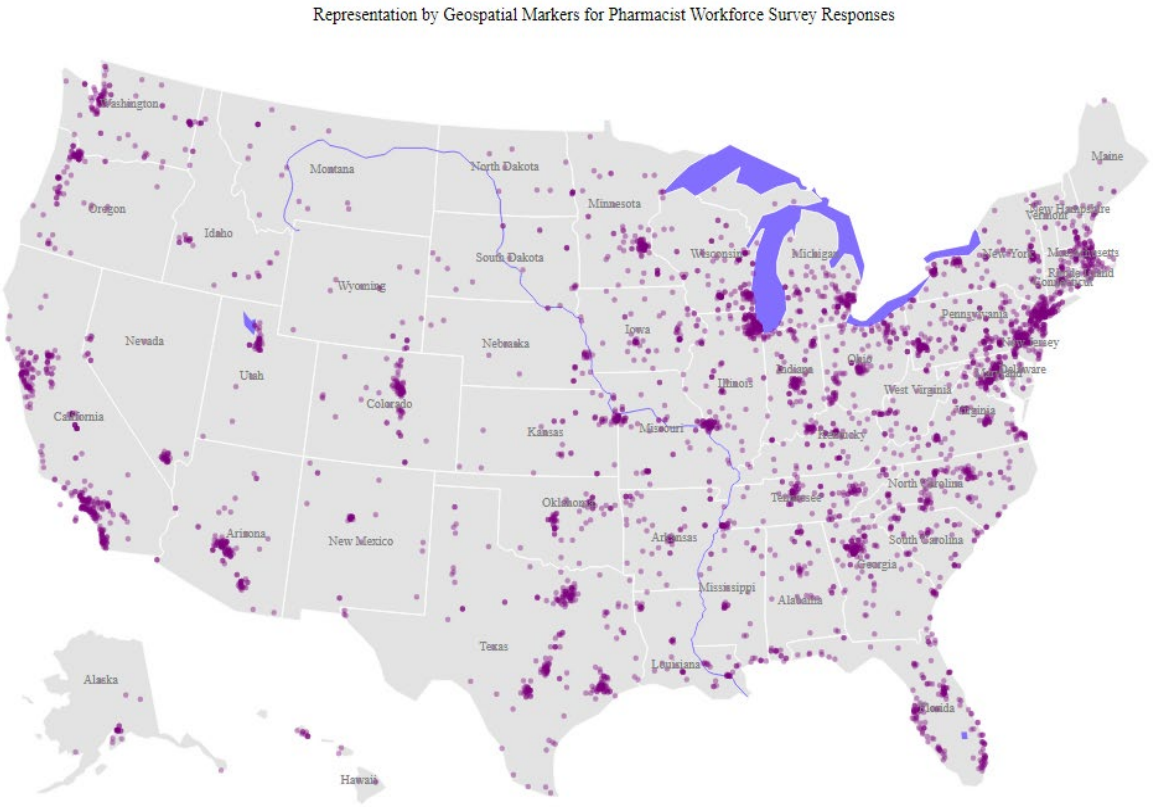
Table 1.2.2 shows the geographic breakdown of the respondents. The South had the largest percentage of respondents (32.4%), with the Midwest region having the next highest (26.4%). Both the Northeast and West regions had just under 22 percent of the responses. The geographic breakdown of respondents was comparable to that from the 2019 National Pharmacist Workforce Survey. Figure 1.2.1 depicts the geographic dispersion of respondents based on their reported zip codes.

Table 1.3.2 Summary of Number of Respondents by Geographic Region

Coded Region	Region	Respondents N = 2,982 n (%)
1	**Northeast** Connecticut; Maine; Massachusetts; New Hampshire; New Jersey; New York; Pennsylvania; Rhode Island; Vermont	570 (19.1)
2	**Midwest** Illinois; Indiana; Iowa; Kansas; Michigan; Minnesota; Missouri; Nebraska; North Dakota; Ohio; South Dakota; Wisconsin	786 (26.4)
3	**South** Alabama; Arkansas; Delaware; District of Columbia; Florida; Georgia; Kentucky Louisiana; Maryland; Mississippi; North Carolina; Oklahoma; South Carolina; Tennessee; Texas; Virginia; West Virginia	966 (32.4)
4	**West** Alaska; Arizona; California; Colorado; Hawaii; Idaho; Montana; Nevada; New Mexico; Oregon; Utah; Washington; Wyoming	648 (21.7)
5	**Outside of 50 United States** APO/FPO/MP; Guam; Northern Mariana Islands; Puerto Rico; Virgin Islands	12 (0.4)

Note: Respondents = 2,982 due to missing data.

Figure 1.3.1 Representation by Geospatial Markers for Respondents from the United States



1.4 Assessment for Non-Response Bias

With the low response rate for this survey, it is reasonable to be concerned about non-response bias. Two ways to assess for non-response bias are to compare actual responses to similar characteristics of the study population and to compare early and late responses. In this case, NABP provided data on limited demographic variables for their population of U.S. licensed pharmacists, to be compared to sample data (shown in Table 1.3.1). Compared to the population, respondents were slightly different in geographic region distribution and were in practice longer; however, there were no significant differences related to proportion of males or females. Table 1.3.2 compares respondents from the first email wave (i.e., Initial Responders) to those responses to the third and fourth email waves (i.e., Later Responders). For all evaluable variables, no statistical differences were found between Early and Later Responders.

Table 1.4.1 Comparison of Respondents and Population by Gender, Region of Country (Residence), and Year of First Licensure/Graduation

	Respondents n (%) *	Random Sample n (%)	Chi-Square Test
Gender	**n=3,883**	**n=93,825**	
Female	2,327 (59.7)	54,780 (58.4)	Not significant
Male	1,556 (39.9)	39,045 (41.6)	
Region of Country (Residence)	**n=2,982**	**n=94,000**	
Northeast	570 (19.1)	20,087 (21.4)	p<0.01
Midwest	786 (26.4)	20,571 (21.9)	
South	966 (32.4)	33,794 (35.9)	
West	648 (12.6)	18,898 (20.1)	
Outside the 50 U.S. & D.C.	12 (0.4)	650 (0.7)	
Years**	**First Licensure n=3,080**	**Graduation n=74,208**	
Prior to 1970	60 (2.0)	570 (0.74)	p<0.01
1970-1979	378 (12.3)	3,574 (4.8)	
1980-1989	601 (19.5)	6,251 (8.4)	
1990-1999	577 (18.7)	11,722 (15.8)	
2000-2009	636 (20.6)	19,689 (26.5)	
2010-2019	827 (26.9)	28,835 (38.9)	
2020-present	0 (0)	3,567 (4.8)	

* Percent figures reported are column percentages.

** Note that first licensure could naturally differ from graduation date, which could create some differences in this comparison.

Table 1.4.2 Comparison of Respondents to First Email wave of Survey to Respondents after the Third and Fourth Email waves of the Survey

	Initial Responders‡ n (%) *	Later Responders‡ n (%)	Chi-Square Test
Age		**n=1,027**	
≤30	Insufficient data	71 (6.9)	na
31-40		241 (23.5)	
41-50		226 (22.0)	
51-60		222 (21.6)	
61-70		189 (18.4)	
>70		78 (7.6)	
Gender	**n=817**	**n=1,044**	
Female	460 (56.3)	629 (60.2)	ns
Male	353 (43.2)	411 (39.4)	
No-binary	4 (0.5)	4 (0.4)	
PharmD Degree	**n=836**	**n=681**	
Yes	417 (49.9)	338 (49.6)	ns
No	419 (51.9)	343 (50.4)	
Employment Status	**n=1,293**	**n=1,050**	
Practicing Pharmacy	983 (76.0)	811 (77.2)	ns
Healthcare-not practicing	78 (6.0)	60 (5.7)	
Non-Healthcare	13 (1.0)	13 (1.2)	
Retired	175 (13.5)	138 (13.1)	
Unemployed	44 (3.4)	28 (2.7)	
Employment Setting	**n=1,046**	**n=820**	
Community	553 (52.9)	417 (49.1)	
Outpatient/MD clinic	47 (4.5)	47 (5.5)	
Hospital	228 (21.8)	190 (22.4)	

Other: Patient care	61 (5.8)	74 (8.7)	ns
Other: Not patient care	157 (15.0)	122 (14.4)	
Year of Licensure	**n=828**	**n=675**	
Prior to 1971	24 (2.9)	20 (2.9)	ns
1971-1980	114 (7.6)	108 (16.0)	
1981-1990	165 (56.5)	127 (43.5)	
1991-2000	161 (19.4)	125 (18.5)	
2001-2010	172 (20.8)	142 (21.0)	
2011-2020	192 (23.2)	153 (22.7)	

* Percent figures reported are column percentages ‡ First e-mail date was 11/17/22 (5 days to second email) & 3rd and 4th e-mail dates were 12/7/22 and 12/20/22 (26 days)

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Section 2: Characteristics of the Pharmacist Workforce

2.1 Overall Characteristics of Survey Respondents

Since the sampling frame for the survey was licensed pharmacists, the results reflect those pharmacists and can generally characterize the pharmacist workforce. Tables 2.1.1 through 2.1.5 contain summaries of responding pharmacists by work status and gender, race, age, highest degree earned, and post-graduation training. By gender in 2022, 59.7% of responding pharmacists identified as female, 39.9% identified as male and 0.2% identified as non-binary. In 2019, slightly more (61.8%) of responding pharmacists were female.

Overall, 78.5% of responding pharmacists in 2022 were working and practicing as a pharmacist, compared to 79.8% in 2019 (Table 2.1.1). By gender, 68.9% of male and 81.2% of female responding pharmacists were practicing pharmacy in 2022. This compares to 72.7% of males and 84.1% of females in 2019. The proportion of responding pharmacists who were working, but not practicing as a pharmacist was 6.8%, higher than estimates from previous National Workforce Surveys (NPWS) from 2009-2019. In 2022, 68.8% of non-binary individuals were working as a pharmacist compared to 25% who were unemployed. There were no non-binary individuals that reported being unemployed in 2019.

By gender in 2022, the proportions of licensed male and female respondents that were retired was 22.8% and 7.8%, respectively. This compares to 16.8% and 5.5% of male and female respondents, respectively, that were retired in 2019. By gender, 2.3% of male and 4.0% of female respondents were unemployed in 2022, compared to 4.7% of males and 5.0% of females in 2019. Overall, in 2022, 14.7% of respondents were either retired or unemployed compared to 14.7% in 2019. Of note is that 2.9% of respondents were unemployed in 2022 compared to 4.9% in 2019. The rate of unemployment in 2022 was similar to that from the 2009 NPWS (2.7%).

Table 2.1.2 shows that the racial diversity of licensed pharmacists continues to underrepresent the racial diversity of the general population in the United States. In 2022, 78.8% of respondents were white, slightly higher than the respondents in the 2019 NPWS (78.2%). In contrast, there were fewer Asian respondents: 9.6% in 2022 and 11.1% in 2019. The proportion of black respondents in 2022 was 3.9%, compared to 4.9% in 2019. Respondents in the “Other” racial category (American Indian, Hispanic/Latino and Other) represented 7.7% of respondents in 2022 compared to 5.8% in 2019.

Table 2.1.3 displays the age distribution of respondents by work status. In 2022, 35.8% of licensed pharmacist respondents were age 55 years or older, which is lower than in 2019 (42.2%). Approximately, 37.0% of respondents working as pharmacists were 40 years old or younger, which is lower than 2019 (41.2%).

Table 2.1.4 shows that the proportion of respondents whose highest degree is a Doctor of Pharmacy (PharmD) degree was 51.8% in 2022 compared to 53.5% in 2019. In 2022, 84.3% of respondents whose highest degree is a PharmD were working as a pharmacist compared to 89.2% in 2019. In, 2022, 31.6% of respondents whose highest degree is a BS-Pharmacy were retired, compared to 18.9% in 2019.

In 2022, over three-fourths of respondents who completed a PGY1 or PGY2 residency were practicing pharmacy (Table 2.1.5). Conversely, in 2019 over 85% of respondents who

completed a PGY1 or PGY2 residency were practicing pharmacy. The difference was due to a greater proportion of licensed pharmacists who completed a PGY1 or PGY2 residency being unemployed in 2022 compared to 2019.

Unemployed pharmacist respondents are described in Table 2.1.6. About 3% (N=145) of responding pharmacists reported being unemployed in 2022, compared to 4.9% in 2019. In 2022, 35.1% of unemployed pharmacists were not seeking employment (i.e. dropped out of the labor market) compared to 15.7% in 2019. In 2022, 65.7% of unemployed respondents stated their unemployment was voluntary, compared to 38.9% in 2019. The mean age of unemployed respondents was 50.8 in 2022 compared to 48.6 years in 2019. The mean number of months unemployed was 28.2 in 2022 compared to 18.6 months in 2019.

2.2 Licensed Pharmacists Practicing Pharmacy

Table 2.2.1 summarizes the practice setting for respondents practicing pharmacy in 2022 and 2019 overall and by gender. In 2022, across all practice settings, female pharmacists were the majority of respondents working in the setting. When examining the proportion of female and male respondents in each practicing setting, the largest proportion of pharmacists in academic settings were female (82.1%) and the largest proportion of male pharmacists were in independent settings (49.1).

In 2022, the proportion of respondents working as pharmacists that were working full-time (>30 hours/week) was 83.7%, compared to 85.4% in 2019 (Table 2.2.2). The proportion of licensed respondents practicing pharmacy and working part-time (<= 30/week) was 16.3% in 2022, compared to 14.6% in 2019.

The proportion of both male and female respondents working as pharmacists and working part-time increased in 2022 compared to data from 2019. The proportion of male respondents working as a pharmacist and working part-time was 14% in 2022, compared to 11.9% in 2019. The proportion of female respondents working as a pharmacist and working part-time was 18% in 2022, compared to 16% in 2019.

Over 20% of licensed respondents working as pharmacists who were over age 56 years worked part-time in 2022 (Table 2.2.3). In 2022, the proportion of respondents working as pharmacists who were at least 61 years and working part-time was higher compared to 2019. In 2022 37.7% of respondents working part-time were at least 61 years compared to 28.2% in 2019.

Table 2.1.1: Responding Licensed Pharmacists by Work Status & Gender 2022 & 2019

Gender	Practicing Pharmacy	Working Not as a Pharmacist	Retired	Unemployed	Total
2022	# Cases (% of Row)				
Male	1073 (68.9)	93 (6.0)	356 (22.8)	36 (2.3)	1558 (100)
Female	1891 (81.2)	160 (6.9)	182 (7.8)	94 (4.0)	2327 (100)
Non-Binary	11 (68.8)	1 (6.2)	0	4 (25.0)	16 (100)
Missing	908 (86.8)	83 (7.9)	44 (4.2)	11 (1.1)	1046 (100)
Total	3883 (78.5)	337 (6.8)	582 (11.8)	145 (2.9)	4947 (100)
2022	(% of Column)				
Male	36.1	36.6	66.2	26.9	39.9
Female	63.6	63	33.8	70.1	59.7
Non-Binary	0.4	0.4	0	3	0.4
2019	(% of Row)				
Male	72.6	5.9	16.8	4.7	100
Female	84.1	5.3	5.5	5.0	100
Non-Binary	89.0	11.1	0.0	0.9	100
Total	79.8	5.5	9.8	4.9	100
2019	(% of Column)				
Male	34.7	40.3	65.4	36.3	38.1
Female	65.1	59.4	34.6	63.7	61.8
Non-Binary	0.2	0.3	--	--	0.1

Note: Working Not as a Pharmacist includes those working in health care and those working outside of health care.

Table 2.1.2: Responding Licensed Pharmacists' Work Status by Race 2022 & 2019

Race	Practicing Pharmacy	Working Not as a Pharmacist	Retired	Unemployed	Total
2022	# of cases (% of row)				
White	1694 (71.1)	152 (6.4)	441 (18.5)	95 (4.0)	2382 (100)
Asian	234 (80.4)	23 (7.9)	20 (6.9)	14 (4.8)	291 (100)
Black	92 (78.6)	6 (5.1)	9 (7.7)	10 (8.5)	117 (100)
Other	170 (73.3)	17 (7.3)	36 (15.5)	9 (3.9)	232 (100)
Missing	1693 (87.9)	139 (7.2)	76 (3.9)	17 (1.0)	1925 (100)
Total	3883 (78.5)	337 (6.8)	582 (11.8)	145 (2.9)	4947 (100)
2022	% of Column				
White	77.4	76.8	87.1	74.2	78.8
Asian	10.9	11.6	4	10.9	9.6
Black	4.2	3	17.8	7.8	3.9
Other	7.5	8.6	7.1	7.1	7.7
2019	% of Row				n (Col %)
White	79.1	5.3	11.3	4.3	4,238 (78.2)
Asian	84.1	6.3	4.1	5.5	603 (11.1)
Black	80.8	5.3	4.1	9.8	266 (4.9)
Other	83.2	6.7	3.8	6.3	315 (5.8)

Table 2.1.3: Responding Licensed Pharmacists' Work Status by Age Group 2022 & 2019

Age Category	Practicing Pharmacy	Working Not as a Pharmacist	Retired	Unemployed	Total
2022	# of cases (% of row)				
24-30	162 (95.3)	6 (3.5)	0	2 (1.2)	170 (100)
31-35	259 (94.2)	10 (3.6)	0	6 (2.2)	275 (100)
36-40	230 (89.8)	21 (8.2)	0	5 (2.0)	256 (100)
41-45	213 (86.6)	27 (11.0)	1 (0.4)	5 (2.0)	246 (100)
46-50	231 (87.2)	22 (8.3)	2 (0.8)	10 (3.7)	265 (100)
51-55	202 (89.8)	13 (5.8)	2 (0.9)	8 (3.5)	225 (100)
56-60	185 (78.7)	25 (10.7)	16 (6.8)	9 (3.8)	235 (100)
61-65	159 (68.8)	15 (6.5)	54 (23.4)	3 (1.3)	231 (100)
66-70	75 (41.2)	7 (3.9)	94 (51.6)	6 (3.3)	182 (100)
>70	46 (29.7)	4 (2.6)	103 (66.4)	2 (1.3)	155 (100)
Missing	2121 (78.4)	187 (6.9)	310 (11.4)	89 (3.3)	2707 (100)
Total	3883 (78.5)	337 (6.8)	582 (11.8)	145 (2.9)	4947 (100)
2022	% of Column				
24-30	9.2	4	0	3.6	7.6
31-35	14.7	6.7	0	10.7	12.3
36-40	13.1	14	0	8.9	11.4
41-45	12.1	18	0.3	8.9	11
46-50	13.1	14.7	0.7	17.9	11.8
51-55	11.5	8.7	0.7	14.3	10
56-60	10.5	16.7	5.9	16.1	10.5
61-65	9	10	19.8	5.4	10.3
66-70	4.3	4.7	34.6	10.7	8.1
>70	2.6	2.7	37.9	3.6	6.9
2019	% of Row				n (col %)
24-30	92.9	3.1	0	4.0	843 (15.4)
31-35	93.6	3.6	0	2.7	885 (16.2)
36-40	89.8	5.5	0	4.6	523 (9.6)
41-45	87.8	6.1	0.5	5.6	394 (7.2)
46-50	85.4	7.4	0.6	6.6	513 (9.4)
51-55	83.2	8.9	1.2	6.7	582 (10.6)
56-60	78.9	8.3	6.2	6.6	564 (10.3)
61-65	63.8	5.9	24.0	6.3	508 (9.3)
66-70	41.8	4.5	50.0	3.7	380 (7.0)
>70	30.9	2.9	63.6	2.5	275 (5.0)

Table 2.1.4: Responding Licensed Pharmacists' Work Status by Highest Degree 2022 & 2019

Highest Degree	Practicing Pharmacy	Working Not as a Pharmacist	Retired	Unemployed	Total
2022	# of cases (% of row)				
BS	714 (61.6)	34 (2.9)	367 (31.6)	45 (3.9)	1160 (100)
PharmD	1359 (84.3)	115 (7.1)	67 (4.2)	72 (4.4)	1613 (100)
MS/MBA	164 (56.2)	39 (13.4)	77 (26.4)	12 (4.1)	292 (100)
PhD	16 (32.0)	16 (32.0)	15 (30.0)	3 (6.0)	50 (100)
Missing	1630 (89.0)	133 (7.3)	56 (3.0)	13 (0.7)	1832 (100)
Total	3883 (78.5)	337 (6.8)	582 (11.8)	145 (2.9)	4947 (100)
2022	% of Column				
BS	31.7	16.7	69.8	34.1	37.2
PharmD	60.3	56.3	12.7	54.5	51.8
MS/MBA	7.3	19.1	14.6	9.1	9.4
PhD	0.7	7.8	2.9	2.3	1.6
2019	% of row				n (col %)
BS	69.9	4.5	18.9	6.7	1,977 (36.2)
PharmD	89.2	4.6	2.3	4.0	2,924 (53.5)
MS/MBA	69.7	11.3	16.3	2.7	486 (8.9)
PhD	42.5	31.3	18.8	7.5	80 (1.5)

Table 2.1.5: Responding Licensed Pharmacists' Work Status by Fellowship, Residency, and Board Certification 2022 & 2019

	Practicing Pharmacy	Working Not as a Pharmacist	Retired	Unemployed	Total
2022	# of cases (% of row)				
Fellowship	29 (40.8)	22 (31.0)	18 (25.4)	2 (2.8)	71 (100)
PGY1 Residency	362 (77.0)	53 (11.3)	34 (7.2)	21 (4.5)	470 (100)
PGY2 Residency	129 (77.7)	17 (10.3)	10 (6.0)	10 (6.0)	166 (100)
Board Certification	460 (79.9)	38 (6.6)	59 (10.2)	19 (3.3)	576 (100)
2019	% of row				
Fellowship	54.2	28.6	13.1	1.2	84
PGY1 Residency	87.6	7.1	3.7	1.6	751
PGY2 Residency	89.9	6.5	6.0	1.6	248
Board Certification	84.7	5.5	5.7	4.1	793

Table 2.1.6: Characteristics of Unemployment Among Responding Licensed Pharmacists by Gender 2022 & 2019

	Male	Female	Non-Binary	Total
	(N=36)	(N=94)	(N=4)	(N=134)
2022	n (% of Column)			
Situation				
Seeking Pharmacy Job	19 (52.8)	35 (37.2)	0	54 (40.3)
Seeking Job Outside Pharmacy	12 (33.3)	18 (19.2)	3 (75.0)	33 (24.6)
Not Seeking Employment	5 (13.9)	41 (43.6)	1 (25.0)	47 (35.1)
2019	% of column			
Situation				
Seeking Pharmacy Job	81.5	73.5	--	76.3
Seeking Job Outside Pharmacy	9.3	7.1	--	7.9
Not Seeking Employment	9.3	19.4	--	15.7
2022	n (% of column)			
Why Left Employment				
Voluntarily due to Work	12 (34.3)	33 (35.9)	0	45 (34.4)
Voluntarily due to Personal Reasons	10 (28.6)	30 (32.6)	1 (25.0)	41 (31.3)
Involuntarily, Pressured to Leave	13 (37.1)	29 (31.5)	3 (75.0)	45 (34.4)
2019	% of column			
Why Left Employment				
Voluntarily due to Work	14.8	18.2	--	17.0
Voluntarily due to Personal Reasons	19.3	23.3	--	21.9
Involuntarily, Pressured to Leave	65.9	58.5	--	61.1
COVID Influence on Unemployment				
No Influence	10 (28.6)	38 (40.9)	2 (50.0)	50 (37.9)
Somewhat of an Influence	7 (20.0)	25 (26.8)	0	32 (24.2)
Very Much an Influence	18 (51.4)	30 (32.3)	2 (50.0)	50 (37.9)
2022				
Average Age	55.6	49	49	50.8
2019				
Average Age	51.3	47.0	--	48.6

Number of Years Employed Prior to Unemployment				
None	0	2 (2.1)	0	2 (1.5)
1-3 years	2 (5.6)	4 (4.2)	0	6 (4.5)
4-10 years	8 (22.1)	27 (28.7)	1 (25.0)	36 (26.9)
11-20 years	2 (5.6)	27 (28.7)	0	29 (21.6)
> 20 years	24 (66.7)	34 (36.2)	3 (75.0)	61 (45.5)
2022				
Average Number of Months Unemployed	14	33.1	40	28.2
2019				
Average Number of Months Unemployed	15.7	20.2	--	18.6

Note: Cases for which gender was missing (n = 11) were excluded.

Table 2.2.1: Work Setting of Responding Licensed Pharmacists Practicing Pharmacy by Gender: 2022 & 2019

Practice Setting	Total Cases	Male	Female	Non-binary	Missing
2022		% of Practice Setting			
Independent	386	49.1	50.9	0	27.2
Chain	879	38.1	61.1	0.8	25.7
Mass Merchandiser	368	37.3	62.3	0.8	27.2
Supermarket	338	38.4	61.1	0.4	23.7
Health System Outpatient	178	35.0	65.0	0	23.0
Outpatient Clinic/Ambulatory Care	222	27.2	72.3	0.5	17.1
Hospital/Health System Inpatient	913	30.2	69.5	0.3	18.5
Academia	47	17.9	82.1	0.3	17.0
Home Health/Infusion	53	35.6	64.4	0	15.1
Industry	18	30.0	70.0	0	44.4
Mail Order	49	38.5	61.5	0	20.4
Managed Care/PBM	96	43.8	56.3	0	16.7
Nursing Home/Long Term Care	96	40.2	59.8	0	14.6
Professional/Trade Association	3	0	100	0	0
Specialty Pharmacy	87	36.4	63.6	0	36.8
Other	56	42.2	57.8	0	19.6
Other Patient Care Practice	685	33.6	66.2	0.2	16.2
Other Non-Patient Care	202	36.5	63.5	0	17.3
	3,803	36.2	63.5	0.5	23.0
2019					
Independent	269	51.7	47.6	0.7	--
Chain	864	36.5	63.5	0.0	--
Mass Merchandiser	305	35.7	64.3	0.0	--
Supermarket	288	30.2	69.8	0.0	--
Hospital/Heath System	1030	35.0	64.9	0.2	--
Industry	16	37.5	62.5	0.0	--
Other Patient Care	673	33.9	66.0	0.1	--
Other Non-Patient Care	282	31.6	68.1	0.4	--
	3,727	35.6	64.2	0.2	--

Note: % Male and % Female do not include Missing cases. Chain is a combination of small chain and large chain. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of Health System Outpatient, Outpatient Clinic/Ambulatory Care, Mail Order, Nursing Home/Long Term Care, and Home Health/Infusion. Other (non-patient care) is defined as settings where pharmacists may not provide patient care and is a combination of MCO/PBM, education/academia, professional/trade associations, and other settings.

Table 2.2.2: Full-time versus Part-time Work Among Responding Licensed Pharmacists Practicing Pharmacy by Gender: 2022 & 2019

Gender	Working Full-time as a Pharmacist	Working Part-time as a Pharmacist	Total Working as a Pharmacist
2022	# Cases (% of Row)		
Male	846 (86.0)	138 (14.0)	984 (100)
Female	1431 (82.0)	314 (18.0)	1745 (100)
Non-Binary	5 (55.6)	4 (44.4)	9 (100)
Missing	634 (85.0)	112 (15.0)	746 (100)
Total	2916 (83.7)	568 (16.3)	3484 (100)
2022	% of Column		
Male	37.1	30.3	35.9
Female	62.7	68.9	63.7
Non-Binary	0.2	0.9	0.4
2019	% of Row		N (Col %)
Male	88.1	11.9	1513 (34.7)
Female	84.0	16.0	2842 (65.1)
Non-Binary	75.0	25.0	8 (0.2)

Note: Full-time is defined as working >30 hours/week.

Table 2.2.3: Full-time versus Part-time Work Among Responding Licensed Pharmacists Practicing Pharmacy by Age Category: 2022 & 2019

Age Category	Working Full-time as a Pharmacist	Working Part-time as a Pharmacist	Total Working as a Pharmacist
2022	# Cases (% of Row)		
24-30	131 (92.2)	11 (7.7)	142 (100)
31-35	217 (92.7)	17 (7.3)	234 (100)
36-40	182 (87.9)	25 (12.1)	207 (100)
41-45	168 (87.5)	24 (12.5)	192 (100)
46-50	170 (82.1)	37 (17.9)	207 (100)
51-55	146 (81.1)	34 (18.9)	180 (100)
56-60	137 (79.7)	35 (20.3)	172 (100)
61-65	104 (70.7)	43 (29.3)	147 (100)
66-70	37 (52.9)	33 (47.1)	70 (100)
>70	15 (33.3)	30 (66.7)	45 (100)
Missing	1609 (85.2)	279 (14.8)	1888 (100)
Total	2916 (83.7)	568 (16.3)	3484 (100)
2022	% of Column		
24-30	10.0	3.8	8.9
31-35	16.6	5.9	14.7
36-40	13.9	8.7	13.0
41-45	12.9	8.3	12.0
46-50	13.0	12.8	13.0
51-55	11.2	11.8	11.3
56-60	10.5	12.1	10.8
61-65	8.0	14.9	9.2
66-70	2.8	11.4	4.4
>70	1.1	10.4	2.8
2019	% of Row		n (Col %)
24-30	93.0	7.0	783 (18.0)
31-35	93.2	6.8	829 (19.0)
36-40	86.6	13.4	470 (10.8)
41-45	87.6	12.4	346 (7.9)
46-50	84.2	15.8	438 (10.0)
51-55	82.4	17.6	484 (11.1)
56-60	80.9	19.1	445 (10.2)
61-65	80.6	19.4	324 (7.4)
66-70	60.1	39.9	158 (3.6)

>70	37.6	62.4	85 (1.9)

Note: Full-time is defined as working >30 hours/week.

Section 3: Employment Status Change

3.1: Prevalence of Employment Status Change

The definition of an employment status change used in the survey included 1) any change in your primary employer, 2) remaining with your primary employer but changing your job position, 3) dropping out of the workforce temporarily due to personal reasons then reentering the workforce, 4) dropping out of the workforce permanently due to personal reasons or retirement since March 2020. Overall, 37.3% of respondents reported experiencing an employment status change since March 2020 (Table 3.1.1). Of respondents currently practicing pharmacy just over one-third (34.1%) reported an employment status change since March 2020. Of retired respondents and unemployed respondents, 58.2% and 27.7%, respectively, reported they did not experience an employment status change since March 2020, suggesting that they were retired or unemployed, respectively, before March 2020.

Among female respondents, 40.3% experienced an employment status change since March 2020 compared to 34.0% of male respondents (Table 3.1.2). Younger respondents were more likely to experience an employment status change since March 2020 compared to older respondents. Of respondents aged 24-35 years and 36-45 years, 45.7% and 37.9% reported experiencing an employment status change since March 2020, respectively. On average, across the age categories 46-55 years, 56-65 years, and >70 years, 30.2% of respondents experienced an employment status change since March 2020.

3.2: Characteristics of Employment Status Changes

Of the 1,476 respondents that reported experiencing an employment status change, two-thirds reported experiencing 1 change, 26.9% reported two changes, and 6.5% reported three or more changes (Table 3.2.1). Among male respondents, 70% reported experiencing 1 employment status change compared to 64.7% of female respondents. Among female respondents, 35.3% reported experiencing 2 or more employment status changes compared to 30.1% of male respondents. Younger respondents were more likely to report experiencing more than 1 employment status change. Among respondents aged 24-35 years, 41.7% reported experiencing 2 or more employment status changes compared to 37.9% and 38.6% of respondents aged 36-45 years and 46-55 years, respectively. Among respondents greater than age 65 years, 21.6% reported experiencing 2 or more employment status changes.

Changing position was the most common (59.9%) type of employment status change, followed by changing employer (51.0%) (Table 3.2.2). A total of 17.8% of respondents who reported an employment status change retired because of the employment status change. Both male and female respondents most often reported that they changed position because of an employment status change and a larger proportion of female respondents (62.7%) reported that they changed position compared to male respondents (52.4%). A larger proportion of male respondents (27.4%) reported that they retired because of an employment status change compared to female respondents (14.6%).

A larger proportion of respondents aged 24-35 years changed position or changed employer because of an employment status change compared to the other age groups. A total of 40.5% of respondents 46-55 years changed position and employer, which was the largest proportion among the age groups of respondents. Over one-half of respondents 65 years or younger changed position because of an employment status change. It was less common for

respondents 56 years and older to change employer because of an employment status change relative to respondents 55 years and younger. Almost 70% of respondents older than 65 years retired because of an employment status change, a higher proportion relative to other respondents.

Overall, 39.9% of respondents who reported experiencing an employment status change stopped working because of the employment status change (Table 3.2.3). Approximately the same proportion of male and female respondents stopped working because of an employment status change. A larger proportion of non-binary respondents (71.4%) stopped working because of an employment status change. Of respondents that stopped working due to an employment status change, the average number of months out of the workforce was 9.39. On average, male respondents were out of the workforce longer (11.0 months) compared to female respondents (8.95 months). Over 60% (62.8%) of respondents who stopped working because of an employment status change re-entered the workforce. A total of 65.4% of female respondents re-entered the workforce after a work stoppage compared to 49.7% of male respondents.

As the age of respondents increased, they were more likely to stop working because of an employment status change, they remained out of the workforce longer, and they were less likely to re-enter the workforce. Respondents 24-35 years who stopped working because of an employment status change, on average, were out of the workforce for 4.45 months and 85.1% re-entered the workforce after their work stoppage. Conversely, respondents 56-65 years were out of the workforce, on average, 9.2 months and 58.9% re-entered the workforce after their work stoppage.

Figure 3.2.1 is a word cloud of reasons for an employment status change provided by respondents to an open-ended question in the survey. The larger the word, the more often the word appeared in the responses. The primary reasons for an employment status change focused on the pharmacy, the job pharmacists were asked to do and the work that they were doing prior to the employment status change. “Retail” also was a common word, reflecting the number of respondents working in community pharmacies that reported an employment status change. “Time”, “hours” and “change” also were common reasons respondents provided for an employment status change. The word cloud paints a picture of poor work conditions for respondents as primary reason for an employment status change.

Figure 3.2.2 is a word cloud of the benefits to an employment status change provided by respondents to an open-ended question in the survey. “Work” was the largest word, suggesting that a common benefit for respondents from an employment status change was a better work environment, better work responsibilities, or better work conditions. “Life”, “time”, “hours”, and “better” also were common words in the benefits of an employment status change for respondents, suggesting keys areas related to quality of work life that were improved because of an employment status change.

3.3: Employment Status Changes Experienced by Respondents Practicing Pharmacy in March 2020

A strength of the 2022 NPWS is that it asks respondents about their work status and employment setting in March 2020, the date that we used to demarcate the beginning of the COVID pandemic. Across practice settings in which respondents were practicing pharmacy in March 2020, the proportion of respondents in each setting that reported experiencing an employment status change ranged widely (0 – 67.1%) (Table 3.3.1). The top three practice

settings in terms of proportion of respondents who reported experiencing an employment status change were Home Health/Infusion (45.0%), Nursing Home/Long Term Care (42.1%), and Community Pharmacy (36.4%). The survey did not ask about types of community pharmacy settings which would provide for more detail about community pharmacy settings. Of the settings with at least 29 pharmacists practicing in the setting in March 2020, the lowest proportion of respondents experiencing an employment status change was Industry (14.3%).

Overall, 37% of male respondents practicing pharmacy in March 2020 reported an employment status change compared to 38.4% of female respondents (Table 3.3.2). A similar proportion of male and female respondents practicing pharmacy in March 2020 at Community Pharmacies, Hospital/Health System Inpatient settings, and Nursing Home/Long Term Care settings reported experiencing an employment status change. A higher proportion of female respondents practicing pharmacy in March 2020 in Outpatient Clinic/Ambulatory Care, Home Health/Infusion, Mail Order Pharmacy, Managed Care/Pharmacy Benefit Management, Specialty Pharmacy settings reported an employment status change relative to male respondents. A higher proportion of male respondents practicing pharmacy in March 20202 in Academia settings reported an employment status change relative to female respondents in Academia settings.

Table 3.1.1 Prevalence of Experiencing an Employment Status Change by Current Employment Status

Current Employment Status	Experienced an Employment Status Change	Did Not Experience an Employment Status Change	Total
	n (% in Row)		
Practicing Pharmacy	1,074 (34.1)	2,078 (65.9)	3,152 (100)
Employed, not Practicing Pharmacy	129 (48.1)	139 (51.9)	268 (100)
Retired	222 (41.8)	309 (58.2)	531 (100)
Unemployed	99 (72.3)	38 (27.7)	137 (100)
Total	1,524 (37.3)	2,564 (62.7)	4,088 (100)
	% of Column		
Practicing Pharmacy	70.5	81.2	77.2
Employed, not Practicing Pharmacy	8.5	5.5	6.6
Retired	14.6	11.8	12.9
Unemployed	6.4	1.5	3.3

Table 3.1.2 Prevalence of Experiencing an Employment Status Change by Gender and Age

Gender	Experienced an Employment Status Change	Did Not Experience an Employment Status Change	Total
	n (% in Row)		
Male	480 (34.0)	931 (66.0)	1411 (100)
Female	844 (40.3)	1250 (59.7)	2094 (100)
Non-binary	7 (54.8)	6 (46.2)	13 (100)
Missing	193 (33.9)	377 (66.1)	570 (100)
Total	1524 (37.3)	2564 (62.7)	4088 (100)
Age Group			
	n (% in Row)		
24-35	160 (45.7)	190 (54.3)	350 (100)
36-45	151 (37.9)	258 (63.1)	409 (100)
46-55	122 (29.8)	288 (70.2)	410 (100)
56-65	124 (30.5)	282 (69.5)	406 (100)
>65	93 (30.2)	215 (69.8)	308 (100)
Missing	874 (39.6)	1331 (60.4)	2205 (100)
Total	1524 (37.3)	2564 (62.7)	4088 (100)

Table 3.2.1 Number of Employment Status Changes Reported by Respondents by Gender and Age Group

Gender	1 Employment Status Change	2 Employment Status Changes	3 or More Employment Status Changes	Total
	n (% of Row)			
Male	326 (70)	116 (24.9)	24 (5.2)	466 (100)
Female	531 (64.7)	231 (28.1)	59 (7.2)	821 (100)
Non-binary	2 (28.6)	3 (42.9)	2 (28.6)	7 (100)
Missing	124 (68.1)	47 (25.8)	11 (6.0)	182 (100)
Total	983 (66.6)	397 (26.9)	96 (6.5)	1476 (100)
Age Group				
	n (% of Row)			
24-35	91 (58.3)	51 (32.7)	14 (9.0)	156 (100)
36-45	92 (62.3)	47 (31.8)	9 (6.1)	148 (100)
46-55	70 (61.4)	32 (28.1)	12 (10.5)	114 (100)
56-65	86 (72.3)	26 (21.8)	7 (5.9)	119 (100)
>65	69 (78.4)	14 (15.9)	5 (5.7)	88 (100)
Missing	575 (67.6)	227 (26.7)	49 (5.8)	851 (100)
Total	983 (66.6)	397 (26.9)	96 (6.5)	1476 (100)

Note: A total of 1,524 pharmacists reported experiencing an employment status change. Of these pharmacists, 48 did not report the number of employment status changes that they experienced.

Table 3.2.2 Types of Employment Status Change by Gender and Age Group

Gender	Changed Position (n=1,497)	Changed Employer (n = 1,499)	Changed Employer and Setting (n = 1,487)	Retired (n = 1,491)
	n (% of Gender)			
Male	247 (52.4)	220 (46.6)	122 (26.0)	132 (27.4)
Female	522 (62.7)	433 (52.2)	239 (29.1)	124 (14.6)
Non-binary	6 (85.7)	6 (85.7)	3 (42.9)	1 (14.3)
Missing	122 (66.3)	106 (57.6)	69 (37.7)	9 (4.9)
Total	897 (59.9)	765 (51.0)	433 (29.1)	266 (17.8)
Age Group	n (% of Age Group)			
24-35	126 (78.8)	108 (67.5)	57 (35.8)	1 (0.6)
36-45	94 (63.9)	92 (61.7)	49 (33.6)	4 (2.8)
46-55	69 (57.5)	63 (52.1)	49 (40.5)	8 (6.7)
56-65	68 (55.4)	39 (32.5)	24 (20.3)	36 (30.2)
>65	31 (34.8)	18 (20.0)	8 (9.0)	63 (69.2)
Missing	509 (59.5)	445 (52.2)	246 (29.0)	154 (17.6)
Total	897 (59.9)	765 (51.0)	433 (29.1)	266 (17.8)

Note: Of the 1,524 pharmacists that reported experiencing an employment status change, a total of 27, 25, 37, and 33 did not report whether they changed position, changed employer, changed position and employer or retired, respectively.

Table 3.2.3 Characteristics of Stopping Work as a Result of an Employment Status Change by Gender and Age Group

Gender	Stopped Working (n = 1,510)	Months Out of Work (n = 560)	Re-entered the Workforce after Stopping Work (n = 602)
	n (% of Row)	Mean (range)	n (% of Row)
Male	197 (41.2)	11.07 (.25-33)	98 (49.7)
Female	339 (40.3)	8.95 (.25-34)	221 (65.4)
Non-Binary	5 (71.4)	7 (1-18)	5 (50.0)
Missing	62 (33.7)	7.00 (.25-32)	54 (87.1)
Total	603 (39.9)	9.39 (.25-34)	378 (62.8)
Age Group	n (% of Row)	Mean (range)	n (% of Row)
24-35	47 (29.4)	4.45 (.5-22)	40 (85.1)
36-45	47 (31.6)	6.89 (.25-32)	40 (85.1)
46-55	52 (42.6)	7.32 (.5-28)	40 (76.9)
56-65	57 (46.7)	9.21 (1-30)	33 (58.9)
>65	60 (64.6)	16.77 (2-33)	21 (35.0)
Missing	340 (39.4)	9.67 (.25-34)	204 (60.0)
Total	603 (39.9)	9.39 (.25-34)	378 (62.8)

Note: Of the 1,524 pharmacists that reported experiencing an employment status change, a total of 14 did not report whether they stopped working or not. Of the 603 pharmacists that reported that they stopped working, a total of 43 and 1 did not report the number of months they were out of work and whether they re-entered the workforce after their work stoppage, respectively.

Figure 3.2.1 Word Cloud of Reasons for an Employment Status Change Reported by Respondents who Experienced an Employment Status Change

Figure 3.2.2 Word Cloud of Benefits of an Employment Status Change Reported by Respondents who Experienced an Employment Status Change

Table 3.3.1: Prevalence of Experiencing an Employment Status Change for Respondents Practicing Pharmacy in March 2020 by Work Setting in March 2020

March 2020 Work Setting	Experienced an Employment Status Change	Did Not Experience an Employment Status Change	Total
	# of Cases (% of Row)		
Community Pharmacy	614 (36.4)	1,074 (63.6)	1,688 (100)
Health System Outpatient	40 (29.0)	98 (71.0)	138 (100)
Outpatient Clinic/Ambulatory Care	58 (32.4)	121 (67.6)	179 (100)
Hospital/Health System Inpatient	298 (35.6)	538 (64.4)	836 (100)
Academia	17 (34.7)	32 (65.3)	49 (100)
Home Health/Infusion	18 (45.0)	22 (55.0)	40 (100)
Industry	1 (14.3)	6 (85.7)	7 (100)
Mail Order Pharmacy	9 (31.0)	20 (69.0)	29 (100)
Managed Care/Pharmacy Benefit Manager	20 (29.4)	48 (70.6)	68 (100)
Nursing Home/Long Term Care	40 (42.1)	55 (57.9)	95 (100)
Professional/Trade Association	0	1 (100)	1 (100)
Specialty Pharmacy	19 (32.8)	39 (67.2)	58 (100)
Other	49 (67.1)	24 (32.9)	73 (100)
Missing	5 (100)	0	5 (100)
Total	1,188 (36.4)	2,078 (63.6)	3,266 (100)

Note: A total of 2,078 licensed pharmacists practicing pharmacy in March 2022 reported that they did not have an employment status change (Table 3.1.1). Of the 1,524 licensed pharmacists who reported having an employment status change since March 2020, 1,188 reported practicing as a pharmacist in March 2020. A total of 164 licensed pharmacists who reported an employment status change did not answer the question about employment status on March 2020.

Table 3.3.2 Prevalence of Experiencing an Employment Status Change for Respondents Practicing Pharmacy in March 2020 by Work Setting in March 2020 and Gender

March 2020 Work Setting	Experienced an Employment Status Change	Total	Experienced an Employment Status Change	Total
	Male		Female	
	# of Cases (% of Work Setting)			
Community Pharmacy	217 (37.9)	573 (100)	323 (38.8)	832 (100)
Health System Outpatient	14 (31.8)	44 (100)	23 (31.5)	73 (100)
Outpatient Clinic/Ambulatory Care	11 (25.0)	44 (100)	41 (36.9)	111 (100)
Hospital/Health System Inpatient	90 (38.3)	235 (100)	176 (35.9)	490 (100)
Academia	6 (54.5)	11 (100)	11 (31.4)	35 (100)
Home Health/Infusion	5 (41.7)	12 (100)	12 (46.2)	26 (100)
Industry	0	3 (100)	1 (33.3)	3 (100)
Mail Order Pharmacy	2 (20.0)	10 (100)	7 (41.2)	17 (100)
Managed Care/Pharmacy Benefit Manager	7 (21.9)	32 (100)	13 (38.2)	34 (100)
Nursing Home/Long Term Care	13 (40.6)	32 (100)	22 (43.1)	51 (100)
Professional/Trade Association	0	0	0	1 (100)
Specialty Pharmacy	2 (13.3)	15 (100)	13 (44.8)	29 (100)
Other	18 (62.1)	29 (100)	26 (68.4)	38 (100)
Missing	2 (100)	2 (100)	0	0
Total	385 (37.0)	1040 (100)	668 (38.4)	1740 (100)

Section 4 Current Work: Impact on Pharmacist Work Life

For the 2022 national pharmacist workforce survey, multiple questions were used to assess pharmacist work life, job satisfaction, self-reported health status, and work-home conflict (Table 1). Most of these items were repeated from the 2019 NPWS.

The first domain was the professional fulfillment index (PFI) which contains items on work exhaustion and personal disengagement which together comprise the burnout domain and professional fulfillment. As in 2019, responding pharmacists reported moderate levels of work exhaustion, but less interpersonal disengagement (Table 4.1).

Table 2 summarizes burnout and intention to leave variables for responding pharmacists practicing pharmacy across practice settings. In 2022, respondents practicing in small chain and independent pharmacies had the highest level of professional engagement and lowest levels of work exhaustion and interpersonal disengagement. The opposite was reported for respondents working in more corporately owned and managed pharmacies (Table 4.2). Responding pharmacists working in non-community settings generally rated their levels of burnout and fulfillment at similar levels to respondents working in independent and small chain pharmacies. An exception, however, is respondents working in hospital inpatient pharmacies who reported levels in between independent and large chain responding pharmacists.

A similar pattern was found for the intention to leave current work and intention to leave pharmacy practice with respondents practicing in independent and small chain pharmacies more often rating relatively lower interest in leaving their job or leaving pharmacy practice altogether (Table 4.2). Responding pharmacists working in non-community practice settings also reported intentions to leave current work and pharmacy practice at similar levels to independent and small chain pharmacists (Table 4.2).

Responding pharmacists also rated their perceptions of job stress, job control, and job satisfaction (Table 4.3). Again, responding independent and small chain pharmacists rated their stress lower than responding pharmacists working at corporately owned and managed pharmacies. This pattern also carried through to responding corporate pharmacists reporting the lowest levels of job control and the lowest levels of job satisfaction. The number of hours worked per week for responding practicing pharmacists ranged from an average of 34.4 for small chain pharmacists to 39.3 for hospital pharmacists, with responding pharmacists working in settings that do not involve patient care reporting the most weekly hours worked (43.6) (Table 4.3).

We also compared respondents who were managers to respondents who were staff pharmacists and found managers reported greater fulfillment and job control, and comparable burnout and job stress. Responding managers also reported working on average about six more hours per week (Table 4.4 & Table 4.5).

The questionnaire contains questions about the physical, emotional, and mental health of pharmacists. Overall, responding pharmacists reported their physical and overall health higher than their emotional and mental health (Table 4.6). Across settings, responding pharmacists working in corporate community settings reported lower physical, emotional, mental, and overall health than respondents working in small chain, independent community, hospital, and other

patient care settings. Regarding conflict, overall responding pharmacists more often reported that their work negatively impacts their home life rather than their home life impacting their performance at work. Respondents working in larger corporate pharmacies (i.e., large chain, mass merchandiser and supermarket) reported the highest levels of work home conflict. Responding pharmacists working at independent and small chain pharmacies reported higher levels of organizational commitment compared to respondents in all other settings, particularly in comparison to the larger corporate pharmacies.

Table 4.1: Summary of Work Life Variables for the Overall Sample of Respondents Practicing Pharmacy

Work life Variable	Mean (SD)	Number of items in domain	Scale
Professional Fulfilment[1]	2.92 (1.08)	6	1 [not at all true] – 5 [completely true]
Work Exhaustion	3.14 (1.20)	4	1 [not at all] – 5 [totally]
Interpersonal Disengagement	2.44 (1.11)	6	1 [not at all] – 5 [totally]
Burnout (WE + ID)	2.72 (1.08)	10	1 [not at all] – 5 [totally]
Intention to leave current employment	2.62 (1.41)	2	1 [very unlikely] – 5 [very likely]
Intention to leave pharmacy practice	1.96 (1.05)	3	1 [very unlikely] – 5 [very likely]
How **stress**ful is…	3.17 (0.71)	5	1 [not at all stressful] – 4 [highly stressful]
How much **control** do you have over…[1]	1.16 (0.87)	3	0 [none] – 3 [a lot]
How **satisfied** are you with…[1]	2.53 (0.98)	3	1 [very dissatisfied] – 4 [very satisfied]
Hours worked per week	38.48 (10.46)		Continuous
Physical Health[1]	3.33 (1.05)	1	1 [poor] – 5 [excellent]
Emotional Health[1]	3.03 (1.17)	1	1 [poor] – 5 [excellent]
Mental Health[1]	3.08 (1.18)	1	1 [poor] – 5 [excellent]
Overall Health[1]	3.24 (1.01)	1	1 [poor] – 5 [excellent]
Work-home conflict	2.89 (0.98)	1	1 [strongly disagree] – 4 [strongly agree]
Organizational commitment[1]	2.54 (0.85)	2	1 [strongly disagree] – 4 [strongly agree]
Home-Work conflict	1.74 (0.81)	1	1 [strongly disagree] – 4 [strongly agree]

Note: N = 3,836. [1]Greater values associated with positive valence, otherwise greater values associated with negative valence.

Table 4.2: Professional Fulfillment, Work Exhaustion, Interpersonal Disengagement, Burnout, Intention to Leave Current Work, and Intention to Leave Pharmacy Practice for Practicing Pharmacists Across Practice Settings

Practice Setting		Professional Fulfilment[1]	Work Exhaustion	Interpersonal Disengagement	Burnout	Intention-to-leave Current work	Intention-to-leave Pharmacy Practice
	# of cases (% of column)			Mean (SD)			
All Community	1927 (50.2)	2.64 (1.06)	3.56 (1.15)	2.78 (1.13)	3.09 (1.06)	2.94 (1.41)	2.17 (1.12)
Independent	354 (9.2)	3.44 (1.05)	2.62 (1.13)	2.07 (0.95)	2.28 (0.96)	2.27 (1.35)	1.88 (1.05)
Small chain	58 (1.5)	3.59 (1.11)	2.27 (1.14)	1.85 (0.91)	2.02 (0.96)	2.21 (1.43)	1.86 (0.93)
Large chain	807 (21.0)	2.37 (0.95)	3.89 (1.00)	2.99 (1.11)	3.36 (0.97)	3.20 (1.35)	2.29 (1.11)
Mass merchandizer	362 (9.4)	2.43 (0.93)	3.75 (0.98)	2.93 (1.08)	3.26 (0.97)	3.11 (1.34)	2.24 (1.11)
Supermarket	336 (8.8)	2.55 (0.99)	3.74 (1.05)	2.95 (1.07)	3.27 (0.97)	2.91 (1.45)	2.12 (1.18)
Mail order	44 (1.1)	3.34 (1.11)	2.11 (1.11)	1.68 (0.95)	1.86 (0.92)	2.05 (1.18)	1.68 (0.92)
Health System Outpatient	164 (4.3)	3.11 (1.11)	2.93 (1.24)	2.44 (1.14)	2.65 (1.14)	2.29 (1.34)	1.84 (0.99)
Ambulatory Care	196 (5.1)	3.40 (1.03)	2.70 (1.06)	2.09 (0.94)	2.33 (0.92)	2.20 (1.35)	1.71 (0.98)
Hospital	831 (21.7)	2.99 (1.01)	2.96 (1.08)	2.24 (1.00)	2.53 (0.94)	2.47 (1.36)	1.79 (0.94)
Other Patient Care	229 (5.9)	3.22 (1.02)	2.66 (1.15)	2.08 (1.00)	2.32 (1.01)	2.21 (1.37)	1.76 (0.95)
Not Patient Care	159 (4.1)	3.39 (0.94)	2.51 (1.04)	1.87 (0.86)	2.13 (0.87)	2.25 (1.25)	1.74 (0.91)

Note: N = 3,836. [1]Greater values associated with positive valence, otherwise greater values associated with negative valence.

Table 4.3: Job Stress, Job Control, Job Satisfaction, and Hours Worked for Respondents Practicing Pharmacy by Practice Setting

Practice Setting		Job Stress	Job Control[1]	Job Sat[1]	Hours worked / week
	N (% of column)		Mean (SD)		
All Community	1927 (50.2)	3.44 (0.60)	0.88 (0.77)	2.17 (0.94)	38.05 (10.55)
Independent	354 (9.2)	2.93 (0.71)	1.45 (0.79)	2.94 (0.85)	36.10 (13.72)
Small chain	58 (1.5)	2.79 (0.84)	1.56 (0.78)	3.16 (0.90)	34.43 (10.89)
Large chain	807 (21.0)	3.62 (0.43)	0.70 (0.70)	1.90 (0.84)	39.11 (10.06)
Mass merchandisers	362 (9.4)	3.55 (0.50)	0.78 (0.68)	2.02 (0.82)	37.83 (9.80)
Supermarket	336 (8.8)	3.51 (0.51)	0.73 (0.68)	2.04 (0.85)	38.29 (7.91)
Mail Order	44 (1.1)	2.61 (0.86)	1.43 (0.97)	2.95 (0.98)	38.43 (9.41)
Health System Outpatient	164 (4.3)	2.95 (0.77)	1.13 (0.82)	2.85 (0.98)	37.23 (8.41)
Ambulatory Care	196 (5.1)	2.88 (0.72)	1.35 (0.81)	2.97 (0.88)	38.67 (8.45)
Inpatient Hospital	831 (21.7)	3.08 (0.59)	1.27 (0.83)	2.69 (0.92)	39.27 (10.60)
Other Patient Care	229 (5.9)	2.84 (0.79)	1.50 (0.87)	2.91 (0.85)	37.39 (11.86)
Not Patient Care	159 (4.1)	2.70 (0.79)	1.83 (0.83)	3.12 (0.79)	43.58 (6.06)

Note: N = 3,836. [1]Greater values associated with positive valence, otherwise greater values associated with negative valence.

Table 4.4: Professional Fulfillment, Work Exhaustion, Interpersonal Disengagement, Burnout, Intention to Leave Current Work, and Intention to Leave Pharmacy Practice for Practicing Pharmacists by Position

Position		Professional Fulfilment[1]	Work Exhaustion	Interpersonal Disengagement	Burnout	Intention-to-leave Current work	Intention-to-leave Pharmacy Practice
	# of cases (% of column)			Mean (SD)			
Managers	970 (25.3)	3.04 (1.10)	3.23 (1.20)	2.44 (1.11)	2.76 (1.08)	2.69 (1.43)	1.97 (1.06)
Staff	2437 (63.5)	2.84 (1.07)	3.14 (1.20)	2.47 (1.12)	2.74 (1.08)	2.62 (1.40)	1.97 (1.06)

Note: N = 3,407. [1]Greater values associated with positive valence, otherwise greater values associated with negative valence.

Table 4.5: Job Stress, Job Control, Job Satisfaction, and Hours Worked for Respondents Practicing Pharmacy by Position

Position		Job Stress	Job Control[1]	Job Sat[1]	Hours worked / week
	N (% of column)		Mean (SD)		
Managers	970 (25.3)	3.19 (0.72)	1.29 (0.91)	2.56 (0.99)	43.26 (8.09)
Staff	2437 (63.5)	3.18 (0.71)	1.06 (0.82)	2.49 (0.97)	36.49 (10.49)

Note: N = 3,407. [1]Greater values associated with positive valence, otherwise greater values associated with negative valence.

Table 4.6: Well-being, Work conflict, and Organizational Commitment for Respondents Practicing Pharmacy by Practice Setting

Practice Setting	Physical Health[1]	Emotional Health[1]	Mental Health[1]	Overall health[1]	Work-home Conflict	Org. Commitment[1]	Home-work Conflict
				Mean (SD)			
All Community	3.15 (1.09)	2.79 (1.21)	2.87 (1.22)	3.06 (1.04)	3.18 (0.89)	2.40 (0.86)	1.72 (0.85)
Independent	3.54 (0.96)	3.39 (1.15)	3.47 (1.17)	3.56 (0.97)	2.71 (0.98)	3.09 (0.75)	1.62 (0.75)
Small chain	3.59 (1.05)	3.62 (1.18)	3.68 (1.25)	3.62 (1.04)	2.28 (0.94)	3.18 (0.74)	1.33 (0.59)
Large chain	3.05 (1.13)	2.68 (1.16)	2.74 (1.17)	2.91 (1.03)	3.32 (0.85)	2.16 (0.81)	1.78 (0.89)
Mass merchandizer	3.00 (1.06)	2.47 (1.18)	2.53 (1.19)	2.87 (0.99)	3.32 (0.82)	2.20 (0.72)	1.79 (0.84)
Supermarket	3.10 (1.10)	2.71 (1.16)	2.84 (1.17)	3.01 (1.02)	3.28 (0.79)	2.38 (0.78)	1.67 (0.83)
Mail order	3.77 (0.82)	3.54 (1.07)	3.54 (1.03)	3.69 (0.79)	2.18 (0.90)	2.69 (0.93)	1.64 (0.73)
Health systems outpatient	3.39 (1.08)	3.24 (1.18)	3.21 (1.14)	3.31 (1.04)	2.61 (1.03)	2.69 (0.80)	1.85 (0.72)
Ambulatory care	3.59 (1.06)	3.23 (1.13)	3.33 (1.15)	3.51 (0.98)	2.50 (0.95)	2.62 (0.83)	1.64 (0.72)
Hospital	3.45 (0.96)	3.17 (1.07)	3.19 (1.11)	3.36 (0.92)	2.85 (0.93)	2.54 (0.82)	1.76 (0.77)
Other patient care	3.44 (0.98)	3.24 (1.08)	3.29 (1.09)	3.37 (0.94)	2.69 (0.99)	2.79 (0.81)	1.76 (0.77)
Not patient care	3.46 (1.01)	3.22 (1.05)	3.22 (1.05)	3.41 (0.94)	2.26 (0.94)	2.86 (0.79)	1.79 (0.76)

Note: N = 3,836[1]Greater values associated with positive valence, otherwise greater values associated with negative valence.

Section 5: Community Practice Settings: Work Activities and Work Setting Characteristics

5.1: Characteristics of Responding Licensed Community Pharmacists

Tables 5.1.1 and 5.1.2 contain summaries of respondents by age and gender at independent community pharmacies and chain community pharmacies. Of the responding licensed pharmacists that reported practicing at an independent pharmacy and reported their gender and age, 50% were female. Conversely, 62% of responding pharmacists who reported practicing at a chain pharmacy and reported their gender and age were female. Independent pharmacies have an older cohort of responding pharmacists, reporting 70% at least 46 years of age compared to chain pharmacies reporting 52% at least the age of 46. The age range with most frequency, without regard to gender, for independent pharmacies was 46-50 years old and 31-35 years old for chain pharmacies. In both independent and chain pharmacies, the percentage of female respondents was greater than male respondents at all ages below 61 years old.

Table 5.1.3 contains summaries of respondents by ethnicity/race at independent and chain community pharmacies. More diversity in ethnicity/race was seen in chain pharmacies with 74.9% of reported race/ethnicity types being white/Caucasian compared to independent pharmacies having 81.5% white/Caucasian. Asian ethnicity was the second most reported and American Indian was the least reported (under 1%) in both independent and chain pharmacies.

5.2: Independent and Chain Community Pharmacists' Reported Time Spent in and Satisfaction with Work Activities

Tables 5.2.1-5.2.3 contain summaries of time and satisfaction in various work activities for respondents practicing in independent pharmacies. Table 2.1 shows that responding pharmacists practicing at independent community pharmacies reported spending about 72% of their time each week on patient care services associated with medication dispensing and about 13% of time on patient care services not associated with medication dispensing.

Over 50% of responding pharmacists practicing in independent community pharmacies reported spending 1-10 hours per week on administering vaccines, documenting information about services provided, consulting with patients about coordination and use of prescription drug coverage, providing medication synchronization services, providing patient medication assistance, and providing medication therapy management (MTM) services (Table 5.2.2). The work activity in which respondents spent the most hours per week was consulting with patients about coordination and use of prescription drug coverage, with about 30% of responding pharmacists spending 11 or more hours per week and about 14% spending 0 hours per week.

Work activities for which over 50% of responding pharmacists reported spending 0 hours per week included administering non-vaccine medication, dispensing naloxone, providing point-of-care testing, and providing point-of-care non-COVID testing. Table 5.2.3 shows high satisfaction with time spent on work activities in independent pharmacies with about 60% of responding pharmacists reporting being satisfied.

Tables 5.2.4-5.2.6 contain summaries of time spent in work activities and satisfaction with time spent in work activities for respondents practicing in chain pharmacies. Like respondents practicing in independent pharmacists, respondents practicing in chain pharmacies reported spending about 76% of their time each week on patient care services associated with

medication dispensing and about 10% of time on patient care services not associated with medication dispensing (Table 5.2.4).

Documenting information about services provided, consulting with patients about coordination and use of prescription drug coverage, providing medication synchronization services, providing patient medication assistance, providing medication therapy management (MTM) services, and dispensing naloxone each were reported to consume between 1-10 hours per week by more than 50% of respondents practicing in chain pharmacies (Table 5.2.5). Consulting with patients about coordination and use of prescription drug coverage and administering vaccines were reported to consume between 11-20 hours per week by more than 15% of respondents practicing in chain pharmacists. The work activity in which the most respondents reported spending the most time per week was administering vaccines. Approximately 51% of respondents reported spending more than 11 hours per week administering vaccines and 24.6% of respondents reported spending >20 hours per week administering vaccines.

Work activities in which 50% or more of respondents practicing in chain pharmacists reported spending 0 hours per week included administering non-vaccine medication, providing point-of-care COVID testing, and providing point-of-care non-COVID testing. Table 5.2.6 shows low satisfaction among respondents practicing in chain pharmacies as only 27% of respondents reported being at least satisfied with the amount of time they spend in work activities.

5.3: Reported Changes in Work Activities by Responding Pharmacists Practicing in Independent and Chain Community Pharmacies

Tables 5.3.1 and 5.3.2 contain summaries of reported changes in time spent in work activities from March 2020 to the date of survey response for respondents practicing in independent community and chain community pharmacies, respectively. For respondents practicing in independent community pharmacies (Table 5.3.1), the most common response across all the work activities was no change. The work activities with the most respondents reporting increases in time spent included administering vaccines (50.0%), documenting information about services provided (39.5%), consulting with patients about coordination and use of prescription drug coverage (35.6%) and providing medication synchronization services (32.3%). Providing medication therapy management (MTM) services (13.4%), providing point-of-care testing (COVID and non-COVID testing) (9.7%), and administering vaccines (9.2%) were the work activities that the most respondents reported a decrease in time spent since March 2020.

Table 5.3.2 shows reported changes in time spent in various work activities from March 2020 to the time of response for respondents practicing in chain community pharmacies. For chain settings, the largest proportion of respondents reported no change in time spent for all the work activities, except administering vaccines. Administering vaccines (86.5%), documenting information about services provided (48.8%), providing patient medication assistance (e. g. locating coupons, discounts, etc.) (46.6%), providing point-of-care COVID testing (36.1%), and consulting with patients about coordination and use of prescription drug coverage (35.6%) were work activities that the largest proportion of respondents reported an increase in time spent since March 2020. Respondents practicing in independent community pharmacies did not report increases in time spent in providing patient medication assistance and providing point-of-care COVID testing to the degree reported by respondents practicing in chain community pharmacies. Work activities for which the largest proportion of respondents practicing in chain community pharmacies reported a decrease in time spent include providing medication therapy

management (MTM) services (29.3%), providing medication synchronization services (21.4%), and providing point-of-care COVID testing (10.0%).

5.4: Reporting About Work Setting Characteristics by Respondents Practicing in Independent and Chain Community Pharmacies

Tables 5.4.1 and 5.4.2 contain summaries of the level of agreement about work setting characteristics reported by respondents practicing in independent community and chain community pharmacies, respectively. Respondents practicing in community settings, regardless of independent or chain designation, were asked about the same seven work characteristics. Pharmacists practicing in community settings also were asked about work setting characteristics specific to independent or chain practice settings. The items in the table that are shaded were asked only to pharmacists practicing in that setting.

For work setting characteristics that were presented to respondents practicing in chain and independent pharmacies, all work setting characteristics were agreed to by at least 60% of responding independent pharmacists, contrary to responding chain pharmacists (only two work characteristics were agreed to by at least 60% of chain pharmacists). The largest proportion of responding independent pharmacists at least somewhat agreed that they had a high level of autonomy (85.1%) (Table 5.4.1), compared to 52.4% of responding chain pharmacists (Table 5.4.2). Over 85% of responding chain pharmacists at least somewhat agreed that the number of work activities performed at their job extends beyond what they were originally hired to do, compared to 62.9% of responding independent pharmacists. Over 80% of responding independent pharmacists at least somewhat agreed that their manager/supervisor listens to them when they have concerns about work, compared to 55% of responding chain pharmacists. Lastly, 75.9% of responding independent pharmacists at least agreed that the number of pharmacists hired at their work setting was adequate to meet patient care needs compared to just 26.2% of responding chain pharmacists.

For work setting characteristics asked only of respondents practicing in independent community pharmacies, having a strong focus on public health and the community (89.9%) and an attitude of “let’s make this work” (83.2%) were the two work setting characteristics with the largest proportion of respondents agreeing at least somewhat (Table 5.4.1). For other work setting characteristics, 81% and 80.1% of responding independent community pharmacists at least somewhat agreed that their work setting had a strong culture of being innovative with services to meet patients’ needs and that patients were referred to the pharmacy by local providers for the clinical services provided, respectively.

In Table 5.4.2, 65.9% of responding chain pharmacists strongly agreed that their work setting would benefit from regulations limiting pharmacist workload. All chain specific work setting characteristics, except one, were at least somewhat agreed upon by at least 73% of respondents, including that the organization’s focus on meeting workload metrics results in unsafe pharmacy practice. The work setting characteristic with the least agreement from respondents (31.6% at least somewhat agreed) was that the organization listens to the concerns of pharmacists related to unsafe pharmacy practice.

5.5: Reporting About How Work Setting Characteristics Impact Patient Medication Safety by Respondents Practicing in Independent and Chain Community Pharmacies

The largest proportion of responding independent pharmacists (25.7%) reported that the level of autonomy to accomplish their work activities significantly improves patient medication safety (Table 5.5.1). Comparatively, 5.9% of responding chain pharmacists reported that the level of autonomy significantly improves patient medication safety (Table 5.5.2). Conversely, a total of 18.1% of respondents practicing in chain pharmacies reported that the level of autonomy significantly reduces patient medication safety compared to 3.8% of responding independent pharmacists.

The smallest proportion of responding independent pharmacists (18.5%) reported that the number of activities that pharmacists perform in their jobs significantly improves patient medication safety. Comparatively, 3.5% of responding pharmacists practicing in chain pharmacies reported that the number of activities that they performed in their job significantly improves patient medication safety. Conversely, a total of 40.6% of responding pharmacists practicing in chain pharmacies reported that the number of activities that they perform in their job significantly reduces patient medication safety, compared to 8.0% of responding independent pharmacists.

Table 5.1.1: Age and Gender Demographics of Responding Licensed Pharmacists Practicing in Independent Community Pharmacies

	Gender			
Age Group	**Male**	**Female**	**Non-binary**	**Total**
	# of cases (% of column)			
25-30	2 (2.3)	7 (8.0)	0	9 (5.1)
31-35	8 (9.1)	10 (11.4)	0	18 (10.2)
36-40	3 (3.4)	10 (11.4)	0	13 (7.4)
41-45	6 (6.8)	7 (8.0)	0	13 (7.4)
46-50	13 (14.8)	18 (20.5)	0	31 (17.6)
51-55	8 (9.1)	11 (12.5)	0	19 (10.8)
56-60	10 (11.4)	12 (13.6)	0	22 (12.5)
61-65	14 (15.9)	6 (6.8)	0	20 (11.4)
66-70	13 (14.8)	7 (8.0)	0	20 (11.4)
>70	11 (12.5)	0 (0)	0	11 (6.3)
Total	88	88	0	176

Note: 50 male respondents and 55 female respondents reporting working in independent community pharmacies did not report their age.

Table 5.1.2: Age and Gender Demographics of Responding Licensed Pharmacists Practicing in Chain Community Pharmacies

	Gender			
Age Group	**Male**	**Female**	**Non-binary**	**Total**
	# of cases (% of column)			
25-30	19 (7.5)	40 (9.4)	1 (50)	60 (8.8)
31-35	32 (12.7)	64 (15)	1 (50)	97 (14.2)
36-40	28 (11.1)	60 (14.1)	0	88 (12.9)
41-45	27 (10.7)	57 (13.3)	0	84 (12.3)
46-50	28 (11.1)	66 (15.5)	0	94 (13.8)
51-55	32 (12.6)	57 (13.3)	0	89 (13.0)
56-60	31 (12.3)	42 (9.8)	0	73 (10.7)
61-65	33 (13)	26 (6.1)	0	59 (8.7)
66-70	12 (4.7)	13 (3.0)	0	25 (3.7)
>70	11 (4.3)	2 (0.5)	0	13 (1.9)
Total	253	427	2	682

Note: Chain community pharmacies included small chain, large chain, mass merchandiser, and supermarket pharmacies. 195 male respondents and 298 female respondents reporting working in chain community pharmacies did not report their age.

Table 5.1.3: Ethnicity/Race of Responding Licensed Pharmacists Practicing in Independent and Chain Community Pharmacies

Ethnicity and/or Race	Independent	Chain
	# of cases (% of column)	
White/Caucasian	159 (81.5)	639 (74.9)
Asian	14 (7.2)	102 (12.0)
Black/African American	9 (4.6)	34 (4.0)
Latino/Latina	6 (3.1)	20 (2.3)
American Indian	0	3 (0.4)
[Other] Text based	7 (3.6)	55 (6.4)
Total	195 (100)	853 (100)

Note: Chain community pharmacies included small chain, large chain, mass merchandiser, and supermarket pharmacies. 191 and 732 respondents reporting working in independent community pharmacies and chain community pharmacies, respectively, did not report their ethnicity/race.

Table 5.2.1: Percent of Time Spent in a Typical Week in Work Activities for Responding Pharmacists Practicing in Independent Community Pharmacies

Work Activity	Mean	Standard Deviation	Range
Patient Care Services Associated with Medication Dispensing	71.8	24.2	0-100
Patient Care Services Not Associated with Medication Dispensing	12.6	14.8	0-100
Business/Organization Management	9.8	16.1	0-100
Research/Scholarship	1.1	2.9	0-25
Education	3.4	5.6	0-45
Other	1.3	5.7	0-100

Note: A total of 307 respondents reported these data (i.e., provided complete data across all six work activities).

Table 5.2.2: Typical Hours per Week Spent on Work Activities by Responding Pharmacists Practicing in Independent Community Pharmacies

Work Activity	0 hours	1-10 hours	11-20 hours	> 20 hours
	# of cases (% of row)			
Administering vaccines	97 (33.8)	149 (51.9)	30 (10.5)	11 (3.8)
Documenting information about services provided	79 (27.7)	174 (60.8)	23 (8.0)	10 (3.5)
Consulting with patients about coordination and use of prescription drug coverage	39 (13.7)	162 (56.8)	56 (19.7)	28 (9.8)
Providing medication synchronization services	79 (27.7)	162 (56.8)	28 (9.9)	16 (5.6)
Providing patient medication assistance (e. g. locating coupons, discounts, etc.)	66 (23.1)	187 (65.4)	21 (7.3)	12 (4.2)
Providing Medication Therapy Management (MTM) services	86 (30.1)	171 (59.8)	18 (6.3)	11 (3.8)
Administering non-vaccine medications (e. g. injection)	200 (70.1)	77 (27.0)	3 (1.1)	5 (1.8)
Dispensing Naloxone	153 (53.7)	123 (43.2)	3 (1.0)	6 (2.1)
Providing point-of-care COVID testing	229 (80.1)	49 (17.2)	5 (1.7)	3 (1.0)
Providing point-of-care non-COVID testing	231 (80.8)	47 (16.5)	5 (1.7)	3 (1.0)

Note: Total respondents for these items ranged from 284-287 due to missing data.

Table 5.2.3: Overall Satisfaction with Time Spent on Work Activities by Responding Pharmacists Practicing in Independent Community Pharmacies

	Not at all satisfied	Partly satisfied	Satisfied	More than satisfied	Very satisfied
	# of cases (% of row)				
Overall, how satisfied are you with the amount of time you spend in these work activities? (N = 287)	24 (8.4%)	90 (31.4%)	98 (34.1%)	33 (11.5%)	42 (14.6%)

Note: Satisfaction question refers to time spent in work activities listed in Table 5.2.2

Table 5.2.4: Percent of Time Spent in a Typical Week in Work Activities for Responding Pharmacists Practicing in Chain Community Pharmacies

Work Activity	Mean	Standard Deviation	Range
Patient Care Services Associated with Medication Dispensing	75.7	22.0	0-100
Patient Care Services Not Associated with Medication Dispensing	10.4	14.2	0-100
Business/Organization Management	6.7	10.6	0-90
Research/Scholarship	0.4	2.4	0-50
Education	3.7	5.6	0-40
Other	3.0	10.4	0-100

Note: Note: A total of 1,280 respondents reported these data (i.e., provided complete data across all six work activities).

Table 5.2.5: Typical Hours per Week Spent on Work Activities by Responding Pharmacists Practicing in Chain Community Pharmacies

Work Activity	0 hours	1-10 hours	11-20 hours	> 20 hours
	# of cases (% of row)			
Administering vaccines	29 (2.4)	561 (46.9)	311 (26.0)	294 (24.7)
Documenting information about services provided	269 (22.5)	751 (63.0)	100 (8.4)	73 (6.1)
Consulting with patients about coordination and use of prescription drug coverage	158 (13.2)	734 (61.6)	188 (15.7)	114 (9.5)
Providing medication synchronization services	380 (31.9)	701 (58.9)	60 (5.0)	50 (4.2)
Providing patient medication assistance (e. g. locating coupons, discounts, etc.)	179 (15.0)	774 (64.8)	142 (11.9)	99 (8.3)
Providing Medication Therapy Management (MTM) services	375 (31.4)	726 (60.8)	61 (5.1)	32 (2.7)
Administering non-vaccine medications (e. g. injection)	897 (75.1)	197 (16.5)	47 (3.9)	54 (4.5)
Dispensing Naloxone	444 (37.2)	727 (61.1)	10 (0.8)	11 (0.9)
Providing point-of-care COVID testing	765 (64.1)	330 (27.7)	37 (3.1)	61 (5.1)
Providing point-of-care non-COVID testing	872 (73.0)	242 (20.2)	21 (1.8)	60 (5.0)

Note: Total respondents for these items ranged from 1191-1195 due to missing data.

Table 5.2.6: Overall Satisfaction with Time Spent on Work Activities by Responding Pharmacists Practicing in Chain Community Pharmacies

	Not at all satisfied	Partly satisfied	Satisfied	More than satisfied	Very satisfied
	# of cases (% of row)				
Overall, how satisfied are you with the amount of time you spend in these work activities? (N = 1,194)	356 (29.8%)	512 (42.9%)	253 (21.2%)	35 (2.9%)	38 (3.2%)

Note: Satisfaction question refers to time spent in work activities listed in Table 5.2.5.

Table 5.3.1: Reported Changes in Time Spent in Work Activities since March 2020 by Responding Pharmacists Practicing in Independent Community Pharmacies

Work Activity	Significantly decreased	Decreased	No change	Increased	Significantly increased
	# of cases (% of row)				
Administering vaccines	7 (3.8)	10 (5.4)	76 (40.9)	44 (23.7)	49 (26.3)
Documenting information about services provided	2 (1.1)	6 (3.2)	104 (56.2)	51 (27.6)	22 (11.9)
Consulting with patients about coordination and use of prescription drug coverage	1 (0.5)	4 (2.2)	114 (61.6)	55 (29.7)	11 (5.9)
Providing medication synchronization services	4 (2.2)	6 (3.2)	116 (62.4)	52 (28.0)	8 (4.3)
Providing patient medication assistance (e. g. locating coupons, discounts, etc.)	2 (1.1)	6 (3.2)	124 (67.0)	46 (24.9)	7 (3.8)
Providing Medication Therapy Management (MTM) services	6 (3.2)	19 (10.2)	115 (61.5)	39 (20.9)	8 (4.3)
Administering non-vaccine medications (e. g. injection)	3 (1.6)	3 (1.6)	140 (75.7)	34 (18.4)	5 (2.7)
Dispensing Naloxone	5 (2.7)	5 (2.7)	139 (75.1)	28 (15.1)	8 (4.3)
Providing point-of-care COVID testing	13 (7.0)	5 (2.7)	134 (72.0)	21 (11.3)	13 (7.0)
Providing point-of-care non-COVID testing	9 (4.8)	2 (1.1)	154 (82.8)	13 (7.0)	8 (4.3)

Note: Only respondents who did not report an employment status change since March 2020 provided responses. The total number of respondents for these items ranged from 185-187 due to missing data.

Table 5.3.2: Reported Changes in Time Spent in Work Activities since March 2020 by Responding Pharmacists Practicing in Chain Community Pharmacies

Work Activity	Significantly decreased	Decreased	No change	Increased	Significantly increased
	# of cases (% of row)				
Administering vaccines	19 (2.4)	42 (5.3)	46 (5.8)	119 (15.0)	566 (71.5)
Documenting information about services provided	21 (2.7)	38 (4.8)	345 (43.7)	259 (32.8)	126 (16.0)
Consulting with patients about coordination and use of prescription drug coverage	27 (3.4)	44 (5.6)	438 (55.7)	202 (25.7)	76 (9.7)
Providing medication synchronization services	69 (8.8)	99 (12.6)	381 (48.4)	183 (23.2)	56 (7.1)
Providing patient medication assistance (e. g. locating coupons, discounts, etc.)	15 (1.9)	46 (5.8)	359 (45.6)	248 (31.5)	119 (15.1)
Providing Medication Therapy Management (MTM) services	96 (12.2)	135 (17.1)	385 (48.8)	140 (17.7)	33 (4.2)
Administering non-vaccine medications (e. g. injection)	21 (2.7)	19 (2.4)	601 (76.4)	86 (10.9)	60 (7.6)
Dispensing Naloxone	12 (1.5)	30 (3.8)	571 (72.6)	155 (19.7)	19 (2.4)
Providing point-of-care COVID testing	30 (3.8)	49 (6.2)	424 (53.9)	115 (14.6)	169 (21.5)
Providing point-of-care non-COVID testing	26 (3.3)	48 (6.1)	581 (73.8)	78 (9.9)	54 (6.9)

Note: Only respondents who did not report an employment status change since March 2020 provided responses. Total number of respondents for these items ranged from 787-792 due to missing data.

Table 5.4.1: Level of Agreement with Work Setting Characteristics Reported by Respondents Practicing in Independent Pharmacies

Work Setting Characteristic	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
	# of cases (% of row)			
I have a high level of autonomy in how I accomplish my work activities.	12 (4.8)	25 (10.0)	88 (35.3)	124 (49.8)
My manager/supervisor listens to me when I have concerns about my work	15 (6.1)	33 (13.4)	81 (32.8)	118 (47.8)
Designated spaces for patient care are appropriate for the services provided at my pharmacy.	20 (8.1)	39 (15.8)	106 (42.9)	82 (33.2)
The number of pharmacists at my primary work setting is adequate to meet patient care needs.	19 (7.6)	41 (16.5)	89 (35.7)	100 (40.2)
The number of work activities that I perform in my job extend beyond what I originally was hired to do.	53 (21.4)	39 (15.7)	94 (37.9)	62 (25.0)
My organization implements strategies to improve well-being and resiliency for employees.	40 (16.1)	59 (23.7)	99 (39.8)	51 (20.5)
I often need to extend my workday (by spending additional time outside of my scheduled work hours) to accomplish everything for which I am responsible.	51 (20.5)	48 (19.3)	69 (27.7)	81 (32.5)
The pharmacists with whom I work have a strong focus on public health and the community.	8 (3.2)	17 (6.9)	101 (40.9)	121 (49.0)
The pharmacists and staff that I work with have an attitude of “let’s make this work.”	12 (4.8)	30 (12.0)	95 (38.2)	112 (45.0)
My pharmacy has a strong culture of being innovative with services to meet patient care needs.	13 (5.3)	34 (13.8)	99 (40.1)	101 (40.9)
Patients are referred to us by local providers for the clinical services we provide.	14 (5.7)	35 (14.2)	117 (47.6)	80 (32.5)
My pharmacy is flexible in modifying operations to benefit staff and patients.	16 (6.5)	37 (15.0)	103 (41.7)	91 (36.8)
My pharmacy has strong partnerships with public health agencies in the community.	15 (6.1)	43 (17.4)	101 (40.9)	88 (35.6)

Note: Work setting characteristics in shaded area were only answered by respondents practicing in independent community pharmacies. Total number of respondents ranged from 246-249 due to missing data.

Table 5.4.2: Level of Agreement with Work Setting Characteristics Reported by Respondents Practicing in Chain Pharmacies

Work Setting Characteristic	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
	# of cases (% of row)			
I have a high level of autonomy in how I accomplish my work activities.	220 (20.7)	285 (26.8)	372 (35.0)	185 (17.4)
My manager/supervisor listens to me when I have concerns about my work	251 (23.7)	226 (21.3)	394 (37.2)	189 (17.8)
Designated spaces for patient care services at my work setting are appropriate for the services provided at my pharmacy.	297 (28.0)	238 (22.4)	360 (33.9)	167 (15.7)
The number of pharmacists at my primary work setting is adequate to meet patient care needs.	540 (50.8)	244 (23.0)	189 (17.8)	89 (8.4)
The number of work activities that I perform in my job extend beyond what I originally was hired to do.	70 (6.6)	74 (7.0)	285 (26.8)	633 (59.6)
My organization implements strategies to improve well-being and resiliency for employees.	517 (48.7)	279 (26.3)	218 (20.5)	47 (4.4)
I often need to extend my workday (by spending additional time outside of my scheduled work hours) to accomplish everything for which I am responsible.	103 (9.7)	97 (9.1)	278 (26.2)	584 (55.0)
Regulations limiting pharmacist workload would greatly improve patient safety in my work setting.	38 (3.6)	78 (7.4)	246 (23.2)	699 (65.9)
Pharmacists at my organization are losing their compassion and empathy for patient care.	72 (6.8)	113 (10.7)	331 (31.2)	545 (51.4)
Leadership at my organization consistently overlooks and underappreciates pharmacists.	90 (8.5)	141 (13.3)	297 (28.0)	534 (50.3)
My organization’s focus on meeting workload metrics results in unsafe pharmacy practice.	111 (10.5)	128 (12.1)	281 (26.5)	541 (51.0)
My organization does not try to hire additional pharmacy staff when they know demand for services at the pharmacy will be high.	87 (8.2)	196 (18.5)	292 (27.5)	485 (45.8)
My organization listens to the concerns of pharmacists related to unsafe pharmacy practice.	447 (42.2)	278 (26.2)	255 (24.1)	80 (7.5)

Note: Work setting characteristics in shaded area were only answered by respondents practicing in chain community pharmacies. Total number of respondents ranged from 1060-1062 due to missing data.

Table 5.5.1: Impact of Work Setting Characteristics on Patient Medication Safety Reported by Respondents Practicing in Independent Community Pharmacies

Work Characteristic	Significantly reduces patient medication safety	Reduces patient medication safety	Improves patient medication safety	Significantly improves patient medication safety
	# of cases (% of row)			
The level of autonomy you have in how you accomplish your work activities.	9 (3.8)	26 (11.0)	141 (59.5)	61 (25.7)
The number of pharmacists currently hired at your primary work setting.	16 (6.8)	47 (19.9)	116 (49.2)	57 (24.2)
The number of work activities that you perform in your job.	19 (8.0)	51 (21.4)	124 (52.1)	44 (18.5)
The extent to which my pharmacy modifies operations to benefit staff and patients.	16 (6.8)	33 (14.0)	134 (56.8)	53 (22.5)

Note: Work setting characteristics in shaded area were only answered by respondents practicing in independent community pharmacies. Total number of respondents ranged from 236-238 due to missing data.

Table 5.5.2: Impacts of Work Setting Characteristics on Patient Medication Safety Reported by Respondents Practicing in Chain Community Pharmacies

Work Characteristic	Significantly reduces patient medication safety	Reduces patient medication safety	Improves patient medication safety	Significantly improves patient medication safety
	# of cases (% of row)			
The level of autonomy you have in how you accomplish your work activities.	184 (18.1)	381 (37.5)	390 (38.4)	60 (5.9)
The number of pharmacists currently hired at your primary work setting.	385 (38.0)	385 (38.0)	201 (19.8)	42 (4.1)
The number of work activities that you perform in your job.	413 (40.6)	421 (41.4)	146 (14.3)	38 (3.7)
The extent to which your organization listens to the concerns of pharmacists related to unsafe pharmacy practice.	473 (46.7)	333 (32.9)	172 (17.0)	34 (3.4)
The extent to which your organization focuses on meeting workload metrics.	545 (53.7)	354 (34.9)	97 (9.6)	19 (1.9)
The extent to which your organization does not try to hire additional pharmacy staff when demand for services at the pharmacy will be high.	568 (56.2)	368 (36.4)	64 (6.3)	11 (1.1)

Note: Work setting characteristics in shaded area were only answered by respondents practicing in chain community pharmacies. Total number of respondents ranged from 1011-1018 due to missing data.

Section 6 Ambulatory Care and Inpatient Hospital Practice Settings: Work Activities and Work Setting Characteristics

6.1: Characteristics of Responding Licensed Ambulatory Care and Inpatient Hospital Pharmacists

Of the responding licensed pharmacists that reported practicing in ambulatory care settings and reported their gender, 75.3% were female (Table 6.1.1). A somewhat lower percentage (69.1%) of responding licensed pharmacists that reported practicing in hospital/health-system settings were female. The age of responding pharmacists in ambulatory care, as well as hospital/health-system settings was well-distributed with between 10.5% to 18.6% of respondents represented in each of the age categories from 24-50 years (Table 6.1.1). In terms of age, 45% and 41% of respondents practicing in ambulatory care and Hospital/Health-System practice settings, respectively, were 40 years old or younger. The largest percentage of responding pharmacists in ambulatory care and hospital/health-systems were between the ages of 31-35 years (18.6% and 17.1%, respectively). In terms of race, the largest percentage of respondents in ambulatory care and hospital/health-system practice settings was White (75.4% and 77.3%, respectively), and the second largest percentage was Asian (11.5% and 10.9%, respectively) (Table 6.1.2).

6.2: Ambulatory Care and Inpatient Hospital Pharmacists' Reported Time Spent in and Satisfaction with Work Activities

Tables 6.2.1-6.2.3 contain summaries of time and satisfaction in various work activities for respondents practicing in ambulatory care. Table 6.2.1 shows that responding pharmacists practicing in ambulatory care reported spending almost one-half (48.2%) of their time each week on patient care services not associated with medication dispensing and slightly over one-quarter of their time (28.4%) on patient care services associated with medication dispensing.

Over one-quarter of respondents spent more than 20 hours each week in five work activities: providing primary care to patients (35.2%), dispensing medications (26.6%), starting, modifying, or stopping drug therapy independent from a patient-specific order (30.3%), providing comprehensive medication management (30.3%), and providing disease state management (34.9%). Also, over one-third of respondents reported spending no time each week in six work activities: administering vaccines (78.8%), discussing mental health needs with patients (50.3), dispensing medications (56.6%), providing specialty care to patients (39.4%), performing activities typically performed by pharmacy technicians or medical assistants (41.0%), and assessing quality dashboard metrics and scheduling patients (46.6%).

Table 6.2.3 shows 70.5% of respondents practicing in ambulatory care were at least satisfied with time spent on work activities and 20% reported being very satisfied.

Tables 6.2.4-6.2.6 contain summaries of time and satisfaction in various work activities for respondents practicing in hospital inpatient pharmacies. Table 6.2.4 shows that responding pharmacists practicing in inpatient hospitals reported spending almost equal percentages of their time each week on patient care services not associated with medication dispensing (37.3%) and on patient care services associated with medication dispensing (35.7%).

For six of the work activities at least one-quarter of respondents reported spending at least 11 hours each week in those activities (Table 6.2.5). The work activities are providing direct patient care to inpatients on a unit (26.2%), engaging in hands-on drug preparation (26.3%), engaging in hands-on drug distribution (26.2%), drug level monitoring (30.7%), comprehensive medication

management (36.5%), management activities (25.3%). Also, for seven of the work activities, over one-half of respondents reported spending no time each week. The activities are administering vaccines (95.2%), administering non-vaccine medications (90.0%), seeing patients in an outpatient clinic (90.9%), rounding with a health care team on a unit (55.2%), providing direct patient care to inpatients on a unit (51.8%), verifying medication orders from home, responding to codes in the hospital.

In terms of satisfaction with time spent in work activities, 41% of responding inpatient hospital pharmacists reported they were “more than satisfied” or “very satisfied” with the amount of time spent in the work activities listed (Table 6.2.6). However, 35% reported they were “not at all” or “partially satisfied” with the amount of time spent in the work activities listed.

6.3: Reported Changes in Work Activities by Responding Pharmacists Practicing in Ambulatory Care and Inpatient Hospital Pharmacies

Across all work activities, the majority of responding pharmacists practicing in ambulatory care practice settings reported no change since March 2020 in time spent weekly on most activities (Table 6.3.1). Work activities with the greatest percentage of responding pharmacists in ambulatory care reporting increased time spent included coordinating patient access to medications (38.1%), discussing mental health needs with patients (28.8%), and performing activities typically performed by pharmacy technicians or medical assistants (28.6%).

The majority of responding inpatient hospital pharmacists reported no change in time spent in the activity since March 2020 for all but one of the listed work activities (Table 6.3.2). Work activities with the greatest percentage of responding inpatient hospital pharmacists reporting increased time spent since March 2020 included directly dealing with drug supply shortages (50.6%), engaging in hands-on drug preparation (23.9%), management activities (23.8%), and engaging in hands-on drug distribution (23.1%). The work activities that yielded the greatest percentage of responding inpatient hospital pharmacists reporting a decrease in time spent were rounding with a health care team on a unit (13.9%) and providing direct patient care to inpatients on a unit (12.1%). It appears that hospital/health-system pharmacists may have been required to shift time away from direct patient care activities to perform more hands-on drug-related activities that would normally be completed by technicians.

6.4: Reporting About Work Setting Characteristics by Respondents Practicing in Ambulatory Care and Inpatient Hospital Pharmacies

Tables 6.4.1 and 6.4.2 contain summaries of the level of agreement about work setting characteristics reported by respondents practicing in ambulatory care and inpatient hospital pharmacies, respectively. Respondents practicing in both settings were asked about the same 9 work characteristics. The responding pharmacists also were asked about work setting characteristics specific to ambulatory care or inpatient hospital pharmacies. The items in each table that are shaded were asked only to pharmacists practicing in the corresponding setting.

For the 9 work setting characteristics that were presented to respondents practicing in ambulatory care and inpatient hospital pharmacies, 7 of the 9 were agreed to by at least 50% of responding ambulatory care pharmacists, compared to 5 of the 9 that were agreed to by responding inpatient hospital pharmacists. The largest proportion of responding ambulatory care pharmacists strongly agreed that they had a high level of autonomy (59.6%) (Table 5.4.1), compared to 42.2% of responding inpatient hospital pharmacists (Table 5.4.2). The largest proportion of responding inpatient hospital pharmacists strongly agreed that their organization

was not doing enough to deal with the actual causes of employee stress and burnout (44.6%), compared to 33.6% of responding ambulatory care pharmacists. Over 40% of responding ambulatory care pharmacists at least somewhat agreed that their organization is flexible with the amount of time pharmacists can work virtually, compared to 28.9% of responding inpatient hospital pharmacists. Alternatively, 28.1% of responding ambulatory care pharmacists strongly disagreed that “Many of the work activities expected from me extend beyond my professional training or skill set”, compared to 40.5% of responding inpatient hospital pharmacists.

For the 4 work setting characteristics asked only of respondents in ambulatory care, more than 70% of responding pharmacists at least somewhat agreed with 2 of the 4 statements. The work setting characteristics with the largest percentage of pharmacists reporting they strongly agreed included, “The level of collaboration between me and the health care providers with whom I work is very high” (56.8%) and “I have co-workers with whom I can have open and honest conversations when I feel overwhelmed or exhausted with work” (45.9%). Alternatively, the largest percentage of responding pharmacists strongly disagreed that they did not have enough time with complex patients to provide needed care (20.6%).

More than 60% of responding inpatient hospital pharmacists at least somewhat agreed with 2 of the 4 work characteristic statements asked only to responding inpatient hospital pharmacists (Table 6.4.2). The work setting characteristics with the largest percentage of respondents reporting they strongly agreed included, “At my organization, pharmacists are consistently overlooked and underappreciated (31.8%) and “Because pharmacists are viewed as versatile, "go-to" professionals at my primary employer, they are performing additional patient care activities” (26.5%). Alternatively, the work setting characteristic with the largest percentage of respondents that reported they strongly disagree was about pharmacists losing their compassion and empathy for patient care (17.3%).

6.5: Reporting About How Work Setting Characteristics Impact Patient Medication Safety by Respondents Practicing in Ambulatory Care and Inpatient Hospital Pharmacies

Table 6.5.1 summarizes ambulatory care pharmacists’ responses regarding whether work setting characteristics impact patient medication safety. Nearly 90% (87.3%) of responding ambulatory care pharmacists reported that “The level of autonomy they had in how they accomplished their work activities” improves or significantly improves patient medication safety. Alternatively, 78.3% of responding ambulatory care pharmacists reported that “The lack of time during clinical visits with complex patients to provide the care they need” reduces or significantly reduces patient medication safety. Over one-quarter of respondents reported that the level of autonomy significantly improves patient medication safety and that the number of work activities they perform significantly improves patient medication safety.

Almost 85% (82.2%) of responding inpatient hospital pharmacists reported that “The level of autonomy they had in how they accomplished their work activities” improves or significantly improves patient medication safety (Table 6.5.2). Alternatively, 76.2% of respondents reported that “The extent to which your primary employer is dealing with the actual causes of employee stress and burnout” reduces or significantly reduces patient medication safety. For two work setting characteristics, the number of work activities, and the level of autonomy, at least one-fifth of responding inpatient hospital pharmacists reported that they significantly improve patient medication safety.

Table 6.1.1: Age and Gender Demographics of Responding Licensed Pharmacists Practicing in Ambulatory Care/Outpatient Clinics and Health System/Hospital Inpatient Practice Settings

	Ambulatory Care / Outpatient Clinic	Hospital / Health-System Inpatient
Gender	**# of cases (% of column)**	
Male	40 (24.1)	214 (30.7)
Female	125 (75.3)	482 (69.1)
Non-Binary	1 (0.6)	2 (0.3)
Missing	31 (15.7)	145 (17.2)
TOTAL	197	843
Age		
24-30	12 (11.8)	49 (12.0)
31-35	19 (18.6)	70 (17.1)
36-40	14 (13.7)	50 (12.2)
41-45	13 (12.7)	56 (13.7)
46-50	16 (15.7)	43 (10.5)
51-55	7 (6.9)	48 (11.7)
56-60	8 (7.8)	41 (10.0)
61-65	11 (10.8)	27 (6.6)
66-70	2 (2.0)	17 (4.2)
>70	0 (0.0)	8 (2.0)
Missing	95 (0.5)	434 (0.5)
TOTAL	197	843

Note: Column percentages do not include missing values. Table includes respondents reporting working in government and non-government clinics and hospitals.

Table 6.1.2: Race/Ethnicity of Responding Licensed Pharmacists Practicing in Ambulatory Care/Outpatient Clinics and Health System/Hospital Inpatient Practice Settings

	Ambulatory Care / Outpatient Clinic	Hospital / Health-System Inpatient
Race/Ethnicity	**# of cases (% of column)**	
American Indian	2 (1.6)	6 (1.1)
Asian	14 (11.5)	61 (10.9)
Black/African American	6 (4.9)	26 (4.7)
Latino/Latina	5 (4.1)	13 (2.3)
White/Caucasian	92 (75.4)	432 (77.3)
Other	3 (2.5)	21 (3.8)
Missing	75 (0.4)	284 (33.7)
TOTAL	197	843

Note: Column percentages do not include missing values. Table includes respondents reporting working in government and non-government clinics and hospitals.

Table 6.2.1: Percent of Time Spent in a Typical Week in Work Activities for Responding Pharmacists Practicing in Ambulatory Care

Work Activity	Mean	Standard Deviation	Range
Patient Care Services Associated with Medication Dispensing	28.4	37.1	0-100
Patient Care Services Not Associated with Medication Dispensing	48.2	36.5	0-100
Business/Organization Management	10.5	20.8	0-93
Research/Scholarship	3.0	9.6	0-90
Education	6.3	9.0	0-78
Other	3.7	15.3	0-100

Note: Total respondents for these items was 197 (i.e., respondents provided complete data across all items).

Table 6.2.2: Typical Hours per Week Spent on Work Activities by Responding Pharmacists Practicing in Ambulatory Care

Work Activity	0 hours	1-10 hours	11-20 hours	> 20 hours
	# of cases (% of row)			
Administering vaccines	130 (78.8)	31 (18.8)	1 (0.6)	3 (1.8)
Discussing mental health needs with patients	83 (50.3)	71 (43.1)	4 (2.4)	7 (4.2)
Coordinating patient access to medication	23 (13.8)	93 (56.0)	24 (14.5)	26 (15.7)
Providing primary care to patients	50 (30.3)	38 (23.0)	19 (11.5)	58 (35.2)
Dispensing medications	94 (56.6)	19 (11.4)	9 (5.4)	44 (26.6)
Providing specialty care to patients	65 (39.4)	42 (25.5)	20 (12.1)	38 (23.0)
Engaging in project work that is not directly related to patient care	44 (26.7)	99 (60.0)	7 (4.2)	15 (9.1)
Performing activities typically performed by pharmacy technicians or medical assistants	68 (41.0)	78 (47.0)	9 (5.4)	11 (6.6)
Starting, modifying, or stopping drug therapy independent from a patient-specific order	52 (31.5)	49 (29.7)	14 (8.5)	50 (30.3)
Providing comprehensive medication management	44 (26.7)	51 (30.9)	20 (12.1)	50 (30.3)
Providing disease state management	46 (27.8)	45 (27.1)	17 (10.2)	58 (34.9)
Assessing quality dashboard metrics and scheduling patients	77 (46.6)	65 (39.4)	12 (7.3)	11 (6.7)

Note: Total respondents for these items ranged from 165-166.

Table 6.2.3: Overall Satisfaction with Time Spent on Work Activities by Responding Pharmacists Practicing in Ambulatory Care

	Not at all satisfied	Partly satisfied	Satisfied	More than satisfied	Very satisfied
	# of cases (% of row)				
Overall, how satisfied are you with amount of time you spend in these work activities? (n = 169)	10 (6.0)	39 (23.0)	60 (35.5)	26 (15.0)	34 (20.0)

Note: Satisfaction question refers to time spent in work activities listed in Table 6.2.2.

Table 6.2.4 Percent of Time Spent in a Typical Week in Work Activities for Responding Pharmacists Practicing in Hospital Inpatient Settings

Work Activity	Mean	Standard Deviation	Range
Patient Care Services Associated with Medication Dispensing	35.7	31.8	0-100
Patient Care Services Not Associated with Medication Dispensing	37.4	29.3	0-100
Business/Organization Management	13.1	25.3	0-100
Research/Scholarship	2.5	7.4	0-100
Education	6.6	8.6	0-100
Other	4.6	16.6	0-100

Note: Note: A total of 797 respondents reported these data (i.e., respondents with complete data for all items).

Table 6.2.5: Typical Hours per Week Spent on Work Activities by Responding Pharmacists Practicing in Inpatient Hospital Pharmacies

Work Activity	0 hours	1-10 hours	11-20 hours	> 20 hours
	# of cases (% of row)			
Administering vaccines	672 (95.2)	32 (4.5)	1 (0.1)	1 (0.1)
Administering non-vaccine medications	636 (90)	28 (4.0)	8 (1.1)	35 (5.0)
Seeing patients in an outpatient clinic	641 (90.9)	47 (6.7)	8 (1.1)	9 (1.3)
Rounding with a health care team on a unit	389 (55.2)	223 (31.6)	56 (7.9)	37 (5.2)
Providing direct patient care to inpatients on a unit	366 (51.8)	156 (22.1)	65 (9.2)	120 (17.0)
Engaging in hands-on drug preparation	207 (29.4)	312 (44.3)	80 (11.3)	106 (15.0)
Engaging in hands-on drug distribution	186 (26.5)	306 (43.5)	95 (13.5)	116 (12.7)
Directly dealing with drug supply shortages	215 (30.5)	347 (49.3)	69 (9.8)	73 (10.4)
Verifying medication orders from home	517 (73.0)	121 (17.1)	30 (4.2)	40 (5.6)
Responding to codes in the hospital	388 (55.0)	271 (38.4)	25 (3.5)	21 (3.0)
Drug level monitoring	126 (17.8)	363 (51.4)	130 (18.4)	87 (12.3)
Comprehensive medication management	177 (25.1)	271 (38.4)	116 (16.4)	142 (20.1)
Management activities	315 (44.7)	211 (30.0)	48 (6.8)	130 (18.5)

Note: Total respondents for these items ranged from 704-708.

Table 6.2.6: Overall Satisfaction with Time Spent on Work Activities by Responding Pharmacists Practicing in Inpatient Hospital Pharmacies

	Not at All Satisfied	Partly Satisfied	Satisfied	More Than Satisfied	Very Satisfied
	# of cases (% of row)				
Overall, how satisfied are you with amount of time you spend in these work activities? (n = 709)	49 (6.9)	198 (27.9)	287 (40.5)	88 (12.4)	87 (12.3)

Note: Satisfaction question refers to time spent in work activities listed in Table 3.2.5.

Table 6.3.1: Reported Changes in Time Spent in Work Activities since March 2020 by Responding Pharmacists Practicing in Ambulatory Care

Work Activities	Decreased/ Decreased Significantly	No Change	Increased/ Increased Significantly
	# of cases (% of row)		
Administering vaccines	7 (6.7)	80 (76.9)	17 (16.3)
Discussing Mental Health Needs with Patients	2 (1.9)	72 (69.2)	30 (28.8)
Coordinating Patient Access to Medication	2 (1.9)	63 (60.0)	40 (38.1)
Providing Primary Care to Patients	3 (2.9)	73 (70.9)	27 (26.2)
Dispensing Medications	5 (4.8)	82 (78.1)	18 (17.1)
Providing Specialty Care to Patients	4 (3.9)	77 (74.8)	22 (21.4)
Engaging in Project Work that is not Directly Related to Patient Care	6 (5.7)	70 (66.7)	29 (27.6)
Performing Activities Typically Performed by Pharmacy Technicians or Medical Assistants	7 (6.7)	68 (64.8)	30 (28.6)
Starting, modifying, or stopping drug therapy independent from a patient-specific order	2 (1.9)	79 (76.0)	23 (22.1)
Providing Comprehensive Medication Management	2 (1.9)	80 (76.9)	22 (21.2)
Providing Disease State Management	2 (1.9)	76 (72.4)	27 (25.7)
Assessing Quality Dashboard Metrics and Scheduling Patients	2 (1.9)	83 (79.8)	19 (18.3)

Note: Respondents used a five-item response scale to report the extent to which time spent in each activity changed where 2 = Significantly Decreased, -1 = Decreased, 0 = No Change, 1 = Increased, 2 = Significantly Increased. Only respondents who did not report an employment status change since March 2020 provided responses.

Table 6.3.2: Reported Changes in Time Spent in Work Activities since March 2020 by Responding Pharmacists Practicing in Inpatient Hospital Pharmacies

	Decreased/ Decreased Significantly	No Change	Increased/ Increased Significantly
Work Activities	# of cases (% of row)		
Administering vaccines	15 (3.2)	420 (90.5)	29 (6.3)
Administering Non-vaccine Medications	4 (0.9)	438 (94.4)	22 (4.7)
Seeing Patients in an Outpatient Clinic	17 (3.7)	429 (92.5)	18 (3.9)
Rounding with a Health Care Team on a Unit	65 (14.0)	362 (77.8)	38 (8.2)
Providing Direct Patient Care to Inpatients on a Unit	56 (12.1)	373 (80.4)	35 (7.5)
Engaging in Hands-on Drug Preparation	17 (3.7)	336 (72.4)	111 (23.9)
Engaging in Hands-on Drug Distribution	17 (3.7)	339 (73.2)	107 (23.1)
Directly Dealing with Drug Supply Shortages	4 (0.9)	225 (48.5)	235 (50.6)
Verifying Medication Orders from Home	13 (2.8)	407 (87.7)	44 (9.5)
Responding to Codes in the Hospital	14 (3.0)	403 (87.0)	46 (9.9)
Drug Level Monitoring	9 (1.9)	352 (75.7)	104 (22.4)
Comprehensive Medication Management	17 (3.7)	358 (77.0)	90 (19.4)
Management Activities	9 (1.9)	346 (74.2)	111 (23.8)

Note: Respondents used a five-item response scale to report the extent to which time spent in each activity changed where 2 = Significantly Decreased, -1 = Decreased, 0 = No Change, 1 = Increased, 2 = Significantly Increased. Only respondents who did not report an employment status change since March 2020 provided responses.

Table 6.4.1: Level of Agreement with Work Setting Characteristics Reported by Respondents Practicing in Ambulatory Care

Work Setting Characteristics	Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
	# of cases (% of row)			
The number of work activities that I perform in my job extend beyond what I originally was hired to do.	20 (13.7)	23 (15.8)	57 (39.0)	46 (31.5)
I have a high level of autonomy in how I accomplish my work activities.	10 (6.8)	12 (8.2)	37 (25.3)	87 (59.6)
The number of pharmacists at my primary work setting is adequate to meet patient care needs.	27 (18.5)	42 (28.8)	46 (31.5)	31 (21.2)
My organization implements strategies to improve well-being and resiliency for employees.	26 (17.8)	34 (23.3)	63 (43.2)	23 (15.8)
I often need to extend my workday (by spending additional time outside of my scheduled work hours) to accomplish everything for which I am responsible.	24 (16.4)	25 (17.1)	54 (37.0)	43 (29.5)
My manager/supervisor listens to me when I have concerns about my work	16 (11.0)	19 (13.0)	55 (37.7)	56 (38.4)
Many of the work activities expected from me extend beyond my professional training or skill set.	41 (28.1)	63 (43.2)	31 (21.2)	11 (7.5)
My organization is not doing enough to deal with the actual causes of employee stress and burnout.	21 (14.4)	37 (25.3)	39 (26.7)	49 (33.6)
My organization is very flexible in terms of the amount of time each week that I can work virtually.	60 (41.1)	27 (18.5)	34 (23.3)	25 (17.1)
There is not enough time during my clinic visits with complex patients to provide the care they need.	29 (20.6)	49 (34.8)	40 (28.4)	23 (16.3)
I have co-workers with whom I can have open and honest conversations when I feel overwhelmed or exhausted with work.	11 (7.5)	14 (9.6)	54 (37.0)	67 (45.9)
The level of collaboration between me and the health care providers with whom I work is very high.	5 (3.4)	14 (9.6)	44 (30.1)	83 (56.8)
My organization listens to providers when attempting to modify processes to improve patient care.	22 (15.2)	29 (20.0)	74 (51.0)	20 (13.8)

Note: Work setting characteristics in shaded area were only answered by respondents practicing in ambulatory care. Total number of respondents ranged from 141-146 due to missing data.

Table 6.4.2: Level of Agreement with Work Setting Characteristics Reported by Respondents Practicing in Inpatient Hospital Pharmacies

Work Setting Characteristics	Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
	# of cases (% of row)			
The number of work activities that I perform in my job extend beyond what I originally was hired to do.	102 (15.3)	126 (18.9)	248 (37.1)	192 (28.7)
I have a high level of autonomy in how I accomplish my work activities.	40 (6.0)	83 (12.4)	264 (39.5)	282 (42.2)
The number of pharmacists at my primary work setting is adequate to meet patient care needs.	168 (25.1)	184 (27.5)	205 (30.6)	112 (16.7)
My organization implements strategies to improve well-being and resiliency for employees.	170 (25.4)	169 (25.3)	261 (39.1)	68 (10.2)
I often need to extend my workday (by spending additional time outside of my scheduled work hours) to accomplish everything for which I am responsible.	133 (19.9)	141 (21.1)	238 (35.7)	155 (23.2)
My manager/supervisor listens to me when I have concerns about my work	95 (14.3)	97 (14.6)	263 (39.5)	211 (31.7)
Many of the work activities expected from me extend beyond my professional training or skill set.	270 (40.5)	266 (39.9)	108 (16.2)	22 (3.3)
My organization is not doing enough to deal with the actual causes of employee stress and burnout.	51 (7.7)	113 (17.0)	205 (30.8)	297 (44.6)
My organization is very flexible in terms of the amount of time each week that I can work remotely.	446 (67.0)	94 (14.1)	92 (13.8)	34 (5.1)
I am engaging in many work activities that are preventing me from using my skills and training to improve patient care	110 (16.5)	252 (37.8)	210 (31.5)	94 (14.1)
Pharmacists at my organization are losing their compassion and empathy for patient care	115 (17.3)	166 (24.9)	257 (38.6)	128 (19.2)
At my organization, pharmacists are consistently overlooked and underappreciated	81 (12.2)	149 (22.4)	224 (33.6)	212 (31.8)
Because pharmacists are viewed as versatile, "go-to" professionals at my primary employer, they are performing additional patient care activities.	62 (9.3)	135 (20.2)	293 (43.9)	177 (26.5)

Note: Work setting characteristics in shaded area were only answered by respondents practicing in inpatient hospital pharmacies. Total number of respondents ranged from 666-669 due to missing data.

Table 6.5.1 Impact of Work Setting Characteristics on Patient Medication Safety Reported by Respondents Practicing in Ambulatory Care

Work Setting Characteristics	Significantly reduces patient medication safety	Reduces patient medication safety	Improves patient medication safety	Significantly improves patient medication safety
	# of cases (% of row)			
The number of work activities that you perform in your job.	10 (7.2)	21 (15.2)	62 (44.9)	45 (32.6)
The level of autonomy you have in how you accomplish your work activities.	4 (2.9)	13 (9.4)	82 (59.4)	39 (28.3)
The number of pharmacists currently hired at your primary work setting.	11 (8.0)	38 (27.5)	61 (44.2)	28 (20.3)
The extent to which work activities expected from you extend beyond your professional training or skill set.	8 (6.1)	56 (42.7)	54 (41.2)	13 (9.9)
The extent to which your organization is dealing with the actual causes of employee stress and burnout.	31 (23.1)	63 (47.0)	34 (25.4)	6 (4.5)
The lack of time during your clinic visits with complex patients to provide the care they need.	18 (14.0)	83 (64.3)	21 (16.3)	7 (5.4)
The extent to which your organization listens to providers when attempting to modify processes to improve patient care.	21 (15.8)	45 (33.8)	56 (42.1)	11 (8.3)

Note: Work setting characteristics in shaded area were only answered by respondents practicing in ambulatory care. Total number of respondents ranged from 129-138 due to missing data.

Table 6.5.2 Impact of Work Setting Characteristics on Patient Medication Safety Reported by Respondents Practicing in Inpatient Hospital Pharmacies

Work Setting Characteristics	Significantly reduces patient medication safety	Reduces patient medication safety	Improves patient medication safety	Significantly improves patient medication safety
	# of cases (% of row)			
The number of work activities that you perform in your job.	62 (9.7)	148 (23.1)	293 (45.8)	137 (21.4)
The level of autonomy you have in how you accomplish your work activities	27 (4.2)	86 (13.6)	394 (61.9)	129 (20.3)
The number of pharmacists currently hired at your primary work setting.	111 (17.4)	189 (29.7)	274 (43.0)	63 (9.9)
The number of work activities that you perform in your job that exceed your professional training or skill set.	37 (6.0)	333 (54.3)	206 (33.6)	37 (6.0)
The extent to which your primary employer is dealing with the actual causes of employee stress and burnout.	224 (35.7)	254 (40.5)	131 (20.9)	18 (2.9)
The extent to which the number of work activities in which you engage prevent you from using your skills and training to improve patient care.	67 (10.7)	321 (51.0)	212 (33.7)	29 (4.6)

Note: Work setting characteristics in shaded area were only answered by respondents practicing in inpatient hospital pharmacies. Total number of respondents ranged from 613-640 due to missing data.

Section 7: Work Life Variables

7.1 Work Life Variables by Race/Ethnicity

Tables 7.1.1-7.3.2 summarize the results of responding pharmacists' perceptions of work life variables that represent the constructs of job stress, job control, job satisfaction, work-home and home-work conflict and organizational commitment categorized by race/ethnicity, employment status change (ESC) since 2020 and gender. As shown in Table 7.1.1, greater than 60% of responding pharmacists reporting "Other" as their racial/ethnic group reported that working at current staffing levels, having so much work to do that everything cannot be done well, and dealing with difficult patients was highly stressful in comparison to other racial/ethnic groups. More than 64% of responding Latino/a/x pharmacists feared that a patient would be harmed by a medical error compared to other groups. Approximately one-third of all racial/ethnic groups reported that possessing inadequate information regarding a patient's medical condition was highly stressful.

On average, less than 19% of responding pharmacists reported a lot of job control, with Latinos/a/x reporting the least control in their ability to take time away during the workday (Table 7.1.2). Twenty-eight percent of responding Blacks and American Indians reported having a lot of control in time spent in various work activities. Approximately, 13% of responding White pharmacists reported a lot of control over their workload. Whites (>55%) and American Indians (>52%) were the most satisfied across all job satisfaction items compared to the other racial/ethnic groups. Almost one-half (46.8%) of responding Latinos/a/x were satisfied across all job satisfaction items.

Over 63% of most racial/ethnic groups of respondents, except those who reported their race/ethnicity as "Other" agreed (i.e., somewhat agreed or strongly agreed) that work had disadvantages for home life. Almost 45% (43%) of responding American Indians reported that their personal life interferes with their work life. Approximately 65% of responding White pharmacists felt more like part of the family at their organization and 71% of American Indians felt their organization had a great deal of personal meaning for them.

Table 7.1.3 summarizes responses to professional fulfillment items and two aspects of burnout: work exhaustion and interpersonal disengagement. On average, 26% of responding pharmacists reported that it was true (i.e., very true or completely true) that they felt happy at work. Less than 14% and 17% of American Indians and Latinos/a/x, respectively, reported it was true that they felt happy at work. Responding White pharmacists (40%) tended to feel more worthwhile at work, while respondents who reported their racial/ethnic group as "Other" felt their work was more meaningful (59.7%). Over 62% of all respondents across the racial/ethnic groups reported that they felt they were contributing professionally in ways that they value the most.

In terms of burnout, more than 40% of responding pharmacists who reported being American Indians, Asians or Latinos/a/x, felt a sense of dread "a lot or totally" over the past two weeks when they think about the work they have to do. Almost 60% of responding American Indians and Latinos/a/x, felt physically exhausted at work. A similar percentage of Latinos/a/x, (57.4%) reported feeling "a lot or totally" emotionally exhausted at work. One-quarter to one-third of responding pharmacists who reported their race/ethnicity as "Other" reported feeling less empathetic and less connected with their patients and less sensitive to others' feelings and emotions over the past two weeks "a lot or totally".

7.2 Work Life Variables by Experiencing an Employment Status Change since March 2020

In general, any ESC since March 2020 tended to have a positive effect on responding pharmacists' evaluation of the work life items. A greater proportion of responding pharmacists who did not experience an ESC since March 2020 rated each of the job stress items except "possessing inadequate information regarding a patient's medical condition" and "fearing a patient would be harmed by a medication error" as highly stressful compared to respondents that did experience an ESC since March 2020 (Table 7.2.1). A greater proportion of respondents who experienced an ESC since March 2020 responded more positively to job control items and job satisfaction items. A greater proportion of respondents who experienced an ESC since March 2020 reported less work-home conflict and more organizational commitment compared to respondents who did not experience an ESC since March 2020.

A greater proportion of responding pharmacists that experienced an ESC since March 2020 reported that they felt happy and worthwhile at work and that their work was more satisfying compared to respondents that did not experience an ESC since March 2020. A greater proportion of respondents who did not experience an ESC since March 2020 reported being emotionally exhausted and had interpersonal disengagement compared to respondents who did experience an ESC since March 2020.

7.3 Work Life Variables by Gender

Table 7.3.1 shows that for most of the job stress items, a greater proportion of responding female pharmacists rated items as highly stressful compared to male or non-binary responding pharmacists. For each of the job control items, a greater proportion of responding male pharmacists rated that they had a lot of job control compared to responding female pharmacists. A greater proportion of responding male and non-binary pharmacists reported being satisfied with their jobs compared to responding female pharmacists. A smaller proportion of responding non-binary pharmacists agreed with experiencing work-home or home-work conflict than male or female pharmacists, however, only 14.3% of non-binary respondents agreed that they felt like a part of the family at their organization.

Table 7.3.2 shows that a higher percentage of responding male pharmacists reported that each of the professional fulfillment items were true compared to female pharmacists. Fifty percent or more of non-binary responding pharmacists reported that each of the professional fulfillment items, except feeling happy at work (37%), was true. Although almost one-half of responding female pharmacists felt physically (45%) and emotionally (47%) exhausted at work, smaller percentages of male pharmacists reported that the interpersonal disengagement items regarding their patients were true. Interestingly, responding female pharmacists more often reported that the interpersonal disengagement items concerning their colleagues were true compared to responding male pharmacists.

7.4 Job and Pharmacy Turnover Intentions of Respondents by Race/Ethnicity, Experiencing an Employment Status Change, and Gender

Tables 7.4.1- 7.4.3 summarize job and pharmacy turnover intentions by race/ethnicity, whether a respondent experienced an ESC since March 2020 and gender. Overall, across all race/ethnicity groups, 36% of respondents reported that they likely (i.e., likely or very likely) would search for a different job in the next year (Table 7.4.1) and 25% reported that they likely

would leave their job within the next year. Over 75% of all respondents reported that they likely would be working as a pharmacist within the next year.

A total of 34.2% of responding White pharmacists reported that they were likely to search for other employment within the next year compared to 71.4% of American Indians, 53.2% of Latinos/a/x and 49.5% of Blacks (Table 7.4.1). Approximately 43% of responding Latino/a/x pharmacists and 39.4% of responding Blacks compared to 23% of responding Whites reported that they were likely to leave their current employer within the next year. Over 83% of responding pharmacists who reported their race/ethnicity as Latinos/a/x, reported that they likely would be working as a pharmacist within the next year compared to 57.1% of American Indians and 66.7% of responding pharmacists who reported their race/ethnicity as other. The highest proportion of respondents that reported they likely would retire in the next year were responding American Indians (14.3%) and Latinos/a/x (10.6%).

In terms of leaving pharmacy within the next 3 years, less than 20% of all respondents reported that they were likely to engage in any of the items describing leaving pharmacy practice (Table 7.4.1) A smaller percentage of responding White pharmacists reported that they were likely to stop practicing pharmacy (12.3%) or pursue a different career in a health field (11.3%) compared to other race/ethnicity groups. Smaller percentages of respondents who reported that their race/ethnicity was American Indian (14.3%) and White (14.7%) indicated that they were likely to pursue a career outside of pharmacy compared to other race/ethnicity groups. The highest proportion of respondents that reported they likely would retire in the next three years were responding American Indians (26%) and Latinos/a/x (26%).

There was very little difference in the percentage of respondents who reported that they likely would leave their job by whether they experienced an ESC since March 2020 (Table 7.4.2). Those respondents who did not experience an ESC since March 2020 were more likely to retire within the next year (9.5%) compared to those who had an ESC since March 2020 (5.6%).

In terms of pharmacy turnover intention, a greater percentage of respondents who experienced an ESC since March 2020 reported that they likely would stop practicing pharmacy to take time off (17.6%), pursue a different career in a health care field (15.5%), or pursue a career outside of health care (17.5%) within the next 3 years compared to respondents who did not experience an ESC since March 2020. A greater percentage of responding pharmacists who did not experience an ESC since March 2020 reported that they were likely to retire (20.3%) compared to those who experienced an ESC since March 2020 (12.3%). It appears that experiencing an ESC makes responding pharmacists more comfortable with the idea of making additional ESCs.

Table 7.4.3 shows that a greater percentage of responding female pharmacists (38.3%) reported that they were likely to search for other employment within the next year compared to responding male (33.4%) and non-binary pharmacists (25.0%). A greater percentage of responding female pharmacists (79.9%) reported that they were likely to work as a pharmacist in the next year compared to responding male pharmacists (73.3%). A greater percentage of responding male pharmacists (10.6%) and responding non-binary pharmacists (12.5%) reported that they were likely to retire within the next year compared to female pharmacists (6.5%).

There was very little difference across gender in terms of leaving the pharmacy profession to pursue a different career in a health care field. Twenty-five percent of responding non-binary pharmacists reported that they were likely to stop practicing pharmacy just to take time off and then return retire compared to male (13.5%) and female (15.1%) pharmacists.

Table 7.1.1: Job Stress, Job Control and Job Satisfaction Items by Race/Ethnicity

	Missing N=169	Am. Indian N=7	Asian N=251	Black N=96	Latino/a/x N=45	White N=1,850	Other N=70	Total N=2,490
Job Stress Items	(% highly stressful)							
In your workplace, how **stressful** is...								
working at current staffing levels? .	51.5	42.9	49.8	44.9	55.6	47.1	60.0	48.1
having so much work to do that everything cannot be done well?	52.1	57.1	57.4	52.7	59.1	54.3	69.6	54.9
dealing with difficult patients?	51.7	16.7	52.9	39.2	46.3	39.7	54.5	42.2
possessing inadequate information regarding a patient's medical condition?	33.3	28.6	36.1	31.3	34.1	26.9	38.6	28.9
fearing that a patient will be harmed by a medication error?	43.6	33.3	56.3	44.8	64.4	44.2	59.0	46.2
Job Control Items	**Missing N=172**	**Am. Indian N=7**	**Asian N=257**	**Black N=99**	**Latino/a/x N=47**	**White N=1,875**	**Other N=72**	**Total N=2,529**
At your workplace, how much **control** do you have over...	(% a lot)							
your ability to take time away from work during the workday?	12.2	28.6	14.0	21.2	6.4	15.0	11.1	14.7
the time spent in various work activities?	15.9	28.6	17.9	28.3	21.3	18.3	18.3	18.6
your own workload?	17.5	28.6	22.7	23.2	19.1	13.7	18.1	15.5
Job Satisfaction Items	**Missing N=160**	**Am. Indian N=7**	**Asian N=257**	**Black N=99**	**Latino/a/x N=47**	**White N=1,875**	**Other N=72**	**Total N=2,517**
In general, how **satisfied** are you with...	(% somewhat/very satisfied)							
the chance your job gives you to do what you are best at doing?	53.1	57.1	56.4	55.6	46.8	58.0	54.2	57.1
your present job in light of your career expectations?	57.2	71.4	53.3	53.5	46.8	59.0	58.3	57.9
your present job when you consider the expectations you had when you took the job?	52.5	57.1	50.6	54.5	46.8	55.1	48.6	54.1

Table 7.1.2: Work-Home Conflict, Home-Work Conflict and Organizational Commitment Items by Race/Ethnicity

Work-Home Conflict Item	**Missing N=141**	**Am. Indian N=7**	**Asian N=257**	**Black N=99**	**Latino/a/x N=47**	**White N=1,872**	**Other N=72**	**Total N=2,495**
	(% agree/strongly agree)							
In general, my work life has disadvantages for my home, family or social life.	74.5	71.4	63.8	62.6	66.0	66.9	56.9	66.6
Home-Work Conflict Item	**Missing N=141**	**Am. Indian N=7**	**Asian N=256**	**Black N=99**	**Latino/a/x N=46**	**White N=1,871**	**Other N=72**	**Total N=2,492**
	(% agree/strongly agree)							
My personal life often interferes with my responsibilities at work such as getting to work on time, accomplishing daily work tasks, or working overtime	17.0	42.9	26.2	22.2	13.0	13.2	18.1	15.3
Organizational Commitment Items	**Missing N=140**	**Am. Indian N=7**	**Asian N=257**	**Black N=99**	**Latino/a/x N=46**	**White N=1,870**	**Other N=72**	**Total N=2,491**
	(% agree/strongly agree)							
I feel like 'part of the family' at my organization	55.0	28.6	56.4	52.5	54.3	64.4	48.6	61.8
My organization has a great deal of personal meaning for me	44.3	71.4	50.6	41.8	45.7	54.2	41.7	52.3

Table 7.1.3: Professional Fulfillment, Work Exhaustion, and Interpersonal Disengagement Items by Race/Ethnicity

Professional Fulfillment Item	**Missing N=139**	**Am. Indian N=7**	**Asian N=256**	**Black N=99**	**Latino/a/x N=47**	**White N=1,875**	**Other N=70**	**Total N=2,492**
During the past two weeks…	(% very/completely true)							
I feel happy at work	27.2	14.3	20.3	27.3	17.0	26.6	25.0	25.7
I feel worthwhile at work	36.8	28.6	35.8	35.4	23.4	40.1	36.6	38.8
My work is satisfying to me	38.2	28.6	32.8	34.3	27.7	37.2	45.8	36.8
I feel in control when dealing with difficult problems at work	27.9	28.6	28.4	36.4	21.3	31.1	32.4	30.7
My work is meaningful to me	50.7	42.9	47.3	57.6	55.3	51.6	59.7	51.6
I'm contributing professionally in the ways I value most (e.g., patient care, teaching, research, and leadership)	62.2	71.4	62.1	64.6	63.8	62.7	69.4	62.9
Work Exhaustion Items	**Missing N=128**	**Am. Indian N=7**	**Asian N=257**	**Black N=98**	**Latino/a/x N=46**	**White N=1,875**	**Other N=72**	**Total N=2,483**
During the past 2 weeks I have felt…	(% a lot/totally)							
A sense of dread when I think about work I have to do	34.4	42.9	40.1	28.6	43.5	34.7	37.5	35.2
Physically exhausted at work	47.2	57.1	45.9	36.4	59.6	40.7	51.4	42.1
Lacking in enthusiasm at work	35.9	14.3	37.4	39.4	51.1	34.6	40.3	35.5
Emotionally exhausted at work	49.2	42.9	45.9	40.4	57.4	42.3	45.8	43.4
Interpersonal Disengagement Items	**Missing N=114**	**Am. Indian N=7**	**Asian N=253**	**Black N=98**	**Latino/a/x N=47**	**White N=1,859**	**Other N=71**	**Total N=2,449**
During the past 2 weeks my job has caused me to feel…	(% a lot/totally)							
Less empathetic with my patients	21.9	14.3	22.9	13.3	14.9	20.3	23.9	20.3
Less interested in talking with my patients	21.1	14.3	25.7	15.3	14.9	22.3	25.0	22.2
Less connected with my patients	21.9	14.3	26.9	15.3	19.1	22.8	29.2	23.0

Less empathetic with my colleagues	14.0	14.3	16.5	15.2	19.1	18.7	20.8	18.1
Less sensitive to others' feelings/emotions	12.4	14.3	18.4	13.1	14.9	16.8	23.6	16.8
Less connected with my colleagues	15.8	28.6	16.9	18.2	25.5	18.5	23.6	18.5

Table 7.2.1: Job Stress, Job Control, Job Satisfaction, Work-Home Conflict, Home-Work Conflict and Organizational Commitment Items by Experiencing an Employment Status Change Since 2020

	Employment Status Change Since 2020		
Job stress Items	**Yes N=874**	**No N=1,616**	**Total N=2,490**
In your workplace, how **stressful** is...	(% highly stressful)		
working at current staffing levels?	42.1	51.3	48.1
having so much work to do that everything cannot be done well?	51.3	56.9	54.9
dealing with difficult patients?	38.2	44.4	42.2
possessing inadequate information regarding a patient's medical condition?	30.3	28.1	28.9
fearing that a patient will be harmed by a medication error?	45.4	46.6	46.2
Job Control Items	**Yes N=895**	**No N=1,634**	**Total N=2,529**
At your workplace, how much **control** do you have over...	(% a lot)		
your ability to take time away from work during the workday?	17.2	13.3	14.7
the time spent in various work activities?	20.8	17.3	18.6
your own workload?	16.1	15.1	15.5
Job Satisfaction Items	**Yes N=891**	**No N=1,626**	**Total N=2,517**
In general, how **satisfied** are you with...	(% somewhat/very satisfied)		
the chance your job gives you to do what you are best at doing?	62.1	54.4	57.1
your present job in light of your career expectations?	61.7	55.8	57.9
your present job when you consider the expectations you had when you took the job?	58.4	51.8	54.1
Work-Home Conflict	**Yes N=881**	**No N=1,614**	**Total N=2,495**
	(% agree/strongly agree)		
In general, my work life has disadvantages for my home, family or social life.	62.2	69.0	66.6
Home-Work Conflict	**Yes N=880**	**No N=1,612**	**Total N=2,492**
	(% agree/strongly agree)		
My personal life often interferes with my responsibilities at work such as getting to work on time, accomplishing daily work tasks, or working overtime.	15.0	15.5	15.3

Organizational Commitment	**Yes N=880**	**No N=1,611**	**Total N=2,491**
	(% agree/strongly agree)		
I feel like 'part of the family' at my organization.	63.7	60.8	61.8
My organization has a great deal of personal meaning for me.	54.5	51.1	52.3

Table 7.2.2 Professional Fulfillment, Work Exhaustion and Interpersonal Disengagement Items by Experiencing an Employment Status Change Since 2020

	Employment Status Change Since 2020		
Professional Fulfillment Items	**Yes N=881**	**No N=1,611**	**Total N=2,492**
During the past two weeks…	(%very/completely true)		
I feel happy at work	31.1	22.8	25.7
I feel worthwhile at work	41.9	37.1	38.8
My work is satisfying to me	40.2	34.9	36.8
I feel in control when dealing with difficult problems at work	32.6	29.7	30.7
My work is meaningful to me	51.8	51.6	51.6
I'm contributing professionally in the ways I value most (e.g., patient care, teaching, research, and leadership)	63.9	62.4	62.9
Work Exhaustion Items	**Yes N=878**	**No N=1,605**	**Total N=2,483**
During the past 2 weeks I have felt…	(% a lot/totally)		
A sense of dread when I think about work I have to do	31.2	37.4	35.2
Physically exhausted at work	37.4	44.7	42.1
Lacking in enthusiasm at work	31.7	37.6	35.5
Emotionally exhausted at work	38.7	45.9	43.4
Interpersonal Disengagement Items	**Yes N=866**	**No N=1,583**	**Total N=2,449**
During the past 2 weeks my job has caused me to feel...	(%)		
Less empathetic with my patients	17.9	21.7	20.3
Less interested in talking with my patients	21.1	22.8	22.2
Less connected with my patients	21.7	23.6	23.0
Less empathetic with my colleagues	16.2	19.2	18.1
Less sensitive to others' feelings/emotions	15.8	17.3	16.8
Less connected with my colleagues	17.0	19.4	18.5

Table 7.3.1 Job Stress, Job Control, Job Satisfaction, Work-Home Conflict, Home-Work Conflict and Organizational Commitment Items by Gender

	Gender			
Job stress Items	**Men N=876**	**Women N=1,524**	**Non-Binary N=7**	**Total N=2,407**
In your workplace, how **stressful** is...	(% highly stressful)			
working at current staffing levels?	45.1	49.7	42.9	48
having so much work to do that everything cannot be done well?	48.6	58.8	42.9	55.1
dealing with difficult patients?	38.9	43.6	57.1	41.9
possessing inadequate information regarding a patient's medical condition?	27.1	29.9	0	28.7
fearing that a patient will be harmed by a medication error?	41.2	49.4	28.6	46.3
Job Control Items	**Men N=894**	**Women N=1,544**	**Non-Binary N=8**	**Total N=2,446**
At your workplace, how much **control** do you have over...	(% a lot)			
your ability to take time away from work during the workday?	16.2	13.9	12.5	14.7
the time spent in various work activities?	19.6	18.0	25.0	18.6
your own workload	16.7	14.8	12.5	15.5
Job Satisfaction Items	**Men N=891**	**Women N=1,541**	**Non-Binary N=8**	**Total N=2,440**
In general, how **satisfied** are you with...	(% somewhat/very satisfied)			
the chance your job gives you to do what you are best at doing?	58.8	56.3	62.5	57.2
your present job in light of your career expectations?	60.4	56.2	75.0	57.8
your present job when you consider the expectations you had when you took the job?	57.8	51.7	75.0	54.0
Work-Home Conflict Item	**Men N=887**	**Women N=1,535**	**Non-Binary N=8**	**Total N=2,430**
	(% agree/strongly agree)			
In general, my work life has disadvantages for my home, family, or social life.	66.3	66.6	50.0	66.5
Home-Work Conflict Item	**Men N=886**	**Women N=1,533**	**Non-Binary N=8**	**Total N=2,427**

	(% agree/strongly agree)			
My personal life often interferes with my responsibilities at work such as getting to work on time, accomplishing daily work tasks, or working overtime.	16.6	14.9	0	15.5
Organizational Commitment Items	**Men N=888**	**Women N=1,533**	**Non-Binary N=8**	**Total N=2,429**
	(% agree/strongly agree)			
I feel like 'part of the family' at my organization.	61.7	62.8	14.3	62.2
My organization has a great deal of personal meaning for me.	51.8	53.2	50.0	52.7

Table 7.3.2 Professional Fulfillment, Work Exhaustion, and Interpersonal Disengagement by Gender

	Gender			
Professional Fulfillment Items	**Men N=886**	**Women N=1,536**	**Non-Binary N=8**	**Total N=2,430**
During the past two weeks…	(% very/completely true)			
I feel happy at work	29.6	23.4	37.5	25.7
I feel worthwhile at work	43.1	36.5	50.0	38.9
My work is satisfying to me	39.3	35.2	50.0	36.7
I feel in control when dealing with difficult problems at work	35.2	28.2	62.5	30.8
My work is meaningful to me	52.5	50.8	87.5	51.6
I'm contributing professionally in the ways I value most (e.g., patient care, teaching, research, and leadership)	63.7	62.1	75.0	62.7
Work Exhaustion Items	**Men N=882**	**Women N=1,534**	**Non-Binary N=8**	**Total N=2,424**
During the past 2 weeks I have felt…	(% a lot/totally)			
A sense of dread when I think about work I have to do	31.0	38.0	25.0	35.4
Physically exhausted at work	36.3	45.5	37.5	42.1
Lacking in enthusiasm at work	32.0	37.7	37.5	35.7
Emotionally exhausted at work	37.3	47.0	25.0	43.4
Interpersonal Disengagement Items	**Men N=872**	**Women N=1,517**	**Non-Binary N=8**	**Total N=2,397**
During the past 2 weeks my job has caused me to feel...	(% a lot/totally)			
Less empathetic with my patients	21.3	19.8	25.0	20.4
Less interested in talking with my patients	23.3	21.8	0.0	22.3
Less connected with my patients	24.9	22.0	25.0	23.0
Less empathetic with my colleagues	16.3	19.7	12.5	18.5
Less sensitive to others' feelings/emotions	16.6	17.4	0.0	17.1
Less connected with my colleagues	18.8	18.8	0.0	18.7

Table 7.4.1: Job and Pharmacy Turnover Intentions of Respondents by Race/Ethnicity

Job Turnover Intention Items	**Missing N=106**	**American Indian N=7**	**Asian N=256**	**Black N=99**	**Latino/a/x N=47**	**White N=1874**	**Other N=72**	**Total N=2461**
	(% likely/very likely)							
How likely is it that you will search for other employment within the next year	33.0	71.4	44.1	49.5	53.2	34.2	41.7	36.4
How likely is it that you will actually leave your current employment within the next year	21.9	28.6	30.1	39.4	42.6	23.0	23.6	24.7
How likely is it that you will be working as a pharmacist within the next year	70.8	57.1	71.1	75.8	83.0	79.1	66.7	77.4
How likely is it that you will retire within the next year	6.7	14.3	8.2	9.1	10.6	8.1	6.9	8.1
Pharmacy Turnover Intention Items	**Missing N=82**	**American Indian N=7**	**Asian N=255**	**Black N=98**	**Latino/a/x N=47**	**White N=1865**	**Other N=72**	**Total N=2483**
Consider your plans in the **next 3 years** about you **leaving pharmacy practice**…	(% likely/very likely)							
How likely is it that you will stop practicing pharmacy just to take time off to recalibrate or get healthy, and then return to pharmacy practice	18.3	42.9	20.4	24.5	29.8	12.3	20.8	14.5
How likely is it that you will stop practicing pharmacy and pursue a different career in a health care field	16.9	28.6	18.4	21.4	14.9	11.3	9.9	12.7
How likely is it that you will stop practicing pharmacy and pursue a career outside of health care	25.6	14.3	19.1	20.4	17.0	14.7	18.1	15.9
How likely is it that you will retire	18.1	28.6	14.5	13.3	25.5	17.9	15.3	17.4

Table 7.4.2: Job and Pharmacy Turnover Intentions of Respondents by Experiencing an Employment Status Change Since March 2020

	Employment Status Change Since 2020		
Job Turnover Intention Items	**Yes N=875**	**No N=1586**	**Total N=2461**
	(% likely/very likely)		
How likely is it that you will search for other employment within the next year	35.7	36.9	36.4
How likely is it that you will actually leave your current employment within the next year	25.2	24.5	24.7
How likely is it that you will be working as a pharmacist within the next year	76.4	78.0	77.4
How likely is it that you will retire within the next year	5.6	9.5	8.1
Pharmacy Turnover Intention Items	**Yes N=866**	**No N=1560**	**Total N=2426**
Consider your plans in the **next 3 years** about you **leaving pharmacy practice**…	(% likely/very likely)		
How likely is it that you will stop practicing pharmacy just to take time off to recalibrate or get healthy, and then return to pharmacy practice	17.6	12.8	14.5
How likely is it that you will stop practicing pharmacy and pursue a different career in a health care field	15.5	11.2	12.7
How likely is it that you will stop practicing pharmacy and pursue a career outside of health care	17.5	15.1	15.9
How likely is it that you will retire	12.3	20.3	17.4

Table 7.4.3: Job and Pharmacy Turnover Intentions of Respondents by Gender

Job Turnover Intention Items	**Men N=878**	**Women N=1526**	**Non-Binary N=8**	**Total N=2412**
	(% likely/very likely)			
How likely is it that you will search for other employment within the next year	33.4	38.3	25.0	36.5
How likely is it that you will actually leave your current employment within the next year	25.1	24.7	25.0	24.8
How likely is it that you will be working as a pharmacist within the next year	73.7	79.9	75.0	77.6
How likely is it that you will retire within the next year	10.8	6.5	12.5	8.1
Pharmacy Practice Turnover Intentions Items	**Men N=869**	**Women N=1507**	**Non-Binary N=8**	**Total N=2424**
Consider your plans in the **next 3 years** about you **leaving pharmacy practice**…	(% likely/very likely)			
How likely is it that you will stop practicing pharmacy just to take time off to recalibrate or get healthy, and then return to pharmacy practice	13.5	15.1	25.0	14.6
How likely is it that you will stop practicing pharmacy and pursue a different career in a health care field	12.8	12.7	12.5	12.7
How likely is it that you will stop practicing pharmacy and pursue a career outside of health care	16.9	15.3	12.5	15.9
How likely is it that you will retire	21.5	15.1	25.0	17.5

Section 8: Diversity, Equity, and Inclusion

8.1 Summary of Diversity, Equity, and Inclusions Items for All Respondents

Tables 8.1.1-8.3.4 summarize all licensed pharmacist respondents' views of Diversity, Equity, and Inclusion (DEI) items and the adoption of DEI related activities overall and by race/ethnicity, age, practice setting, and community practice setting. At least 55% of responding pharmacists agreed (i.e., somewhat or strongly agreed) with each of the diversity-related items (Table 8.1.1). In terms of equity items, less than 46% of respondents agreed that the process for career advancement/promotion is transparent to all employees and that they felt supported in their careers. Less than 50% of respondents agreed that people from all backgrounds and identities have equitable opportunities to advance in their careers and have access to appropriate benefits and representation.

For the inclusion items, 21% of respondents disagreed (i.e., somewhat or strongly disagreed) that they felt their unique background was valued or that they felt a sense of belonging at their primary employer. Over 70% of respondents agreed that they felt respected by their employer.

Responding pharmacists' overall views regarding DEI suggested that a small percentage (12%) disagreed that leadership was prioritizing DEI. However, 34% of respondents were neutral in their response that leadership was prioritizing DEI and almost 40% were neutral in their response that the culture at their primary employer, as it relates to DEI, needs improvement.

One-half of respondents reported that their primary employer implemented a DEI committee and developed programs to address access to care (Table 8.1.2). Over 60% of respondents reported that DEI training was available to all employees (68%) and that employees are required to attend trainings (63%). Over one-half of respondents (56%) reported that their primary employers were trying to hire a more diverse workforce and 57% reported success in hiring more diverse providers. Trainings and committees are typical responses to calls to increase diversity and not a lot of active, creative activities were reported being done to address DEI.

8.2 Summary of Diversity, Equity, and Inclusions Items for All Respondents by Race/Ethnicity and Age

Generally, a smaller percentage of Black respondents agreed with the items related to diversity relative to the other racial/ethnic groups (Table 8.2.1). A smaller percentage of American Indian respondents (42.9%) agreed that their primary employer values diversity compared to the other race/ethnicity groups.

A greater percentage of American Indian respondents (71.4%) agreed that they felt supported in their career growth compared to the other racial/ethnic groups. A smaller percentage of Black respondents (42.9%) and Latinos/a/x respondents (39.6%) agreed that people from all backgrounds and ranges of identities have equitable opportunities to advance their careers compared to the other groups. Generally, 50% of Black and Latinos/a/x respondents agreed that people from all backgrounds have equal access to appropriate benefits and representation, smaller percentages compared to the other groups.

For inclusion items, a greater percentage of White, American Indian, and respondents whose racial/ethnicity data were missing agreed that their unique background and identities were

valued by their employer. Similar percentages (51%-60%) of all groups except for those who identified as “Other” agreed that they felt a sense of belonging at their primary employer.

In terms of overall view of DEI activities, 71.4% of American Indian respondents and 54.3% of White respondents agreed that their primary employer is prioritizing improving DEI. Less than 35% of White respondents, respondents who identified as Others and respondents whose race/ethnicity were missing agreed that the culture at their primary employer as it relates to DEI needs improvement compared to greater than 55% of Black respondents and American Indian respondents. The findings suggest that when employers desire to address DEI issues at their workplace, they must ask diverse members of their staff for their recommendations and follow through on these suggestions for improvement.

Table 8.2.2 presents the perceptions of adoption of DEI activities by respondents’ race/ethnicity. Only 34%-39% of respondents who identified as Blacks, Latinos/a/x, Asians, and Whites reported that their employers are conducting employee focus groups to learn what is needed in terms of DEI. At least 61% of respondents across all groups except Blacks (57.3%), reported that DEI trainings are available to all employees.

In general, older responding pharmacists were more likely to agree to most of the diversity items (Table 8.2.3). A greater percentage of respondents >65 years old (82%) agreed that their primary employer values diversity compared to other age groups.

Only 39.1% of responding pharmacists between 24-35 years old agreed that the process for career advancement/promotions is transparent to all employees. Forty-four percent of respondents 46-65 years old agreed that they felt supported in their career growth by their primary employer. There were no large differences across age groups in terms of agreement that people from all backgrounds have equitable opportunities to advance and have equal access to appropriate benefits and representation at their primary employer.

A smaller percentage of responding pharmacists 46-55 years old (45.8%) agreed that their unique background and identity are valued by their employer, compared to the other age groups. Seventy-two percent of respondents >65 years old agreed that they felt a sense of belonging by their employer, a greater percentage compared to the other age groups. A greater percentage of younger responding pharmacists (41%) agreed that the culture at their primary employer needs improvement, compared to the other age groups.

Smaller percentages of responding pharmacists 24-35 years old and >65 years old reported that their employer created a DEI committee and that their employers were actively trying to hire a more diverse provider population compared to other age groups (Table 8.2.4). Thirty-three percent and 55.9% of responding pharmacists 24-35 years old reported that their employer was conducting employee focus groups to learn what is needed in terms of DEI and that their employer was successful in hiring a more diverse provider population, respectively, both relatively low percentages. A greater proportion of respondents 24-35 years old (72.7%) reported that DEI training is available to all employees compared to other age groups.

8.3 Summary of Diversity, Equity, and Inclusions Items for All Respondents by Practice Setting

Greater than 80% of responding pharmacists working in non-patient care settings agreed with all the diversity items (8.3.1). A smaller percentage of respondents working in community

pharmacies (49.3%) agreed that their employer invests time and energy into building a diverse work staff.

Agreement with the equity items was more varied across practice settings. Approximately, 37% of respondents working at hospital inpatient pharmacies agreed that the process for career promotion was transparent compared to 62% of respondents working in non-patient care settings. A total of 38.6% of respondents working at community pharmacies agreed that they felt supported in their career growth, a smaller percentage compared to other practice settings. Eighty-one percent of respondents working at non-patient care settings and 77.8% of respondents working in other patient care settings agreed that people from all backgrounds have access to appropriate benefits and representation, the largest percentages across the practice settings.

In terms of inclusion items, 40% of responding community pharmacists agreed that their unique background was valued by their employer and 49.8% agreed that they felt a sense of belonging at their primary employer, the largest percentages across practice settings.

A total of 46.5% of responding community pharmacists agreed that leadership at their primary employer was prioritizing improving DEI compared to other settings, the smallest percentage across practice settings. Across all practice settings, a greater percentage of respondents working in ambulatory care (44.1%), non-patient care settings (44.9%) and other settings (40.0%) agreed that the culture at their primary employer needs improvement.

Respondents working in non-patient care settings were more likely to report that their employer created a DEI committee (81.5%), held employee focus groups (61.9%), had DEI training available to all employees (87.5%), was actively trying to hire a more diverse workforce (77.8%), and had been successful hiring more diverse providers (75.5%) than respondents working at other practice settings (Table 8.3.2). Respondents working in ambulatory care (73.1%) and non-patient care settings (71.2%) were more likely to report that their employer implemented programs to address access to care issues for vulnerable populations compared to the other practice settings.

Tables 8.3.3 and 8.3.4 further examine the DEI items by type of community pharmacy practice setting. A smaller percentage of respondents practicing in supermarket pharmacies agreed that their employer values diversity (66.8%) compared to the other community practice settings (Table 8.3.3). Approximately one-half of respondents across all community practice settings agreed that their employer invests time and energy into building a diverse work staff.

In terms of equity, the largest percentage of respondents (70.0%) that agreed that people from all backgrounds have equitable opportunities to advance were practicing in independent pharmacies (70.0%). Respondents practicing in independent pharmacies (68.7%) and respondents practicing in small chain pharmacies (71.8%) more often agreed that people from all backgrounds have equal access to appropriate benefits and representation compared to the other community practice settings.

Only 32% of responding pharmacists practicing in large chain, mass merchandiser and supermarket pharmacies agreed that their unique background was valued compared to more than 60% of respondents practicing in independent and small chain pharmacies. Greater than 80% of respondents practicing in independent and small chain pharmacies agreed that they felt a sense of belonging and respect by their colleagues, a larger percentage compared to other

community practicing settings. The findings suggest that larger employers need to think of ways to provide more satisfaction and connectedness for their employees and likely may be able to learn effective strategies in this area from smaller employers.

In terms of overall views on diversity, 49.4% of respondents practicing in large chain pharmacies agreed that leadership is prioritizing improving DEI, a higher percentage compared to some of the other community practice settings. Responding independent pharmacists (24.2%) and mass merchandizer pharmacists (25.4%) less often agreed that the DEI culture at their practice setting needs improvement compared to the other community practice settings.

The adoption of DEI activities is less likely to occur in some practice settings. Less than 15% of responding independent and small chain pharmacists reported that their employer created a DEI committee or is conducting employee focus group to learn what is needed in terms of DEI, a smaller percentage compared to the other community practice settings (Table 8.3.4). Respondents practicing in large chain pharmacies were more often reported that their employers implemented programs to address access to care issues for vulnerable populations (41.1%), require employees to attend DEI trainings (70.9%) and are actively trying to hire a more diverse provider population (55.8%) compared with other community practice settings. Across all community practice settings, less than 51% of respondents reported that their employers have been successful in hiring more diverse providers. The findings suggest that smaller employers are not adopting DEI activities as much as larger employers. Could small employers learn about strategies for adoption from larger employers?

Table 8.1.1: Summary of Diversity, Equity, and Inclusion Items for All Respondents

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
Diversity Items	# of cases (% of row)				
My primary employer values diversity.	81 (3.0)	80 (3.0)	566 (21.0)	708 (26.2)	1260 (46.8)
Leadership at my primary employer understands that diversity is critical to our future success.	112 (4.2)	120 (4.5)	699 (26.0)	693 (25.8)	1063 (39.6)
My primary employer invests time and energy into building a diverse work staff.	156 (5.8)	175 (6.5)	877 (32.6)	659 (24.5)	822 (30.6)
Equity Items					
The process for career advancement/promotion is transparent to all employees from my primary employer.	370 (13.9)	438 (16.4)	684 (25.7)	707 (26.5)	464 (17.4)
People from all backgrounds and with a range of identities and abilities have equitable opportunities to advance their careers at my primary employer.	181 (6.8)	185 (6.9)	645 (24.2)	787 (29.6)	864 (32.5)
I feel supported in my career growth at my primary employer.	383 (14.4)	395 (14.8)	652 (24.5)	675 (25.4)	556 (20.9)
People from all backgrounds and range of identities have equal access to appropriate benefits and representation at my primary employer.	139 (5.2)	145 (5.5)	576 (21.7)	782 (29.4)	1017 (38.2)
Inclusion					
I feel my unique background and identity (i.e., my differences) are valued by my primary employer.	274 (10.4)	292 (11.0)	805 (30.4)	627 (23.7)	648 (24.5)
I feel a sense of belonging at my primary employer.	295 (11.1)	310 (11.7)	495 (18.7)	794 (29.6)	762 (28.6)
I feel respected by my colleagues.	130 (4.9)	143 (5.4)	326 (12.3)	940 (35.5)	1109 (41.8)
Overall Views on Diversity, Equity, and Inclusion					
Leadership at my primary employer is prioritizing improving Diversity, Equity, and Inclusion (DEI).	156 (5.9)	163 (6.2)	913 (34.7)	676 (25.7)	726 (27.6)
The culture at my primary employer as it relates to DEI needs improvement.	339 (12.9)	357 (13.6)	1035 (39.3)	497 (18.9)	404 (15.3)

Table 8.1.2 Adoption by Primary Employer of Diversity, Equity, and Inclusion (DEI) Activities Reported by All Respondents

	Yes	No
My primary employer:	# of cases (% of row)	
created a DEI Committee that will develop and implement DEI-related activities.	1239 (50.6)	1208 (49.4)
is conducting employee focus groups to learn what is needed in terms of DEI at my primary employer.	901 (39.1)	1480 (60.9)
has implemented programs to address access to care issues for vulnerable populations in my community.	1227 (50.5)	1204 (49.5)
has DEI training/activities available to all employees.	1686 (68.9)	760 (31.1)
requires all employees to participate in DEI training/activities.	1551 (63.5)	892 (36.5)
is actively trying to hire a more diverse provider (i.e., pharmacists, physicians, nurses) population.	1352 (55.9)	1065 (44.1)
has been successful in hiring a more diverse provider (i.e., pharmacists, physicians, nurses) population.	1385 (57.5)	1022 (42.5)

Table 8.2.1: Summary of Diversity, Equity, and Inclusion Items for All Respondents by Race/Ethnicity

	Unknown	American Indian	Asian	Black	Latino/a/x	White	Other	Total
Diversity Items	# of cases (% somewhat/strongly agree)							
My primary employer values diversity.	237 (72.9)	3 (42.9)	179 (69.6)	58 (59.2)	36 (75.0)	1401 (74.3)	52 (72.2)	1966 (73.0)
Leadership at my primary employer understands that diversity is critical to our future success.	212 (65.4)	5 (71.4)	162 (63.0)	54 (55.1)	28 (58.3)	1253 (66.5)	42 (60.9)	1756 (65.4)
My primary employer invests time and energy into building a diverse work staff.	179 (55.2)	4 (57.1)	141 (54.9)	44 (44.9)	26 (54.2)	1053 (55.9)	34 (48.6)	1481 (55.1)
Equity Items								
The process for career advancement/promotion is transparent to all employees from my primary employer.	121 (41.2)	4 (57.1)	122 (47.5)	35 (35.7)	15 (31.3)	853 (45.2)	21 (29.6)	1171 (44.0)
People from all backgrounds and with a range of identities and abilities have equitable opportunities to advance their careers at my primary employer.	170 (58.0)	6 (85.7)	151 (58.8)	42 (42.9)	19 (39.6)	1228 (65.0)	35 (49.3)	1651 (62.0)
I feel supported in my career growth at my primary employer.	135 (46.1)	5 (71.4)	116 (45.1)	41 (41.8)	17 (35.4)	893 (47.3)	24 (33.8)	1231 (46.3)
People from all backgrounds and range of identities have equal access to appropriate benefits and representation at my primary employer.	179 (61.1)	6 (85.7)	165 (64.2)	49 (50.0)	24 (50.0)	1332 (70.6)	44 (62.9)	1799 (67.7)
Inclusion Items								
I feel my unique background and identity (i.e. my differences) are valued by my primary employer.	138 (49.5)	5 (71.4)	113 (44.0)	44 (44.4)	19 (40.4)	927 (49.2)	29 (40.8)	1275 (48.2)
I feel a sense of belonging at my primary employer.	161 (57.7)	4 (57.1)	139 (54.1)	57 (57.6)	24 (51.1)	1133 (60.1)	28 (39.4)	1546 (58.4)
I feel respected by my colleagues.	205 (73.7)	5 (71.4)	195 (75.9)	73 (73.7)	36 (75.0)	1479 (78.5)	53 (74.6)	2046 (77.4)

Overall Views on Diversity, Equity and Inclusion								
Leadership at my primary employer is prioritizing improving Diversity, Equity, and Inclusion (DEI).	137 (51.1)	5 (71.4)	133 (51.8)	48 (48.5)	22 (45.8)	1023 (54.3)	34 (47.9)	1402 (53.2)
The culture at my primary employer as it relates to DEI needs improvement.	87 (32.5)	4 (57.1)	100 (39.1)	55 (55.6)	22 (46.8)	608 (32.3)	25 (35.2)	901 (34.2)

Table 8.2.2: Adoption by Primary Employer of Diversity, Equity, and Inclusion (DEI) Activities Reported by All Respondents by Race/Ethnicity

	Unknown	American Indian	Asian	Black	Latino/a/x	White	Other	Total
My primary employer:	# of cases (% Yes)							
created a DEI Committee that will develop and implement DEI-related activities.	99 (53.2)	4 (57.1)	123 (49.6)	41 (42.7)	18 (40.9)	915 (50.9)	39 (56.5)	1239 (50.6)
is conducting employee focus groups to learn what is needed in terms of DEI at my primary employer.	78 (43.3)	4 (57.1)	96 (39.0)	33 (34.4)	15 (34.1)	695 (38.8)	30 (46.2)	951 (39.1)
has implemented programs to address access to care issues for vulnerable populations in my community.	88 (49.4)	5 (71.4)	110 (44.5)	35 (36.8)	21 (47.7)	931 (52.0)	37 (54.4)	1227 (50.5)
has DEI training/activities available to all employees.	119 (66.5)	5 (71.4)	169 (67.9)	55 (57.3)	27 (61.4)	1264 (70.1)	47 (69.1)	1686 (68.9)
requires all employees to participate in DEI training/activities.	108 (60.7)	5 (71.4)	158 (64.0)	48 (49.5)	25 (56.8)	1163 (64.5)	44 (66.7)	1551 63.5)
is actively trying to hire a more diverse provider (i.e., pharmacists, physicians, nurses) population.	98 (56.6)	4 (57.1)	132 (53.4)	54 (56.3)	21 (47.7)	1005 (56.3)	38 (57.6)	1352 (55.9)
has been successful in hiring a more diverse provider (i.e., pharmacists, physicians, nurses) population.	98 (57.3)	5 (71.4)	141 (57.6)	53 (52.2)	20 (45.5)	1027 (57.8)	41 (62.1)	1385 (57.5)

Table 8.2.3: Summary of Diversity, Equity, and Inclusion Items for All Respondents by Age Group

	24-35 years	36-45 years	46-55 years	56-65 years	> 65 years	Total
Diversity Items	# of cases (% somewhat/strongly agree)					
My primary employer values diversity.	178 (71.8)	243 (76.2)	228 (73.3)	196 (72.3)	80 (81.6)	925 (74.2)
Leadership at my primary employer understands that diversity is critical to our future success.	180 (64.5)	214 (67.3)	206 (66.5)	178 (65.7)	71 (73.2)	1244 (66.6)
My primary employer invests time and energy into building a diverse work staff.	135 (54.4)	191 (60.1)	172 (55.3)	154 (56.8)	51 (52.6)	703 (56.5)
Equity Items						
The process for career advancement/promotion is transparent to all employees from my primary employer.	95 (39.1)	139 (44.4)	135 (44.1)	118 (43.7)	41 (41.4)	528 (42.9)
People from all backgrounds and with a range of identities and abilities have equitable opportunities to advance their careers at my primary employer.	150 (61.5)	196 (62.8)	189 (61.8)	165 (61.1)	68 (68.7)	768 (62.4)
I feel supported in my career growth at my primary employer.	122 (50.0)	159 (51.0)	137 (44.8)	119 (44.1)	53 (54.1)	590 (48.0)
People from all backgrounds and range of identities have equal access to appropriate benefits and representation at my primary employer.	171 (70.7)	217 (69.6)	206 (67.3)	184 (68.1)	75 (75.8)	853 (69.4)
Inclusion						
I feel my unique background and identity (i.e., my differences) are valued by my primary employer.	115 (47.9)	157 (50.6)	140 (45.8)	128 (47.6)	26 (59.2)	377 (48.9)
I feel a sense of belonging at my primary employer.	145 (60.4)	186 (60.0)	187 (61.1)	160 (59.5)	71 (72.4)	749 (61.2)
I feel respected by my colleagues.	191 (79.6)	235 (75.8)	244 (79.7)	207 (77.0)	83 (84.7)	960 (78.5)
Overall Views on Diversity, Equity and Inclusion						
Leadership at my primary employer is prioritizing improving Diversity, Equity, and Inclusion (DEI).	118 (49.4)	182 (58.7)	153 (50.5)	136 (50.9)	53 (54.1)	642 (52.8)
The culture at my primary employer as it relates to DEI needs improvement.	98 (41.0)	129 (41.6)	84 (27.6)	86 (32.2)	16 (16.3)	413 (33.9)

Table 8.2.4: Adoption by Primary Employer of Diversity, Equity, and Inclusion (DEI) Activities Reported by All Respondents by Age Group

	24-35 years	36-45 years	46-55 years	56-65 years	> 65 years	Total
My primary employer:	# of cases (% yes)					
created a DEI Committee that will develop and implement DEI-related activities.	100 (45.5)	166 (56.3)	130 (46.3)	130 (53.3)	37 (44.6)	563 (50.1)
is conducting employee focus groups to learn what is needed in terms of DEI at my primary employer.	142 (33.5)	165 (43.3)	170 (39.1)	144 (41.0)	52 (37.3)	144 (39.7)
has implemented programs to address access to care issues for vulnerable populations in my community.	105 (47.9)	155 (53.1)	134 (48.2)	127 (51.6)	37 (44.6)	558 (49.9)
has DEI training/activities available to all employees.	160 (72.7)	204 (69.9)	187 (66.5)	174 (69.9)	45 (53.6)	770 (68.4)
requires all employees to participate in DEI training/activities.	144 (65.2)	172 (59.1)	181 (64.4)	167 (67.1)	46 (54.1)	710 (63.0)
is actively trying to hire a more diverse provider (i.e., pharmacists, physicians, nurses) population.	118 (53.9)	173 (59.7)	162 (58.9)	149 (61.1)	43 (52.4)	645 (58.1)
has been successful in hiring a more diverse provider (i.e., pharmacists, physicians, nurses) population	123 (55.9)	174 (60.0)	165 (60.0)	152 (62.8)	51 (60.7)	685 (59.9)

Table 8.3.1: Summary of Diversity, Equity, and Inclusion Items for All Respondents by Practice Setting

	Community Pharmacy	Health System Outpatient	Ambulatory Care	Hospital Inpatient	Other Patient Care	Non-Patient Care	Other	Total
Diversity Items	# of cases (% somewhat/strongly agree)							
My primary employer values diversity.	852 (70.8)	86 (76.1)	110 (72.4)	463 (70.3)	165 (77.8)	218 (88.3)	53 (73.6)	1947 (73.3)
Leadership at my primary employer understands that diversity is critical to our future success.	763 (63.5)	79 (70.5)	93 (61.6)	401 (61.0)	146 (69.2)	207 (83.8)	49 (68.1)	1738 (65.5)
My primary employer invests time and energy into building a diverse work staff.	593 (49.3)	70 (62.5)	82 (53.9)	351 (53.4)	126 (59.7)	198 (80.2)	45 (62.5)	1465 (55.2)
Equity Items								
The process for career advancement/promotion is transparent to all employees from my primary employer.	505 (42.3)	50 (43.9)	72 (49.3)	240 (36.9)	105 (50.7)	153 (62.4)	33 (45.2)	1158 (44.0)
People from all backgrounds and with a range of identities and abilities have equitable opportunities to advance their careers at my primary employer.	732 (61.4)	65 (57.5)	90 (61.6)	369 (56.6)	154 (74.4)	174 (71.0)	50 (68.5)	1634 (62.2)
I feel supported in my career growth at my primary employer.	460 (38.6)	61 (54.0)	81 (45.1)	289 (44.3)	115 (55.6)	171 (69.8)	40 (54.8)	1217 (46.3)
People from all backgrounds and range of identities have equal access to appropriate benefits and representation at my primary employer.	767 (61.1)	71 (62.8)	97 (66.4)	442 (67.9)	161 (77.8)	199 (81.2)	49 (67.1)	1786 (68.0)
Inclusion								
I feel my unique background and identity (i.e., my differences) are valued by my primary employer.	474 (40.0)	60 (53.6)	68 (46.9)	316 (48.8)	116 (56.9)	179 (73.4)	51 (68.0)	1264 (48.4)

I feel a sense of belonging at my primary employer.	590 (49.8)	78 (69.6)	87 (60.0)	389 (60.0)	147 (72.1)	183 (75.0)	58 (77.3)	1532 (58.7)
I feel respected by my colleagues.	873 (73.7)	87 (77.7)	112 (77.2)	505 (78.1)	172 (84.3)	213 (87.3)	63 (84.0)	2025 (77.6)
Overall Views on Diversity, Equity and Inclusion								
Leadership at my primary employer is prioritizing improving Diversity, Equity, and Inclusion (DEI).	548 (46.5)	64 (57.1)	82 (57.3)	349 (53.9)	108 (52.9)	196 (80.7)	43 (57.3)	1390 (53.4)
The culture at my primary employer as it relates to DEI needs improvement.	328 (27.9)	43 (38.4)	63 (44.1)	247 (38.2)	67 (32.8)	109 (44.9)	30 (40.0)	887 (34.1)

Note: Community is a combination of independent, small chain, large chain, mass merchandiser and supermarket pharmacy. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of Health System Outpatient, Outpatient Clinic/Ambulatory Care, Mail Order, Nursing Home/Long Term Care, and Home Health/Infusion. Other (non-patient care) is defined as settings where pharmacists may not provide patient care and is a combination of MCO/PBM, education/academia, professional/trade associations, and other settings.

Table 8.3.2: Adoption by Primary Employer of Diversity, Equity, and Inclusion (DEI) Activities Reported by All Respondents by Practice Setting

	Community Pharmacy	Health System Outpatient	Ambulatory Care	Hospital Inpatient	Other Patient Care	Non-Patient Care	Other	Total
My primary employer:	# of cases (% yes)							
created a DEI Committee that will develop and implement DEI-related activities.	456 (42.2)	61 (59.8)	79 (59.4)	322 (52.4)	82 (44.1)	190 (81.5)	39 (56.5)	1229 (50.8)
is conducting employee focus groups to learn what is needed in terms of DEI at my primary employer.	336 (31.3)	53 (52.0)	63 (47.4)	250 (41.0)	70 (38.0)	143 (61.9)	29 (42.0)	944 (39.3)
has implemented programs to address access to care issues for vulnerable populations in my community.	408 (38.1)	65 (62.5)	98 (73.1)	364 (59.3)	87 (48.1)	163 (71.2)	37 (53.6)	1222 (50.9)
has DEI training/activities available to all employees.	685 (63.3)	80 (76.9)	98 (73.7)	434 (70.8)	125 (67.6)	203 (87.5)	48 (69.6)	1673 (69.2)
requires all employees to participate in DEI training/activities.	665 (61.4)	73 (71.6)	90 (67.2)	397 (65.0)	119 (64.3)	155 (67.1)	41 (59.4)	1540 (63.8)
is actively trying to hire a more diverse provider (i.e., pharmacists, physicians, nurses) population.	517 (48.6)	68 (66.7)	85 (63.7)	349 (57.3)	102 (55.7)	179 (77.8)	44 (63.8)	1344 (56.2)
has been successful in hiring a more diverse provider (i.e., pharmacists, physicians, nurses) population	513 (48.5)	72 (71.3)	85 (63.9)	379 (62.0)	117 (64.3)	173 (75.5)	40 (59.7)	1379 (57.9)

Note: Community is a combination of independent, small chain, large chain, mass merchandiser and supermarket pharmacy. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of Health System Outpatient, Outpatient Clinic/Ambulatory Care, Mail Order, Nursing Home/Long Term Care, and Home Health/Infusion. Other (non-patient care) is defined as settings where pharmacists may not provide patient care and is a combination of MCO/PBM, education/academia, professional/trade associations, and other settings.

Table 8.3.3: Summary of Diversity, Equity, and Inclusion Items for All Respondents by Community Practice Setting

	Independent Pharmacy	Small Chain	Large Chain	Mass Merchandiser	Supermarket Pharmacy	Total
Diversity Items	# of cases (% somewhat/strongly agree)					
My primary employer values diversity.	167 (72.6)	28 (71.8)	358 (71.7)	159 (70.7)	139 (66.8)	851 (70.9)
Leadership at my primary employer understands that diversity is critical to our future success.	148 (64.3)	25 (64.1)	324 (64.9)	139 (61.8)	126 (60.9)	762 (63.5)
My primary employer invests time and energy into building a diverse work staff.	114 (49.6)	20 (51.3)	252 (50.5)	109 (48.4)	97 (46.6)	592 (49.3)
Equity Items						
The process for career advancement/promotion is transparent to all employees from my primary employer.	102 (44.9)	19 (48.7)	189 (38.3)	112 (49.8)	82 (39.6)	504 (42.3)
People from all backgrounds and with a range of identities and abilities have equitable opportunities to advance their careers at my primary employer.	159 (70.0)	26 (66.7)	278 (56.4)	148 (65.8)	120 (58.0)	731 (61.4)
I feel supported in my career growth at my primary employer.	135 (59.7)	22 (56.4)	150 (30.4)	84 (37.5)	68 (32.9)	459 (38.6)
People from all backgrounds and range of identities have equal access to appropriate benefits and representation at my primary employer.	156 (68.7)	28 (71.8)	302 (61.3)	143 (64.1)	137 (66.2)	766 (64.4)
Inclusion						
I feel my unique background and identity (i.e., my differences) are valued by my primary employer.	148 (66.7)	25 (64.1)	161 (32.8)	72 (32.1)	68 (32.9)	474 (40.1)
I feel a sense of belonging at my primary employer.	177 (79.7)	32 (82.1)	191 (38.9)	93 (41.5)	96 (46.4)	589 (49.8)
I feel respected by my colleagues.	187 (84.2)	235 (84.6)	348 (70.9)	153 (68.3)	151 (72.9)	872 (73.7)
Overall Views on Diversity, Equity and Inclusion						

Leadership at my primary employer is prioritizing improving Diversity, Equity, and Inclusion (DEI).	93 (42.3)	17 (43.6)	241 (49.4)	92 (41.1)	105 (51.0)	548 (46.6)
The culture at my primary employer as it relates to DEI needs improvement.	53 (24.2)	12 (30.8)	149 (30.5)	57 (25.4)	57 (27.7)	328 (27.9)

Table 8.3.4: Adoption by Primary Employer of Diversity, Equity, and Inclusion (DEI) Activities Reported by All Respondents by Community Practice Setting

	Independent Pharmacy	Small Chain	Large Chain	Mass Merchandiser	Supermarket Pharmacy	Total
My primary employer:	# of cases (% yes)					
created a DEI Committee that will develop and implement DEI-related activities.	26 (12.9)	5 (14.7)	233 (52.4)	93 (45.4)	99 (51.0)	456 (42.2)
is conducting employee focus groups to learn what is needed in terms of DEI at my primary employer.	27 (13.4)	4 (11.8)	164 (36.9)	9 (36.1)	68 (35.6)	336 (31.3)
has implemented programs to address access to care issues for vulnerable populations in my community.	70 (34.5)	13 (38.2)	184 (41.4)	76 (37.4)	65 (34.8)	408 (38.1)
has DEI training/activities available to all employees.	80 (39.6)	17 (50.0)	309 (69.3)	144 (69.6)	144 (69.6)	685 (63.4)
requires all employees to participate in DEI training/activities.	76 (37.4)	14 (41.2)	316 (70.9)	127 (61.7)	132 (68.4)	685 (61.5)
is actively trying to hire a more diverse provider (i.e., pharmacists, physicians, nurses) population.	75 (37.1)	13 (38.2)	245 (55.8)	93 (46.0)	91 (48.9)	517 (48.6)
has been successful in hiring a more diverse provider (i.e., pharmacists, physicians, nurses) population	87 (43.1)	14 (41.2)	218 (50.0)	100 (50.0)	94 (51.1)	513 (48.6)

Section 9: Pharmacy Technician Shortage

The goal of this section of the survey was to learn more about the prevalence of the pharmacy technician shortage, what factors are contributing to the shortage, and how the pharmacy technician shortage is impacting pharmacy practice environments. Analyses were limited to pharmacists reporting they currently worked in community, institutional, and other practice settings (home infusion, long-term care, mail-order, and specialty pharmacies). Respondents were asked a series of questions. The first item covered their view on the extent of the technician shortage. Then the survey branched to present parallel items framed to elicit 1) how their work setting was dealing with the shortage for those reporting a shortage or 2) why their work setting was not experiencing a shortage for those reporting not experiencing a technician shortage. Finally, for those respondents reporting a technician shortage, the survey included five statements about the impact of unfilled pharmacy technician positions at their primary work setting for the employees and their patients.

9.1: Extent of a Technician Shortage

Overall, most respondents perceived that a shortage of technicians is present in the workforce and the degree of perceived shortage varied (Table 9.1.1). Approximately one in 10 respondents reported that they perceived no shortage of technicians and nearly two thirds of respondents rated the degree of technician shortage as severe or very severe.

In the most common practice settings (community and hospital/health system), the highest proportion of respondents reporting “no shortage” were in independent and small chain settings and the smallest proportion reporting “no shortage” were in chain pharmacies (Table 9.1.2). In the chain setting, both staff and managers had low and similar proportions of respondents with “no shortage” perceptions. Across the non-community settings there tended to be variation in the proportions of respondents in different positions reporting “no shortage” perceptions. For example, among respondents from hospital inpatient settings, the proportion of respondents in director/assistant director positions was considerably higher than for staff pharmacists and managers. Overall, there did not seem to be a definite distinction in perception of “no shortage” by position; no consistent pattern emerged in the proportions of respondents in staff or management positions that reported “no shortage” of technicians.

For respondents that reported some degree of technician shortage, chain pharmacists had the highest proportions of severe or very severe ratings for the degree of technician shortage. Nearly 80 percent of respondents practicing in chain pharmacies considered the technician shortage as severe or very severe. Respondents practicing in other typically corporate pharmacy settings (mass merchandiser and supermarket) also had nearly as high proportions of respondents reporting severe or very severe shortage perceptions. Respondents in hospital inpatient settings also tended towards higher proportions of such severe shortage ratings with nearly 70 percent of staff and managers giving those ratings (directors somewhat less with nearly half expressing those perceptions). Comparing across employment positions, there was a tendency overall for staff pharmacists to have higher proportions of severe and very severe shortage ratings compared to managers.

9.2: Dealing with a Technician Shortage and Strategies to Prevent a Technician Shortage

Overall, most respondents disagreed that providing technicians flexibility to work from home was a way for their workplace to deal the technician shortage or a reason why they did not perceive a shortage (Table 9.2.1). These perceptions are consistent with how traditional roles

for technicians have emphasized tasks associated with dispensing processes and on-site work activities and expectations.

Flexibility in scheduling was the item most respondents agreed with as an approach to deal with or a mechanism to avoid a technician shortage in their workplaces. Nearly 70 percent of respondents claiming they did not have a technician shortage agreed with schedule flexibility as a reason for not having a technician shortage. Opinions on the merits of other strategies for dealing with or not having a shortage were mixed, with similar proportions of respondents agreeing and disagreeing with the survey item statements.

Comparing responses for pharmacists in different work positions revealed that higher proportions of staff pharmacists did not know about increased pay, opportunities for position progression (career ladder), and payment for advanced training for pharmacists as means of dealing with the technician shortage (Table 9.2.2) or as a reason for why they reported no shortage was present (Table 9.2.3). Respondents in all but "Other" settings (nursing home, home health, etc.) predominantly disagreed that flexibility to work from home was a strategy to deal with or a reason for lack of technician shortage. For other items, responses were mixed between disagree and agree, but generally higher proportions of respondents across settings agreed with the statements. The largest proportions of respondents agreeing that higher pay and schedule flexibility for technicians were strategies for dealing with the shortage (Table 9.2.2) or not experiencing a shortage (Table 9.2.3) resulted among pharmacy owners/partners. Curiously, among pharmacy owners or partners, there were some that did not know whether increased pay, career ladder opportunities, or payment for advanced training were reasons for not having a shortage (Table 9.2.2).

Comparing responses for pharmacists in different work settings showed some differences in perceptions on strategies for dealing with the technician shortage and reasons no shortage existed (Table 9.2.4 and Table 9.2.5). The most noticeable differences were for pharmacists in community settings versus hospital settings (except for flexibility to work from home that had consistently high proportions of respondents disagreeing across those settings). Although there were proportions of respondents across items that disagreed with statements, generally more respondents agreed, with respondents in independent/small chain pharmacies most often agreeing that flexible scheduling and increased pay were strategies to deal with the shortage followed by respondents in chain settings (Table 9.2.4). For respondents reporting they were not experiencing a shortage, those in community settings had higher proportions agreeing that scheduling flexibility and pay were effective strategies (Table 9.2.5).

9.3 Impacts of a Pharmacy Technician Shortage

Overall, most respondents that reported a technician shortage agreed with the statements about impacts from the shortage, with more than 80 percent of respondents reporting that technicians were unhappy due to being overworked, that pharmacists were unhappy with their jobs, and that pharmacists were spending too much time in dispensing activities (Table 9.3.1 and Table 9.3.2)). However, 25 percent or more of respondents disagreed that patient safety or quality of care is significantly compromised.

Comparing responses of the practicing pharmacists across different work positions (Table 9.3.1) showed some differences in perceptions among respondents with mixed levels of agreement and disagreement amongst the statements of potential impacts. Only the item about pharmacists spending too much time in dispensing activities had a preponderance of

respondents agreeing with the statement. Staff pharmacists and managers had the highest proportions of respondents strongly agreeing with all of the statements about potential impacts from the technician shortage. Interestingly, higher proportions of owners/partners and directors/assistant directors disagreed with statements that patient safety or quality of care is significantly compromised.

Comparing responses of the practicing pharmacists across different practice settings (Table 9.3.2) also showed some variability in perceptions among respondents. Pharmacists in chain settings had the highest proportions of strongly agree perceptions across the technician shortage impact items and all items had 90 percent or more of chain pharmacists agreeing with all the statements except for medication safety being compromised significantly. Pharmacists in independent/small chain pharmacies tended to have more tempered, mixed responses with more disagreement opinions being expressed.

Table 9.1.1: Perceptions of a Technician Shortage – Practicing Pharmacists Overall

	N	Percent
There is no technician shortage	257	10.9
Not too severe	578	24.5
Severe	908	38.4
Very severe	619	26.2
Total	2,362	100

Note: The table includes all respondents who reported their current employment status as “practicing as a pharmacist” but excludes respondent pharmacists in Executive, Faculty, or Other work positions.

Table 9.1.2: Perceptions of a Technician Shortage by Employment Setting and Position

		N	No shortage	Not too severe	Severe	Very severe
Community Pharmacy Practice Settings						
Independent Pharmacy (fewer than 4 stores under the same ownership)						
	Staff	125	13.6%	37.6%	36.0%	12.8%
	Manager	39	20.5%	20.5%	35.9%	23.1%
	Owner	57	19.3%	36.8%	36.8%	7.0%
	Total	221	16.3%	34.4%	36.2%	13.1%
Small Chain (4 to 10 stores under the same ownership)						
	Staff	27	22.2%	44.4%	25.9%	7.4%
	Manager	12	8.3%	50.0%	25.0%	16.7%
	Total	39	17.9%	46.2%	25.6%	10.3%
Large Chain (more than 10 units under same ownership)						
	Staff	333	3.9%	15.0%	42.9%	38.1%
	Manager	162	4.9%	19.8%	38.3%	37.0%
	Total	495	4.2%	16.6%	41.4%	37.8%
Mass Merchandiser (e.g. Walmart, Costco)						
	Staff	149	7.4%	20.1%	46.3%	26.2%
	Manager	78	5.1%	25.6%	38.5%	30.8%
	Total	227	6.6%	22.0%	43.6%	27.8%
Supermarket						
	Staff	133	3.0%	15.0%	44.4%	37.6%
	Manager	80	12.5%	13.8%	38.8%	35.0%
	Total	213	6.6%	14.6%	42.3%	36.6%
Community Overall						
	Staff	767	6.6%	20.7%	42.1%	30.5%
	Manager	371	8.4%	20.8%	37.7%	33.2%
	Owner	57	19.3%	36.8%	36.8%	7.0%
	Total	1,195	7.8%	21.5%	40.5%	30.2%
Hospital/Health System Practice Settings						
Hospital/Health System Inpatient						
	Staff	528	8.7%	23.3%	39.6%	28.4%
	Manager	45	4.4%	26.7%	48.9%	20.0%
	Director	68	25.0%	23.5%	27.9%	23.5%
	Total	641	10.1%	23.6%	39.0%	27.3%
Hospital Outpatient (not clinic)						
	Staff	96	7.3%	37.5%	38.5%	16.7%
	Manager	27	22.2%	33.3%	37.0%	7.4%
	Total	123	10.6%	36.6%	38.2%	14.6%
Hospital/Health System Overall						

	Staff	624	8.1%	24.9%	39.7%	27.3%
	Manager	72	10.8%	26.2%	47.7%	15.4%
	Director	68	25.9%	22.4%	27.6%	24.1%
	Total	764	9.8%	24.8%	39.4%	26.0%
Other Practice Settings						
Home Health/Infusion						
	Staff	26	3.8%	26.9%	23.1%	46.2%
	Manager	7	0.0%	57.1%	28.6%	14.3%
	Total	33	3.0%	33.3%	24.2%	39.4%
Mail Order						
	Staff	26	30.8%	34.6%	30.8%	3.8%
	Manager	7	14.3%	57.1%	28.6%	0.0%
	Total	33	27.3%	39.4%	30.3%	3.0%
Nursing Home/Long Term Care						
	Staff	56	14.3%	35.7%	33.9%	16.1%
	Manager	23	17.4%	21.7%	30.4%	30.4%
	Total	79	15.2%	31.6%	32.9%	20.3%
Specialty Pharmacy						
	Staff	44	15.9%	36.4%	40.9%	6.8%
	Manager	12	33.3%	33.3%	16.7%	16.7%
	Total	56	19.6%	35.7%	35.7%	8.9%
Overall Total						
	Staff	1,552	8.3%	24.0%	40.1%	27.5%
	Manager	495	9.7%	23.4%	37.6%	29.3%
	Director	68	25.0%	23.5%	27.9%	23.5%
	Owner	57	19.3%	36.8%	36.8%	7.0%
	Total	2,172	9.4%	24.2%	39.1%	27.3%

Note: Includes only practicing pharmacist respondents in settings where techs likely are employed. Owners only included as separate category for Independent Pharmacy respondents. In other settings, Owners were collapsed into the Manager position category. (Overall few respondents in any other settings were thus affected.) Directors only included as a separate category for Hospital/Health System Inpatient respondents. In other settings, Directors were collapsed into the Manager position category. (Overall few respondents in other settings were thus re-categorized.)

Table 9.2.1: Strategies to Deal with or Prevent a Technician Shortage by Whether a Technician Shortage was Reported or Not

	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	I Don't Know
Some Shortage Reported (N= 2082)					
Flexibility to Work from Home	79.8%	6.1%	3.7%	3.8%	6.7%
Flexible Work Schedule	22.2%	17.4%	32.8%	22.1%	5.5%
Increased Pay to Retain Technicians	22.3%	13.9%	32.7%	18.0%	13.2%
Established Position Progression (Career Ladder)	24.9%	20.8%	30.9%	13.0%	10.4%
Pay/Reimburse for Advanced or Specialty Training	25.3%	16.1%	29.2%	12.3%	17.1%
No Shortage Reported (N = 252)					
Flexibility to Work from Home	67.7%	6.0%	4.8%	6.8%	14.7%
Flexible Work Schedule	11.5%	6.3%	24.6%	45.2%	12.3%
Increased Pay to Retain Technicians	12.7%	9.5%	23.0%	26.6%	28.2%
Established Position Progression (Career Ladder)	21.8%	14.7%	29.0%	13.9%	20.6%
Pay/Reimburse for Advanced or Specialty Training	18.3%	11.1%	21.8%	19.4%	29.4%

Note: The number of responses represents the maximum number of respondents. For some specific individual items, total responses were a few less. Respondents perceiving a technician shortage reported their agreement about using each item to deal with the technician shortage. Respondents perceiving no pharmacy technician shortage reported their agreement about whether each item was preventing a technician shortage.

Table 9.2.2: Strategies to Deal with Technician Shortage – Pharmacists Reporting Technician Shortage by Position

	N	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	I Don't Know
Flexibility to Work from Home						
Staff/Clinical Pharmacist	1409	81.0%	5.8%	3.2%	3.3%	6.7%
Owner/Partner	53	71.7%	9.4%	5.7%	5.7%	7.5%
Director/Assistant Director	93	73.1%	7.5%	8.6%	7.5%	3.2%
Manager/Assistant Manager	393	86.3%	4.6%	3.6%	2.8%	2.8%
All Positions Combined	1948	81.4%	5.7%	3.6%	3.4%	5.8%
Flexible Work Schedule						
Staff/Clinical Pharmacist	1408	24.8%	19.5%	30.9%	19.2%	5.7%
Owner/Partner	53	3.8%	7.5%	41.5%	41.5%	5.7%
Director/Assistant Director	93	20.4%	16.1%	33.3%	28.0%	2.2%
Manager/Assistant Manager	393	16.5%	14.0%	40.5%	28.2%	0.8%
All Positions Combined	1947	22.3%	17.9%	33.2%	22.0%	4.5%
Increased Pay to Retain Technicians						
Staff/Clinical Pharmacist	1408	25.5%	15.1%	30.5%	13.5%	15.4%
Owner/Partner	53	1.9%	3.8%	34.0%	54.7%	5.7%
Director/Assistant Director	93	18.3%	15.1%	32.3%	31.2%	3.2%
Manager/Assistant Manager	393	18.6%	10.9%	41.7%	26.2%	2.5%
All Positions Combined	1947	23.1%	14.0%	32.9%	18.0%	12.0%
Established Position Progression (Career Ladder)						
Staff/Clinical Pharmacist	1407	27.4%	21.7%	28.8%	10.9%	11.2%
Owner/Partner	53	9.4%	24.5%	43.4%	9.4%	13.2%
Director/Assistant Director	93	19.4%	19.4%	40.9%	19.4%	1.1%
Manager/Assistant Manager	394	20.6%	19.3%	37.8%	19.0%	3.3%

All Positions Combined	1947	25.2%	21.2%	31.6%	12.9%	9.2%
Pay/Reimburse for Advanced or Specialty Training						
Staff/Clinical Pharmacist	1407	27.4%	16.1%	26.6%	10.4%	19.5%
Owner/Partner	53	3.8%	13.2%	49.1%	24.5%	9.4%
Director/Assistant Director	93	19.4%	21.5%	40.9%	14.0%	4.3%
Manager/Assistant Manager	393	23.4%	15.5%	37.7%	17.6%	5.9%
All Positions Combined	1946	25.6%	16.1%	30.1%	12.4%	15.8%

Note: Includes only practicing pharmacist respondents in settings where techs likely are employed. Owners only included as separate category for Independent Pharmacy respondents. In other settings, Owners were collapsed into the Manager position category. (Overall few respondents in any other settings were thus affected.) Directors only included as a separate category for Hospital/Health System Inpatient respondents. In other settings, Directors were collapsed into the Manager position category. (Overall few respondents in other settings were thus re-categorized.)

Table 9.2.3: Reasons for Preventing a Technician Shortage - Pharmacists Reporting No Technician Shortage by Position

	N	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	I Don't Know
Flexibility to Work from Home						
Staff/Clinical Pharmacist	125	65.6%	7.2%	4.0%	8.0%	15.2%
Owner/Partner	13	76.9%	0.0%	7.7%	7.7%	7.7%
Director/Assistant Director	24	91.7%	4.2%	0.0%	0.0%	4.2%
Manager/Assistant Manager	39	87.2%	7.7%	2.6%	2.6%	0.0%
All Positions Combined	201	73.6%	6.5%	3.5%	6.0%	10.4%
Flexible Work Schedule						
Staff/Clinical Pharmacist	126	11.9%	7.1%	25.4%	46.8%	8.7%
Owner/Partner	13	7.7%	0.0%	23.1%	61.5%	7.7%
Director/Assistant Director	24	12.5%	8.3%	33.3%	41.7%	4.2%
Manager/Assistant Manager	39	10.3%	5.1%	35.9%	48.7%	0.0%
All Positions Combined	202	11.4%	6.4%	28.2%	47.5%	6.4%
Increased Pay to Retain Technicians						
Staff/Clinical Pharmacist	126	11.1%	9.5%	21.4%	26.2%	31.7%
Owner/Partner	13	7.7%	0.0%	23.1%	46.2%	23.1%
Director/Assistant Director	24	20.8%	8.3%	37.5%	29.2%	4.2%
Manager/Assistant Manager	39	17.9%	15.4%	28.2%	35.9%	2.6%
All Positions Combined	202	13.4%	9.9%	24.8%	29.7%	22.3%
Established Position Progression (Career Ladder)						
Staff/Clinical Pharmacist	126	21.4%	11.9%	30.2%	15.1%	21.4%
Owner/Partner	13	7.7%	23.1%	15.4%	38.5%	15.4%
Director/Assistant Director	24	50.0%	16.7%	29.2%	0.0%	4.2%
Manager/Assistant Manager	39	20.5%	23.1%	43.6%	12.8%	0.0%
All Positions Combined	202	23.8%	15.3%	31.7%	14.4%	14.9%

Pay/Reimburse for Advanced or Specialty Training						
Staff/Clinical Pharmacist	126	18.3%	10.3%	23.8%	17.5%	30.2%
Owner/Partner	13	15.4%	7.7%	0.0%	53.8%	23.1%
Director/Assistant Director	24	33.3%	16.7%	29.2%	16.7%	4.2%
Manager/Assistant Manager	39	17.9%	15.4%	35.9%	23.1%	7.7%
All Positions Combined	202	19.8%	11.9%	25.2%	20.8%	22.3%

Note: Includes only practicing pharmacist respondents in settings where techs likely are employed. Owners only included as separate category for Independent Pharmacy respondents. In other settings, Owners were collapsed into the Manager position category. (Overall few respondents in any other settings were thus affected.) Directors only included as a separate category for Hospital/Health System Inpatient respondents. In other settings, Directors were collapsed into the Manager position category. (Overall few respondents in other settings were thus re-categorized.)

Table 9.2.4: Strategies to Deal with Technician Shortage – Pharmacists Reporting Shortage by Practice Setting

	N	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	I Don't Know
Flexibility to Work from Home						
Independent/Small Chain	213	80.3%	7.0%	6.1%	3.3%	3.3%
Chain	876	86.5%	4.9%	1.5%	1.7%	5.4%
Hospital/Health System	683	82.4%	6.7%	2.8%	1.9%	6.1%
Other Pharmacies	176	53.4%	4.5%	14.2%	18.2%	9.7%
All Settings Combined	1948	81.4%	5.7%	3.6%	3.4%	5.8%
Flexible Work Schedule						
Independent/Small Chain	213	14.1%	11.3%	38.5%	35.2%	0.9%
Chain	876	22.5%	18.0%	36.8%	21.2%	1.5%
Hospital/Health System	682	27.3%	20.2%	27.4%	16.9%	8.2%
Other Pharmacies	176	12.5%	15.9%	31.8%	30.1%	9.7%
All Settings Combined	1947	22.3%	17.9%	33.2%	22.0%	4.5%
Increased Pay to Retain Technicians						
Independent/Small Chain	212	14.6%	9.9%	28.3%	32.1%	15.1%
Chain	876	26.3%	15.8%	37.6%	15.9%	4.6%
Hospital/Health System	683	23.7%	13.2%	29.9%	16.5%	16.7%
Other Pharmacies	176	15.3%	13.1%	27.3%	17.6%	26.7%
All Settings Combined	1947	23.1%	14.0%	32.9%	18.0%	12.0%
Established Position Progression (Career Ladder)						
Independent/Small Chain	212	21.7%	25.9%	33.5%	8.5%	10.4%
Chain	877	25.2%	22.8%	35.0%	11.4%	5.6%
Hospital/Health System	682	28.0%	18.0%	24.8%	16.7%	12.5%
Other Pharmacies	176	18.2%	19.3%	38.6%	10.8%	13.1%
All Settings Combined	1947	25.2%	21.2%	31.6%	12.9%	9.2%
Pay/Reimburse for Advanced or Specialty Training						
Independent/Small Chain	212	19.3%	11.3%	36.3%	17.9%	15.1%
Chain	875	27.5%	18.1%	35.4%	12.5%	6.5%
Hospital/Health System	683	26.5%	16.0%	22.5%	9.8%	25.2%
Other Pharmacies	176	19.9%	13.1%	25.6%	15.3%	26.1%
All Settings Combined	1946	25.6%	16.1%	30.1%	12.4%	15.8%

Note: Includes only practicing pharmacists in settings where techs likely are employed. The Chain pharmacy category includes respondents from Mass Merchandiser and Supermarket pharmacies (considered as pharmacy departments in larger “corporate” operations). The Other practice setting included respondents practicing in home infusion, nursing home/long-term care, mail-order, and specialty pharmacies.

Table 9.2.5: Reasons for Preventing a Technician Shortage - Pharmacists Reporting No Technician Shortage by Practice Setting

	N	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	I Don't Know
Flexibility to Work from Home						
Independent/Small Chain	43	81.4%	2.3%	4.7%	4.7%	7.0%
Chain	50	86.0%	8.0%	2.0%	2.0%	2.0%
Hospital/Health System	74	70.3%	8.1%	1.4%	5.4%	14.9%
Other Pharmacies	34	52.9%	5.9%	8.8%	14.7%	17.6%
All Settings Combined	201	73.6%	6.5%	3.5%	6.0%	10.4%
Flexible Work Schedule						
Independent/Small Chain	43	9.3%	2.3%	20.9%	62.8%	4.7%
Chain	50	10.0%	6.0%	38.0%	46.0%	0.0%
Hospital/Health System	75	14.7%	8.0%	24.0%	42.7%	10.7%
Other Pharmacies	34	8.8%	8.8%	32.4%	41.2%	8.8%
All Settings Combined	202	11.4%	6.4%	28.2%	47.5%	6.4%
Increased Pay to Retain Technicians						
Independent/Small Chain	43	14.0%	7.0%	25.6%	30.2%	23.3%
Chain	50	20.0%	8.0%	34.0%	36.0%	2.0%
Hospital/Health System	75	12.0%	10.7%	21.3%	26.7%	29.3%
Other Pharmacies	34	5.9%	14.7%	17.6%	26.5%	35.3%
All Settings Combined	202	13.4%	9.9%	24.8%	29.7%	22.3%
Established Position Progression (Career Ladder)						
Independent/Small Chain	43	14.0%	27.9%	25.6%	18.6%	14.0%
Chain	50	22.0%	12.0%	44.0%	16.0%	6.0%
Hospital/Health System	75	29.3%	12.0%	29.3%	9.3%	20.0%
Other Pharmacies	34	26.5%	11.8%	26.5%	17.6%	17.6%
All Settings Combined	202	23.8%	15.3%	31.7%	14.4%	14.9%
Pay/Reimburse for Advanced or Specialty Training						
Independent/Small Chain	43	18.6%	16.3%	9.3%	32.6%	23.3%
Chain	50	16.0%	6.0%	46.0%	24.0%	8.0%
Hospital/Health System	75	26.7%	10.7%	22.7%	10.7%	29.3%
Other Pharmacies	34	11.8%	17.6%	20.6%	23.5%	26.5%
All Settings Combined	202	19.8%	11.9%	25.2%	20.8%	22.3%

Note: Includes only practicing pharmacists in settings where techs likely are employed. The Chain pharmacy category includes respondents from Mass Merchandiser and Supermarket pharmacies (considered as pharmacy departments in larger “corporate” operations). The Other practice setting included respondents practicing in home infusion, nursing home/long-term care, mail-order, and specialty pharmacies.

Table 9.3.1: Perceptions of Impacts of a Pharmacy Technician Shortage by Position

	N	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
Pharmacists Spend Too Much Time in Dispensing Activities					
Staff/Clinical Pharmacist	1372	5.8%	12.5%	39.1%	42.5%
Owner/Partner	50	6.0%	10.0%	62.0%	22.0%
Director/Assistant Director	91	6.6%	15.4%	42.9%	35.2%
Manager/Assistant Manager	391	3.1%	10.5%	37.1%	49.4%
All Positions Combined	1904	5.3%	12.2%	39.5%	43.0%
Patient Safety Significantly Compromised					
Staff/Clinical Pharmacist	1372	7.9%	20.6%	37.0%	34.5%
Owner/Partner	50	24.0%	50.0%	24.0%	2.0%
Director/Assistant Director	91	15.4%	34.1%	28.6%	22.0%
Manager/Assistant Manager	391	4.9%	13.8%	40.9%	40.4%
All Positions Combined	1904	8.0%	20.6%	37.1%	34.2%
Quality of Care Significantly Compromised					
Staff/Clinical Pharmacist	1373	7.4%	17.7%	36.9%	37.9%
Owner/Partner	50	14.0%	48.0%	32.0%	6.0%
Director/Assistant Director	91	16.5%	28.6%	33.0%	22.0%
Manager/Assistant Manager	391	3.3%	12.8%	36.8%	47.1%
All Positions Combined	1905	7.2%	18.0%	36.6%	38.2%
Technicians Unhappy Due to Being Overworked					
Staff/Clinical Pharmacist	1371	2.9%	8.6%	29.2%	59.2%
Owner/Partner	50	8.0%	36.0%	48.0%	8.0%
Director/Assistant Director	91	12.1%	16.5%	39.6%	31.9%
Manager/Assistant Manager	391	1.5%	7.9%	30.7%	59.8%
All Positions Combined	1903	3.2%	9.6%	30.5%	56.7%
Pharmacists Unhappy with Their Jobs					
Staff/Clinical Pharmacist	1373	5.3%	10.5%	36.1%	48.1%
Owner/Partner	50	10.0%	40.0%	34.0%	16.0%
Director/Assistant Director	91	8.8%	25.3%	39.6%	26.4%
Manager/Assistant Manager	391	3.3%	7.9%	29.9%	58.8%
All Positions Combined	1905	5.2%	11.4%	35.0%	48.4%

Note: Data included only for respondents that reported some level of technician shortage.

Table 9.3.2: Perceptions of Impacts of a Pharmacy Technician Shortage by Practice Setting

	N	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
Pharmacists Spend Too Much Time in Dispensing Activities					
Independent/Small Chain	207	7.7%	12.1%	52.2%	28.0%
Chain	861	3.3%	6.3%	32.4%	58.1%
Hospital/Health System	667	5.8%	18.3%	43.2%	32.7%
Other Pharmacies	169	10.7%	18.3%	45.6%	25.4%
All Settings Combined	1904	5.3%	12.2%	39.5%	43.0%
Patient Safety Significantly Compromised					
Independent/Small Chain	207	17.9%	36.7%	34.8%	10.6%
Chain	861	2.7%	9.2%	38.0%	50.2%
Hospital/Health System	666	8.7%	28.2%	37.8%	25.2%
Other Pharmacies	170	20.6%	29.4%	32.4%	17.6%
All Settings Combined	1904	8.0%	20.6%	37.1%	34.2%
Quality of Care Significantly Compromised					
Independent/Small Chain	207	13.0%	33.8%	37.7%	15.5%
Chain	861	1.4%	6.7%	33.6%	58.3%
Hospital/Health System	667	10.2%	25.3%	40.5%	24.0%
Other Pharmacies	170	17.6%	27.1%	35.3%	20.0%
All Settings Combined	1905	7.2%	18.0%	36.6%	38.2%
Technicians Unhappy Due to Being Overworked					
Independent/Small Chain	207	9.2%	22.2%	41.5%	27.1%
Chain	861	1.3%	3.8%	20.0%	74.9%
Hospital/Health System	665	3.5%	9.9%	38.9%	47.7%
Other Pharmacies	170	4.7%	21.8%	37.6%	35.9%
All Settings Combined	1903	3.2%	9.6%	30.5%	56.7%
Pharmacists Unhappy with Their Jobs					
Independent/Small Chain	207	11.6%	25.1%	40.1%	23.2%
Chain	861	1.0%	3.3%	23.5%	72.2%
Hospital/Health System	667	6.6%	15.9%	46.9%	30.6%
Other Pharmacies	170	12.9%	18.8%	40.0%	28.2%
All Settings Combined	1905	5.2%	11.4%	35.0%	48.4%

Note: Data included only for respondents that reported some level of technician shortage. The Chain pharmacy category includes respondents from Mass Merchandiser and Supermarket pharmacies (considered as pharmacy departments in larger “corporate” operations). The Other practice setting included respondents practicing in home infusion, nursing home/long-term care, mail-order, and specialty pharmacies.

Section 10: Limitations and Conclusions

10.1: Limitations

The findings of this study should be considered recognizing its limitations. The results are based on respondents' self-reports, which could be influenced by intent to make socially desirable responses or simple misinterpretations of questions. We tried to limit misreading by having practice setting experts review and modify, where necessary, questionnaire items. Additionally, we pilot tested the questionnaire prior to the main questionnaire distribution. We used an online survey mode like the approach used in the 2019 NPWS. As such, comparisons of the current findings with those previous results could be valid, however, comparisons with results from NPWSs prior to 2019 should be done with caution.

The low response rate raises concerns about non-response bias. Our analyses of survey responses showed some differences in the respondents compared to the random sample pulled by the NABPF from their population of licensed pharmacists. As a group, NPWS 2022 respondents had a high percentage of older pharmacists and had a lower percentage from the West and higher from the Midwest. Whether and how these differences cause bias in the interpretation of the findings is unknown and consideration of bias resulting from response differences should be considered.

10.2: Conclusions

Although the purpose of the current NPWS was not to study the characteristics of the pharmacist workforce as was the case with the NPWS in 2000, 2004, 2009, 2014 & 2019, the data provide an update about the workforce approximately 33 months after the start of the COVID-19 pandemic in March 2020. A notable difference in terms of current employment status is that a smaller proportion of respondents were unemployed in 2022. This result is meaningful as it suggests that a significant proportion of respondents are not still unemployed after the pandemic. However, a greater proportion of unemployed respondents reported being permanently out of the workforce in 2022 relative to 2019. One explanation for this is the effect of COVID, but more research is needed about this topic. Also, the proportion of respondents working part-time as a pharmacist was higher in 2022 compared to 2019. The reasons for part-time work and the implications of part-time work for pharmacists could be examined in the 2024 NPWS.

Overall, the results suggest that approximately 14.9% of licensed pharmacists in 2022 experienced an employment status change at some time since March 2020 that resulted in pharmacists being unemployed. Given estimates from NABPF about the number of licensed pharmacists in the US in 2022 (416,044), the results suggest that 61,990 licensed pharmacists were unemployed at some time after March 2020. Fortunately, the results suggest that most pharmacists returned to the workforce after their time unemployed and many reported returning to a work situation that was better than their work situation prior to March 2020.

Future research could explore, in more detail, why pharmacists experienced an employment status change and their motivations and their search process for different employment. Additionally, it is important to learn why pharmacists did not leave an employment situation even if an opportunity was presented to them. Employment status changes could be very important to improve work life for pharmacists in the future. Focusing this area of study on younger

pharmacists is particularly important, given the percentage of pharmacists that are age 40 or less.

A strength of this study is that we identified work activities and work setting characteristics unique to individual work settings. Data from respondents about changes in work activities since March 2020 show that generally, time spent in work activities in December 2022 returned to pre-COVID levels. We did not collect information about how time spent in work activities changed immediately after March 2020 and the length of time that it took for time spent in activities to return to pre-COVID levels. Unfortunately, the results suggest that in many practice settings, a large percentage of pharmacists have reduced the time that they spent in work activities that require them to work directly with patients to potentially improve patient care. Identifying current and future pharmacist work activities that are unique to specific work settings and documenting time spent in specific work activities is important for future study.

A primary goal of the 2022 NPWS was to collect information about work characteristics across individual pharmacy work settings and work life variables for pharmacists practicing in different work settings. Broadly, the results showed a connection between work setting characteristics and work life outcomes. Future research could associate work characteristics with work life variables to better understand whether and how individual work setting characteristics improve pharmacists' work life. Pharmacy organizations and other stakeholders could continue to work together to identify the sources of work setting problems and identify ways to improve work environments for pharmacists.

The results showed variation across work settings in terms of work setting characteristics. A benefit of the results is that many pharmacists are working in very positive work settings, they are engaged in work activities that impact patient outcomes, and their work life outcomes are better. Given the decrease in individual applicants to schools of pharmacy in the US, information about the positive impacts on pharmacists of work setting characteristics and their work activities could be communicated to young people and their parents thinking about pursuing pharmacy as a career to counter negative perceptions of pharmacy as a career.

Pharmacists and researchers can work together to study and learn from work settings that are more positive for pharmacists and share best practices across all work settings. Pharmacy organizations have developed workplace reporting portals that allow pharmacists to share how characteristics of their work setting, both positive and negative, are impacting them and their work. By identifying and prioritizing specific best practices, pharmacists and researchers can work together to design, implement, and evaluate modifications to work settings to improve pharmacist performance, work life, and ultimately patient outcomes, such as medication safety, in work settings that are not as beneficial for pharmacists or patients. Purposeful modification of leadership, management, access to and use of technology are examples of work setting characteristics that could be considered in the future. We feel this is an important area for future study.

More active and creative strategies are needed to address the lack of diversity, equity and inclusion activities implemented in pharmacy. The 2022 NPWS collected baseline information on pharmacists' perceptions regarding this topic. It is our hope that with this information, we, along with others can delve more deeply in this area to provide greater insight into what is needed to make a significant impact in the diversity of our profession and improve pharmacists' perceptions of equity and inclusion.

Given the impact of COVID on pharmacists, it is important that studies of the pharmacist workforce continue to document information about pharmacists and their work. We think it is important for pharmacy organizations and researchers to identify events external to pharmacy work settings that are impacting pharmacy practice and pharmacists. Workforce studies could gather information about how the external events are impacting pharmacists, their work, and their work life. Studying such events could allow the profession to develop strategies to help pharmacists thrive as the health care landscape continues to change.

2022 Interim National Workforce Survey: Results About Work Settings from Focus Groups with Pharmacists

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Objectives

- Describe the process used to collect data about work system characteristics
- Provide results about pharmacy work system characteristics
- Discuss implications of the results and how the results will be used in the National Pharmacist Workforce Survey

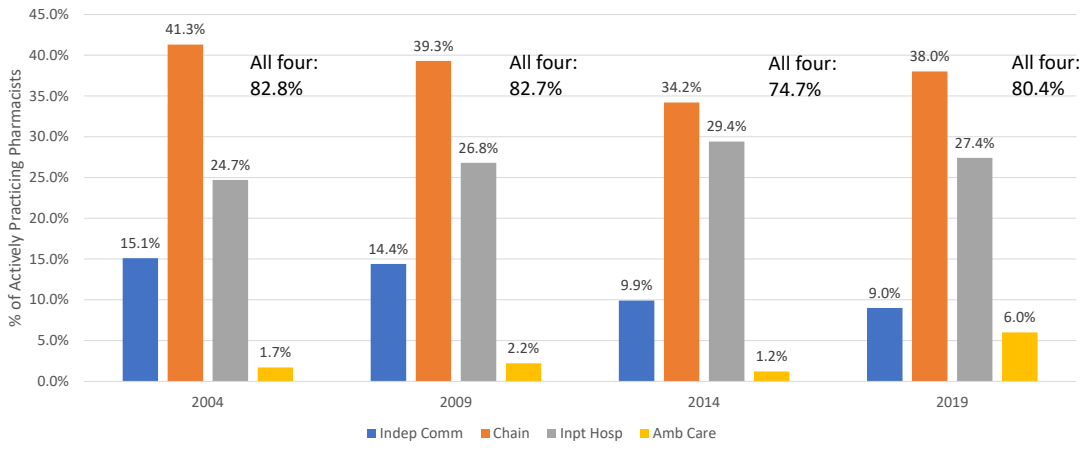
2

Significant Issues for Pharmacy

- Post COVID
  - What are the characteristics of pharmacy work settings?
    - What work setting characteristics are significantly influencing what pharmacists are doing?
    - How are work setting characteristics influencing pharmacists' reactions to their work?
    - How have the work setting characteristics changed since the COVID-19 pandemic started?

3

Trend in Practice Setting:2004-2019



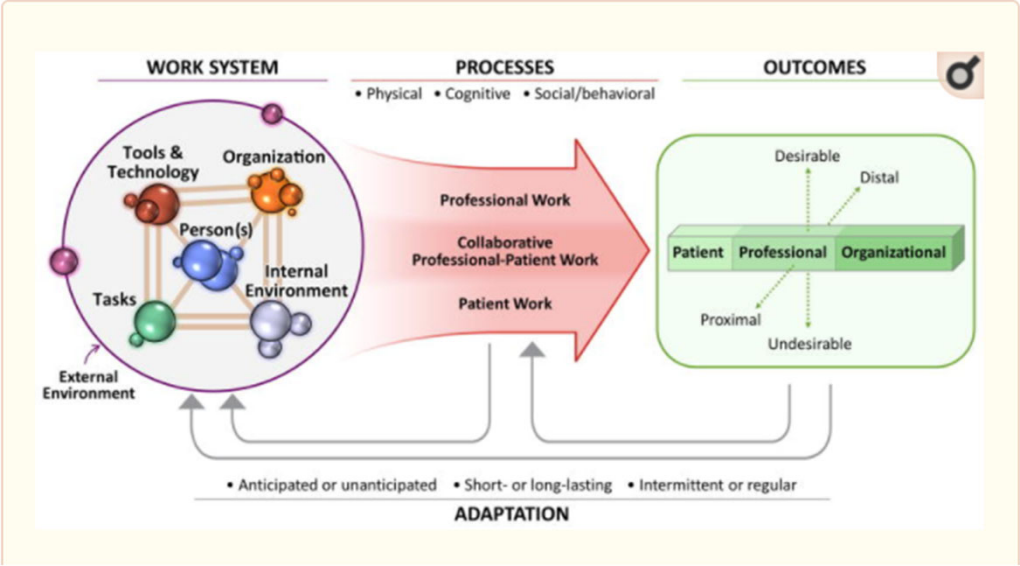
4

Significance/Gap/Need for Study

- Past efforts to study work setting characteristics
  - National Pharmacist Workforce Surveys
  - Setting specific surveys
  - Value of deeper look into each setting
- Recent reports about work life (APhA)
  - Signals about settings
- Recent articles about medication errors
  - Chain settings
- Define or operationalize what is causing problems

5

SEIPS Model 2.0



6

The Focus Groups

- Work settings
- Interview Guide
- Focus group facilitation
- Transcript coding
- Theme (item) extraction

7

Common Work Setting Characteristics

Organization

1. My supervisor/manager does not listen to me when I have concerns about work.
2. My organization actively implements strategies to improve well-being and resiliency for employees.

People

3. The number of pharmacists at my primary work setting is not adequate to meet patient care needs.

Tasks

4. The number of work activities that I currently perform in my job extend beyond what I was originally hired to do.
5. I have a low level of autonomy in how I accomplish my work activities.
6. I have little control over the amount of work that I am expected to complete.
7. I often need to extend my workday (i.e. spend additional time outside of my scheduled work hours) to accomplish everything for which I am responsible.

8

Ambulatory Care

Organization

1. My organization is very flexible in terms of the amount of time each week that I can work virtually.
2. My organization is not doing enough to deal with the actual causes of employee stress and burnout.
3. My organization listens to health care professionals when attempting to modify processes to improve patient care.

Technology

4. Virtual meetings have promoted equal participation by all members of the health care team during the meeting.

People

5. I have co-workers with whom I can have open and honest conversations when I feel overwhelmed or exhausted with work.
6. The level of collaboration between me and the health care providers with whom I work is very high.
7. Other health care providers with whom I work treat me as a trusted member of the health care team.

Tasks

8. Many of the work activities expected from me extend beyond my professional training or skill set.
9. There is not enough time during my clinic visits with complex patients to provide the care they need.

9

Inpatient Hospital

Organization

1. My organization is very flexible in terms of the amount of time each week that I can work remotely.
2. At my organization, pharmacists are consistently overlooked and underappreciated.
3. My organization is not doing enough to deal with the actual causes of employee stress and burnout.
4. Because pharmacists are viewed as versatile, "go-to" professionals in my organization, they are performing additional patient care activities.
5. At my organization, there is a backlog of patients with chronic conditions who are not being managed.

People

6. Pharmacists at my organization are losing their compassion and empathy for patient care.

Tasks

7. I am engaging in many work activities that are preventing me from using my skills and training to improve patient care.
8. Many of the work activities that I perform in my job exceed my professional training or skill set.

Technology

9. Virtual meetings improve collaboration between members of the health care team with whom I work.

10

Chain Community

Organization

1. My organization does not try to hire additional pharmacy staff when they know demand for services at the pharmacy will be high.
2. My organization listens to the concerns of pharmacists related to unsafe pharmacy practice.
3. Leadership at my organization consistently overlooks and underappreciates pharmacists.
4. My organization is flexible in modifying operations to benefit pharmacy staff and patients.
5. My organization's focus on meeting workload metrics results in unsafe pharmacy practice..

Tasks

7. Prescription dispensing often is delayed at my work setting due to insufficient time to accomplish my work activities.
8. Designated spaces for patient care services at my work setting are appropriate for the services provided at my pharmacy.
9. We provide many of our patient care services via appointment at my pharmacy.

People

6. Pharmacists at my organization are losing their compassion and empathy for patient care.

External Environment

10. Regulations limiting pharmacist workload would greatly improve patient safety in my work setting.

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Independent Community

Organization

1. My pharmacy has strong partnerships with public health agencies in the community.
2. My pharmacy has a strong culture of being innovative with services to meet patient care needs.
3. My pharmacy is flexible in modifying operations to benefit staff and patients.

Tasks

6. We provide many of our patient care services via appointment at my pharmacy.
7. Designated spaces for patient care are appropriate for the services provided at my pharmacy.

People

4. The pharmacists and staff that I work with have an attitude of "let's make this work."
5. The pharmacists with whom I work have a strong focus on public health and the community.

External Environment

8. Public health agencies look to my pharmacy to help plan solutions to problems related to patient care needs.
9. Patients are referred to us by local providers for the clinical services we provide.

12

Implications of Results

- Common characteristics across the four settings
  - Task expansion, limited resources, little control and autonomy, leadership could be better
- Differences across settings
  - Power dynamics
  - Collaboration
  - COVID role maintenance
  - Leadership issues
- Need for more research
  - Interventions to improve settings and patient medication safety
  - Change young people's perceptions

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Next Steps

- Dissemination
- Survey Questions
  - Presence of each work system characteristic
  - How each work system characteristic impacts patient medication safety
  - Extent to which each work system characteristic has changed since March 2020
  - Other settings items
- Associate work system characteristics with
  - Work activities
  - Work life outcomes (i.e. burnout, satisfaction, work-home conflict)
  - Job and Career Turnover Intention
- Pilot Test & Main Survey Distribution

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