National Pharmacist Workforce Study 2019

Executive Summary

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Project Commission

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), National Alliance of State Pharmacy Associations (NASPA), National Association of Chain Drug Stores (NACDS) Foundation, 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) and National Association of Boards of Pharmacy (NABP).

Repository for Project Materials and Data

Project materials and data are stored at the University of Iowa, College of Pharmacy, Department of Pharmacy Practice & Science, 180 S. Grand Avenue, Iowa City, IA 52242.

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Finally, several people were vital to conducting the survey, managing the data and analyzing the results of this study. We thank project manager Scott Egerton for his excellent work on creating and conducting the online survey, as well as his work on data management and reporting. Graduate students Brahmendra Viyyuri and Arwa Al-Khatib helped with data analyses and dissemination, which we appreciate.

EXECUTIVE SUMMARY: SECTIONS I - VI

I. BACKGROUND

Pharmacy practice and the profession continue to evolve and respond as both external and internal factors have led to changes in service delivery and work-life. Limited payments for many pharmacy services have influenced pharmacists' ability to provide them. Some pharmacies have responded by offering new services and by limiting costs through substitution of pharmacist labor through use of automation and technicians. As pharmacies work to adjust to external influences, such changes in work-life and service delivery can affect pharmacists. For example, there have been reports of job burnout by pharmacists across settings. Tracking of healthcare quality and pharmacy performance is becoming more common. The aging population and advancing healthcare technology have continued to increase demand for health care services, including medications and pharmacist services. The increased number of graduates from U.S. pharmacy schools has added capacity to the pharmacist workforce.

This 2019 National Pharmacist Workforce Study (NPWS) provides an update on the pharmacist workforce and examines changes since previous studies done in 2014 and 2009. In addition, the 2019 NPWS examines newer topics affecting pharmacist work-life, including job burnout, discrimination and harassment in the workplace, as well as retirement.

II. STUDY OBJECTIVES

The primary purpose of this project was to collect reliable information on demographic characteristics, work contributions and the quality of work-life of the pharmacist workforce in the United States during 2019. The results support analyses and trends from previous NPWS surveys conducted in 2009 and 2014. The project obtained information from a random sample of licensed pharmacists. Specific objectives included:

1. Describe demographic and work-life characteristics of the pharmacist workforce in the United States during 2019.
2. Describe work contributions of the pharmacist workforce in the United States during 2019.
3. Examine the new pharmacy workforce variables, including job burnout, workplace discrimination and harassment, opioid-related practice issues and pharmacist retirement during 2019.

III. METHODS

To meet the project objectives, a cross-sectional, descriptive survey design was used for collecting and analyzing data. Data were collected using an on-line survey hosted at the University of Iowa.

Survey Questionnaire: Questions comprising each section of the survey were taken primarily from previous workforce surveys conducted by members of the project team or from other published research. The survey questionnaire included seven topic areas: 1) General Employment Status and Work Environment, 2) Pharmacist Work Hours and Activities, 3) Pharmacy Practice Site Characteristics and Experiences, 4) Quality of Work-Life, 5) Opioid-related Activities, 6) Retirement and 7) Demographics.

Sampling Strategy: The National Association of Boards of Pharmacy Foundation (NABPF) drew a systematic random sample of 96,100 from its unduplicated list of licensed pharmacists in the US. The study sample represents over 20% of the licensed pharmacists in NABPF's files.

Survey Administration: Data collection included sending sampled subjects three emails that contained a link to an online survey (Qualtrics). The emails were sent out by the NABPF to sampled subjects. Subjects were asked to click on the survey link to access the survey. The emails were sent out on May 22, 2019, May 31, 2019 and June 10, 2019. A pilot test was conducted prior to the main survey to determine the feasibility of these proposed methods.

Data Analysis: Submitted surveys were available to researchers at the University of Iowa through their Qualtrics account. On July 8, 2019 the survey datafiles were downloaded from Qualtrics. Data are presented in this report in a manner that allows comparison to previous NPWSs whenever possible, since not all the same questions were included in each administration of the survey.

IV. RESULTS

About one-third of sampled subjects opened the email sent during the second and third email waves, with a mean open rate of 27.4% across the three email waves. The average rate for clicking on the survey link, after opening the email, was 11.7%. Across the three email waves, the mean bounce rate (i.e. undeliverable email) was 1.4%.

A total of 5,467 usable responses were received. A usable response was defined as responses which contained responses (i.e. no missing data) for each of five key variables: work status, gender, age, hours worked weekly and practice setting. The same definition for a usable response was used in previous national surveys. The maximum number of emails delivered was 94,803. This resulted in a traditional usable response rate of 5.8%. A total of 8,466 pharmacists clicked on the survey link. Using the number of pharmacists who clicked on the survey link as a denominator, 64.6% of pharmacists provided a usable response.

Demographics

Overall in 2019, 79.8% of licensed pharmacists submitting usable responses were actively practicing as pharmacists. A total of 5.5% of licensed pharmacists were working not as a pharmacist, a total of 9.8% of licensed pharmacists were retired, and 4.9% were unemployed. Compared to 2009, there was a greater proportion of responding licensed pharmacists working not as a pharmacist, retired, and unemployed in 2019. Of licensed pharmacists who reported being retired, 34.6% were female in 2019 compared to 20.2% in 2009. Overall, 78.2% of licensed pharmacists were white in 2019 compared to 86.5% in 2009. A total of 41.2% of licensed pharmacists were less than age 41 in 2019 compared to 22.8% in 2009. In 2019, 53.5% of licensed pharmacists earned a PharmD degree as their highest degree compared to 21.6% in 2009. Of actively practicing pharmacists, 65.1% were female compared to 46.4% in 2009. A total of 11.6% of actively practicing pharmacists were working part-time (<30 hours per week) compared to 20.9% in 2009.

A total of 50% of actively practicing pharmacists reported their primary place of employment was community-based practice settings (e.g. independent, chain, supermarket), 27.8% reported primary place of employment as hospital/health-system practice settings (e.g. government and non-government hospitals), and 6% reported primary place of employment as ambulatory care practice settings (e.g. outpatient clinics, primary care clinics). Reported primary place of employment for independent community and supermarket settings decreased from 2014 to 2019 and primary place of employment for ambulatory care practice settings increased between 2014 and 2019.

Of actively practicing pharmacists who were in management positions in 2019, 58.8% were female compared to 40.5% in 2009. In 2019, 20.5% of actively practicing female pharmacists held management positions compared to 29.8% in 2009.

Work Contribution, Compensation and Debt

In 2019, males working full-time as a pharmacist worked 0.9 weekly hours more than females. The difference in weekly hours worked between male and female full-time pharmacists was 1.6 hours in 2014 and 2.4 hours in 2009. Overall, pharmacists working full-time worked an average of 43.8 hours per week in 2019, the same as in 2009. Overall, 23.3% and 12.4% of actively practicing pharmacists reported that the average number of hours they worked weekly increased and decreased, respectively, from last year. On

average, pharmacists who reported that the number of hours they worked weekly decreased from last year, worked 8.1 fewer hours. Pharmacists who reported that the number of hours they worked weekly increased from last year, worked, on average, 7.7 more hours.

A total of 44.2% of pharmacists actively practicing full-time received an increase in base pay in 2019 compared to 31.7% in 2014. Also, a total of 48.4% of pharmacists actively practicing full-time reported their base pay stayed the same in 2019 compared to 31.7% in 2014. By primary place of employment, a smaller proportion of full-time pharmacists in community retail pharmacies enjoyed increased base pay in 2019 relative to full-time pharmacists in other employment settings. Also, a considerably higher proportion of full-time pharmacists in community retail pharmacies (approximately 12%) reported a base pay decrease in the past year compared to full-time pharmacists in hospital settings (2%).

Overall, in 2019, 71% of full-time actively practicing pharmacists rated their workload level at their primary place of employment as "high" or "excessively high", compared to 66% and 68% of full-time pharmacists in 2014 and 2009, respectively. Furthermore, 69% of full-time pharmacists in 2019 reported that their workload "increased" or "greatly increased" compared to a year ago. The proportion was higher than in 2014 (64%) and 2009 (61%). By primary employment setting, the highest proportions of full-time pharmacists rating their workload as "high" or "extremely high" were in chain (91%) and mass merchandiser (88%) pharmacy settings, while the lowest proportions of full-time pharmacists rating their workload as "high" or "extremely high" were in independent community (48%) and ambulatory care (57%) pharmacy settings.

Pharmacists who reported graduating during the latest decade (2011-2019) reported a mean student loan debt at time of graduation of $142,875, which was higher than the mean debt at graduation of $82,188 reported by pharmacists graduating between 2001-2010.

Practice Activities, Environment, and Changes

Full-time pharmacists reported the percentage of time they spent in patient care activities during a typical week. The mean percentage of time spent on patient care activities associated with dispensing was 49%, though it ranged from 9-75% across primary employment settings. The overall mean percent of time spent on care activities not associated with dispensing was 22% (range: 9-41%). The means were similar to means reported from the 2014 NPWS (49% and 21%, respectively). Business or organizational management had the third highest mean percentage at 12% (range: 8-20%). Full-time pharmacists in a management position reported spending less time on care activities (dispensing 50%, non-dispensing 11%) and more time in business management (27%) than do pharmacists in staff positions (55%, 28%, 5% respectively).

Overall, about half of actively practicing pharmacists reported working with more than one pharmacist during a majority of their workday. The range across primary employment settings was large (18-81%) , with the lowest percentage reported by pharmacists working in chain settings and the highest percentage reported by pharmacists working in other patient care settings. The highest percentages of pharmacists working with residents were in hospital and ambulatory care settings. The most common type of personnel with which pharmacists work during a majority of their workday across all employment settings is multiple technicians.

Actively practicing pharmacists reported about various changes that occurred at their primary place of employment in the past year. A total of 62% of pharmacists reported that the "ease of pharmacists in your community finding work" decreased while 3% said it increased. Also, a total of 47% of pharmacists reported that "your feeling of job security" decreased while 7% said it increased. A total of 68% of pharmacists working in chain settings reported that their feeling of job security decreased compared to 30% of

pharmacists working in ambulatory care settings. A total of 55% and 54% of pharmacists working in chain settings and mass merchandiser settings, respectively, reported that the number of technicians working at their workplaces decreased. About one-third (33%) of pharmacists across all primary employment settings reported an increase in communicating with prescribers (range: 17-50%).

Services Provided

Overall, the three most common services reported being offered by actively practicing pharmacists in ambulatory care settings were medication education (61.6%) or counseling (48.5%) and changing drug therapy independent from a patient-specific order or prescription (45.1%). The three most common services reported being offered by actively practicing pharmacists in hospital/acute care settings were drug level monitoring (87.2%), therapeutic drug interchange (81.5%), and ordering laboratory tests (72.7%). A majority of actively practicing pharmacists in community pharmacists reported administering vaccines (90.0%), providing patient medication assistance (e.g. coupons, discounts) (83.4%), dispensing naloxone (72.2%), providing medication therapy management (MTM) services (66.7%) and providing medication synchronization (66.5%). Over 30% of actively practicing pharmacists in community settings reported monitoring diabetes (35.7%) and hypertension (35.6%) therapy for patients in the past month.

Community pharmacists reported about their services related to the opioid crisis. According to pharmacists working in mass merchandiser and large chain settings, the most common method to dispense naloxone is via a standing order (76.6% and 63.3% respectively). Conversely, according to pharmacists working in independent and small chain settings, the most common method to dispense naloxone is based on a prescription order (44.4% each). Overall, 52.1% of pharmacists working in community settings reported dispensing naloxone less than once a month and 6.2% of pharmacists reported dispensing naloxone at least once a week. Although 57% of pharmacists working in community settings reported that they were very confident about recommending naloxone to a patient, only 28.3% of pharmacists working in community settings reported that they were very confident in their ability to administer it.

Quality of Work-life

The quality of work-life section measured full-time pharmacists' attitudes about work-home conflict (i.e. work impacting home-life, job satisfaction, organizational commitment, home-work conflict (home impacting work-life and control in the work environment. A total of 58% of pharmacists reported high levels of job satisfaction. Job satisfaction was lowest among pharmacists working in chain, mass merchandiser and supermarket settings. Overall, only one-third of respondents reported they had a high level of control in their work environment with higher levels of control reported by pharmacists working in independent community pharmacy (50% of pharmacists), ambulatory care (50% of pharmacists) and other (non-patient care) (65% of pharmacists) settings. Generally, compared to 2014, the results related to work attitudes suggest that full-time pharmacists' quality of work-life was lower in 2019.

In terms of job stress, full-time pharmacists reported on experiences or aspects of their jobs that are "highly stressful." The three most common "highly stressful" job experiences or aspects were "having so much work to do that everything cannot be done well" (43% reporting "highly stressful"), "working at current staffing levels" (37% reporting "highly stressful"), and "fearing that a patient will be harmed by a medication error" (35% reporting "highly stressful"). The findings were similar to findings in 2014. Female pharmacists rated each stressor higher than their male colleagues.

Regarding the job market, younger full-time pharmacists (up to age 30) and those practicing in community pharmacy settings reported a greater likelihood to search for new employment and a higher possibility of leaving their current job within the next year. A higher percentage of younger (up to age 30) full-time pharmacists were aware of vacant positions that would be a good fit for them.

Job burnout and professional fulfillment were assessed using subscales from the Professional Fulfillment Index (Trockel 2018) to measure professional fulfillment, work exhaustion and interpersonal disengagement. Low scores on the subscale of professional fulfilment and high scores on the subscales of work exhaustion and interpersonal disengagement indicate a higher level of job burnout. Subscale analyses showed that 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. Female full-time pharmacists reported lower levels of professional fulfillment and higher levels of work exhaustion compared to male full-time pharmacists.

A new section examining discrimination and harassment in the workplace also was introduced this year. In 2019, a total of 1,380 actively practicing pharmacists (31%) reported that they experienced a total of 2,820 incidents of discrimination (all basis/forms). The most common basis for/form of discrimination was age (31.3% of incidents) followed by gender (29.2% of incidents). Overall, only 15.9% of all discrimination incidents were reported to an employer. The most common offender of the discrimination incident was a male supervisor.

Actively practicing pharmacists reported a total of 2,311 incidents of harassment that occurred in their workplace. A total of 46.9% of the incidents occurred in community retail work settings. The most common type of harassment was “hearing demeaning comments related to race/ethnicity” (31.5%) followed by “hearing or observing offensive behavior of a sexual nature” (27.4%). When harassment was experienced, approximately 83% of pharmacists did not report the harassment to their employer. The most common offender of the harassment was a male customer/patient followed next by a male colleague.

Pharmacy Leadership

In 2019, 46.8% of pharmacists in management positions (i.e. owners/partners, upper management, lower management) reported that the perceived availability of qualified pharmacists to fill management positions was at least a moderate shortage. A total of 32.8% of pharmacists in management positions reported that the difficulty of filling a management position was more difficult than 5 years ago. A total of 31.6% of pharmacists in management positions reported that the difficulty of filling a management position was easier than 5 years ago.

For actively practicing pharmacists currently in staff positions, approximately 41.5% reported they were likely or very likely to pursue a management/leadership role in the next 5 years. The most common desire for leadership was the “desire to mentor others”. The “ability to make an impact” was the most common positive factor selected by both male and female staff pharmacists regardless of practice setting. The most common barrier to pursuing a leadership role reported by staff pharmacists was “role conflicting with family or lifestyle”.

Retirement

A total of 534 (9.8%) respondents reported their employment status as retired. The most common reported age at which pharmacists retired was 66. Factors such as “having established financial security”, “a desire for more personal or family time”, “the demands of the job” and “culture or philosophy at work” were most often rated as important in the decision to retire among the respondents. Where the gender differences were most notable within the reasons given for retiring were “culture or philosophy at work” and “negative interpersonal relationships at work”—a higher proportion of women rated these reasons to retire as very important.

Approximately one-quarter of retired pharmacists have continued to work in some capacity after they retired and approximately three-fourths of retired pharmacists continue to engage in pharmacy-related work. A higher proportion of retired women pharmacists volunteer time in a service capacity (nearly 60% vs. about 35% for men). About two-thirds of those retired pharmacists that volunteer do so primarily because they feel a need to contribute their talents and efforts. A slightly higher proportion of retired women pharmacists reported their decision to retire was not voluntary or somewhat voluntary.

V. LIMITATIONS

The findings of this study should be interpreted 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 such errors by piloting the survey prior to the main data collection. Since the NPWS 2019 used a different survey mode (online) compared to previous NPWS surveys (mail), comparisons of these findings with those previous results should be done with caution.

While the response rate for this online survey met or exceeded standards for electronically administered surveys, the response rate was lower than previous National Pharmacist Workforce Studies and raises concerns about non-response bias. Our analyses of survey responses showed some differences in the respondents compared to the random sample selected by the NABPF from their population of licensed pharmacists. As a group, the NPWS 2019 respondents had a high percentage of female pharmacists, were older and had a lower percentage of pharmacists living in the Northeast and a higher percentage in the Midwest compared to the population of licensed pharmacists. These differences, and how they may be associated with the survey results, should be kept in mind when interpreting the findings.

VI. CONCLUSIONS

Overall these findings have provided continuing data and some new data about the pharmacist workforce. The pharmacist workforce continues to change in 2019. More licensed pharmacists were working outside of pharmacy or were unemployed relative to 2014, reflective of the tightening of the pharmacist labor market. Monitoring trends in pharmacist unemployment and reasons for unemployment will be important for the future. The proportion of licensed pharmacists that are non-white is increasing while the proportion of licensed pharmacists with a PharmD degree is growing rapidly. How much more racially diversified the pharmacist workforce can become is an important topic to ponder.

Among actively practicing pharmacists, the proportion that is female is over 65% and the proportion that is age 40 years or younger is nearly 50%. The impact that female pharmacists and young pharmacists will have on the workplace and how they react to the workplace will be important issues to monitor moving forward. The impact of rising student loan debt at time of graduation also will be important to monitor as debt load continues to increase. Less than half of staff pharmacists reported being interested in pursuing leadership positions, which raises attention for developing more pharmacy leaders.

The mean percentage of time spent on care activities not associated with dispensing did not change from 2014. Somewhat in contrast, a wide range of care services were reported being delivered by pharmacists in all practice settings. Some pharmacy settings continue to reduce pharmacist time spent in distributional tasks, while using more automation and pharmacy technicians where feasible. It is likely that availability of payment for enhanced services is a key influence on pharmacist delivery of them.

Overall, the quality of pharmacist work-life was positive, though high stress and job burnout were reported in some community settings. A focus on improving pharmacist work-life and preventing burnout and reduced service quality is important. Also, it is clear that discrimination and harassment in the pharmacy workplace should receive attention to improve employers' ability to positively respond to such incidents.

Mass merchandisers and large chain pharmacies were the most likely to dispense naloxone based on a standing order, whereas independent and small chain pharmacies were more likely to report dispensing

naloxone based on a patient prescription order. Given the continued presence of opioid misuse, it appears that more pharmacists could engage to a greater extent in addressing this problem.

Many retired pharmacists continue to maintain a presence in pharmacy. About a quarter of retired pharmacists have continued to work in some capacity during their retirement, with about 75 percent of those still working in pharmacy. A higher percentage of retired female pharmacists volunteer time in a service capacity. Many retired pharmacists reported enjoying retirement.