2009 NATIONAL PHARMACIST WORKFORCE SURVEY

FINAL REPORT OF THE 2009 NATIONAL SAMPLE SURVEY OF THE PHARMACIST WORKFORCE TO DETERMINE CONTEMPORARY DEMOGRAPHIC AND PRACTICE CHARACTERISTICS

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A fact sheet for PMP, Inc. is presented on the next page.

Finally, and most importantly, we thank the nation's pharmacists who received and responded to the survey. We appreciate their time and effort in providing requested information. Without their assistance, the report would not be possible.

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Fact Sheet

The Pharmacy Manpower Project, Inc. (PMP) was established in 1989 as a nonprofit corporation comprised of major national pharmacy professional and trade organizations. Its mission is to serve the public and the profession by collecting, analyzing, and disseminating data regarding the size and demography of the pharmacy practitioner workforce and conducting and supporting research in areas related to that workforce.

Data from the PMP-developed and sponsored [1]*Aggregate Demand Index* (www.pharmacymanpower.com) and results from the PMP-sponsored [2]*National Pharmacist Workforce Survey: 2009* (report available March 1, 2010 at: www.aacp.org) are made available to the public and are reported and discussed at multiple government agencies and conferences each year. The *Aggregate Demand Index* (www.pharmacymanpower.com) is an ongoing project supported by the PMP since 2000, which provides regional, state and practice setting indices of national demand for pharmacist positions. The *National Pharmacist Workforce Survey* is conducted every five years to capture the demographic and work characteristics of the pharmacist workforce.

PMP-sponsored projects have provided important information toward the development of several HHS reports including, *The Adequacy of Pharmacists Supply: 2004-2030* and *The Pharmacist Workforce: A Study of the Supply and Demand for Pharmacists.* Project directors for the PMP have provided pharmacy workforce data and valuable research assistance to workforce analysis teams at Health and Human Services, Health Research and Services Administration, the Bureau of Labor Statistics, the Bureau of Health Professions, Veterans Health Administration, Kaiser Permanente, the Health Workforce Information Center (www.healthworkforceinfo.org), and other agencies and organizations.

In 2006, PMP released the [3]*Final Report of the National Sample Survey of the Pharmacist Workforce to Determine Contemporary Demographic and Practice Characteristics* (report available at www.aacp.org, Resources, Pharmacy Manpower, Inc.). Conducted by the Midwest Pharmacy Workforce Research Consortium, the study provides an update of the demographic and work characteristics of the pharmacist workforce in 2004. The study also examines changes in the workforce since 2000 when the first national assessment was conducted.

In 2001-02 PMP member organizations contributed to the HRSA-sponsored *Tenth Report on Health Personnel in the U.S.: 2000-2015*. The PMP also conducted a conference on [4]*Professionally Determined Need for Pharmacy Services in 2020* in October 2001. Conference proceedings were published in the *American Journal of Pharmaceutical Education*, 2002; 66: 421-429 (available at www.ajpe.org).
The most recent national pharmacist census, sponsored by the PMP, was conducted in 1989-1991.

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EXECUTIVE SUMMARY

The purpose of this study was to collect reliable information on demographic characteristics and work contributions of the pharmacist workforce in the United States during 2009. Specific objectives were to describe:

1. demographic and work characteristics of the pharmacist workforce in the United States during 2009, and
2. work contributions of the pharmacist workforce in the United States during 2009.

Data were collected from a random sample of 3,000 individuals selected from a list of 249,381 licensed pharmacists in the United States. Of the 2,667 surveys that were presumed to be delivered to a pharmacist, 1,395 were returned yielding a response rate of 52%.

Findings from 2009 were compared with findings obtained in the 2000 [1] and 2004 [2] surveys whenever possible.

Key Findings

Our results suggest that there was an increase in the proportion of licensed pharmacists actively practicing pharmacy between 2004 and 2009 and the proportion increased to a level that was similar to pharmacist work participation levels seen in 2000. Although a greater proportion of pharmacists were actively practicing pharmacy, the FTE contribution of pharmacists did not increase between 2004 and 2009 mainly due to increasing rates of part-time work among male and female pharmacists and no significant increase in hours worked among pharmacists working full-time and part-time.

One explanation for the increase in the proportion of pharmacists actively practicing pharmacy was the economic downturn in 2008 and 2009. As the economy impacted other business sectors, pharmacists working in other fields or not working at all may have decided to enter the pharmacy workforce, either on a full or part-time basis, to shield themselves and their families from the impact of the bad economy.

The prevalence of part-time work by actively practicing pharmacists has been an increasing trend since 2000. Working part-time has been an attractive option for male and female pharmacists because the demand for pharmacists has been high, allowing pharmacists to choose the amount they will work. In 2009, the economic downturn and reactions from pharmacist employers likely contributed to the rate of part-time work by pharmacists. Roughly one-third of hospitals and chain settings restructured schedules and some settings reduced hours in reaction to the economy. It will be important for workforce researchers to track the rate of part-time work among pharmacists as the number of new pharmacy graduates increases and the economy rebounds.

An important characteristic of the pharmacist workforce is the proportion of pharmacists age 60 and older that are actively practicing pharmacy. High wages help older pharmacists deal with downturns in the stock market, the nature of trends in funding pension plans, availability of health insurance, and out-of-pocket costs associated with health insurance. The work contribution of retirement age pharmacists has been a significant factor in the dynamics of the pharmacist workforce.

Regarding work contributions, full-time pharmacists in 2009 devoted 55% of their time to medication dispensing, 16% to patient care services, 14% to business/organization management, 5% to education, 4% to research, and 5% to other activities. Sixty-eight percent of pharmacists rated their workload level at their place of practice as high or excessively high, which is an increase of 14 percentage points compared to 2004 (54%).

SELECTED HIGHLIGHTS

Characteristics of Licensed Pharmacists

- 88.3% (67.4% full-time and 20.9% part-time) of licensed pharmacists responding to the survey in 2009 were actively practicing pharmacy. In 2004, 86.0% of pharmacists were actively practicing pharmacy and in 2000, 88.2% were actively practicing pharmacy.

- Between 2000, 2004, and 2009 the proportion of pharmacists working full-time decreased (73.3%, 68.3%, 67.4%, respectively) and the proportion of pharmacists working part-time increased (14.9%, 17.7%, 20.9%, respectively).

- The proportion of both male and female pharmacists working part-time increased between 2000, 2004, and 2009. For females, the rate increased from 21.3% in 2000, to 24.0% in 2004, to 27.2% in 2009. For males, the proportions were: 9.9%, 12,8%, and 15.8% for the years 2000, 2004, and 2009, respectively.

- The proportion of licensed pharmacists who held a Pharm.D. as their highest degree increased from 13.9% in 2000, to 18.6% in 2005, and 21.6% in 2009.

- The racial diversity of licensed pharmacists in the U.S. did not change significantly between 2000, 2004, and 2009. For the 2009 survey, we collected information for the proportion of respondents who were American Indian (n=5; 0.4% of all respondents) and Hispanic/Latino (n=23; 1.7% of all respondents).

- Results reveal an aging population of pharmacists with 37.1% over age 55 in 2009 compared to 30.7% in 2004, and 21.6% in 2000.

Characteristics of Actively Practicing Pharmacists

- The proportion of actively practicing pharmacists who are female has increased from 44.8% in 2000, to 45.9% in 2004, to 46.4% in 2009.

- Among respondents who were actively practicing as pharmacists, the proportion of both male and female pharmacists working part-time increased between 2000, 2004, and 2009. For females, the rate increased from 23.4% in 2000, to 26.8% in 2004, to 29.8% in 2009. For males, the proportions were: 11.6%, 15.4%, and 18.4% for the years 2000, 2004, and 2009, respectively.

- In 2000, 44.1% of practicing pharmacists were age 40 or younger. This proportion decreased to 33.0% in 2004, and in 2009 it was only 24.4%. Conversely, in 2000 16.7% of practicing pharmacists were over age 55, and this proportion increased to 24.6% in 2004, and to 32.5% in 2009.

- The proportion of actively practicing pharmacists working in traditional community pharmacy practice settings (independent, chain, mass merchandiser, and supermarket pharmacies) remained relatively stable between 2000 (55.4%), 2004 (56.4%), and 2009 (53.8%).

- In 2000, 10.9% of actively practicing male pharmacists were in owner/partner positions compared to only 2.3% of females. This gap was similar in 2004 (10.3% of males compared to 2.1% of females were in owner/partner positions). However, the gap was significantly less in 2009 when 11.6% of males and 8.1% of females were in owner/partner positions.

- The patterns of part-time work for males in the 2000, 2004, and 2009 surveys were similar in that relatively few men aged 60 and younger worked part-time. At age 61 and older, men are more likely to work part-time. Patterns of part-time work for females in the 2000, 2004, and 2009 surveys showed that they typically were more likely than males to work part-time at ages 65 and younger.

- The proportion of actively practicing pharmacists who were male decreased only slightly between 2000 (58.7% male), 2004 (57.7% male), and 2009 (57.3% male). Findings from 2004 showed that hospital pharmacy, industry, and Other (non-patient care) settings had a majority of females working full-time. However, the 2009 data showed that all practice settings had a majority of male pharmacists working full-time in them.

- For males working part-time, the most common employment practice setting was independent pharmacy (35.0%) followed by chain pharmacy (27.4%). For females working part-time, the most common practice setting was hospital (31.1%) followed by chain pharmacy (22.6%).

Hours Worked by Actively Practicing Pharmacists

- Among pharmacists working full-time, males worked 2.4 hours more per week compared to females. In 2004, the difference was 2.1 hours and in 2000 the difference was 4.4 hours.
- Overall, pharmacists working full-time worked an average of 44.2 hours per week in 2000, 43.4 hours per week in 2004, and 43.8 hours per week in 2009.
- For part-time pharmacists, average hours worked per week did not change significantly either (19.0 hours per week in 2000, 19.1 hours per week in 2004, and 19.4 hours per week in 2009).
- A full-time equivalent (FTE) was calculated using the number of reported total hours worked in primary employment and the number of weeks worked annually. We defined 1.0 FTE as a pharmacist working 40 hours per week, 52 weeks per year, or 2080 hours. In 2000, pharmacists were contributing an average of 0.93 FTE to the workforce. In 2004, pharmacists contributed an average of 0.87 FTE and in 2009 they also contributed an average of 0.87 FTE.
- In 2009, actively practicing male pharmacists contributed an average of 0.92 FTE compared to 0.82 FTE for females. This difference is almost identical to the results from 2004 (0.91 and 0.82, respectively).

Work History of Actively Practicing Pharmacists

- For 2009, the work settings with the highest proportion of full time pharmacists working for less than three years at their current place of employment were: industry (34.3%), other-non patient care (28.8%), and other patient care practice (25.3%). The proportion of pharmacists who have been with their employer for less than three years may be an indication of turnover, but also could reflect job expansion and new hiring in certain sectors.
- For hospital pharmacy settings, the proportion of full-time pharmacists working for less than three years at their current place of employment declined from 26% in 2000 to 21% in 2004, and only 13% in 2009.
- There was a decrease in the proportion of full-time pharmacists working for less than three years at their current place of employment for pharmacists overall (31% in 2000, 20% in 2004, and 16% in 2009).

- The mean number of employers reported by actively practicing full-time pharmacists did not change significantly between 2000 (3.7 employers), 2004 (3.9 employers), and 2009 (3.8 employers).
- However, the mean years per employer did increase (6.5 years per employer in 2000, 6.8 years in 2004, and 8.2 years in 2009).
- Pharmacists who worked in independent and chain settings worked the longest per employer. This finding was consistent in 2000, 2004, and 2009.

Debt Load for Pharmacists Working Full-Time

- In 2009, pharmacists reported an average current student loan debt of $4,224 compared to $14,936 when they graduated from pharmacy school.

- Pharmacists with five years or less years of experience reported an average of $79,895 of student debt at the time of graduation from pharmacy school and a current student load debt of $61,667. Only 5% of respondents in this group reported having zero student load debt at time of graduation and 17% reported no student loan debt currently. For this group, average total household debt (not including student loan debt) was $221,280 (with 12% reporting no household debt).

- It should be noted that our survey did not include any graduates from 2007 onward. A recent "Graduating Pharmacy Student Survey" conducted by the American Association of Colleges of Pharmacy during July 2009 [3] showed that for the 6,578 graduating students who responded to the survey in 2009, 87.4% of the respondents reported having a debt load upon graduation. The mean amount of the debt load in 2009 was $101,892. This finding for 2009 is consistent with the trend identified in our survey if one considers that the "≤ 5 years" category in our study only included graduates from 2004 – 2006.

Ratings of Workload by Pharmacists Working Full-Time

- In 2009, 68% of pharmacists rated their workload level at their place of practice as high or excessively high. This is an increase of 14 percentage points compared to 2004 (54%).

- Furthermore, 61% of pharmacists working full-time in 2009 reported that workload increased or greatly increased compared to a year ago. This proportion is similar to 2004 (58%).

- Unlike findings from the 2004 survey, all practice settings in 2009 had 64% or more of their pharmacists rate work level at their pharmacy as high or excessively high (mean = 68; range from 64 to 72). In comparison, none of the practice sites in 2004 were greater than 61% (mean = 54; range from 35 to 61). The largest increases between 2004 and 2009 were for supermarket (from 35% in 2004 to 69% in 2009), mass merchandiser (42% to 67%), and independent pharmacies (43% to 66%).

- Males and females rated their workload level similarly. In terms of position, workload also was rated similarly by management and staff pharmacists.

- However, the effects of current workload on pharmacists did differ between male and female pharmacists. In both 2004 and in 2009, males were more likely to report that their current level of workload had a negative or very negative effect on job-related issues (job performance, motivation to work at their pharmacy, and job satisfaction) and patient care-related issues: (time spent in contact with patients, quality of care provided to patients, and opportunity to solve drug therapy problems).

- In 2009, over 50% of independent pharmacists reported that current level of workload had a negative or very negative effect on their opportunity to take breaks. Over 50% of chain pharmacists reported this as well, and also 52% of chain pharmacists reported negative or very negative effects on time spent in contact with patients. Over 50% of mass merchandiser respondents reported negative or very negative effects on three items: mental/emotional health, opportunity to take breaks, and time spent in contact with patients. Supermarket pharmacists were similar to chain pharmacists in that over 50% reported negative or very negative effects on: opportunity to take breaks and time spent in contact with patients. Hospital, Other Patient Care, and Other pharmacists did not report over 50% negative or very negative effects for any of the items we studied.

Work Activities for Pharmacists Working Full-Time

For the 2009 survey, definitions for work activities were updated to better reflect pharmacists' contributions to patient care, health care, education, and medication discovery, development, and utilization research. One limitation of the update was that we could not directly compare the findings from 2009 with other years' findings.

- Full-time pharmacists in 2009 devoted 55% of their time to medication dispensing, 16% to patient care services, 14% to business/organization management, 5% to education, 4% to research, and 5% to other activities.

- Pharmacists practicing in community pharmacy settings (independent, chain, mass merchandiser, or supermarket pharmacies), devoted at least 70% of their time to medication dispensing. Hospital and Other Patient Care pharmacists devoted less than half their time to medication dispensing and each of these pharmacist categories devoted 27% of their time to patient care on average. Pharmacists in Other (non-patient care) settings exhibited a different pattern of work activities including business/organization management (27% of their time, on average), research (27%), and other activities (23%).

- Fifty-two percent of responders to this set of questions worked in community pharmacy settings (independent, chain, mass merchandiser, or supermarket pharmacies). In these settings pharmacists typically devoted 70% or more of their time to medication dispensing activities and approximately 10% of their time to patient care services.

- In comparison, 38% of responders worked in hospital or other patient care settings. In these settings, pharmacists typically devoted 43% of their time to medication dispensing and 27% of their time to patient care services.

- Pharmacists in Other (non-patient care) settings comprised just 10% of the responders and devoted relatively little time to either medication dispensing (4%) or patient care services (7%).

- For every practice setting in 2009, pharmacists would like to spend less time in medication dispensing and business/organization management and more time in patient care services, education, and research activities.

- We suggest that future research should describe and monitor the expected shifts in which less pharmacist time will be devoted to traditional medication dispensing and more time devoted to: patient care services including specialty pharmaceuticals, management of people / information / organizations / systems, education, and research.

Workplace Labor Reductions Reported By Pharmacists Working Full-Time

The 2009 National Pharmacist Workforce Survey was conducted during an economic recession in the United States which included declines in employment, gross domestic product, and trade that had been ongoing since December 2007.

According to the Bureau of Labor Statistics [4], the number of unemployed persons had risen by 7.4 million, and the unemployment rate had grown by 4.8 percentage points between the beginning of the recession in December 2007 and August 2009. However, the health care sector added 544,000 jobs in that time period, with gains during 2009 being mostly in ambulatory care, nursing, and residential care.

Little, however, was known about the pharmacist workforce and how it was affected by the recession. According to the IMS National Prescription Audit, change in number of prescriptions dispensed in the United States had slowed in its growth and, for part of 2008, there were months when the change was negative. Corresponding to these trends in the change in number of prescriptions dispensed, the National Aggregate Demand Index (ADI) for pharmacists declined from 4.09 in 2007, to 3.96 in 2008, to 3.79 in 2009 [5]. The ADI is rated on a scale where: 1 = supply exceeds demand, 2 = some excess of supply, 3 = balance, 4 = moderate difficulty in filling vacancies, 5 = difficulty in filling vacancies.

In order to learn more about the pharmacist workforce within the time period of the 2009 economic recession, questions were added for the 2009 survey that asked pharmacists to report changes at their place of employment related to staffing or operations during the year prior to the survey, including: (1) pharmacist lay offs, (2) mandatory reductions in pharmacist hours, (3) early retirement incentives for pharmacists, and (4) restructuring of pharmacist work schedules to save labor costs.

- Out of four workforce adjustments we described in this study, the most common was restructuring of pharmacist work schedules to save labor costs (26%), followed by mandatory reductions in pharmacist hours (13%), pharmacist layoffs (6%), and early retirement incentives for pharmacists (4%).

- "Restructuring of pharmacist work schedules" was more commonly seen in chain and hospital type pharmacies.

- "Mandatory reductions in pharmacist hours" was more common in chain pharmacies.

- These differences may be reflective of organizational sizes, staff sizes, adjustments in prescription dispensing volumes, adjustments in dispensing processes, or adjustments in service offerings.

- The pattern of the four workforce adjustments was similar for pharmacists categorized by gender and by position.

- Future monitoring of these variables will be useful for determining the extent to which our findings were (1) a result of the economic recession of 2009, (2) typical for the profession as it continually adjusts to other economic and professional developments, or (3) early indicators of changes still to come in the pharmacist workforce.

Work Contributions (Hours per Week) and Career Plans Expected in Three Years

- The majority of pharmacists expected to be working about the same or more amount of hours per week three years from the time of the survey (i.e. in 2012).

- Independent pharmacists were less likely than other respondent types to report that they planned to work about the same or more hours per week. These differences may be reflective of the age distribution and future plans of pharmacists working in independent pharmacies.

- The pattern of responses to this question was similar for pharmacists categorized by gender and by position.

- The majority of pharmacists expected to be working with their current employer three years from the time of the survey (i.e. in 2012).

- Pharmacists currently working at independent pharmacies had the highest proportion reporting that they planned to be retired or out of the workplace (11%) and chain pharmacies had the lowest proportion (5%).

- Regarding the expectation that the respondent would be working with a different employer in the next three years, 20% of the respondents currently working in supermarket pharmacies reported this compared to only 6% of chain pharmacists.

- 10% of male pharmacists and 4% of female pharmacists expect to be retired by 2012.

Limitations

The results and our interpretation of them should be tempered with the limitations of the study. The results are based on respondents' self reports, raising questions regarding the extent to which respondents gave socially desirable responses.

Our findings showed that we achieved a geographically diverse sample of pharmacists for this study in that all regions of the United States were represented in proportion to the U.S. population and in proportion to our sampling frame. However, some individual states were over-represented (e.g. Montana) and some states were under-represented (e.g. New Mexico). Thus, while we achieved good geographic coverage, some states were disproportionately represented in this study. To overcome this limitation, we report aggregate data and not state- or region-specific findings.

Non-response bias is another limitation. It is possible that responders were more interested in the topic we studied or had stronger opinions about the questions we asked than those who chose not to respond. Our findings showed that late responders were more likely to be: working as a pharmacist, younger, and having a PharmD degree than early responders. These same characteristics are likely to be reflected in the non-responders to this study and should be considered when interpreting the reported findings.

Finally, all of the respondents to this survey were first licensed before 2007. Therefore, even though our survey was conducted in 2009, our sampling frame had a lag time so that pharmacists newly licensed from 2007 through the present were not included in the sample. This limitation must be considered, especially when interpreting findings related to year of licensure, age, or other time dependent variable.

References

1. Pedersen, Craig A., William R. Doucette, Caroline A. Gaither, David A. Mott, and Jon C. Schommer, "National Pharmacist Workforce Survey: 2000," Presented to Pharmacy Manpower Project, Inc., August 1, 2000, accessible at http://www.aacp.org/resources/research/pharmacymanpower/.

2. Mott, David A., William R. Doucette, Caroline A. Gaither, David H. Kreling, Craig A. Pedersen, and Jon C. Schommer, "Final Report of the 2004 National Sample Survey of the Pharmacist Workforce to Determine Contemporary Demographic and Practice Characteristics," Presented to Pharmacy Manpower Project, Inc., June 27, 2005, accessible at http://www.aacp.org/resources/research/pharmacymanpower/.

3. American Association of Colleges of Pharmacy, Graduating Pharmacy Student Survey Summary Report – 2009, accessible at: http://www.aacp.org/resources/research/institutionalresearch/Documents/2009_GSS_Summary%20Report_all%20schools_83.pdf

4. Bureau of Labor Statistics, "Employment Situation Summary," accessed January 10, 2010, http://www.bls.gov/news.release/empsit.nr0.htm.

5. Knapp, Katherine K. "Aggregate Demand Index," accessible at www.pharmacymanpower.com.

SECTION 1
BACKGROUND, STUDY OBJECTIVES, METHODS, RESPONSE RATE, AND LIMITATIONS

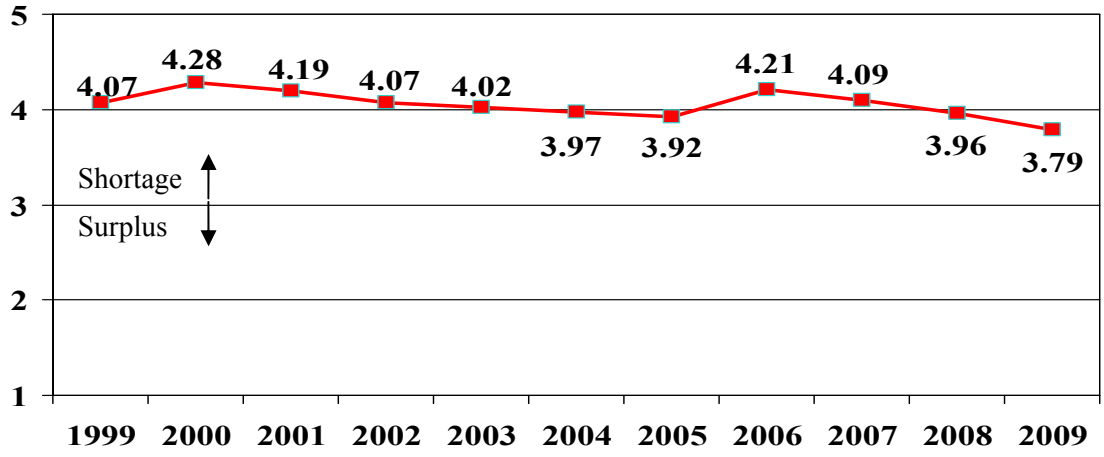
Background

Health care cannot function without medicines. The availability of both medicines and a pharmacy workforce in adequate numbers and skills is crucial for ensuring a well functioning health care system. To help ensure the profession's capacity in this regard, the pharmacy profession has become more patient focused resulting in reforms for both pharmacy education and practice. According to the Joint Commission of Pharmacy Practitioners' Future Vision of Pharmacy Practice [1], pharmacists should "be the health care professionals responsible for providing patient care that ensures optimal medication therapy outcomes."

Changing roles for pharmacists have opened new career pathways for them. Recently, the Medicare Prescription Drug Improvement and Modernization Act, implemented in 2006, initiated a new era of prescription drug coverage and Medication Therapy Management (MTM) services. At the writing of this report (January 2010), health care reform is being debated and is likely to expand roles for pharmacists. Continued growth in medication use by society and the expansion of the pharmacist's role in direct patient care continue to generate demand for pharmacist expertise and services [2]. At the same time, increased efficiencies for medication dispensing have been achieved through the use of technicians and technology [2]. These changes are likely to have an impact on the demand for pharmacists, and there is a need for continued monitoring of pharmacist characteristics and contributions to the workforce.

Over the past decade in the United States, a pharmacist shortage has been documented (Figure 1.1).

Figure 1.1: National Aggregate Demand Index Values
http://www.pharmacymanpower.com/

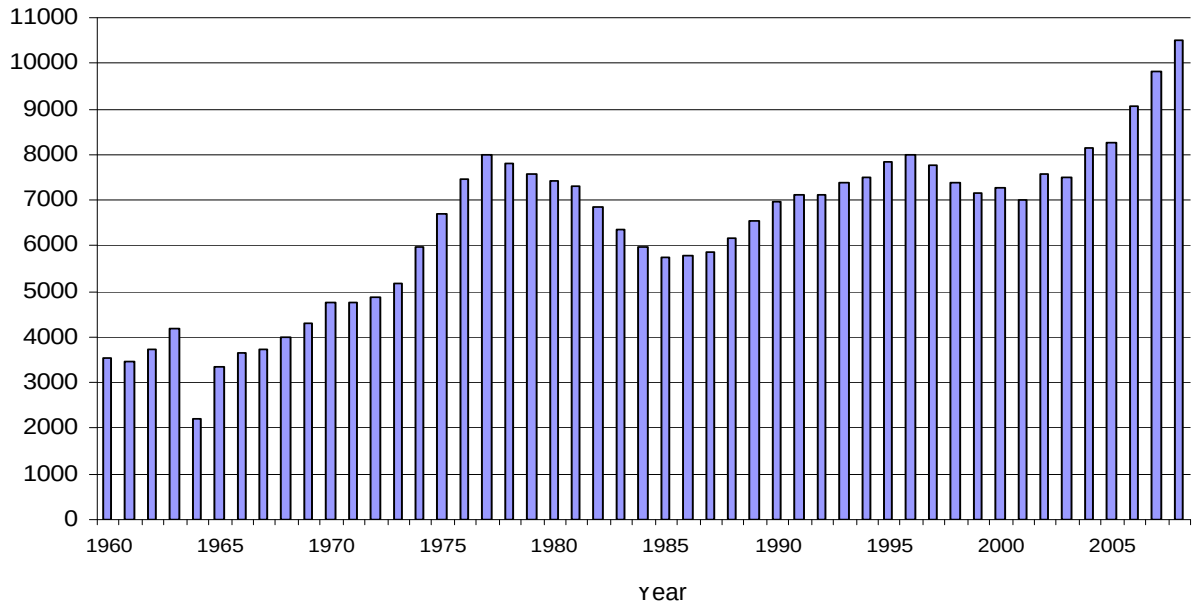


Source: Dr. Katherine Knapp

1 = supply exceeds demand, 2 = some excess of supply, 3 = balance,
4 = moderate difficulty in filling vacancies, 5 = difficulty in filling vacancies

In response to the documented shortage of pharmacists since 1999, the number of U.S. pharmacy school graduates per year has increased recently to help meet this demand (Figure 1.2).

Figure 1.2: Number of U.S. Pharmacy School Graduates: 1960-2008



Source: Data from AACP website, www.aacp.org

Thus, the context for the 2009 National Pharmacist Workforce Survey was: (1) continued expansion of pharmacists' roles, (2) increased efficiencies in medication distribution, (3) a documented shortage of pharmacists in the United States, and (4) growth in the number of U.S. pharmacy school graduates per year. In addition to these pharmacy profession aspects, the context for this survey also included a U.S. economic recession that began in December 2007 and had persisted throughout the time this study was conducted (2009).

Study Objectives

This study was undertaken to provide an updated description for the United States pharmacist workforce in 2009 and examine changes compared to studies conducted in 2000 and 2004 [3, 4].

The primary purpose of this project was to collect reliable information on demographic characteristics and work contributions of the pharmacist workforce in the United States during 2009. Specific objectives were to describe:

1. demographic and work characteristics of the pharmacist workforce in the United States during 2009, and
2. work contributions of the pharmacist workforce in the United States during 2009.

Methods

Research Design

A cross-sectional, descriptive survey design was used for collecting and analyzing data. Variables were operationalized and measured (not manipulated as in experimental design). Data were collected using a self-administered questionnaire that was mailed to subjects.

Survey Questionnaire

Questions comprising each section of the survey were taken from previous workforce surveys conducted by members of the project team. Each of the items was found to be reliable and valid and thus included in the instrument. Although certain sections of the questionnaire were new or updated, most of the items used for the 2009 survey also were used in 2000 and 2004. This was done so that we could examine trends in keys variables collected in 2000, 2004, and 2009.

Survey Administration

A mailed questionnaire with multiple follow-up was designed using principles from Dillman in which a four-contact approach was utilized:

1. March 4, 2009 - Pre-notification letter and form were mailed. This correspondence described the importance of understanding the work characteristics of pharmacists. Also, a response form and postage paid envelope were included so that sample members could let us know if they were included in the sample of pharmacists by mistake or were unable to participate (n = 3,000).

2. March 27, 2009 - Survey packet was mailed. This included the survey, a postage paid return envelope, and letter describing the study (n = 2,750).

3. April 17, 2009 – A postcard reminder / thank you was mailed to non-responders. This correspondence thanked any of the recipients who had responded while the postcard was in transit and reminded non-respondents to complete the survey (n = 1,894).

4. May 15, 2009 – The survey packet was remailed to non-responders. This correspondence asked non-respondents to complete the questionnaire, highlighting the importance of the study, and providing another copy of the survey instrument along with a postage paid return envelope (n = 1,540).

Letters and forms for these steps are contained in Appendix A.

Sampling and Sample Size

As was done in 2000 and 2004, we obtained a list of licensed pharmacists in the United States from KM Lists, Inc., a company that maintained a list of 249,381 licensed pharmacists in the United States from every state. This list contained unduplicated licensed individuals and was cleaned and updated whenever a state board of pharmacy provided an updated file. They have no states that refuse to give them the information. A randomly selected sample of 3,000 names and mailing addresses from this file was selected and provided to us in electronic format. We incorporated this file into a database program to generate mailing labels and reports of respondents. Usable data from 1,200 pharmacists in this sample were determined to be sufficient for making population estimates.

Data Analysis

Surveys were returned to the University of Minnesota, College of Pharmacy and processed for data entry. A database structure was created and responses coded according to the survey code book (see Appendix B). Data were extracted from the database and analyzed for this report using descriptive statistics. Data are presented in this report in a manner that allows comparison to 2000 and 2004 findings whenever possible.

Response Rate

Of the 3,000 individuals contained in our random sample, the disposition of 1,728 (58%) sample members became known. Of these, 333 (11%) were considered "undeliverable or not applicable" for the study (see Table 1.1) and the other 1,395 were considered a "survey response."

Table 1.1: Disposition of 3,000 Sample Members

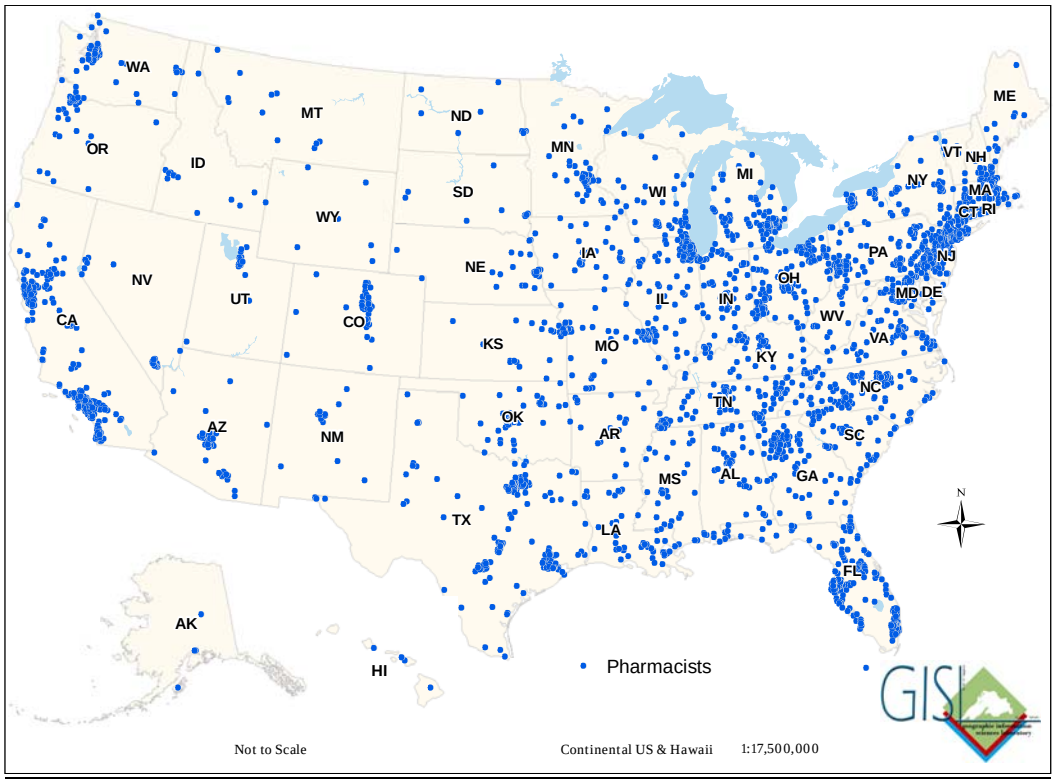
	Based on Responses to Pre-notification Form			
Undeliverable	Not a Pharmacist	Pharmacist but Can't Participate (Reason) *	Pharmacist but Can't Participate (No Reason)	PRESUMED DELIVERED TO A PHARMACIST
92	86	58	97	2,667

* Reasons included: dementia, accident, became a dentist, became a physician, do not volunteer for anything, tired of completing surveys, illness, token license only and no longer consider self a pharmacist, very old, lack strength to complete the survey, out of country, disability.

Of the 2,667 surveys that were presumed to be delivered to a pharmacist, 1,395 were returned yielding a 52.3% overall response rate. Responses received on August 15, 2009 or later were not included for analysis. Thus, 1,391 surveys were entered into our data file (52.2% usable response rate).

Figure 1.3 shows the geographic distribution of 3,000 individuals in our overall sample. A visual comparison of this sample's distribution is similar to the U.S. population distribution:
http://www.census.gov/geo/www/mapGallery/2kpopden.html

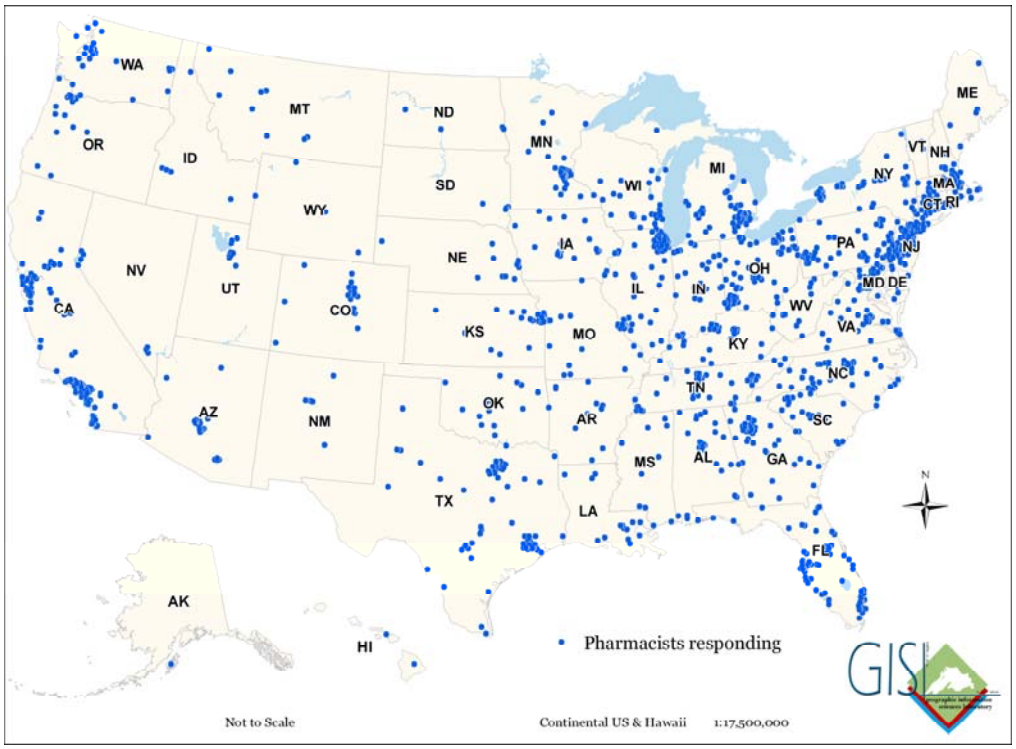
Figure 1.3: 2009 National Pharmacist Workforce Survey: Sample Distribution (n = 3,000)



Using the assumption that pharmacists are distributed similarly to the overall U.S. population, we conclude that our initial sample was geographically distributed in a way that was representative of the overall United States pharmacist population.

In order to ascertain the geographic representativeness of our 1,391 respondents (that is, those responses received before August 15, 2009), Figure 1.4 shows the geographic distribution for those individuals. Upon visual comparison, the distribution is similar to the original sample. Thus, we conclude that this is further evidence that our respondents (n = 1,391) are geographically representative of United States pharmacists.

Figure 1.4: 2009 National Pharmacist Workforce Survey: Respondent Distribution (n = 1,391)



In addition to visual comparison for the geographic distribution, Table 1.2 summarizes the number and percent of individuals in the (1) sampling frame population, (2) sample, and (3) respondents for this study for each State and the District of Columbia. The distribution of respondents compared to sample members was statistically different (Chi-square p-value < 0.05). For example, some states were over-represented (e.g. Montana) and some states were under-represented (e.g. New Mexico). Thus, while we achieved good geographic coverage, some states were disproportionately represented in this study. To overcome this limitation, we report aggregate data and not state- or region-specific findings.

Table 1.2 Summary of Sampling Frame Population, Sample, and Respondents (n, % of total)

State/District	Sampling Frame Population (n = 249,381)	Sample (n = 3,000)	Respondents (n = 1,391)
Alabama	3,991 (1.60%)	51 (1.70%)	27 (1.94%)
Alaska	402 (0.16%)	4 (0.12%)	1 (0.07%)
Arizona	4,601 (1.84%)	52 (1.73%)	25 (1.80%)
Arkansas	2,291 (0.92%)	24 (0.80%)	14 (1.01%)
California	25,479 (10.22%)	263 (8.77%)	103 (7.40%)
Colorado	4,114 (1.65%)	50 (1.67%)	27 (1.94%)
Connecticut	2,972 (1.19%)	35 (1.17%)	22 (1.58%)
Delaware	591 (0.24%)	8 (0.27%)	5 (0.36%)
District of Columbia	452 (0.18%)	2 (0.07%)	0 (0.00%)
Florida	15,927 (6.39%)	203 (6.77%)	76 (5.46%)
Georgia	7,586 (3.04%)	94 (3.13%)	40 (2.88%)
Hawaii	391 (0.16%)	4 (0.13%)	2 (0.14%)
Idaho	1,045 (0.42%)	12 (0.40%)	5 (0.36%)
Illinois	10,834 (4.34%)	141 (4.70%)	84 (6.04%)
Indiana	5,703 (2.29%)	76 (2.53%)	36 (2.59%)
Iowa	3,305 (1.33%)	38 (1.27%)	24 (1.73%)
Kansas	2,334 (0.94%)	27 (0.90%)	20 (1.44%)
Kentucky	3,598 (1.44%)	48 (1.60%)	32 (2.30%)
Louisiana	3,728 (1.49%)	46 (1.53%)	15 (1.08%)
Maine	956 (0.38%)	12 (0.40%)	5 (0.36%)
Maryland	5,431 (2.18%)	66 (2.20%)	32 (2.30%)
Massachusetts	6,488 (2.60%)	80 (2.67%)	35 (2.52%)
Michigan	8,205 (3.29%)	107 (3.57%)	50 (3.59%)
Minnesota	4,543 (1.82%)	49 (1.63%)	34 (2.44%)
Mississippi	2,526 (1.01%)	32 (1.07%)	10 (0.72%)
Missouri	4,430 (1.78%)	56 (1.87%)	26 (1.87%)
Montana	892 (0.36%)	11 (0.37%)	9 (0.65%)
Nebraska	2,039 (0.82%)	23 (0.77%)	11 (0.79%)
Nevada	1,770 (0.71%)	19 (0.63%)	8 (0.58%)
New Hampshire	1,101 (0.44%)	14 (0.47%)	5 (0.36%)
New Jersey	10,358 (4.15%)	130 (4.33%)	48 (3.45%)
New Mexico	1,379 (0.55%)	15 (0.50%)	5 (0.36%)
New York	14,823 (5.94%)	170 (5.67%)	71 (5.10%)
North Carolina	7,141 (2.86%)	91 (3.03%)	41 (2.95%)
North Dakota	614 (0.25%)	8 (0.27%)	4 (0.29%)
Ohio	9,840 (3.95%)	133 (4.43%)	65 (4.67%)
Oklahoma	3,024 (1.21%)	37 (1.23%)	15 (1.08%)
Oregon	2,877 (1.15%)	34 (1.13%)	18 (1.29%)
Pennsylvania	12,758 (5.12%)	163 (5.43%)	76 (5.46%)
Rhode Island	1,254 (0.50%)	6 (0.20%)	2 (0.14%)
South Carolina	3,682 (1.48%)	48 (1.60%)	22 (1.58%)
South Dakota	856 (0.34%)	11 (0.37%)	4 (0.29%)
Tennessee	8,176 (3.28%)	101 (3.37%)	40 (2.88%)
Texas	15,866 (6.36%)	182 (6.07%)	76 (5.46%)
Utah	1,593 (0.64%)	15 (0.50%)	9 (0.64%)
Vermont	466 (0.19%)	6 (0.20%)	2 (0.14%)
Virginia	6,487 (2.60%)	83 (2.77%)	37 (2.66%)
Washington	5,256 (2.11%)	53 (1.77%)	29 (2.08%)
West Virginia	1,585 (0.64%)	20 (0.67%)	12 (0.86%)
Wisconsin	3,055 (1.23%)	40 (1.33%)	28 (2.01%)
Wyoming	566 (0.23%)	7 (0.23%)	4 (0.29%)

In addition to a geographic distribution assessment regarding the representativeness of our survey responses, we also compared "early responders" (the first 695 responses) with "late responders" (the last 696 responses) under the assumption that late responders would be most like non-responders. Our comparisons showed no differences between these two groups for: practice type, position, gender, years employed at current employer, or number of hours worked per week. However, there were statistically significant differences between the two groups for: (1) employment status, (2) age, and (3) having a PharmD degree. These differences are described in tables 1.3 through 1.5 below.

Table 1.3: Comparison between Early Responders (n = 695) and Late Responders (n = 696) for Current Employment Status

Employment Status	Early Responder	Late Responder	Total
Practicing as a pharmacist	69%	79%	74%
Employed in a pharmacy related field	9%	7%	8%
Retired, but still working	9%	4%	7%
Retired, do not practice at all	8%	6%	7%
Employed in a career not related to pharmacy	2%	2%	2%
Unemployed	3%	2%	2%

Chi-Square p-value < 0.05

Table 1.4: Comparison between Early Responders (n = 695) and Late Responders (n = 696) for Age

Age Categories	Early Responder	Late Responder	Total
Less than or equal to 30 years	2%	3%	2%
31 to 45 years	28%	36%	32%
46 to 60 years	42%	42%	42%
Greater than 60 years	28%	19%	24%

Chi-Square p-value < 0.05

Table 1.5: Comparison between Early Responders (n = 695) and Late Responders (n = 696) for Having a PharmD Degree

Have a PharmD Degree	Early Responder	Late Responder	Total
Yes	21%	28%	24%
No	79%	72%	76%

Chi-Square p-value < 0.05

These findings show that late responders were more likely to be: working as a pharmacist, younger, and having a PharmD degree than early responders. These same characteristics are likely to be reflected in the non-responders to this study. Furthermore, results for "year of first licensure" showed that all of the respondents were first licensed before 2007. Even though our survey was conducted in 2009, our sampling frame had a lag time so that pharmacists newly licensed from 2007 through the present were not included in the sample.

Limitations

The results and our interpretation of them should be tempered with the limitations of the study. The results are based on respondents' self reports, raising questions regarding the extent to which respondents gave socially desirable responses.

Our findings showed that we achieved a geographically diverse sample of pharmacists for this study in that all regions of the United States were represented in proportion to the U.S. population and in proportion to our sampling frame. However, some individual states were over-represented (e.g. Montana) and some states were under-represented (e.g. New Mexico). Thus, while we achieved good geographic coverage, some states were disproportionately represented in this study. To overcome this limitation, we report aggregate data and not state- or region-specific findings.

Non-response bias is another limitation. It is possible that responders were more interested in the topic we studied or had stronger opinions about the questions we asked than those who chose not to respond. Our findings showed that late responders were more likely to be: working as a pharmacist, younger, and having a PharmD degree than early responders. These same characteristics are likely to be reflected in the non-responders to this study and should be considered when interpreting the reported findings.

Finally, all of the respondents to this survey were first licensed before 2007. Therefore, even though our survey was conducted in 2009, our sampling frame had a lag time so that pharmacists newly licensed from 2007 through the present were not included in the sample. This limitation must be considered, especially when interpreting findings related to year of licensure, age, or other time dependent variable.

References

1. Joint Commission of Pharmacy Practitioners, "An Action Plan for Implementation of the JCPP Future Vision of Pharmacy Practice," 2008, accessible at: www.ascp.com/advocacy/coalitions/upload/JCPP.FinalReport.pdf.

2. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, "The Adequacy of Pharmacist Supply: 2004 to 2030," December 2008, accessible at: http://bhpr.hrsa.gov/healthworkforce/pharmacy/.

3. Pedersen, Craig A., William R. Doucette, Caroline A. Gaither, David A. Mott, and Jon C. Schommer, "National Pharmacist Workforce Survey: 2000," Presented to Pharmacy Manpower Project, Inc., August 1, 2000, accessible at http://www.aacp.org/resources/research/pharmacymanpower/.

4. Mott, David A., William R. Doucette, Caroline A. Gaither, David H. Kreling, Craig A. Pedersen, and Jon C. Schommer, "Final Report of the 2004 National Sample Survey of the Pharmacist Workforce to Determine Contemporary Demographic and Practice Characteristics," Presented to Pharmacy Manpower Project, Inc., June 27, 2005, accessible at http://www.aacp.org/resources/research/pharmacymanpower/.

SECTION 2
DEMOGRAPHIC AND WORK CHARACTERISTICS OF THE PHARMACIST WORKFORCE: COMPARISONS BETWEEN THE YEARS 2009, 2004, AND 2000

Section 2: Overview

This section describes demographic and work characteristics of the U.S. pharmacist workforce in 2009 and compares these findings with those reported for surveys conducted in 2004 and 2000 when data were available. Data for the years 2000 and 2004 were obtained from the 2000 and 2004 National Pharmacist Workforce Surveys: http://www.aacp.org/resources/research/pharmacymanpower/.

This section is divided into six parts:

2.1 Characteristics of Licensed Pharmacists

2.2 Characteristics of Actively Practicing Pharmacists

2.3 Hours Worked by Actively Practicing Pharmacists

2.4 Work History of Actively Practicing Pharmacists

2.5 Debt Load for Pharmacists Working Full-Time

2.6 Ratings of Workload by Pharmacists Working Full-Time

Section 2.1: Characteristics of Licensed Pharmacists

Tables 2.1.1 through 2.1.3 contain summaries of licensed pharmacists by work status.

Table 2.1.1 shows that 88.3% (67.4% full-time and 20.9% part-time) of licensed pharmacists responding to the survey in 2009 were actively practicing pharmacy. In 2004, 86.0% of pharmacists were actively practicing pharmacy and in 2000, 88.2% were actively practicing pharmacy.

Between 2000, 2004, and 2009 the proportion of pharmacists working full-time decreased (73.3%, 68.3%, 67.4%, respectively) and the proportion of pharmacists working part-time increased (14.9%, 17.7%, 20.9%, respectively).

The proportion of both male and female pharmacists working part-time increased between 2000, 2004, and 2009. For females, the rate increased from 21.3% in 2000, to 24.0% in 2004, to 27.2% in 2009. For males, the proportions were: 9.9%, 12,8%, and 15.8% for the years 2000, 2004, and 2009, respectively.

Table 2.1.2 shows that the proportion of licensed pharmacists who held a Pharm.D. as their highest degree increased from 13.9% in 2000, to 18.6% in 2005, and 21.6% in 2009. Furthermore, the proportion of pharmacists who held a masters or Ph.D. as their highest degree continued to increase from 7.3% in 2000, to 9.0% in 2004, to 10.9% in 2009. In 2009, the proportion of pharmacists who held a BS degree as their highest degree fell to under two-thirds (66.3%). This compares to 71.2% in 2004 and 74.1% in 2000.

The racial diversity of licensed pharmacists in the U.S. did not change significantly between 2000, 2004, and 2009 (Table 2.1.2). For the 2009 survey, we collected information for the proportion of respondents who were American Indian (n=5; 0.4% of all respondents) and Hispanic/Latino (n=23; 1.7% of all respondents). In 2000 and 2004, these categories were not included as survey response options.

Results presented in Table 2.1.3 reveal an aging population of pharmacists with 37.1% over age 55 in 2009 compared to 30.7% in 2004, and 21.6% in 2000.

Table 2.1.1: Licensed Pharmacists' Work Status by Gender (2009, 2004, 2000)

		Working			Not Working	
		Pharmacy				
Gender	Licensed pharmacists	Full-time	Part-time	Not in Pharmacy	Retired	Not Retired
2009			# of Cases			
Male	741	519	117	18	75	12
Female	602	386	164	9	19	24
Total	1,343	905	281	27	94	36
			% of Row			
Male		70.1	15.8	2.4	10.1	1.6
Female		64.1	27.2	1.5	3.2	4.0
Total		67.4	20.9	2.0	7.0	2.7
			% of Column			
Male	55.2	57.3	41.6	66.7	79.8	33.3
Female	44.8	42.7	58.4	33.3	20.2	66.7
2004			# of Cases			
Male	823	579	105	37	90	12
Female	647	425	155	17	22	28
Total	1,470	1,004	260	54	112	40
			% of Row			
Male		70.3	12.8	4.5	10.9	1.5
Female		65.6	24.0	2.6	3.4	4.3
Total		68.3	17.7	3.7	7.6	2.7
			% of Column			
Male	56.0	57.7	40.4	68.5	80.4	30.0
Female	44.0	42.3	59.6	31.5	19.6	70.0
2000			# of Cases			
Male	1,187	901	118	44	111	13
Female	905	633	193	18	19	42
Total	2,092	1,534	311	62	130	55
			% of Row			
Male		75.9	9.9	3.7	9.4	1.1
Female		69.9	21.3	2.0	2.1	4.6
Total		73.3	14.9	3.0	6.2	2.6
			% of Column			
Male	56.7	58.7	37.9	71.0	85.4	23.6
Female	43.3	41.3	62.1	29.0	14.6	76.4

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting) Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment. Pharmacists not working in pharmacy listed a variety of non-pharmacy careers including other industries, other health professions, health care administration, other, retail businesses, and education.

Table 2.1.2: Licensed Pharmacists' Work Status by Race and Highest Degree (2009, 2004, 2000)

	Licensed pharmacists		Working			Not Working	
			Pharmacy				
			Full-time	Part-time	Not in Pharmacy	Retired	Not Retired
2009	n	% of Column	% of Row			% of Row	
Race							
White	1158	86.5	66.1	21.5	2.3	7.5	2.6
Black	27	2.0	77.8	14.8	--	3.7	3.7
Asian	109	8.1	74.3	21.1	--	1.8	2.8
Other*	44	3.3	77.3	11.4	--	6.9	4.5
Total	1338	99.9	67.3	21.0	2.0	7.0	2.7
Highest Degree							
B.S.	888	66.3	64.8	22.9	1.0	8.7	2.6
PharmD	290	21.6	76.2	17.6	1.4	2.1	2.8
MS/MBA	123	9.2	74.0	15.4	4.1	4.1	2.4
Ph.D.	23	1.7	65.2	8.7	8.7	13.0	4.3
Other	16	1.2	18.8	18.8	43.8	12.5	6.2
Total	1340	100.0	49.2	15.2	2.0	6.9	2.7
2004	N	% of Column	% of Row			% of Row	
Race							
White	1,279	87.7	66.8	18.6	3.9	7.8	2.9
Black	32	2.2	78.1	6.3	--	15.6	--
Asian	102	7.0	87.0	9.0	2.0	2.9	1.0
Other	46	3.2	65.2	21.7	2.2	6.5	4.3
Total	1,459	100.1	68.3	17.7	3.6	7.6	2.7
Highest Degree							
B.S.	1,033	71.2	66.0	20.5	2.2	9.3	2.0
PharmD	270	18.6	79.3	10.4	3.7	1.5	2.0
MS/MBA	106	7.3	70.8	12.3	9.4	6.6	0.9
Ph.D.	24	1.7	54.2	4.2	25.0	12.5	4.2
Other	18	1.2	50.0	11.1	22.2	5.6	11.1
Total	1,451	100.0	68.4	17.6	3.7	7.7	2.7
2000	n		% of Row			% of Row	
Race							
White	1,837	87.8	72.5	15.2	3.0	6.6	2.7
Black	45	2.2	77.8	6.7	6.7	8.9	--
Asian	148	7.1	77.7	15.5	1.4	2.7	2.7
Other	62	3.0	83.9	9.7	3.2	--	3.2
Total	2,092	100.0	73.3	14.9	3.0	6.2	2.6
Highest Degree							
B.S.	1,550	74.1	71.2	16.6	2.0	7.4	2.8
PharmD	290	13.9	83.8	10.3	2.1	2.1	1.7
MS/MBA	136	6.5	75.0	7.4	11.8	2.9	2.9
Ph.D.	17	0.8	64.7	17.6	5.9	11.8	--
Other	99	4.7	74.7	11.1	8.1	4.0	2.0
Total	2,092	100.0	73.3	14.9	3.0	6.2	2.6

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting) Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment. Pharmacists not working in pharmacy listed a variety of non-pharmacy careers including other industries, other health professions, health care administration, other, retail businesses, and education.

* For 2009, "Other" for Race (n = 44) was further categorized as American Indian (n=5), Hispanic/Latino (n=23), and Other (n=16).

Table 2.1.3: Licensed Pharmacists' Work Status by Age Category (2009, 2004, 2000)

			Working			Not Working	
			Pharmacy				
Age Category	Licensed pharmacists		Full-time	Part-time	Not in Pharmacy	Retired	Not Retired
2009	n	% of column	% of Row				
24-30	32	2.4	87.5	12.5	--	--	--
31-35	126	9.4	78.5	14.3	2.4	0.8	4.0
36-40	148	11.0	66.9	27.7	2.0	0.7	2.7
41-45	158	11.8	69.0	22.8	1.9	--	6.3
46-50	159	11.8	78.6	17.6	3.1	--	0.6
51-55	223	16.6	78.0	17.9	2.2	1.3	0.4
56-60	181	13.5	84.0	7.7	1.1	3.9	3.3
61-65	135	10.1	60.7	18.5	3.7	14.8	2.2
66-70	87	6.5	31.0	44.8	1.1	19.5	3.4
>70	94	7.0	10.6	38.3	--	47.9	3.2
Total	1343	100.0	67.4	20.9	2.0	7.0	2.7
2004	n	% of column	% of Row				
24-30	116	7.9	89.7	7.8	0.9	--	1.7
31-35	167	11.4	72.5	20.4	1.2	0.6	5.4
36-40	159	10.8	75.9	17.7	3.2	--	3.2
41-45	171	11.6	78.2	14.7	3.5	--	3.5
46-50	206	14.0	77.2	16.5	2.9	--	3.4
51-55	201	13.7	81.1	10.9	6.5	0.5	1.0
56-60	154	10.5	68.8	13.0	9.7	7.1	1.3
61-65	98	6.7	59.2	17.3	2.0	17.3	4.1
66-70	90	6.1	31.1	34.4	2.2	30.0	2.2
>70	108	7.4	9.3	37.0	1.9	50.9	0.9
Total	1,470	100.0	68.3	17.7	3.7	7.6	2.7
2000	n	% of column	% of Row				
23-30	286	13.7	92.0	5.6	1.4	--	1.0
31-35	263	12.6	77.9	17.9	1.5	--	2.7
36-40	310	14.8	72.3	19.0	3.9	--	4.8
41-45	309	14.8	80.3	14.6	2.6	0.3	2.3
46-50	273	13.0	82.8	9.2	3.7	0.7	3.7
51-55	198	9.5	80.3	9.6	6.6	2.5	1.0
56-60	166	7.9	72.9	10.8	4.2	9.6	2.4
61-65	92	4.4	57.6	25.0	1.1	15.2	1.1
66-70	97	4.6	27.8	29.9	1.0	39.2	2.1
>70	98	4.7	8.2	30.6	2.0	55.1	4.1
Total	2,092	100.0	73.3	14.9	3.0	6.2	2.6

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment. Pharmacists not working in pharmacy listed a variety of non-pharmacy careers including other industries, other health professions, health care administration, other, retail businesses, and education.

Section 2.2: Characteristics of Actively Practicing Pharmacists

Tables 2.2.1 through 2.2.7 summarize the characteristics of pharmacists actively practicing pharmacy (working as pharmacists in a licensed pharmacy or in a pharmacy-related field or profession).

Table 2.2.1 shows that the proportion of actively practicing pharmacists who are female has increased from 44.8% in 2000, to 45.9% in 2004, to 46.4% in 2009. Among respondents who were actively practicing as pharmacists, the proportion of both male and female pharmacists working part-time increased between 2000, 2004, and 2009. For females, the rate increased from 23.4% in 2000, to 26.8% in 2004, to 29.8% in 2009. For males, the proportions were: 11.6%, 15.4%, and 18.4% for the years 2000, 2004, and 2009, respectively.

The age distribution of actively practicing pharmacists also changed between 2000, 2004, and 2009. In 2000, 44.1% of practicing pharmacists were age 40 or younger. This proportion decreased to 33.0% in 2004, and in 2009 it was only 24.4%. Conversely, in 2000 16.7% of practicing pharmacists were over age 55, and this proportion increased to 24.6% in 2004, and to 32.5% in 2009.

Table 2.2.2 shows all categories of practice settings reported by actively practicing pharmacists that responded to the survey and Table 2.2.3 shows the results when respondents' practice settings were condensed into eight categories. The condensed categories are used throughout this report. The proportion of actively practicing pharmacists working in traditional community pharmacy practice settings (independent, chain, mass merchandiser, and supermarket pharmacies) remained relatively stable between 2000 (55.4%), 2004 (56.4%), and 2009 (53.8%).

A comparison of practicing pharmacists categorized by employment position (Table 2.2.4) shows that of pharmacists in owner/partner positions, the proportion that was female increased from 14.6% in both 2000 and 2004 to 24.0% in 2009. Overall, in 2000, 10.9% of males were in owner/partner positions compared to only 2.3% of females (Table 2.2.4). This gap was similar in 2004 (10.3% of males compared to 2.1% of females were in owner/partner positions). However, the gap was significantly less in 2009 when 11.6% of males and 8.1% of females were in owner/partner positions.

Table 2.2.5 shows findings for actively practicing pharmacists' work status when categorized by age and gender. The patterns of part-time work for males in the 2000, 2004, and 2009 surveys were similar in that relatively few men aged 60 and younger worked part-time. At age 61 and older, men are more likely to work part-time (see Figure 2.2.1 for a summary). Patterns of part-time work for females in the 2000, 2004, and 2009 surveys showed that they typically were more likely than males to work part-time at ages 65 and younger. One notable difference for the 2009 data compared to 2000 and 2004 data was for females aged 56 to 60. In 2000, 33.3% of female pharmacists aged 56 to 60 worked part time and in 2004, 27.8% worked part time. However, in 2009, only 15.0% of female pharmacists aged 56 to 60 worked part time.

Table 2.2.6 shows that the proportion of actively practicing full-time pharmacists who were male decreased only slightly between 2000 (58.7% male), 2004 (57.7% male), and 2009 (57.3% male). Findings from 2004 showed that hospital pharmacy, industry, and Other (non-patient care) settings had a majority of females working full-time. However, the 2009 data showed that all practice settings had a majority of male pharmacists working full-time in them.

For part-time pharmacists in 2009 (Table 2.2.7), chain pharmacy and hospital pharmacy settings were the most common employment settings (24.6% for each), followed by independent (23.1%), and Other Patient Care Practice (11.0%). For males working part-time, the most common employment practice setting was independent pharmacy (35.0%) followed by chain pharmacy (27.4%). For females working part-time, the most common practice setting was hospital (31.1%) followed by chain pharmacy (22.6%).

Table 2.2.1: Actively Practicing Pharmacists' Work Status by Gender and Age Category (2009, 2004, 2000)

		% by Row		% by Column		
	All Cases	Full-time	Part-time	All Pharm.	Full-time	Part-time
Gender	n					
2009						
Male	636	81.6	18.4	53.6	57.3	41.6
Female	550	70.2	29.8	46.4	42.7	58.4
Total	1186	76.3	23.7	100.0	100.0	100.0
2004						
Male	684	84.6	15.4	54.1	57.7	40.4
Female	580	73.2	26.8	45.9	42.3	59.6
Total	1,264	79.4	20.6	100.0	100.0	100.0
2000						
Male	1019	88.4	11.6	55.2	58.7	37.9
Female	826	76.6	23.4	44.8	41.3	62.1
Total	1,845	83.1	16.9	100.0	100.0	100.0
Age Category						
2009						
24-30	32	87.5	12.5	2.7	3.1	1.4
31-35	117	84.6	15.4	9.9	10.9	6.4
36-40	140	70.7	29.3	11.8	10.9	14.6
41-45	145	75.2	24.8	12.2	12.0	12.8
46-50	153	81.7	18.3	12.9	13.8	10.0
51-55	214	81.3	18.7	18.0	19.2	14.2
56-60	166	91.6	8.4	14.0	16.8	5.0
61-65	107	76.6	23.4	9.0	9.1	8.9
66-70	66	40.9	59.1	5.6	3.0	13.9
>70	46	21.7	78.3	3.9	1.1	13.9
Total	1186	76.3	23.7	100.0	100.0	100.0
2004						
24-30	113	92.0	8.0	9.0	10.4	3.5
31-35	155	78.1	21.9	12.3	12.1	13.1
36-40	149	81.1	18.9	11.7	12.0	10.8
41-45	159	84.2	15.8	12.5	13.3	9.6
46-50	193	82.4	17.6	15.3	15.9	13.1
51-55	185	88.1	11.9	14.7	16.3	8.5
56-60	126	84.1	15.9	10.0	10.6	7.7
61-65	75	77.3	22.7	5.9	5.8	6.5
66-70	59	47.5	52.5	4.7	2.8	11.9
>70	50	20.0	80.0	4.0	1.0	15.4
Total	1,264	79.4	20.6	100.0	100.0	100.0
2000						
23-30	279	94.3	5.7	15.1	17.1	5.1
31-35	252	81.3	18.7	13.7	13.4	15.1
36-40	283	79.2	20.8	15.3	14.6	19.0
41-45	293	84.6	15.4	15.9	16.2	14.5
46-50	251	90.0	10.0	13.6	14.7	8.0
51-55	178	89.3	10.7	9.6	10.4	6.1
56-60	139	87.1	12.9	7.5	7.9	5.8
61-65	76	69.7	30.3	4.1	3.5	7.4
66-70	56	78.2	51.8	3.0	1.8	9.3
>70	38	21.1	78.9	2.1	0.5	9.6
Total	1,845	83.1	16.9	100.0	100.0	100.0

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment.

Table 2.2.2: Actively Practicing Pharmacists' Work Status by Non-condensed Primary Employment Practice Setting (2009, 2004, 2000)

		% by Row		% by Column		
Practice Setting	**All Cases**	**Full-time**	**Part-time**	**All Cases**	**Full-time**	**Part-time**
2009						
Independent (<4 units)	171	62.0	38.0	14.4	11.7	14.4
Small Chain (4-10 units)	29	55.2	44.8	2.4	1.8	2.4
Large Chain (>10 units)	266	78.9	21.1	22.4	23.2	22.4
Mass Merchandiser	58	79.3	20.7	4.9	5.1	4.9
Supermarket	114	80.7	19.3	9.6	10.2	9.6
Mail Service	27	81.5	18.5	2.3	2.4	2.3
Government Hospital / Health System	82	86.6	13.4	6.9	7.8	6.9
Non-government Hospital	236	75.4	24.6	19.9	19.7	19.9
Nursing Home / Long Term Care	38	76.3	23.7	3.2	3.2	3.2
Home Health / Infusion	12	91.7	8.3	1.0	1.2	1.0
HMO Operated Pharmacy	7	57.1	42.9	0.6	0.4	0.6
Clinic Pharmacy	26	61.5	38.5	2.2	1.8	2.2
Nuclear	4	100.0	--	0.3	0.4	0.3
Industry	40	87.5	12.5	3.4	3.9	3.4
MCO/PBM	22	95.5	4.5	1.9	2.3	1.9
Education / Academia	18	94.4	5.6	1.5	1.9	1.5
Government (FDA, etc)	11	90.9	9.1	0.9	0.4	0.9
Other	25	68.0	32.0	2.1	2.8	2.1
Total	1186			100	100	100
2004						
Independent (<4 units)	190	64.7	35.3	15.1	12.3	25.8
Small Chain (4-10 units)	30	62.1	37.9	2.3	1.8	4.2
Large Chain (>10 units)	320	80.0	20.0	25.4	25.5	24.6
Mass Merchandiser	57	75.4	24.6	4.5	4.3	5.4
Supermarket	115	89.6	10.4	9.1	10.3	4.6
Mail Service	35	85.7	14.3	2.8	9.0	1.9
Government Hospital / Health System	73	83.6	16.4	5.8	6.1	4.6
Non-government Hospital	239	83.2	16.8	18.9	19.8	15.4
Nursing Home / Long Term Care	38	71.1	28.9	3.0	2.7	4.7
Home Health / Infusion	28	78.6	21.4	2.2	2.2	2.3
HMO Operated Pharmacy	10	90.0	10.0	0.8	0.9	0.4
Clinic Pharmacy	21	66.7	33.3	1.7	1.4	2.7
Nuclear	10	90.0	10.0	0.8	0.9	0.4
Industry	27	96.3	3.7	2.1	2.6	0.4
MCO/PBM	11	100.0	--	0.9	1.1	--
Education / Academia	12	100.0	--	0.3	0.4	--
Government (FDA, etc)	4	100.0	--	0.3	0.4	--
Other	44	81.8	18.2	3.5	3.6	3.1
Total	1,264			100	100	100

2000						
Independent (<4 units)	300	68.0	32.0	16.3	13.3	30.9
Small Chain (4-10 units)	30	76.7	23.3	1.6	1.5	2.3
Large Chain (>10 units)	404	89.4	10.6	21.9	23.5	13.8
Mass Merchandiser	122	86.9	13.1	6.6	6.9	5.1
Supermarket	166	86.1	13.9	9.0	9.3	7.4
Mail Service	40	85.0	15.0	2.2	2.2	1.9
Government Hospital / Health System	106	90.6	9.4	5.7	6.3	3.2
Non-government Hospital	338	84.3	15.7	18.3	18.6	17.0
Nursing Home / Long Term Care	70	81.4	18.6	3.8	3.7	4.2
Home Health	44	81.8	18.2	2.4	2.3	2.6
HMO Operated Pharmacy	27	74.1	25.9	1.5	1.3	2.3
Clinic Pharmacy	41	80.5	18.5	2.2	2.2	2.6
Nuclear	10	90.0	10.0	0.5	0.6	0.3
Industry	44	95.5	4.5	2.4	2.7	0.6
MCO/PBM	24	91.7	8.3	1.3	1.4	0.6
Education / Academia	22	86.4	13.6	1.2	1.2	1.0
Government (FDA, etc)	11	100	--	0.6	0.7	--
Armed Services	3	66.7	33.3	0.2	0.1	0.3
Other	43	72.1	27.9	2.3	2.0	3.9
Total	1,845	83.1	16.9	100	100	100

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment. . Nuclear, Industry and Other were written in for an "Other For- Profit Corporation/Organization" category or an " Other Non- Profit Corporation/Organization" category on the survey form.
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Table 2.2.3: Actively Practicing Pharmacists' Work Status by Primary Employment Practice Setting (2009, 2004, 2000)

		% by Row		% by Column		
Practice Setting	**All Cases**	**Full-time**	**Part-time**	**All Cases**	**Full-time**	**Part-time**
2009						
Independent	171	62.0	38.0	14.4	11.7	23.1
Chain	295	76.6	23.4	24.9	25.0	24.6
Mass Merchandiser	58	79.3	20.7	4.9	5.1	4.3
Supermarket	114	80.7	19.3	9.6	10.2	7.8
Hospital	318	78.3	21.7	26.8	27.5	24.6
Other Patient Care Practice	123	74.8	25.2	10.4	10.2	11.0
Industry	40	87.5	12.5	3.4	3.9	1.8
Other (non-patient care)	67	88.1	11.9	5.6	6.5	2.8
Total	1186	76.3	23.7	100.0	100.0	100.0
2004						
Independent	190	64.7	35.3	15.1	12.3	25.9
Chain	350	78.5	21.5	27.7	27.3	29.0
Mass Merchandiser	57	75.4	24.6	4.5	4.3	5.4
Supermarket	115	89.6	10.4	9.1	10.3	4.6
Hospital	312	83.3	16.7	24.7	25.8	20.1
Other Patient Care Practice	148	77.6	22.4	11.7	11.4	12.7
Industry	27	96.3	3.7	2.1	2.6	0.4
Other (non-patient care)	65	92.3	7.7	5.2	6.0	1.9
Total	1,264	79.5	20.5	100	100	100
2000						
Independent	300	68.0	32.0	16.3	13.3	30.9
Chain	434	88.5	11.5	23.5	25.0	16.1
Mass Merchandiser	122	86.9	13.1	6.6	6.9	5.1
Supermarket	166	86.1	13.9	9.0	9.3	7.4
Hospital	444	85.8	14.2	24.1	24.8	20.3
Other Patient Care Practice	257	80.9	19.1	13.9	13.6	15.8
Industry	44	95.5	4.5	2.4	2.7	0.6
Other (non-patient care)	78	84.6	15.4	4.2	4.3	3.9
Total	1,845	83.1	16.9	100	100	100

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. Other (non-patient care) is defined as settings where pharmacists may not provide patient care and is a combination of MCO/PBM, education/academia, government (FDA, etc) and other.

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Table 2.2.4: Actively Practicing Pharmacists' Primary Employment Position by Gender (2009, 2004, 2000)

		% by Row		% by Column		
Position	**# of Cases**	**Males**	**Females**	**All Cases**	**Males**	**Females**
2009						
Owner/Partner	96	76.0	24.0	8.1	11.6	8.1
Management	351	59.5	40.5	29.8	33.2	29.8
Staff	732	47.5	52.5	62.1	55.2	62.1
Total	1179~	53.4	46.6	100.0	100.0	100.0
2004						
Owner/Partner	82	85.4	14.6	6.5	10.3	2.1
Management	364	58.8	41.2	28.8	31.3	25.8
Staff	814	48.9	51.1	64.7	58.4	72.1
Total	1,260*	54.1	45.9	100.0	100.0	100.0
2000						
Owner, Partner	130	85.4	14.6	7.0	10.9	2.3
Management	552	63.0	37.0	29.9	34.1	24.7
Staff	1162	48.2	51.8	63.1	55.0	73.0
Total	1,844†			100.0	100.0	100.0

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting) Data for 2004 based on respondents to the "2004 National Pharmacists Workforce Survey." Data for 2000 based on respondents to the "National Pharmacists Workforce Survey: 2000." Actively practicing is defined as a licensed pharmacist who is working full-time or part-time in their primary employment setting. Partner is defined as ≥ 25% ownership. Management includes manager, director, supervisor, assistant manager.

~Total not equal to 1,186 due to missing data.

*Total not equal to 1,264 due to missing data.

†Total not equal to 1,845 due to missing data.

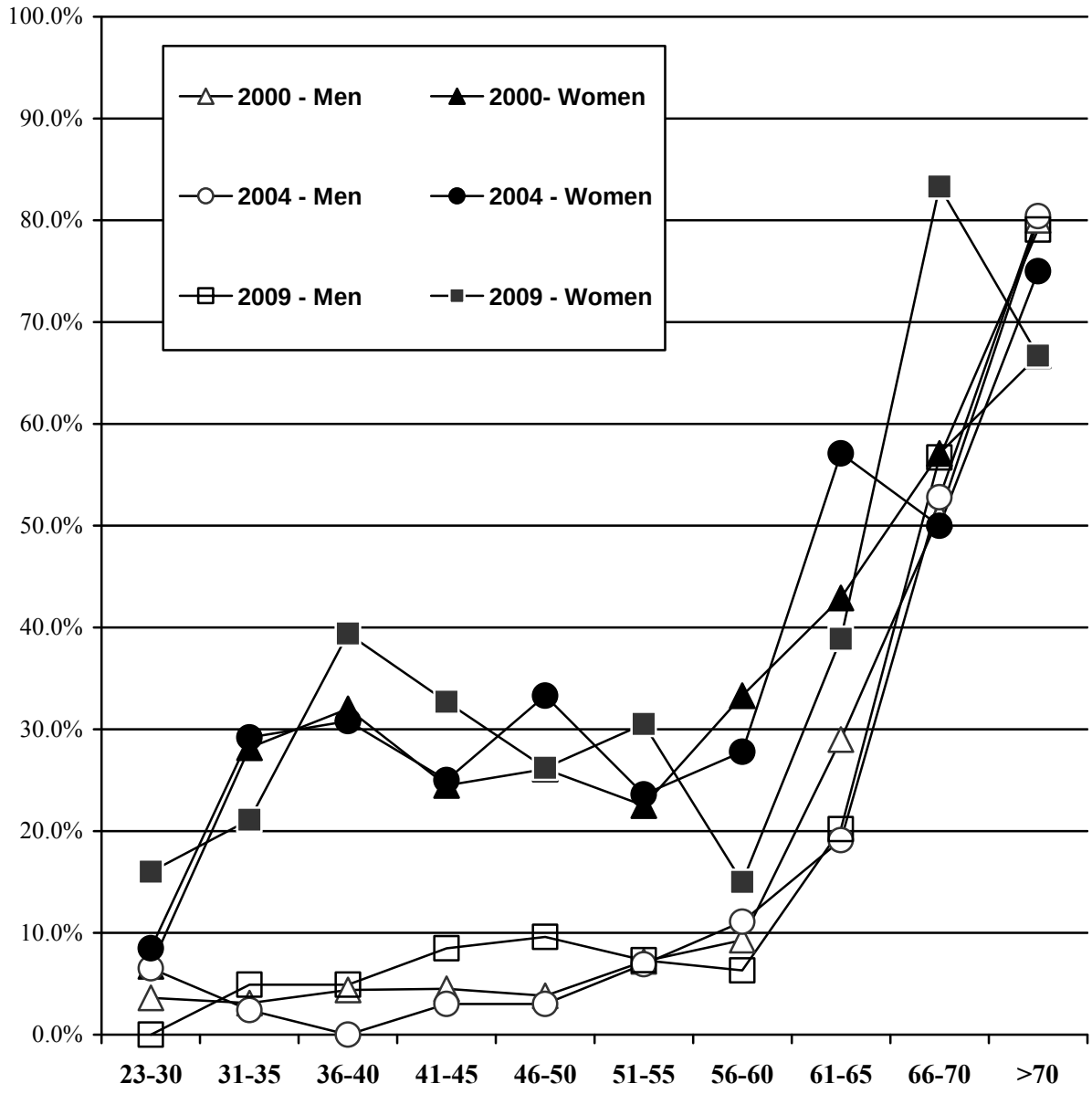
Table 2.2.5: Actively Practicing Pharmacists by Work Status versus Age Category by Gender (2009, 2004, 2000)

	2009 % by Row			2004 % by Row			2000 % by Row		
	All Cases	**Full-time**	**Part-time**	**All Cases**	**Full-time**	**Part-time**	**All Cases**	**Full-time**	**Part-time**
Age Category- Males									
23-30	7	100.0	--	31	93.5	6.5	84	96.4	3.6
31-35	41	95.1	4.9	42	97.6	2.4	96	96.9	3.1
36-40	41	95.1	4.9	57	100.0	0.0	114	95.6	4.4
41-45	47	91.5	8.5	67	97.0	3.0	134	95.5	4.5
46-50	73	90.4	9.6	100	97.0	3.0	182	96.2	3.8
51-55	109	92.7	7.3	130	93.1	6.9	138	92.8	7.2
56-60	126	93.7	6.3	90	88.9	11.1	118	90.7	9.3
61-65	89	79.8	20.2	68	80.9	19.1	69	71.0	29.0
66-70	60	43.3	56.7	53	47.2	52.8	49	49.0	51.0
>70	43	20.9	79.1	46	19.6	80.4	35	20.0	80.0
Total	636	81.6	18.4	684	84.6	15.4	1,019	88.4	11.6
Age Category- Females									
23-30	25	84.0	16.0	82	91.5	8.5	195	93.3	6.7
31-35	76	78.9	21.1	113	70.8	29.2	156	71.8	28.2
36-40	99	60.6	39.4	92	69.2	30.8	169	68.0	32.0
41-45	98	67.3	32.7	92	75.0	25.0	159	75.5	24.5
46-50	80	73.8	26.2	93	66.7	33.3	69	73.9	26.1
51-55	105	69.5	30.5	55	76.4	23.6	40	77.5	22.5
56-60	40	85.0	15.0	36	72.2	27.8	21	66.7	33.3
61-65	18	61.1	38.9	7	42.9	57.1	7	57.1	42.9
66-70	6	16.7	83.3	6	50.0	50.0	7	42.9	57.1
>70	3	33.3	66.7	4	25.0	75.0	3	33.3	66.7
Total	550	70.2	29.8	580	73.2	26.8	826	76.6	23.4

	2009 % by Col			2004 % by Col			2000 % by Col		
	All Cases	**Full-time**	**Part-time**	**All Cases**	**Full-time**	**Part-time**	**All Cases**	**Full-time**	**Part-time**
Age Category- Males									
23-30	7	1.3	--	31	5.0	1.9	84	9.0	2.5
31-35	41	7.5	1.7	42	7.1	1.0	96	10.3	2.5
36-40	41	7.5	1.7	57	9.8		114	12.1	4.2
41-45	47	8.3	3.4	67	11.2	1.9	134	14.2	5.1
46-50	73	12.7	6.0	100	16.8	2.9	182	19.4	5.9
51-55	109	19.5	6.8	130	20.9	8.6	138	14.2	8.5
56-60	126	22.7	6.8	90	13.8	9.5	118	11.9	9.3
61-65	89	13.7	15.4	68	9.5	12.4	69	5.4	16.9
66-70	60	5.0	29.1	53	4.3	26.7	49	2.7	21.2
>70	43	1.7	29.1	46	1.6	35.2	35	0.8	23.7
Total	636	100.0	100.0	684	100	100	1019	100	100
Age Category- Females									
23-30	25	5.4	2.4	82	17.6	4.5	195	28.8	6.7
31-35	76	15.5	9.8	113	18.8	21.3	156	17.7	22.8
36-40	99	15.5	23.8	92	15.1	18.1	169	18.2	28.0
41-45	98	17.1	19.5	92	16.2	14.8	159	19.0	20.2
46-50	80	15.3	12.8	93	14.6	20.0	69	8.1	9.3
51-55	105	18.9	19.5	55	9.9	8.4	40	4.9	4.7
56-60	40	8.8	3.7	36	6.1	6.5	21	2.2	3.6
61-65	18	2.8	4.3	7	0.7	2.6	7	0.6	1.6
66-70	6	0.3	3.0	6	0.7	1.9	7	0.5	2.1
>70	3	0.3	1.2	4	0.2	1.9	3	0.2	1.0
Total	550	100.0	100.0	580	100	100	826	100	100

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Actively practicing is defined as a licensed pharmacist who is working full-time or part-time in their primary employment setting.

Figure 2.2.1
Proportion of Actively Practicing Pharmacists Working Part-time by Age Group and Gender



Note: Actively practicing is defined as a licensed pharmacist who is working full-time or part-time in their primary employment setting.

Table 2.2.6: Pharmacists Working Full-time by Gender versus Primary Employment Practice Setting (2009, 2004, 2000)

		% by Row		% by Column		
Practice Setting	**# of Cases**	**Males**	**Females**	**All Cases**	**Males**	**Females**
2009						
Independent	106	68.9	31.1	11.7	14.1	8.5
Chain	226	55.8	44.2	25.0	24.3	25.9
Mass Merchandiser	46	56.5	43.5	5.1	5.0	5.2
Supermarket	92	63.0	37.0	10.2	11.2	8.8
Hospital	249	54.2	45.8	27.5	26.0	29.5
Other Patient Care Practice	92	55.4	44.6	10.2	9.8	10.6
Industry	35	51.4	48.6	3.9	3.5	4.4
Other (non-patient care)	59	54.2	45.8	6.5	6.2	7.0
Total	905	57.3	42.7	100.0	100.0	100.0
2004						
Independent	123	73.2	26.8	12.3	15.6	7.8
Chain	275	63.5	36.5	27.3	30.1	23.6
Mass Merchandiser	43	67.4	32.6	4.3	5.0	3.3
Supermarket	103	55.3	44.7	10.3	9.9	10.8
Hospital	260	49.8	50.2	25.8	22.3	30.7
Other Patient Care Practice	114	52.6	47.4	11.4	10.4	12.7
Industry	26	42.3	57.7	2.6	1.9	3.5
Other (non-patient care)	60	46.7	53.3	6.0	4.8	7.5
Total	1,004	57.7	42.3	100.0	100.0	100.0
2000						
Independent	204	74.0	26.0	13.3	16.8	8.4
Chain	384	59.6	40.4	25.0	25.4	24.5
Mass Merchandiser	106	56.6	43.4	6.9	6.7	7.3
Supermarket	143	57.3	42.7	9.3	9.1	9.6
Hospital	381	52.8	47.2	24.8	22.3	28.4
Other Patient Care Practice	208	59.1	40.9	13.6	13.7	13.4
Industry	42	50.0	50.0	2.7	2.3	3.3
Other (non-patient care)	66	51.5	48.5	4.3	3.8	5.1
Total	1,534	58.7	41.3	100.0	100.0	100.0

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting. Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. Other (non-patient care) is defined as settings where pharmacists may not provide patient care and is a combination of MCO/PBM, education/academia, government (FDA, etc) and other.

Table 2.2.7: Pharmacists Working Part-time by Gender versus Primary Employment Practice Setting (2009, 2004, 2000)

		% by Row		% by Column		
Practice Setting	**# of Cases**	**Males**	**Females**	**All Cases**	**Males**	**Females**
2009						
Independent	65	63.1	36.9	23.1	35.0	14.6
Chain	69	46.4	53.6	24.6	27.4	22.6
Mass Merchandiser	12	33.3	66.7	4.3	3.4	4.9
Supermarket	22	36.4	63.6	7.8	6.8	8.5
Hospital	69	26.1	73.9	24.6	15.4	31.1
Other Patient Care Practice	31	32.3	67.7	11.0	8.5	12.8
Industry	5	40.0	60.0	1.8	1.7	1.8
Other (non-patient care)	8	25.0	75.0	2.8	1.7	3.7
Total	281	41.6	58.4	100.0	100.0	100.0
2004						
Independent	67	50.7	49.3	25.9	32.7	21.3
Chain	75	46.7	53.3	29.0	33.7	25.8
Mass Merchandiser	14	28.6	71.4	5.4	3.8	6.5
Supermarket	12	25.0	75.0	4.6	2.9	5.8
Hospital	52	25.0	75.0	20.1	12.5	25.2
Other Patient Care Practice	34	36.4	63.6	12.7	11.5	13.5
Industry	1	--	100.0	0.4	--	0.6
Other (non-patient care)	5	60.0	40.0	1.9	2.9	1.3
Total	260	40.2	59.8	100.0	100.0	100.0
2000						
Independent	96	59.4	40.6	30.9	48.3	20.2
Chain	50	42.0	58.0	16.1	17.8	15.0
Mass Merchandiser	16	25.0	75.0	5.1	3.4	6.2
Supermarket	23	34.8	65.2	7.4	6.8	7.8
Hospital	63	27.0	73.0	20.3	14.4	23.8
Other Patient Care Practice	49	18.4	81.6	15.8	7.6	20.7
Industry	2	--	100.0	0.6	--	1.0
Other (non-patient care)	12	16.7	83.3	3.9	1.7	5.2
Total	311	37.9	62.1	100.0	100.0	100.0

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. Other (non-patient care) is defined as settings where pharmacists may not provide patient care and is a combination of MCO/PBM, education/academia, government (FDA, etc) and other.

Section 2.3: Hours Worked by Actively Practicing Pharmacists

In 2009, among pharmacists working full-time, males worked 2.4 hours more per week compared to females (Table 2.3.1). In 2004, the difference was 2.1 hours and in 2000 the difference was 4.4 hours. Overall, pharmacists working full-time worked an average of 44.2 hours per week in 2000, 43.4 hours per week in 2004, and 43.8 hours per week in 2009. For part-time pharmacists, average hours worked per week did not change significantly either (19.0 hours per week in 2000, 19.1 hours per week in 2004, and 19.4 hours per week in 2009).

Consistently across age groups, males working full-time in 2009 worked more hours per week compared to females (except for the age category 66 to 70). This pattern is consistent with the one reported in 2004 (see Table 2.3.2).

Regarding hours worked for part-time pharmacists, all age groups contributed significant hours per week to the workforce. However a downward trend in hours worked was detected for older pharmacists.

Male full-time pharmacists worked more hours per week across all position types compared to females (Table 2.3.3). For pharmacists working part-time in 2009, males in owner, partner or management positions worked more hours per week than females. However, females in part-time staff positions worked more hours per week than their male counterparts.

A full-time equivalent (FTE) was calculated using the number of reported total hours worked in primary employment and the number of weeks worked annually. We defined 1.0 FTE as a pharmacist working 40 hours per week, 52 weeks per year, or 2080 hours. In 2000, pharmacists were contributing an average of 0.93 FTE to the workforce (Table 2.3.4). In 2004, pharmacists contributed an average of 0.87 FTE and in 2009 they also contributed an average of 0.87 FTE (Table 2.3.4).

In 2009, actively practicing male pharmacists contributed an average of 0.92 FTE compared to 0.82 FTE for females. This difference is almost identical to the results from 2004 (0.91 and 0.82, respectively). For 2009, the pattern of FTE contribution by males and females across age categories is summarized in Figure 2.3.1. For each age category except one (age >70) male pharmacists contributed more FTEs than females.

Table 2.3.1: Actively Practicing Pharmacists' Mean Weekly Hours Worked in Primary Employment by Work Status and Gender versus Practice Setting (2009, 2004, 2000)

	Full-time			Part-time		
Practice Setting	**All Full-time**	**Males**	**Females**	**All Part-time**	**Males**	**Females**
2009	(n=905)	(n=519)	(n=386)	(n=281)	(n=117)	(n=164)
Independent	47.3	48.7	44.1	18.0	17.1	19.6
Chain	41.8	42.8	40.4	18.2	17.3	18.9
Mass Merchandiser	41.9	43.1	40.3	23.1	22.5	23.4
Supermarket	41.2	42.0	39.6	21.6	18.1	23.6
Hospital	44.1	45.0	43.1	21.2	17.9	22.3
Other Patient Care Practice	42.7	44.2	40.9	17.9	17.6	18.0
Industry	50.2	49.4	51.1	21.5	25.0	19.2
Other (non-patient care)	47.2	47.9	46.5	20.7	25.0	19.3
Total	43.8	44.8	42.4	19.4	17.8	20.6
2004	(n=1,004)	(n=579)	(n=425)	(n=260)	(n=105)	(n=155)
Independent	44.4	46.1	39.8	16.8	15.9	17.7
Chain	42.8	43.7	41.0	18.2	16.2	19.9
Mass Merchandiser	41.1	42.2	38.8	23.7	26.6	22.6
Supermarket	41.2	41.6	40.7	22.8	24.3	22.3
Hospital	43.4	43.7	43.0	20.2	17.5	21.1
Other Patient Care Practice	44.3	45.3	43.3	21.5	19.4	22.7
Industry	48.8	50.9	47.3	12.0	---	12.0
Other (non-patient care)	46.0	47.3	44.9	16.0	16.7	15.0
Total	43.4	44.3	42.2	19.1	17.3	20.3
2000	(n=1,534)	(n=901)	(n=633)	(n=311)	(n=118)	(n=193)
Independent	47.7	49.6	42.5	17.8	17.0	18.9
Chain	43.3	44.2	42.1	19.7	16.4	22.1
Mass Merchandiser	43.3	44.0	42.4	19.1	19.3	19.1
Supermarket	41.9	42.4	41.1	20.5	21.6	20.0
Hospital	43.4	44.1	42.7	19.7	19.2	19.9
Other Patient Care Practice	44.1	44.6	43.3	19.2	16.2	19.8
Industry	46.8	45.6	48.1	20.0	---	20.0
Other (non-patient care)	47.5	47.5	47.5	18.8	19.0	18.7
Total	44.2	45.1	42.8	19.0	17.6	19.9

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Weekly hours is actual hours worked, rather than scheduled hours. Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. Other (non-patient care) is defined as settings where pharmacists may not provide patient care and is a combination of MCO/PBM, education/academia, government (FDA, etc) and other.

Table 2.3.2: Actively Practicing Pharmacists' Mean Weekly Hours Worked in Primary Employment by Work Status and Gender versus Age Category (2009, 2004, 2000)

	Full-time			Part-time		
Age Category	**All Full-time**	**Males**	**Females**	**All Part-time**	**Males**	**Females**
2009	(n=905)	(n=519)	(n=386)	(n=281)	(n=117)	(n=164)
23-30	43.0	43.7	42.7	17.5	--	17.5
31-35	42.6	43.2	42.3	19.8	20.5	19.7
36-40	42.3	43.8	41.4	19.8	20.5	19.7
41-45	43.5	44.7	42.7	20.7	21.5	20.6
46-50	44.6	46.4	42.6	22.0	17.4	23.5
51-55	45.5	46.8	43.8	21.8	25.0	21.0
56-60	43.7	44.5	41.0	21.8	20.9	22.9
61-65	44.2	44.9	40.3	18.8	18.4	19.9
66-70	41.7	41.6	44.0	18.2	18.7	14.8
>70	37.2	37.8	32.0	14.2	13.6	24.0
Total	43.8	44.8	42.4	19.4	17.8	20.6
2004	(n=1,004)	(n=579)	(n=425)	(n=260)	(n=105)	(n=155)
23-30	43.2	44.6	42.7	20.9	16.0	22.3
31-35	42.1	43.8	41.2	20.8	20.0	20.9
36-40	43.4	44.2	42.7	19.8	---	19.8
41-45	44.5	46.5	42.7	20.3	27.0	19.7
46-50	44.3	45.7	42.1	21.3	16.7	21.8
51-55	43.6	43.6	43.5	19.5	20.3	18.9
56-60	43.2	44.0	40.6	20.5	18.7	22.2
61-65	43.5	43.7	40.0	16.5	16.3	17.0
66-70	39.3	39.3	39.3	17.9	18.1	15.5
>70	42.3	43.2	34.0	15.1	15.1	15.2
Total	43.4	44.3	42.2	19.1	17.2	20.3
2000	(n=1,534)	(n=901)	(n=633)	(n=311)	(n=118)	(n=193)
23-30	43.4	45.0	42.7	16.6	13.0	17.5
31-35	44.0	45.4	42.8	19.4	19.3	19.4
36-40	43.8	44.4	43.2	20.6	26.6	20.0
41-45	43.8	44.7	42.9	20.5	16.1	21.2
46-50	45.6	46.1	44.0	20.0	17.4	21.1
51-55	44.7	45.3	42.4	20.8	22.4	19.0
56-60	44.7	45.2	40.6	21.4	20.9	22.3
61-65	43.0	43.3	39.3	16.5	16.5	16.7
66-70	44.1	44.3	42.3	16.9	17.0	16.3
>70	46.4	47.3	40.0	15.0	14.9	16.5
Total	44.2	45.1	42.8	19.0	17.6	19.9

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting) . Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment .

Table 2.3.3: Actively Practicing Pharmacists' Mean Weekly Hours Worked in Primary Employment by Work Status and Gender versus Position Type (2009, 2004, 2000)

	Full-time			Part-time		
Position Type	**All Full-time**	**Males**	**Females**	**All Part-time**	**Males**	**Females**
2009	(n=900)	(n=515)	(n=385)	(n=279)	(n=115)	(n=164)
Owner, Partner	51.3	51.7	49.7	20.5	21.5	18.9
Management	45.1	45.9	43.8	22.7	22.9	22.6
Staff	41.7	42.4	41.0	19.1	16.9	20.5
Total	43.8	44.8	42.3	19.5	18.0	20.6
2004	(n=1,003)	(n=578)	(n=425)	(n=260)	(n=105)	(n=155)
Owner, Partner	47.6	48.3	43.2	19.6	20.7	13.0
Management	44.9	45.5	44.1	26.6	22.0	30.0
Staff	42.0	42.7	41.2	18.9	16.6	20.3
Total	43.4	44.3	42.2	19.1	17.2	20.5
2000	(n =1,533)	(n = 901)	(n = 632)	(n = 311)	(n = 118)	(n = 193)
Owner, Partner	51.5	52.2	47.4	22.9	22.8	23.3
Management	45.8	46.1	45.3	23.0	22.0	24.0
Staff	42.2	42.8	41.6	18.6	16.6	19.6
Total	44.2	45.1	42.9	19.0	17.6	19.9

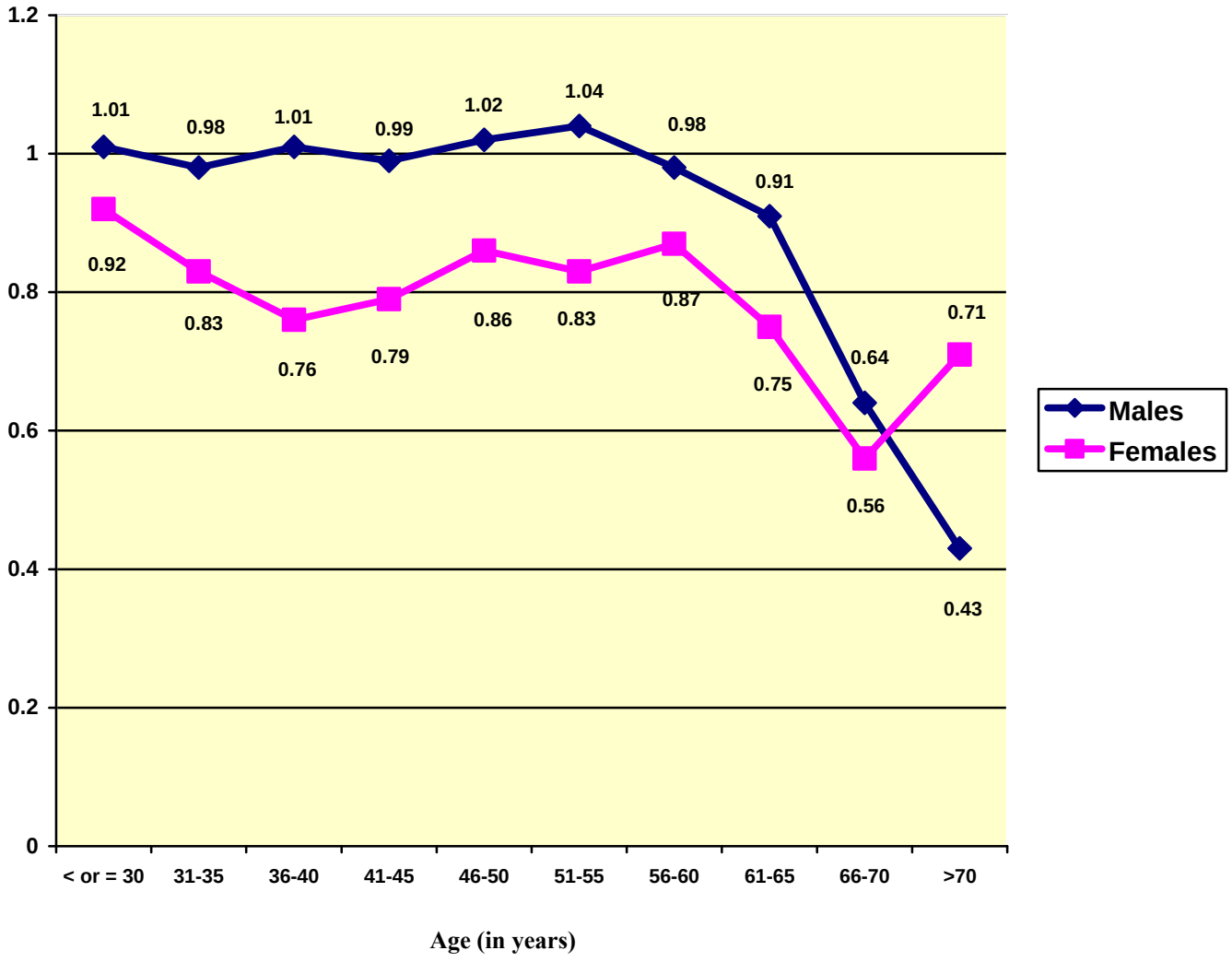
Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Actively practicing is defined as a licensed pharmacist who is working full-time or part-time in their primary employment setting. Weekly Hours worked are actual hours worked, rather than scheduled hours worked. Pharmacists were classified as working part-time if they worked 30 hours or less per week in their primary employment. Partner is defined as ≥ 25% ownership. Management includes manager, director, supervisor, assistant manager.

Table 2.3.4: Actively Practicing Pharmacists' Mean Full-time Equivalent (FTE) in Primary Employment by Gender and Age Category (2009, 2004, 2000)

Age Category	All Pharmacists	Males	Females
2009	(n=1154)	(n=619)	(n=535)
24-30	.94	1.01	.92
31-35	.88	.98	.83
36-40	.83	1.01	.76
41-45	.86	.99	.79
46-50	.92	1.02	.86
51-55	.94	1.04	.83
56-60	.96	.98	.87
61-65	.88	.91	.75
66-70	.63	.64	.56
>70	.44	.43	.71
Total	.87	.92	.82
2004	(n=1,246)	(n=677)	(n=569)
24-30	.94	.95	.93
31-35	.85	1.02	.79
36-40	.88	1.03	.79
41-45	.92	1.05	.83
46-50	.91	1.02	.78
51-55	.92	.95	.86
56-60	.88	.90	.84
61-65	.84	.87	.49
66-70	.64	.63	.65
>70	.46	.46	.38
Total	.87	.91	.82
2000	(n=1,824)	(n=1,006)	(n=818)
23-30	.98	1.04	.96
31-35	.92	1.05	.83
36-40	.91	1.03	.84
41-45	.95	1.03	.88
46-50	1.00	1.05	.88
51-55	.99	1.03	.86
56-60	.97	.99	.83
61-65	.80	.82	.66
66-70	.72	.73	.64
>70	.47	.45	.60
Total	.93	.99	.87

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Actively practicing is defined as a licensed pharmacist who is working full-time or part-time in their primary employment setting. A pharmacist who works forty hours a week for 52 weeks equals 1.0 "Full Time Equivalent" (FTE). We determined a respondent's FTE value by multiplying actual weekly hours worked in primary employment by weeks worked per year.

Figure 2.3.1: Summary of Actively Practicing Pharmacists' Mean Full-Time Equivalent (FTE) Contributions in Primary Employment during 2009



Pharmacists reported how long (years) they had worked for their current employer. Males working full-time reported being with their current employers longer than females (Table 2.4.1). Generally, as years of experience increased, years with current employer increased. For 2009, pharmacists reported working with their current employer the longest in independent (14.5 years), hospital (13.4 years), and chain (11.8 years) settings.

For 2009, the work settings with the highest proportion of full time pharmacists working for less than three years were: industry (34.3%), other-non patient care (28.8%), and other patient care practice (25.3%). The proportion of pharmacists who have been with their employer for less than three years may be an indication of turnover, but also could reflect job expansion and new hiring in certain sectors. It is noteworthy that for hospital pharmacy settings, the proportion of full-time pharmacists working for less than three years declined from 26% in 2000 to 21% in 2004, and only 13% in 2009. Also noteworthy is the decrease in the proportion of full-time pharmacists working for less than three years for pharmacists overall (31% in 2000, 20% in 2004, and 16% in 2009).

Tables 2.4.2 and 2.4.3 show that the mean number of employers reported by actively practicing full-time pharmacists did not change significantly between 2000 (3.7 employers), 2004 (3.9 employers), and 2009 (3.8 employers). However, the mean years per employer did increase (6.5 years per employer in 2000, 6.8 years in 2004, and 8.2 years in 2009). Effects of gender and years of experience are summarized in these tables.

In terms of practice setting (Table 2.4.4), pharmacists who worked in independent and chain settings worked the longest per employer. This finding was consistent in 2000, 2004, and 2009.

Table 2.4.1: Actively Practicing Full-Time Pharmacists' Mean Years with Current Employer in Primary Employment versus Gender, Age, and Practice Setting (2009, 2004, 2000)

	Mean Years with Current Employer			% of pharmacists with current employer for less than 3 years		
	2009	**2004**	**2000**	**2009**	**2004**	**2000**
Gender	(n=901)	(n=1,003)	(n=1,518)	(n=901)	(n=1,003)	(n=1,518)
Male	12.6	10.8	9.8	14.8	18	27
Female	10.3	8.3	6.6	18.7	22	36
Total	11.6	9.7	8.5	16.4	20	31
Age Category	(n=901)	(n=1,002)	(n=1,5180	(n=901)	(n=1,002)	(n=1,518)
23-30	4.4	3.6	2.9	35.7	43	56
31-35	6.1	6.1	5.2	22.2	18	32
36-40	8.4	7.2	7.7	16.2	23	28
41-45	9.7	8.9	8.8	15.6	16	24
46-50	12.2	9.7	10.8	14.5	19	25
51-55	12.6	12.9	12.0	17.8	13	24
56-60	15.2	15.0	13.1	15.3	12	22
61-65	15.9	13.4	13.4	9.8	19	17
66-70	14.7	14.5	16.6	11.5	15	22
>70	17.1	20.3	26.9	0	0	0
Total	11.6	9.7	8.5	16.4	20	31
Practice Setting		(n=1,002)	(n=1,518)	(n=901)	(n=1,002)	(n=1,518)
Independent	14.5	15.1	14.3	17.1	14	19
Chain	11.8	10.0	8.1	12.0	17	29
Mass Merchandiser	9.1	8.5	6.3	17.4	19	40
Supermarket	9.9	7.4	6.5	12.0	23	38
Hospital	13.4	9.9	9.2	12.9	21	26
Other Patient Care Practice	9.4	6.8	5.8	25.3	25	41
Industry	9.2	6.3	6.8	34.3	31	33
Other (non-patient care)	7.8	8.7	6.3	28.8	17	38
Total	11.6	9.7	8.5	16.4	20	31

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. Other (non-patient care) is defined as settings where pharmacists may not provide patient care and is a combination of MCO/PBM, education/academia, government (FDA, etc) and other.

Table 2.4.2: Actively Practicing Full-time Pharmacists' Mean Number of Employers and Mean Years per Employer versus Gender (2009, 2004, 2000)

	Male	Female	Total
2009	(n = 475)	(n = 361)	(n = 836)
Mean Number of Employers	4.0	3.6	3.8
Mean Years per Employer	8.9	7.2	8.2
2004	(n = 198)	(n = 160)	(n = 358)
Mean Number of Employers	4.1	3.6	3.9
Mean Years per Employer	7.4	6.1	6.8
2000	(n = 863)	(n = 607)	(n = 1,470)
Mean Number of Employers	4.0	3.2	3.7
Mean Years per Employer	7.6	4.9	6.5

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Full-time is defined as working more than 30 hours weekly at the primary employer

Table 2.4.3: Actively Practicing Full-time Pharmacists' Mean Number of Employers and Mean Years per Employer versus Years of Experience (2009, 2004 and 2000)

	0-5 years	6-10 years	11-20 years	21-30 years	>30 years	Total
2009	(n = 19)	(n = 79)	(n =187)	(n = 222)	(n =317)	(n = 824)
Mean Number of Employers	1.7	2. 4	3.3	4.1	4.5	3.8
Mean Years per Employer	2.8	4.1	6.0	8.4	10.7	8.2
2004	(n = 27)	(n = 56)	(n = 85)	(n = 119)	(n =71)	(n = 358)
Mean Number of Employers	2.0	2.6	3.6	4.4	5.0	3.9
Mean Years per Employer	2.1	3.9	6.2	8.1	9.5	6.8
2000	n = 244)	(n = 243)	(n = 387)	(n = 390)	(n =206)	(n =1,470)
Mean Number of Employers	2.0	2.8	3.6	4.4	5.5	3.7
Mean Years per Employer	1.9	3.9	6.4	8.9	10.6	6.5

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Full-time is defined as working more than 30 hours weekly at the primary employer.

Table 2.4.4: Actively Practicing Full-time Pharmacists' Mean Number of Employers and Mean Years per Employer versus Primary Employment Setting (2009, 2004 and 2000)

	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
2009	(n = 101)	(n = 205)	(n = 42)	(n = 83)	(n = 233)	(n = 87)	(n = 83)	(n = 834)
Mean Number of Employers	3.3	3.6	3.8	4.2	3.7	4.2	4.7	3.8
Mean Years per Employer	10.5	8.7	6.6	7.5	8.4	6.9	5.8	8.2
2004	(n = 44)	(n = 99)	(n = 19)	(n = 36)	(n = 89)	(n = 41)	(n = 30)	(n = 358)
Mean Number of Employers	3.6	3.7	3.6	3.4	4.3	3.8	4.5	4.0
Mean Years per Employer	11.0	7.4	5.8	5.9	5.8	4.9	6.2	7.1
2000	(n = 195)	(n = 371)	(n = 103)	(n =136)	(n = 365)	(n = 198)	(n = 102)	(n=1,470)
Mean Number of Employers	3.3	3.4	3.7	4.1	3.6	4.1	4.3	3.7
Mean Years per Employer	9.7	7.0	5.6	5.3	6.3	4.9	4.8	6.5

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia and government.

Section 2.5: Debt Load for Pharmacists Working Full-Time

Pharmacist respondents were asked questions about their total household debt, the amount of their student loan debt when they graduated from pharmacy school and their current level of student loan debt. Tables 2.5.1 and 2.5.2 summarize this information for pharmacists working full-time.

In 2009, pharmacists reported an average current student loan debt of $4,224 compared to $14,936 when they graduated from pharmacy school (Table 2.5.1). Pharmacists with five years or less years of experience reported an average of $79,895 of student debt at the time of graduation from pharmacy school and a current student loan debt of $61,667. Only 5% of respondents in this group reported having zero student loan debt at time of graduation and 17% reported no student loan debt currently. For this group, average total household debt (not including student loan debt) was $221,280 (with 12% reporting no household debt).

It should be noted that our survey did not include any graduates from 2007 onward. A recent "Graduating Pharmacy Student Survey" conducted by the American Association of Colleges of Pharmacy (AACP) during July 2009 showed that for the 6,578 graduating students who responded to the survey in 2009, 87.4% of the respondents reported having a debt load upon graduation. The mean amount of the debt load in 2009 was $101,892. This finding for 2009 is consistent with the trend identified in Table 2.5.1 if one considers that the "≤ 5 years" category in the table only included graduates from 2004 – 2006 (recall that our survey did not have any responders who graduated in 2007 or later). The complete AACP report for the 2009 graduating pharmacy student survey [1] is available at www.aacp.org.

Reference

1. American Association of Colleges of Pharmacy, Graduating Pharmacy Student Survey Summary Report – 2009, accessible at: http://www.aacp.org/resources/research/institutionalresearch/Documents/2009_GSS_Summary%20Report_all%20schools_83.pdf

Table 2.5.1: Debt Load for Pharmacists Actively Practicing and Working Full-time by Years of Experience (2009, 2004)

2009	≤ 5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	31-35 years	36-40 years	41-45 years	>45 years	Total
	n = 19	n = 76	n = 88	n = 93	n = 96	n = 119	n = 148	n = 103	n = 43	n = 15	n = 800
Approximate total household debt (e.g. mortgage, student loans, car loans, consumer debt, etc.) (mean $ amount)	$221,280	$270,647	$174,477	$196,225	$174,767	$118,233	$97,876	$102,240	$73,263	$153,714	$149,038
% with zero ($0) household debt	12%	5%	18%	4%	15%	21%	29%	36%	50%	57%	22%
Total student loan debt amount at time of graduation from pharmacy school. (mean $ amount)	$79,895	$47,118	$27,097	$15,155	$12,890	$6,456	$3,966	$2,698	$990	$400	$14,936
% with zero ($0) student loan debt at time of graduation	5%	20%	23%	34%	40%	42%	62%	64%	77%	87%	45%
Total student loan debt currently. (mean $ amount)	$61,667	$23,368	$4,998	$247	$0	$0	$176	$0	$0	$0	$4,224
% with zero (0) student loan debt currently.	17%	46%	84%	98%	100%	100%	99%	100%	100%	100%	91%
2004	**≤ 5 years**	**6-10 years**	**11-15 years**	**16-20 years**	**21-25 years**	**26-30 years**	**31-35 years**	**36-40 years**	**41-45 years**	**>45 years**	**Total**
	n = 72	n = 123	n = 119	n = 91	n = 130	n = 139	n = 81	n = 50	n = 22	n = 12	n = 839
Approximate total household debt (e.g. mortgage, student loans, car loans, consumer debt, etc.) (mean $ amount)	$184,129	$163,675	$137,472	$141,792	$136,198	$106,555	$121,500	$72,351	$56,845	$70,786	$131,247
% with zero ($0) household debt	2%	6%	8%	12%	11%	12%	15%	22%	41%	64%	12%
Total student loan debt amount at time of graduation from pharmacy school. (mean $ amount)	$42,600	$24,889	$10,975	$9,744	$5,859	$3,397	$2,334	$1,161	$432	$0	$11,848
% with zero ($0) student loan debt at time of graduation	20%	26%	37%	39%	40%	58%	64%	71%	86%	100%	45%
Total student loan debt currently. (mean $ amount)	$28,854	$6,822	$525	$77	$77	$633	$1,099	$0	$0	$0	$3,782
% with zero (0) student loan debt currently.	28%	69%	94%	98%	99%	98%	96%	100%	100%	100%	87%

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting) Full-time is defined as working more than 30 hours weekly at the primary employer.

Table 2.5.2: Debt Load for Pharmacists Actively Practicing and Working Full-time by Gender (2009 and 2004)

	2009			2004		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
	(n = 406)	(n = 288)	(n = 694)	(n = 479)	(n = 377)	(n = 856)
Approximate total household debt (e.g. mortgage, student loans, car loans, consumer debt, etc.) (mean $ amount)	$137,362	$166,760	$149,562	$123,960	$138,831	$130,612
% with zero ($0) household debt	24%	18%	21.6%	13%	12%	12%
Total student loan debt amount at time of graduation from pharmacy school. (mean $ amount)	$12,012	$19,453	$15,123	$8,102	$16,493	$11,772
% with zero ($0) student loan debt at time of graduation. (mean $ amount)	49%	40%	44.7%	52%	36%	45%
Total student loan debt currently.	$3,395	$5,653	$4,361	$2,527	$5,272	$3,132
% with zero (0) student loan debt currently.	93%	87%	90.5%	92%	82%	88%

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Full-time is defined as working more than 30 hours weekly at the primary employer.

Section 2.6: Ratings of Workload by Pharmacists Working Full-Time

In 2009, 68% of pharmacists rated their workload level at their place of practice as high or excessively high. This is an increase of 14 percentage points compared to 2004 (54%). Furthermore, 61% of pharmacists working full-time in 2009 reported that workload increased or greatly increased compared to a year ago. This proportion is similar to 2004 (58%).

Unlike findings from the 2004 survey (Table 2.6.1), all practice settings in the 2009 had 64% or more of their pharmacists rate work level at their pharmacy as high or excessively high (mean = 68; range from 64 to 72). In comparison, none of the practice sites in 2004 were greater than 61% (mean = 54; range from 35 to 61). Figure 2.6.1 shows that the largest increases between 2004 and 2009 were for supermarket (from 35% in 2004 to 69% in 2009), mass merchandiser (42% to 67%), and independent pharmacies (43% to 66%).

Table 2.6.2 shows that males and females rated their workload level similarly. In terms of position, workload also was rated similarly by management and staff pharmacists.

However, Table 2.6.4 reveals that the effects of current workload on pharmacists did differ between male and female pharmacists. In both 2004 and in 2009, males were more likely to report that their current level of workload had a negative or very negative effect on job-related issues (job performance, motivation to work at their pharmacy, and job satisfaction) and patient care-related issues: (time spent in contact with patients, quality of care provided to patients, and opportunity to solve drug therapy problems).

Table 2.6.5 summarizes effects of current workload on pharmacists working full-time by practice setting. In 2009, over 50% of independent pharmacists reported that current level of workload had a negative or very negative effect on their opportunity to take breaks. Over 50% of chain pharmacists reported this as well, and also 52% of chain pharmacists reported negative or very negative effects on time spent in contact with patients. Over 50% of mass merchandiser respondents reported negative or very negative effects on three items: mental/emotional health, opportunity to take breaks, and time spent in contact with patients. Supermarket pharmacists were similar to chain pharmacists in that over 50% reported negative or very negative effects on: opportunity to take breaks and time spent in contact with patients. Hospital, Other Patient Care, and Other pharmacists did not report over 50% negative or very negative effects for any of the items (Table 2.6.5).

Table 2.6.1: Ratings of Workload by Pharmacists Working Full-time by Practice Setting

2009	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
	(n = 106)	(n = 226)	(n = 46)	(n = 92)	(n = 249)	(n = 92)	(n = 94)	(n = 905)
% who rate workload level at their pharmacy as high or excessively high	66	72	67	69	64	64	72	68
% who report that workload has increased or greatly increased compared to a year ago	60	65	65	63	60	49	64	61

2004	Independent (n = 124)	Chain (n = 276)	Mass Merchandiser (n = 45)	Super -market (n = 103)	Hospital (n = 264)	Other Patient Care (n = 107)	Other (n = 13)	Total (n = 932)
% who rate workload level at their pharmacy as high or excessively high	43	59	42	35	61	56	58	54
% who report that workload has increased or greatly increased compared to a year ago	48	57	49	46	64	67	75	58

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia and government.

Figure 2.6.1
Proportion of Pharmacists Who Rated Workload as High or Excessively High (2009 vs. 2004) by Work Setting

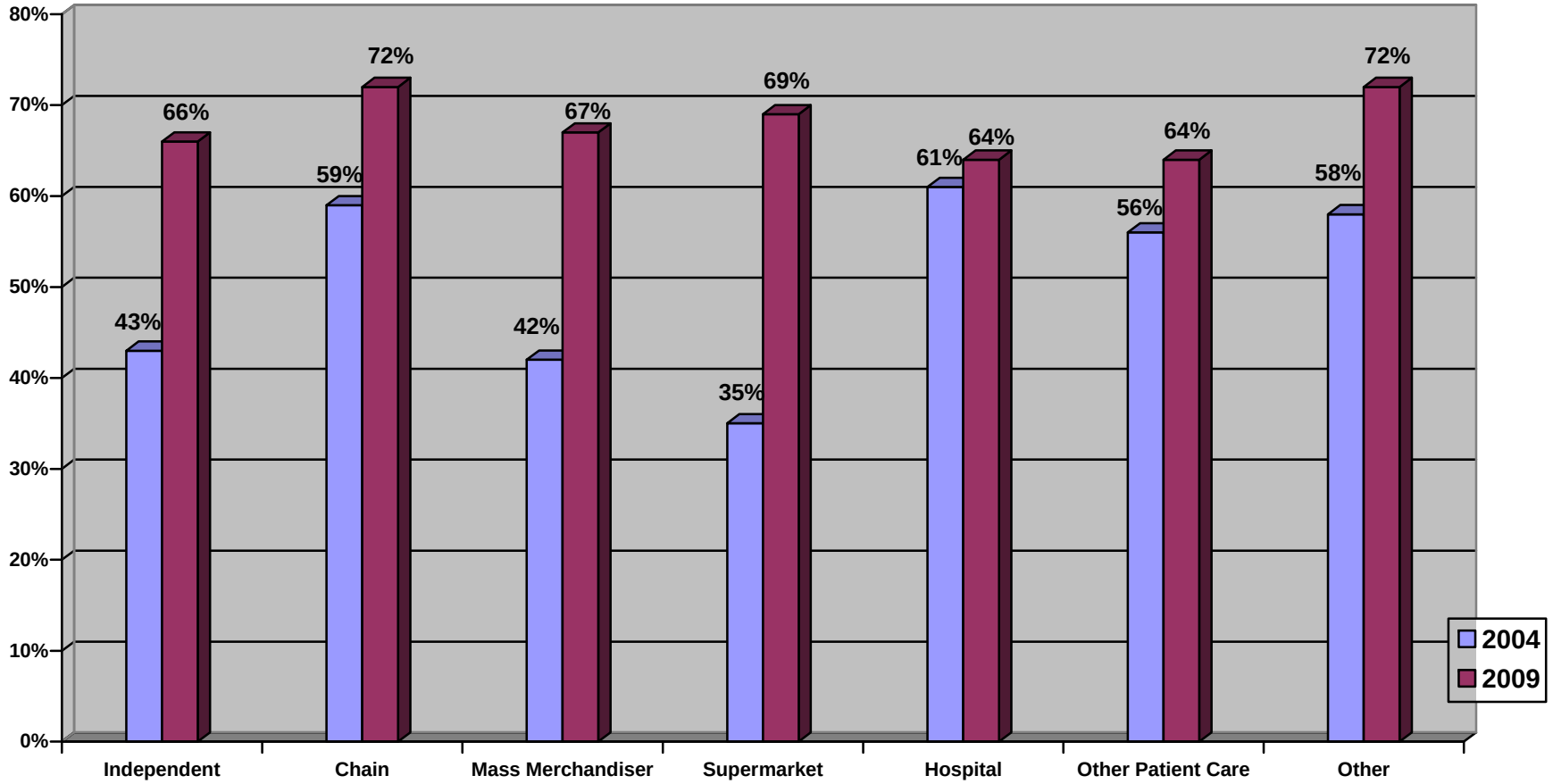


Table 2.6.2: Ratings of Workload by Pharmacists Working Full-time by Gender

2009	Male	Female	Total
	(n = 519)	(n =386)	(n = 905)
% who rate workload level at their pharmacy as high or excessively high	68	67	68
% who report that workload has increased or greatly increased compared to a year ago	61	61	61
2004	**Male** (n = 525)	**Female** (n = 407)	**Total** (n = 932)
% who rate workload level at their pharmacy as high or excessively high	54	53	54
% who report that workload has increased or greatly increased compared to a year ago	55	61	58

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Full-time is defined as working more than 30 hours weekly at the primary employer.

Table 2.6.3: Ratings of Workload by Pharmacists Working Full-time by Position

2009	Management	Staff	Total
	(n =406)	(n =494)	(n = 900)
% who rate workload level at their pharmacy as high or excessively high	68	67	68
% who report that workload has increased or greatly increased compared to a year ago	63	60	61
2004	**Management** (n = 525)	**Staff** (n = 407)	**Total** (n = 932)
% who rate workload level at their pharmacy as high or excessively high	54	53	54
% who report that workload has increased or greatly increased compared to a year ago	55	61	58

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Full-time is defined as working more than 30 hours weekly at the primary employer. Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers.

Table 2.6.4: Effect of Current Workload on Pharmacists Working Full-time by Gender

2009 Effect current level of workload in the pharmacy has on: (% reporting "negative" or "very negative")	Male (n = 519)	Female (n = 386)	Total (n = 905)
Job Related			
Job performance	28	19	25
Motivation to work at this pharmacy	26	22	25
Job satisfaction	34	29	31
Pharmacist Related			
Mental/emotional health	37	37	37
Physical health	31	33	32
Opportunity to take adequate breaks	51	54	53
Patient Care Related			
Time spent in contact with patients	41	37	39
Quality of care provided to patients	29	25	27
Opportunity to solve drug therapy problems	30	26	29
Opportunity to reduce potential errors	34	29	32

2004 Effect current level of workload in the pharmacy has on: (% reporting "negative" or "very negative")	Male (n = 525)	Female (n = 407)	Total (n = 932)
Job Related			
Job performance	27	17	22
Motivation to work at this pharmacy	22	20	21
Job satisfaction	28	26	27
Pharmacist Related			
Mental/emotional health	30	31	30
Physical health	26	27	27
Opportunity to take adequate breaks	48	47	48
Patient Care Related			
Time spent in contact with patients	36	32	35
Quality of care provided to patients	29	23	27
Opportunity to solve drug therapy problems	34	31	33
Opportunity to reduce potential errors	36	35	36

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting. Full-time is defined as working more than 30 hours weekly at the primary employer. Effect of current level of workload in pharmacy on each aspect was measured using a 5-point scale (1=very negative, 2=negative, 3=neither negative nor positive, 4=positive, and 5=very positive). The scale also has a "does not apply option".

Table 2.6.5: Effect of Current Workload on Pharmacists Working Full-time by Practice Setting

2009 Effect that current level of workload in the pharmacy has on: (% reporting "negative" or "very negative")	Indepen-dent	Chain	Mass Merchan-diser	Super-market	Hospital	Other Patient Care	Other	Total
	(n = 106)	(n= 226)	(n = 46)	(n = 92)	(n = 249)	(n = 92)	(n = 94)	(n = 905)
Job Related								
Job performance	24	32	26	26	22	23	14	25
Motivation to work at this pharmacy	21	31	37	29	22	21	12	25
Job satisfaction	29	37	46	36	30	30	13	31
Pharmacist Related								
Mental/emotional health	39	42	52	41	35	30	21	37
Physical health	38	36	44	35	27	30	22	32
Opportunity to take adequate breaks	59	65	59	69	43	39	34	53
Patient Care Related								
Time spent in contact with patients	42	52	61	54	31	28	13	39
Quality of care provided to patients	20	36	50	38	24	20	6	27
Opportunity to solve drug therapy problems	28	33	50	35	29	22	7	29
Opportunity to reduce potential errors	28	37	39	38	34	28	12	32

2004 Effect that current level of workload in the pharmacy has on: (% reporting "negative" or "very negative")	Indepen-dent	Chain	Mass Merchan-diser	Super-market	Hospital	Other Patient Care	Other	Total
	(n = 124)	(n= 163)	(n = 45)	(n = 103)	(n = 264)	(n = 107)	(n = 13)	(n = 932)
Job Related								
Job performance	16	29	31	12	25	12	25	22
Motivation to work at this pharmacy	16	26	36	15	19	16	33	21
Job satisfaction	19	32	36	22	28	20	33	27
Pharmacist Related								
Mental/emotional health	21	33	38	26	34	24	50	30
Physical health	20	31	44	24	25	23	25	27
Opportunity to take adequate breaks	43	62	53	52	41	27	18	48
Patient Care Related								
Time spent in contact with patients	29	45	47	26	33	25	27	35
Quality of care provided to patients	21	32	36	18	30	23	0	27
Opportunity to solve drug therapy problems	24	37	42	24	38	26	18	33
Opportunity to reduce potential errors	29	39	40	20	46	28	18	36

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting). Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia and government Effect of current level of workload in pharmacy on each aspect was measured using a 5-point scale (1=very negative, 2=negative, 3=neither negative nor positive, 4=positive, and 5=very positive). The scale also has a "does not apply option.

Table 2.6.6: Effect of Current Workload on Pharmacists Working Full-time by Position

2009 Effect current level of workload in the pharmacy has on: (% reporting "negative" or "very negative")	Management	Staff	Total
	(n = 406)	(n = 494)	(n = 900)
Job Related			
Job performance	24	25	25
Motivation to work at this pharmacy	23	26	24
Job satisfaction	28	34	31
Pharmacist Related			
Mental/emotional health	38	36	37
Physical health	33	31	32
Opportunity to take adequate breaks	55	50	52
Patient Care Related			
Time spent in contact with patients	40	39	40
Quality of care provided to patients	26	29	27
Opportunity to solve drug therapy problems	29	29	29
Opportunity to reduce potential errors	29	34	32

2004 Effect current level of workload in the pharmacy has on: (% reporting "negative" or "very negative")	Management	Staff	Total
	(n = 302)	(n = 567)	(n = 934)
Job Related			
Job performance	20	24	22
Motivation to work at this pharmacy	18	22	21
Job satisfaction	25	28	27
Pharmacist Related			
Mental/emotional health	29	31	30
Physical health	26	27	26
Opportunity to take adequate breaks	50	46	48
Patient Care Related			
Time spent in contact with patients	33	36	35
Quality of care provided to patients	23	29	27
Opportunity to solve drug therapy problems	30	35	33
Opportunity to reduce potential errors	32	38	36

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting. Full-time is defined as working more than 30 hours weekly at the primary employer. Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers. Effect of current level of workload in pharmacy on each aspect was measured using a 5-point scale (1=very negative, 2=negative, 3=neither negative nor positive, 4=positive, and 5=very positive). The scale also has a "does not apply option.

SECTION 3
SELECTED FINDINGS FROM THE 2009 NATIONAL PHARMACIST WORKFORCE SURVEY

Section 3: Overview

This section describes selected findings from the 2009 National Pharmacist Workforce Survey that were not already presented in Section 2. For each part of this section a brief introduction is provided in order to give background and context for the findings. In addition, a discussion of the findings and suggestions for future monitoring are given.

This section is divided into three parts:

3.1 Work Activities for Pharmacists Working Full-Time

3.2 Workplace Labor Reductions Reported by Pharmacists Working Full-Time

3.3. Work Contributions (Hours per Week) and Career Plans Expected in Three Years

Section 3.1: Work Activities for Pharmacists Working Full-Time

For the 2009 survey, definitions for work activities were updated to better reflect pharmacists' contributions to patient care, health care, education, and medication discovery, development, and utilization research. One limitation of the update was that we could not directly compare the findings from 2009 with other years' findings. However, we propose that the updates provide a clearer understanding of pharmacist work activities and contributions.

For 2009, work activities included: medication dispensing, patient care services, business / organization management, research, education and other activities.

- **Medication Dispensing**: preparing, distributing, and administering medication products, including associated consultation, interacting with patients about selection and use of over-the-counter products, and interactions with other professionals during the medication dispensing process.
- **Patient Care Services**: assessing and evaluating patient medication-related needs, monitoring and adjusting patients' treatments to attain desired outcome, and other services designed for patient care management.
- **Business / Organization Management**: managing personnel, finances, and systems.
- **Research**: discovery, development, and evaluation of products, services, and/or ideas.
- **Education**: teaching, precepting, and mentoring of students/trainees.
- **Other Activities**: any activities not described in other categories.

For reference and context, the work activities for 2000 and 2004 were:

- **Consultation:** consulting and communicating with patients about prescription medications; interacting / communicating with other health professionals on patient's behalf (via phone, face-to-face, etc.); patient / provider education.
- **Drug Use Management:** assessing and evaluating patient medication-related needs; monitoring and adjusting treatment to attain desired outcomes.
- **Business Management:** managing pharmacy personnel, finances, and systems; processing and reconciling third-party claims; other business management activities.
- **Medication Dispensing:** preparing, dispensing, distributing and administering medications (traditional dispensing and medication distribution activities).
- **Other:** teaching, precepting, research, etc.

The categories and definitions used for 2000 and 2004 were focused on activities associated with pharmaceutical product distribution whereas the 2009 categories were broader in scope and more explicitly included patient care, research, and education activities. It should be noted that the 2009 definition for "medication dispensing" included associated consultation and other professional interactions. For 2000 and 2004, "medication dispensing" was defined only as medication preparation, dispensing, and distribution and did not include consultation or other professional interactions.

Table 3.1.1 shows that, overall, full-time pharmacists in 2009 devoted 55% of their time to medication dispensing, 16% to patient care services, 14% to business/organization management, 5% to education, 4% to research, and 5% to other activities. On average, pharmacists practicing in community pharmacy settings (independent, chain, mass merchandiser, or supermarket pharmacies), devoted at least 70% of their time to medication dispensing. Hospital and Other Patient Care pharmacists devoted less than half their time to medication dispensing and each of these pharmacist categories devoted 27% of their time to

patient care on average. Pharmacists in Other (non-patient care) settings exhibited a different pattern of work activities including business/organization management (27% of their time, on average), research (27%), and other activities (23%).

Findings from 2009 showed that 464 (52%) of the 889 respondents described in Table 3.1.1 worked in community pharmacy settings (independent, chain, mass merchandiser, or supermarket pharmacies). In these settings pharmacists typically devoted 70% or more of their time to medication dispensing activities and approximately 10% of their time to patient care services. In comparison, 337 (38%) of the 889 respondents worked in hospital or other patient care settings. In these settings, pharmacists typically devoted 43% of their time to medication dispensing and 27% of their time to patient care services. Finally, pharmacists in Other (non-patient care) settings comprised just 10% of the 889 respondents and devoted relatively little time to either medication dispensing (4%) or patient care services (7%).

For context and comparison, Table 3.1.2 summarizes data from 2000 and 2004.

Tables 3.1.3 (2009 data) and 3.1.4 (2000 and 2004 data) summarize the amount of time pharmacists would like to devote to the work activities we studied. Tables 3.1.5 (2009 data) and 3.1.6 (2000 and 2004 data) reveal the differences between actual and desired amount of time in work activities. For every practice setting in 2009, pharmacists would like to spend less time in medication dispensing and business/organization management and more time in patient care services, education, and research activities.

Tables 3.1.7 through 3.1.9 show these findings for respondents categorized by gender. The pattern of responses in 2009 is similar for both males and females. For context and comparison, tables 3.1.10 through 3.1.12 contain data from 2000 and 2004.

Tables 3.1.13 through 3.1.15 show the 2009 findings for respondents categorized by position. As expected, staff pharmacists spend more time in dispensing and patient care services and less time in business / organization management than those in management positions. However, Table 3.1.15 shows that the differences between actual and desired time in the various activities was similar regardless of position. For context and comparison, findings from 2000 and 2004 are summarized in Tables 3.1.16 through 3.1.18.

These findings reveal that pharmacists desire to spend more time devoted patient care services, education, and research. Also, pharmacists in Other (non-patient care) settings exhibited a different pattern of work activities including business/organization management (27% of their time, on average), research (27%), and other activities (23%).

We suggest that future research should describe and monitor the expected shifts in which less pharmacist time will be devoted to traditional medication dispensing and more time devoted to: patient care services including specialty pharmaceuticals, management of people / information / organizations / systems, education, and research.

Table 3.1.1: Actual Work Activities for Pharmacists Working Full-time by Practice Setting (2009)

Actual amount of time spent in: (% of week; mean +/- s.d)	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
2009	(n = 104)	(n = 224)	(n = 46)	(n = 90)	(n = 247)	(n = 90)	(n = 88)	(n = 889)
Medication dispensing	70+/-17	74+/-20	75+/-22	78+/-18	43+/-35	42+/-34	4+/-15	55+/-34
Patient care services	11+/-9	11+/-11	9+/-9	8+/-9	27+/-27	27+/-29	7+/-19	16+/-21
Business/Organization Management	12+/-11	10+/-14	9+/-14	9+/-14	15+/-26	18+/-28	27+/-32	14+/-22
Education	3+/-3	3+/-5	5+/-5	2+/-3	6+/-8	3+/-5	12+/-20	5+/-9
Research	2+/-6	1+/-3	1+/-3	1+/-3	3+/-6	3+/-7	27+/-30	4+/-13
Other Activities	2+/-7	1+/-7	1+/-2	1+/-4	6+/-17	8+/-23	23+/-36	5+/-18

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia and government.

- **Medication Dispensing**: preparing, distributing, and administering medication products, including associated consultation, interacting with patients about selection and use of over-the-counter products, and interactions with other professionals during the medication dispensing process.
- **Patient Care Services**: assessing and evaluating patient medication-related needs, monitoring and adjusting patients' treatments to attain desired outcome, and other services designed for patient care management.
- **Business / Organization Management**: managing personnel, finances, and systems.
- **Research**: discovery, development, and evaluation of products, services, and/or ideas.
- **Education**: teaching, precepting, and mentoring of students/trainees.
- **Other Activities**: any activities not described in other categories.

Table 3.1.2: Actual Work Activities for Pharmacists Working Full-time by Practice Setting (2004 and 2000)

Actual amount of time spent in: (% of day; mean +/- s.d)	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
2004	(n = 124)	(n = 276)	(n = 45)	(n = 103)	(n = 264)	(n = 107)	(n = 13)	(n = 932)
Consultation	19 +/- 13	18 +/- 13	23 +/- 16	20 +/- 13	18 +/- 18	23 +/- 23	23 +/- 21	19 +/- 16
Drug Use Management	8 +/- 10	9 +/- 10	9 +/- 7	8 +/- 8	20 +/- 20	16 +/- 20	15 +/- 12	13 +/- 15
Business Management	16 +/- 15	16 +/- 15	15 +/- 11	14 +/-12	17 +/- 28	12 +/- 22	16 +/- 26	16 +/- 20
Medication Dispensing	56 +/- 23	54 +/- 22	53 +/- 22	55 +/- 22	37 +/- 31	45 +/-32	26 +/- 31	49 +/- 27
Other Activities	1 +/- 3	3 +/- 7	1 +/- 2	3 +/- 12	5 +/- 10	4 +/-9	20 +/- 23	4 +/- 9
2000	(n = 193)	(n = 355)	(n = 101)	(n = 136)	(n = 197)	(n = 145)	(n = 12)	(n= 1,139)
Consultation	19 +/- 13	19 +/- 12	20 +/- 14	19 +/- 12	19 +/- 15	20 +/- 17	25 +/- 15	19 +/- 14
Drug Use Management	8 +/- 7	9 +/- 9	9 +/- 8	8 +/- 8	17 +/- 15	14 +/- 17	13 +/- 13	11 +/- 12
Business Management	18 +/- 14	15 +/- 13	16 +/- 14	17 +/- 13	18 +/- 27	21 +/- 26	17 +/- 20	17 +/- 17
Medication Dispensing	55 +/- 21	57 +/- 22	55 +/- 23	56 +/- 20	46 +/- 29	45 +/- 28	45 +/- 23	53 +/- 24
Other Activities*								

Note: Results based on respondents who provided information for a minimum set of variables in the core survey. Data for 2000 based on respondents to the "National Pharmacists Workforce Survey: 2000." Full-time pharmacists worked more than 30 hours weekly in their primary employment setting. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care, home health, and armed services. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia, managed care administrators, and government.

*We did not include the category "Other Activities" in the 2000 survey instrument.

- **Consultation:** consulting and communicating with patients about prescription medications; interacting / communicating with other health professionals on patient's behalf (via phone, face-to-face, etc.); patient / provider education.
- **Drug Use Management:** assessing and evaluating patient medication-related needs; monitoring and adjusting treatment to attain desired outcomes.
- **Business Management:** managing pharmacy personnel, finances, and systems; processing and reconciling third-party claims; other business management activities.
- **Medication Dispensing:** preparing, dispensing, distributing and administering medications (traditional dispensing and medication distribution activities).
- **Other:** teaching, precepting, research, etc.

Table 3.1.3: Desired Work Activities for Pharmacists Working Full-time by Practice Setting (2009)

Desired amount of time spent in: (% of week; mean +/- s.d)	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
2009	(n = 86)	(n = 200)	(n = 40)	(n = 79)	(n = 214)	(n = 80)	(n = 71)	(n = 770)
Medication dispensing	58+/-21	58+/-24	60+/-22	64+/-21	35+/-31	34+/-29	4+/-11	45+/-31
Patient care services	21+/-14	24+/-19	22+/13	20+/-16	34+/-26	31+/-30	10+/-20	25+/-23
Business/Organization Management	10+/-12	8+/-14	8+/-12	9+/-12	14+/-23	17+/-26	24+/-27	12+/-20
Education	5+/-5	7+/-8	8+/-7	5+/-6	9+/-9	7+/-8	12+/-16	8+/-9
Research	4+/-7	2+/-5	3+/-5	2+/-6	5+/-10	6+/-10	28+/-28	6+/-13
Other Activities	2+/-6	1+/-1	0+/-0	1+/-1	3+/-10	5+/-17	22+/-34	4+/-14

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia and government.

- **Medication Dispensing**: preparing, distributing, and administering medication products, including associated consultation, interacting with patients about selection and use of over-the-counter products, and interactions with other professionals during the medication dispensing process.
- **Patient Care Services**: assessing and evaluating patient medication-related needs, monitoring and adjusting patients' treatments to attain desired outcome, and other services designed for patient care management.
- **Business / Organization Management**: managing personnel, finances, and systems.
- **Research**: discovery, development, and evaluation of products, services, and/or ideas.
- **Education**: teaching, precepting, and mentoring of students/trainees.
- **Other Activities**: any activities not described in other categories.

Table 3.1.4: Desired Work Activities for Pharmacists Working Full-time by Practice Setting (2004 and 2000)

Desired amount of time spent in: (% of day; mean +/- s.d)	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
2004	(n = 124)	(n = 276)	(n = 45)	(n = 103)	(n = 264)	(n = 107)	(n = 13)	(n = 932)
Consultation	29 +/- 16	31 +/- 17	34 +/- 17	33 +/- 16	24 +/- 18	25 +/- 18	22 +/- 16	28 +/-18
Drug Use Management	15 +/- 13	17 +/- 12	20 +/- 12	17 +/- 14	26 +/- 19	21 +/- 20	23 +/- 11	20 +/- 16
Business Management	11 +/- 12	12 +/-16	10 +/- 13	7 +/- 6	16 +/- 26	14 +/- 24	16 +/- 23	13 +/- 19
Medication Dispensing	40 +/- 23	35 +/- 23	33 +/- 18	37 +/- 23	25 +/- 25	34 +/- 27	16 +/- 21	33 +/- 25
Other Activities	4 +/- 9	6 +/- 10	3 +/- 8	6 +/- 14	8 +/- 12	6 +/- 11	23 +/- 24	6 +/-11
2000	(n = 193)	(n = 355)	(n = 101)	(n = 136)	(n = 197)	(n = 145)	(n = 12)	(n= 1,139)
Consultation	32 +/- 17	35 +/- 16	38 +/- 16	34 +/- 16	30 +/- 18	29 +/- 18	31 +/- 10	33 +/- 17
Drug Use Management	16 +/- 11	21 +/- 14	21 +/- 12	19 +/- 14	27 +/- 18	21 +/- 17	21 +/- 16	21 +/- 15
Business Management	12 +/- 12	8 +/- 9	8 +/- 9	9 +/- 9	17 +/- 27	19 +/- 26	13 +/- 16	12 +/- 17
Medication Dispensing	41 +/- 23	36 +/- 22	33 +/- 21	38 +/- 21	26 +/- 22	31 +/- 24	36 +/- 21	34 +/- 23
Other Activities*								

Note: Results based on respondents who provided information for a minimum set of variables in the core survey. Data for 2000 based on respondents to the "National Pharmacists Workforce Survey: 2000." Full-time pharmacists worked more than 30 hours weekly in their primary employment setting. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care, home health, and armed services. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia, managed care administrators, and government.

*We did not include the category "Other Activities" in the 2000 survey instrument.

- **Consultation:** consulting and communicating with patients about prescription medications; interacting / communicating with other health professionals on patient's behalf (via phone, face-to-face, etc.); patient / provider education.
- **Drug Use Management:** assessing and evaluating patient medication-related needs; monitoring and adjusting treatment to attain desired outcomes.
- **Business Management:** managing pharmacy personnel, finances, and systems; processing and reconciling third-party claims; other business management activities.
- **Medication Dispensing:** preparing, dispensing, distributing and administering medications (traditional dispensing and medication distribution activities).
- **Other:** teaching, precepting, research, etc.

Table 3.1.5: Difference in Actual and Desired Work Activities for Pharmacists Working Full-time by Practice Setting (2009)

"Actual" minus "Desired" ( ) signifies a negative difference	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
2009	(n = 86)	(n = 200)	(n = 40)	(n = 79)	(n = 214)	(n = 80)	(n = 71)	(n = 770)
Medication dispensing	12	15	15	13	8	7	1	11
Patient care services	(11)	(13)	(12)	(11)	(7)	(4)	(1)	(9)
Business/Organization Management	2	2	1	1	2	1	5	2
Education	(2)	(4)	(3)	(3)	(2)	(4)	(1)	(2)
Research	(1)	(1)	(2)	(1)	(2)	(3)	(3)	(2)
Other Activities	1	1	1	1	2	3	(3)	1

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia and government.

- **Medication Dispensing**: preparing, distributing, and administering medication products, including associated consultation, interacting with patients about selection and use of over-the-counter products, and interactions with other professionals during the medication dispensing process.
- **Patient Care Services**: assessing and evaluating patient medication-related needs, monitoring and adjusting patients' treatments to attain desired outcome, and other services designed for patient care management.
- **Business / Organization Management**: managing personnel, finances, and systems.
- **Research**: discovery, development, and evaluation of products, services, and/or ideas.
- **Education**: teaching, precepting, and mentoring of students/trainees.
- **Other Activities**: any activities not described in other categories.

Table 3.1.6: Difference in Actual and Desired Work Activities for Pharmacists Working Full-time by Practice Setting (2004 and 2000)

"Actual" minus "Desired" ( ) signifies a negative difference	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
2004	(n = 124)	(n = 276)	(n = 45)	(n = 103)	(n = 264)	(n = 107)	(n = 13)	(n = 932)
Consultation	(10)	(13)	(11)	(13)	(6)	(2)	1	(9)
Drug Use Management	(7)	(8)	(11)	(9)	(6)	(5)	(8)	(7)
Business Management	5	4	5	7	1	(2)	0	3
Medication Dispensing	16	19	20	18	12	11	10	16
Other Activities	(3)	(3)	(2)	(3)	(3)	(2)	(3)	(2)
2000	(n = 193)	(n = 355)	(n = 101)	(n = 136)	(n = 197)	(n = 145)	(n = 12)	(n= 1,139)
Consultation	(11)	(16)	(18)	(15)	(11)	(9)	(6)	(14)
Drug Use Management	(8)	(12)	(12)	(11)	(10)	(7)	(8)	(10)
Business Management	6	7	8	8	1	2	4	5
Medication Dispensing	14	21	22	18	20	14	9	19
Other Activities*								

Note: Results based on respondents who provided information for a minimum set of variables in the core survey. Data for 2000 based on respondents to the "National Pharmacists Workforce Survey: 2000." Full-time pharmacists worked more than 30 hours weekly in their primary employment setting. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care, home health, and armed services. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia, managed care administrators, and government.

*We did not include the category "Other Activities" in the 2000 survey instrument.

- **Consultation:** consulting and communicating with patients about prescription medications; interacting / communicating with other health professionals on patient's behalf (via phone, face-to-face, etc.); patient / provider education.
- **Drug Use Management:** assessing and evaluating patient medication-related needs; monitoring and adjusting treatment to attain desired outcomes.
- **Business Management:** managing pharmacy personnel, finances, and systems; processing and reconciling third-party claims; other business management activities.
- **Medication Dispensing:** preparing, dispensing, distributing and administering medications (traditional dispensing and medication distribution activities).
- **Other:** teaching, precepting, research, etc.

Table 3.1.7: Actual Work Activities for Pharmacists Working Full-time by Gender (2009)

Actual amount of time spent in: (% of week; mean +/- s.d)	Male	Female	Total
2009	(n = 510)	(n = 379)	(n = 889)
Medication dispensing	57+/-35	53+/-34	55+/-34
Patient care services	14+/-20	20+/-22	16+/-21
Business/Organization Management	17+/-25	11+/-17	14+/-22
Education	4+/-8	6+/-10	5+/-9
Research	4+/-11	5+/-14	4+/-13
Other Activities	5+/-17	6+/-18	5+/-18

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer

Table 3.1.8: Desired Work Activities for Pharmacists Working Full-time by Gender (2009)

Desired amount of time spent in: (% of week; mean +/- s.d)	Male	Female	Total
2009	(n = 440)	(n = 330)	(n = 770)
Medication dispensing	46+/-31	43+/-30	45+/-31
Patient care services	23+/-22	29+/-24	25+/-23
Business/Organization Management	15+/-23	9+/-15	12+/-20
Education	7+/-8	9+/-10	8+/-9
Research	6+/-13	6+/-14	6+/-13
Other Activities	3+/-13	4+/-15	4+/-14

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer

Table 3.1.9: Difference in Actual and Desired Work Activities for Pharmacists Working Full-time by Gender (2009)

"Actual" minus "Desired" ( ) signifies a negative difference: (% of week; mean)	Male	Female	Total
2009	(n = 440)	(n = 330)	(n = 770)
Medication dispensing	11	10	11
Patient care services	(9)	(9)	(9)
Business/Organization Management	2	2	2
Education	(3)	(3)	(3)
Research	(2)	(2)	(2)
Other Activities	1	2	1

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer

- **Medication Dispensing**: preparing, distributing, and administering medication products, including associated consultation, interacting with patients about selection and use of over-the-counter products, and interactions with other professionals during the medication dispensing process.
- **Patient Care Services**: assessing and evaluating patient medication-related needs, monitoring and adjusting patients' treatments to attain desired outcome, and other services designed for patient care management.
- **Business / Organization Management**: managing personnel, finances, and systems.
- **Research**: discovery, development, and evaluation of products, services, and/or ideas.
- **Education**: teaching, precepting, and mentoring of students/trainees.
- **Other Activities**: any activities not described in other categories.

Table 3.1.10: Actual Work Activities for Pharmacists Working Full-time by Gender (2004 and 2000)

Actual amount of time spent in: (% of day; mean +/- s.d)	Male	Female	Total
2004	(n = 525)	(n = 407)	(n = 932)
Consultation	17 +/- 14	22 +/- 18	19 +/- 16
Drug Use Management	11 +/- 14	15 +/- 16	13 +/- 15
Business Management	17 +/- 21	13 +/- 18	16 +/- 20
Medication Dispensing	51 +/- 27	46 +/-28	49 +/- 27
Other Activities	3 +/- 9	4 +/- 9	4 +/- 9
2000	(n = 692)	(n = 447)	(n= 1,139)
Consultation	17 +/- 12	23 +/- 15	19 +/- 14
Drug Use Management	10 +/- 11	12 +/- 13	11 +/- 12
Business Management	18 +/- 20	15 +/- 17	17 +/- 17
Medication Dispensing	55 +/- 24	50 +/- 23	53 +/- 24
Other Activities*			

Note: Results based on respondents who provided information for a minimum set of variables in the core survey. Data for 2000 based on respondents to the "National Pharmacists Workforce Survey: 2000." Full-time pharmacists worked more than 30 hours weekly in their primary employment setting.
*We did not include the category "Other Activities" in the 2000 survey instrument.

Table 3.1.11: Desired Work Activities for Pharmacists Working Full-time by Gender (2004 and 2000)

Desired amount of time spent in: (% of day; mean +/- s.d)	Male	Female	Total
2004	(n = 525)	(n = 407)	(n = 932)
Consultation	28 +/- 17	29 +/- 17	28 +/-18
Drug Use Management	18 +/- 15	22 +/- 17	20 +/- 16
Business Management	14 +/- 20	11 +/-18	13 +/- 19
Medication Dispensing	35 +/-25	30 +/-23	33 +/- 25
Other Activities	6 +/- 11	7 +/- 12	6 +/-11
2000	(n = 692)	(n = 447)	(n= 1,139)
Consultation	31 +/- 17	35 +/- 17	33 +/- 17
Drug Use Management	20 +/- 15	23 +/- 15	21 +/- 15
Business Management	13 +/- 19	9 +/- 15	12 +/- 17
Medication Dispensing	36 +/- 23	32 +/- 21	34 +/- 23
Other Activities*			

Note: Results based on respondents who provided information for a minimum set of variables in the core survey. Data for 2000 based on respondents to the "National Pharmacists Workforce Survey: 2000." Full-time pharmacists worked more than 30 hours weekly in their primary employment setting.
*We did not include the category "Other Activities" in the 2000 survey instrument.

Table 3.1.12: Difference in Actual and Desired Work Activities for Pharmacists Working Full-time by Gender (2004 and 2000)

"Actual" minus "Desired" ( ) signifies a negative difference	Male	Female	Total
2004	(n = 525)	(n = 407)	(n = 932)
Consultation	(11)	(7)	(9)
Drug Use Management	(7)	(7)	(7)
Business Management	3	2	3
Medication Dispensing	16	16	16
Other Activities	(3)	(3)	(2)
2000	(n = 692)	(n = 447)	(n= 1,139)
Consultation	(14)	(12)	(14)
Drug Use Management	(10)	(9)	(10)
Business Management	5	6	5
Medication Dispensing	19	18	19
Other Activities*			

Note: Results based on respondents who provided information for a minimum set of variables in the core survey. Data for 2000 based on respondents to the "National Pharmacists Workforce Survey: 2000." Full-time pharmacists worked more than 30 hours weekly in their primary employment setting.
*We did not include the category "Other Activities" in the 2000 survey instrument.

- **Consultation:** consulting and communicating with patients about prescription medications; interacting / communicating with other health professionals on patient's behalf (via phone, face-to-face, etc.); patient / provider education.
- **Drug Use Management:** assessing and evaluating patient medication-related needs; monitoring and adjusting treatment to attain desired outcomes.
- **Business Management:** managing pharmacy personnel, finances, and systems; processing and reconciling third-party claims; other business management activities.
- **Medication Dispensing:** preparing, dispensing, distributing and administering medications (traditional dispensing and medication distribution activities).
- **Other:** teaching, precepting, research, etc.

Table 3.1.13: Actual Work Activities for Pharmacists Working Full-time by Position (2009)

Actual amount of time spent in: (% of week; mean +/- s.d)	Management	Staff	Total
2009	(n = 399)	(n = 486)	(n = 885)
Medication dispensing	50+/-33	60+/-35	55+/-34
Patient care services	11+/-13	21+/-25	16+/-21
Business/Organization Management	25+/-26	5+/-11	14+/-22
Education	5+/-9	5+/-9	5+/-9
Research	5+/-13	4+/-12	4+/-13
Other Activities	4+/-15	6+/-20	5+/-18

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. . Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers

Table 3.1.14: Desired Work Activities for Pharmacists Working Full-time by Position (2009)

Desired amount of time spent in: (% of week; mean +/- s.d)	Management	Staff	Total
2009	(n = 350)	(n = 417)	(n = 767)
Medication dispensing	41+/-28	49+/-32	45+/-31
Patient care services	21+/-18	29+/-25	25+/-23
Business/Organization Management	22+/-24	5+/-11	12+/-20
Education	7+/-9	8+/-9	8+/-9
Research	6+/-13	6+/-13	6+/-13
Other Activities	3+/-13	4+/-15	4+/-14

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. . Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers

Table 3.1.15: Difference in Actual and Desired Work Activities for Pharmacists Working Full-time by Position (2009)

"Actual" minus "Desired" ( ) signifies a negative difference: (% of week; mean	**Management**	**Staff**	**Total**
2009	(n = 350)	(n = 416)	(n = 766)
Medication dispensing	10	11	11
Patient care services	(10)	(8)	(9)
Business/Organization Management	4	1	2
Education	(3)	(3)	(3)
Research	(2)	(2)	(2)
Other Activities	1	2	1

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. . Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers

- **Medication Dispensing**: preparing, distributing, and administering medication products, including associated consultation, interacting with patients about selection and use of over-the-counter products, and interactions with other professionals during the medication dispensing process.
- **Patient Care Services**: assessing and evaluating patient medication-related needs, monitoring and adjusting patients' treatments to attain desired outcome, and other services designed for patient care management.
- **Business / Organization Management**: managing personnel, finances, and systems.
- **Research**: discovery, development, and evaluation of products, services, and/or ideas.
- **Education**: teaching, precepting, and mentoring of students/trainees.
- **Other Activities**: any activities not described in other categories.

Table 3.1.16: Actual Work Activities for Pharmacists Working Full-time by Position (2004 and 2000)

Actual amount of time spent in: (% of day; mean +/- s.d)	Management	Staff	Total
2004	(n = 302)	(n = 567)	(n = 934)
Consultation	17 +/- 14	21 +/- 17	19 +/- 16
Drug Use Management	10 +/- 12	15 +/- 17	13 +/- 15
Business Management	26 +/- 25	9 +/-13	16 +/- 20
Medication Dispensing	44 +/- 25	52 +/- 28	49 +/- 27
Other Activities	3 +/- 9	4 +/- 9	4 +/- 9
2000	(n = 513)	(n = 626)	(n =1,139)
Consultation	18 +/- 13	20 +/- 14	19 +/- 14
Drug Use Management	9 +/- 9	12 +/- 13	11 +/- 12
Business Management	24 +/- 22	11 +/-13	17 +/- 17
Medication Dispensing	49 +/- 25	57 +/- 22	53 +/- 24
Other Activities*			

Note: Results based on respondents who provided information for a minimum set of variables in the core survey. Data for 2000 based on respondents to the "National Pharmacists Workforce Survey: 2000." Full-time pharmacists worked more than 30 hours weekly in their primary employment setting. Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers.
*We did not include the category "Other Activities" in the 2000 survey instrument.

Table 3.1.17: Desired Work Activities for Pharmacists Working Full-time by Position (2004 and 2000)

Desired amount of time spent in: (% of day; mean +/- s.d)	Management	Staff	Total
2004	(n = 302)	(n = 567)	(n = 934)
Consultation	28 +/- 18	29 +/- 18	28 +/-18
Drug Use Management	17 +/-13	22 +/- 17	20 +/- 16
Business Management	22 +/- 24	7 +/- 13	13 +/- 19
Medication Dispensing	28 +/- 22	35 +/- 26	33 +/- 25
Other Activities	5 +/- 11	7 +/- 12	6 +/-11
2000	(n = 513)	(n = 626)	(n =1,139)
Consultation	31 +/- 17	34 +/- 16	33 +/- 17
Drug Use Management	19 +/-14	23 +/- 15	21 +/- 15
Business Management	19 +/- 22	6 +/- 10	12 +/- 17
Medication Dispensing	31 +/- 22	37 +/- 23	34 +/- 23
Other Activities*			

Note: Results based on respondents who provided information for a minimum set of variables in the core survey. Data for 2000 based on respondents to the "National Pharmacists Workforce Survey: 2000." Full-time pharmacists worked more than 30 hours weekly in their primary employment setting. Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers.

*We did not include the category "Other Activities" in the 2000 survey instrument.

Table 3.1.18: Difference in Actual and Desired Work Activities for Pharmacists Working Full-time by Position (2004 and 2000)

"Actual" minus "Desired" ( ) signifies a negative difference	Management	Staff	Total
2004	(n = 302)	(n = 567)	(n = 934)
Consultation	(11)	(8)	(9)
Drug Use Management	(7)	(7)	(7)
Business Management	4	2	3
Medication Dispensing	15	17	16
Other Activities	(3)	(3)	(2)
2000	(n = 513)	(n = 626)	(n =1,139)
Consultation	(13)	(14)	(14)
Drug Use Management	(10)	(11)	(10)
Business Management	5	5	5
Medication Dispensing	17	20	19
Other Activities*			

Note: Results based on respondents who provided information for a minimum set of variables in the core survey. Data for 2000 based on respondents to the "National Pharmacists Workforce Survey: 2000." Full-time pharmacists worked more than 30 hours weekly in their primary employment setting. Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers

*We did not include the category "Other Activities" in the 2000 survey instrument.

- **Consultation:** consulting and communicating with patients about prescription medications; interacting / communicating with other health professionals on patient's behalf (via phone, face-to-face, etc.); patient / provider education.
- **Drug Use Management:** assessing and evaluating patient medication-related needs; monitoring and adjusting treatment to attain desired outcomes.
- **Business Management:** managing pharmacy personnel, finances, and systems; processing and reconciling third-party claims; other business management activities.
- **Medication Dispensing:** preparing, dispensing, distributing and administering medications (traditional dispensing and medication distribution activities).
- **Other:** teaching, precepting, research, etc.

Section 3.2: Workplace Labor Reductions Reported By Pharmacists Working Full-Time

The 2009 National Pharmacist Workforce Survey was conducted during an economic recession in the United States which included declines in employment, gross domestic product, and trade that had been ongoing since December 2007. According to the Bureau of Labor Statistics (http://www.bls.gov/news.release/empsit.nr0.htm), the number of unemployed persons had risen by 7.4 million, and the unemployment rate had grown by 4.8 percentage points between the beginning of the recession in December 2007 and August 2009. However, the health care sector added 544,000 jobs in that time period, with gains during 2009 being mostly in ambulatory care, nursing, and residential care.

Little, however, was known about the pharmacist workforce and how it was affected by the recession. According to the IMS National Prescription Audit, change in number of prescriptions dispensed in the United States had slowed in its growth and, for part of 2008, there were months when the change was negative. Corresponding to these trends in the change in number of prescriptions dispensed, the National Aggregate Demand Index (ADI) for pharmacists declined from 4.09 in 2007, to 3.96 in 2008, to 3.79 in 2009 (www.pharmacymanpower.com). The ADI is rated on a scale where: 1 = supply exceeds demand, 2 = some excess of supply, 3 = balance, 4 = moderate difficulty in filling vacancies, 5 = difficulty in filling vacancies.

In order to learn more about the pharmacist workforce within the time period of the 2009 economic recession, questions were added for the 2009 survey that asked pharmacists to report changes at their place of employment related to staffing or operations during the year prior to the survey, including: (1) pharmacist lay offs, (2) mandatory reductions in pharmacist hours, (3) early retirement incentives for pharmacists, and (4) restructuring of pharmacist work schedules to save labor costs.

Table 3.2.1 shows that out of four workforce adjustments we described in this study, the most common was restructuring of pharmacist work schedules to save labor costs (26%), followed by mandatory reductions in pharmacist hours (13%), pharmacist layoffs (6%), and early retirement incentives for pharmacists (4%). “Restructuring of pharmacist work schedules” was more commonly seen in chain and hospital type pharmacies. Also, “mandatory reductions in pharmacist hours” was more common in chain pharmacies. These differences may be reflective of organizational sizes, staff sizes, adjustments in prescription dispensing volumes, adjustments in dispensing processes, or adjustments in service offerings. Tables 3.2.2 and 3.2.3 show that the pattern of the four workforce adjustments was similar for pharmacists categorized by gender and by position.

Future monitoring of these variables will be useful for determining the extent to which our findings were (1) a result of the economic recession of 2009, (2) typical for the profession as it continually adjusts to other economic and professional developments, or (3) early indicators of changes still to come in the pharmacist workforce.

Table 3.2.1: Labor reductions in workplace for Pharmacists Working Full-time by Practice Setting

Proportion of Respondents reporting occurrence of the following in the workplace during the past year (%)	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
	(n = 105)	(n = 217)	(n = 45)	(n = 91)	(n = 244)	(n = 92)	(n = 90)	(n = 884)
Pharmacist lay offs	4	7	4	7	4	7	11	6
Mandatory reductions in pharmacist hours	(n=103) 4	(n=224) 25	(n=46) 11	(n=90) 17	(n=246) 11	(n=91) 9	(n=88) 3	(n=888) 13
Early retirement incentives for pharmacists	(n=103) 0	(n=214) 7	(n=46) 7	(n=90) 2	(n=244) 3	(n=90) 2	(n=89) 3	(n=876) 4
Restructuring of pharmacist work schedules	(n=106) 9	(n=224) 35	(n=46) 22	(n=92) 25	(n=246) 34	(n=92) 23	(n=88) 7	(n=894) 26

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia and government.

Table 3.2.2: Labor reductions in workplace for Pharmacists Working Full-time by Gender

Proportion of Respondents reporting occurrence of the following in the workplace during the past year (%)

	Male	Female	Total
Pharmacist lay offs	(n=509)	(n=375)	(n=884)
	6	7	6
Mandatory reductions in pharmacist hours	(n=511)	(n=377)	(n=888)
	12	15	13
Early retirement incentives for pharmacists	(n=506)	(n=370)	(n=876)
	3	4	4
Restructuring of pharmacist work schedules	(n=515)	(n=379)	(n=894)
	23	29	26

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer.

Table 3.2.3: Labor reductions in workplace for Pharmacists Working Full-time by Position

Proportion of Respondents reporting occurrence of the following in the workplace during the past year (%)

	Management	Staff	Total
Pharmacist lay offs	(n=399)	(n=482)	(n=881)
	6	6	6
Mandatory reductions in pharmacist hours	(n=397)	(n=488)	(n=885)
	11	15	13
Early retirement incentives for pharmacists	(n=394)	(n=479)	(n=873)
	3	4	4
Restructuring of pharmacist work schedules	(n=403)	(n=488)	(n=891)
	22	29	26

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. . Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers.

Section 3.3: Work Contributions (Hours per Week) and Career Plans Expected in Three Years

Another consequence of the U.S. economic recession, was a reduction in value for many retirement savings portfolios that had been invested in stocks. Findings presented in Section 2 suggested that older pharmacists may have increased their hours worked as pharmacists in order to offset reduced income from retirement portfolios. In order to gain a better understanding of work contributions in the future, we asked questions about work contributions, in terms of hours worked per week, three years from the time of the survey (i.e. plans for 2012).

Table 3.3.1 shows that the majority of pharmacists expected to be working about the same or more amount of hours per week three years from the time of the survey (i.e. in 2012). Independent pharmacists were less likely than other respondent types to report that they planned to work about the same or more hours per week. These differences may be reflective of the age distribution and future plans of pharmacists working in independent pharmacies. Tables 3.3.2 and 3.3.3 show that the pattern of responses to this question was similar for pharmacists categorized by gender and by position.

Table 3.3.4 shows that the majority of pharmacists expected to be working with their current employer three years from the time of the survey (i.e. in 2012). Pharmacists currently working at independent pharmacies had the highest proportion reporting that they planned to be retired or out of the workplace (11%) and chain pharmacies had the lowest proportion (5%).

Regarding the expectation that the respondent would be working with a different employer in the next three years, 20% of the respondents currently working in supermarket pharmacies reported this compared to only 6% of chain pharmacists (Table 3.3.4).

Table 3.3.5 shows that 10% of male pharmacists and 4% of female pharmacists expect to be retired by 2012. Table 3.3.6 shows that the pattern of responses to this question did not differ for respondents categorized by position.

These findings provide some insight into “separation rates” that may be expected in the next three years.

We suggest that future monitoring in this area would be useful as pharmacists currently working at independent pharmacies will likely work fewer hours per week in the near future.

Table 3.3.1: Expected hours per week in three years compared to now for Pharmacists Working Full-time by Practice Setting

Expected hours per week in three years compared to now (%)	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
	(n = 105)	(n = 222)	(n = 46)	(n = 92)	(n = 247)	(n = 91)	(n = 94)	(n = 897)
Same or more hours per week	52	76	74	69	74	65	77	71
Fewer hours per week	42	23	22	26	21	28	17	25

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia and government.

%s may not sum to 100% due to "do not know" responses.

Table 3.3.2: Expected hours per week in three years compared to now for Pharmacists Working Full-time by Gender

Expected hours per week in three years compared to now (%)	Male	Female	Total
	(n = 512)	(n = 385)	(n = 897)
Same or more hours per week	71	71	71
Fewer hours per week	24	25	25

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer.

%s may not sum to 100% due to "do not know" responses.

Table 3.3.3: Expected hours per week in three years compared to now for Pharmacists Working Full-time by Position

Expected hours per week in three years compared to now (%)	Management	Staff	Total
	(n = 402)	(n =490)	(n = 892)
Same or more hours per week	70	71	71
Fewer hours per week	26	24	25

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. . Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers.
%s may not sum to 100% due to "do not know" responses.

Table 3.3.4: Career plans over the next three years for Full-time pharmacist by Practice Setting

In the next three years, proportion of pharmacists that will be: (%)	Independent	Chain	Mass Merchandiser	Super-market	Hospital	Other Patient Care	Other	Total
	(n = 104)	(n = 222)	(n = 45)	(n = 92)	(n = 248)	(n = 90)	(n = 91)	(n = 892)
Retired; or Out of the workplace	11	5	7	7	9	7	6	7
Working with current employer	71	82	71	64	75	72	76	75
Working with a different employer	10	6	11	20	11	7	11	10

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. Chain is a combination of small chain and large chain settings. Hospital is a combination of government and non-government hospitals. Other Patient Care Practice is defined as settings where pharmacists are providing patient care and is a combination of HMO operated pharmacies, clinic pharmacies, mail service, nuclear, nursing home/long term care and home health. "Other" is defined as a setting where pharmacists may not provide patient care. It is a combination of "Industry" and "Other (non-patient care)" settings. It primarily includes industry, academia and government.

%s may not sum to 100% due to "do not know" responses.

Table 3.3.5: Career plans over the next three years for Full-time pharmacist by Gender

In the next three years, proportion of pharmacists that will be: (%)

	Male	Female	Total
	(n = 508)	(n = 384	(n = 892)
Retired; or Out of the workplace	10	4	7
Working with current employer	73	78	75
Working with a different employer	10	10	10

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer.
%s may not sum to 100% due to "do not know" responses.

Table 3.3.6: Career plans over the next three years for Full-time pharmacist by Position

In the next three years, proportion of pharmacists that will be: (%)

	Management	Staff	Total
	(n = 104)	(n = 222)	(n = 892)
Retired; or Out of the workplace	7	7	7
Working with current employer	76	73	75
Working with a different employer	8	12	10

Note: Results based on respondents who provided information for a minimum set of variables (work status, gender, age, hours worked weekly at primary employment setting, and practice setting." Full-time is defined as working more than 30 hours weekly at the primary employer. Management includes pharmacists who are owners/partners, managers, directors, supervisors and assistant managers.

%s may not sum to 100% due to "do not know" responses.

SECTION 4
SUMMARY AND CONCLUSIONS

Summary and Conclusions

The objectives for the 2009 National Pharmacist Workforce Survey were to describe:

1. demographic and work characteristics of the pharmacist workforce in the United States during 2009, and
2. work contributions of the pharmacist workforce in the United States during 2009.

A self-administered survey was mailed to a national random sample of 3,000 pharmacists. Of the 2,667 surveys that were presumed to be delivered to a pharmacist, 1,395 were returned yielding a response rate of 52%.

Demographic and Work Characteristics

The results showed that 88.3% (67.4% full-time and 20.9% part-time) of licensed pharmacists responding to the survey in 2009 were actively practicing pharmacy. In 2004, 86.0% of pharmacists were actively practicing pharmacy and in 2000, 88.2% were actively practicing pharmacy. Between 2000, 2004, and 2009 the proportion of pharmacists working full-time decreased (73.3%, 68.3%, 67.4%, respectively) and the proportion of pharmacists working part-time increased (14.9%, 17.7%, 20.9%, respectively).

The proportion of both male and female pharmacists working part-time increased between 2000, 2004, and 2009. For females, the rate increased from 21.3% in 2000, to 24.0% in 2004, to 27.2% in 2009. For males, the proportions were: 9.9%, 12,8%, and 15.8% for the years 2000, 2004, and 2009, respectively.

The proportion of licensed pharmacists who held a Pharm.D. as their highest degree increased from 13.9% in 2000, to 18.6% in 2005, and 21.6% in 2009. Furthermore, the proportion of pharmacists who held a masters or Ph.D. as their highest degree continued to increase from 7.3% in 2000, to 9.0% in 2004, to 10.9% in 2009. In 2009, the proportion of pharmacists who held a BS degree as their highest degree fell to under two-thirds (66.3%). This compares to 71.2% in 2004 and 74.1% in 2000.

The racial diversity of licensed pharmacists in the U.S. did not change significantly between 2000, 2004, and 2009. The findings revealed an aging population of pharmacists with 37.1% over age 55 in 2009 compared to 30.7% in 2004, and 21.6% in 2000.

The proportion of actively practicing pharmacists who are female increased from 44.8% in 2000, to 45.9% in 2004, to 46.4% in 2009. Among respondents who were actively practicing as pharmacists, the proportion of both male and female pharmacists working part-time increased between 2000, 2004, and 2009. For females, the rate increased from 23.4% in 2000, to 26.8% in 2004, to 29.8% in 2009. For males, the proportions were: 11.6%, 15.4%, and 18.4% for the years 2000, 2004, and 2009, respectively.

The age distribution of actively practicing pharmacists also changed between 2000, 2004, and 2009. In 2000, 44.1% of practicing pharmacists were age 40 or younger. This proportion decreased to 33.0% in 2004, and in 2009 it was only 24.4%. Conversely, in 2000 16.7% of practicing pharmacists were over age 55, and this proportion increased to 24.6% in 2004, and to 32.5% in 2009.

The proportion of actively practicing pharmacists working in traditional community pharmacy practice settings (independent, chain, mass merchandiser, and supermarket pharmacies) remained relatively stable between 2000 (55.4%), 2004 (56.4%), and 2009 (53.8%). The findings revealed no statistically significant pattern in findings for the proportion of pharmacists working in rural settings for pharmacists categorized

by age cohort. However, the proportion of pharmacists working in independent pharmacy practice increased as age increased.

A comparison of practicing pharmacists categorized by employment position showed that, of pharmacists in owner/partner positions, the proportion that was female increased from 14.6% in both 2000 and 2004 to 24.0% in 2009. Overall, in 2000, 10.9% of males were in owner/partner positions compared to only 2.3% of females. This gap was similar in 2004 (10.3% of males compared to 2.1% of females were in owner/partner positions). However, the gap was significantly less in 2009 when 11.6% of males and 8.1% of females were in owner/partner positions.

The patterns of part-time work for males in the 2000, 2004, and 2009 surveys were similar in that less than 10% of males aged 55 and younger worked part-time. At age 56 and older, males are more likely to work part-time. Patterns of part-time work for females in the 2000, 2004, and 2009 surveys were similar as well. Females were more likely than males to work part-time at ages 55 and younger. At 56 and older, females (like males) were more likely to work part-time. One notable difference for the 2009 data compared to 2000 and 2004 data was for females aged 56 to 60. In 2000, 33.3% of female pharmacists aged 56 to 60 worked part time and in 2004, 27.8% worked part time. However, in 2009, only 15.0% of female pharmacists aged 56 to 60 worked part time.

The proportion of actively practicing pharmacists who were male decreased only slightly between 2000 (58.7% male), 2004 (57.7% male), and 2009 (57.3% male). Findings from 2004 showed that hospital pharmacy, industry, and Other (non-patient care) settings had a majority of females working full-time. However, the 2009 data showed that all practice settings had a majority of male pharmacists working full-time in them.

For part-time pharmacists in 2009, chain pharmacy and hospital pharmacy settings were the most common employment settings (24.6% for each), followed by independent (23.1%), and Other Patient Care Practice (11.0%). For males working part-time, the most common employment practice setting was independent pharmacy (35.0%) followed by chain pharmacy (27.4%). For females working part-time, the most common practice setting was hospital (31.1%) followed by chain pharmacy (22.6%).

Pharmacists reported how long (years) they had worked for their current employer. Males working full-time reported being with their current employers longer than females. Generally, as years of experience increased, years with current employer increased. For 2009, pharmacists reported working with their current employer the longest in independent (14.5 years), hospital (13.4 years), and chain (11.8 years) settings.

For 2009, the work settings with the highest proportion of full time pharmacists working for less than three years were: industry (34.3%), other-non patient care (28.8%), and other patient care practice (25.3%). The proportion of pharmacists who have been with their employer for less than three years may be an indication of turnover, but also could reflect job expansion and new hiring in certain sectors. It is noteworthy that for hospital pharmacy settings, the proportion of full-time pharmacists working for less than three years declined from 26% in 2000 to 21% in 2004, and only 13% in 2009. Also noteworthy is the decrease in the proportion of full-time pharmacists working for less than three years for pharmacists overall (31% in 2000, 20% in 2004, and 16% in 2009).

The mean number of employers reported by actively practicing full-time pharmacists did not change significantly between 2000 (3.7 employers), 2004 (3.9 employers), and 2009 (3.8 employers). However, the mean years per employer did increase (6.5 years per employer in 2000, 6.8 years in 2004, and 8.2 years in 2009). In terms of practice setting, pharmacists who worked in independent and chain settings worked the longest per employer. This finding was consistent in 2000, 2004, and 2009.

In 2009, pharmacists reported an average current student loan debt of $4,224 compared to $14,936 when they graduated from pharmacy school. Pharmacists with five years or less years of experience reported an average of $79,895 of student debt at the time of graduation from pharmacy school and a current student load debt of $61,667. Only 5% of respondents in this group reported having zero student load debt at time of graduation and 17% reported no student loan debt currently. For this group, average total household debt (not including student loan debt) was $221,280 (with 12% reporting no household debt).

In 2009, 68% of pharmacists rated their workload level at their place of practice as high or excessively high. This is an increase of 14 percentage points compared to 2004 (54%). Furthermore, 61% of pharmacists working full-time in 2009 reported that workload increased or greatly increased compared to a year ago. This proportion is similar to 2004 (58%). Unlike findings from the 2004 survey, all practice settings in the 2009 had 64% or more of their pharmacists rate work level at their pharmacy as high or excessively high. In comparison, none of the practice sites in 2004 were greater than 61%. Males and females rated their workload level similarly. In terms of position, workload also was rated similarly by management and staff pharmacists.

However, the effects of current workload on pharmacists did differ between male and female pharmacists. In both 2004 and in 2009, males were more likely to report that their current level of workload had a negative or very negative effect on: job performance, motivation to work at their pharmacy, job satisfaction, time spent in contact with patients, quality of care provided to patients, and opportunity to solve drug therapy problems.

In 2009, over 50% of independent pharmacists reported that current level of workload had a negative or very negative effect on their opportunity to take breaks. Over 50% of chain pharmacists reported this as well, and also 52% of chain pharmacists reported negative or very negative effects on time spent in contact with patients. Over 50% of mass merchandiser respondents reported negative or very negative effects on three items: mental/emotional health, opportunity to take breaks, and time spent in contact with patients. Supermarket pharmacists were similar to chain pharmacists in that over 50% reported negative or very negative effects on: opportunity to take breaks and time spent in contact with patients. Hospital, Other Patient Care, and Other pharmacists did not report over 50% negative or very negative effects for any of the items.

Out of four workforce adjustments we described in this study, the most common was restructuring of pharmacist work schedules to save labor costs (26%), followed by mandatory reductions in pharmacist hours (13%), pharmacist layoffs (6%), and early retirement incentives for pharmacists (4%). "Restructuring of pharmacist work schedules" was more commonly seen in chain and hospital type pharmacies. Also, "mandatory reductions in pharmacist hours" was more common in chain pharmacies. These differences may be reflective of organizational sizes, staff sizes, adjustments in prescription dispensing volumes, adjustments in dispensing processes, or adjustments in service offerings. The pattern of the four workforce adjustments was similar for pharmacists categorized by gender and by position.

Work Contributions

In 2009, among pharmacists working full-time, males worked 2.4 hours more per week compared to females. In 2004, the difference was 2.1 hours and in 2000 the difference was 4.4 hours. Overall, pharmacists working full-time worked an average of 44.2 hours per week in 2000, 43.4 hours per week in 2004, and 43.8 hours per week in 2009. For part-time pharmacists, average hours worked per week did not change significantly either (19.0 hours per week in 2000, 19.1 hours per week in 2004, and 19.4 hours per week in 2009).

Consistently across age groups, males working full-time in 2009 worked more hours per week compared to females (except for the age category 66 to 70). This pattern is consistent with the one reported in 2004.

Regarding hours worked for part-time pharmacists, all age groups contributed significant hours per week to the workforce. However a downward trend in hours worked was detected for older pharmacists.

Male full-time pharmacists worked more hours per week across all position types compared to females. For pharmacists working part-time in 2009, males in owner, partner or management positions worked more hours per week than females. However, females in part-time staff positions worked more hours per week than their male counterparts.

A full-time equivalent (FTE) was calculated using the number of reported total hours worked in primary employment and the number of weeks worked annually. We defined 1.0 FTE as a pharmacist working 40 hours per week, 52 weeks per year, or 2080 hours. In 2000, pharmacists were contributing an average of 0.93 FTE to the workforce. In 2004, pharmacists contributed an average of 0.87 FTE and in 2009 they also contributed an average of 0.87 FTE.

In 2009, actively practicing male pharmacists contributed an average of 0.92 FTE compared to 0.82 FTE for females. This difference is almost identical to the results from 2004 (0.91 and 0.82, respectively). For each age category except one (age >70) male pharmacists contributed more FTEs than females.

The majority of pharmacists expected to be working about the same amount of hours per week three years from the time of the survey (i.e. in 2012). Independent pharmacists were less likely than other respondent types to report that they planned to work about the same or more hours per week. These differences may be reflective of the age distribution and future plans of pharmacists working in independent pharmacies. The pattern of responses to this question was similar for pharmacists categorized by gender and by position.

The majority of pharmacists expected to be working with their current employer three years from the time of the survey (i.e. in 2012). Pharmacists currently working at independent pharmacies had the highest proportion reporting that they planned to be retired or out of the workplace (11%) and chain pharmacies had the lowest proportion (5%).

Regarding the expectation that the respondent would be working with a different employer in the next three years, 20% of the respondents currently working in supermarket pharmacies reported this compared to only 6% of chain pharmacists.

The findings showed that 10% of male pharmacists and 4% of female pharmacists expect to be retired by 2012. The pattern of responses to this question did not differ for respondents categorized by position.

Overall, full-time pharmacists devoted 55% of their time to medication dispensing, 16% to patient care services, 14% to business/organization management, 5% to education, 4% to research, and 5% to other activities. Pharmacists practicing in community pharmacy settings (independent, chain, mass merchandiser, or supermarket pharmacies), devoted at least 70% of their time to medication dispensing. Hospital and Other Patient Care pharmacists devoted less than half their time to medication dispensing and each of these categories devoted 27% of their time to patient care on average. Pharmacists in Other (non-patient care) settings exhibited a different pattern of work activities that included business / organization management (27% of their time, on average), research (27%), and other activities (23%).

For every practice setting, pharmacists would like to spend less time in medication dispensing and business/organization management and more time in patient care services, education, and research activities. The pattern of responses is similar for both males and females. As expected, staff pharmacists spend more time in dispensing and patient care services and less time in business / organization

management than those in management positions. However, the differences between actual and desired time in the various activities was similar regardless of position.

These findings reveal that pharmacists desire to spend more time devoted patient care services, education, and research. Also, the findings revealed that "Other (non-patient care settings)" offer pharmacists with non-traditional work activities for pharmacists including business/organization management (27% of their time, on average), research (27%), and other activities (23%).

Limitations

The results and our interpretation of them should be tempered with the limitations of the study. The results are based on respondents' self reports, raising questions regarding the extent to which respondents gave socially desirable responses.

Our findings showed that we achieved a geographically diverse sample of pharmacists for this study in that all regions of the United States were represented in proportion to the U.S. population and in proportion to our sampling frame. However, some individual states were over-represented (e.g. Montana) and some states were under-represented (e.g. New Mexico). Thus, while we achieved good geographic coverage, some states were disproportionately represented in this study. To overcome this limitation, we report aggregate data and not state- or region-specific findings.

Non-response bias is another limitation. It is possible that responders were more interested in the topic we studied or had stronger opinions about the questions we asked than those who chose not to respond. Our findings showed that late responders were more likely to be: working as a pharmacist, younger, and having a PharmD degree than early responders. These same characteristics are likely to be reflected in the non-responders to this study and should be considered when interpreting the reported findings.

Finally, all of the respondents to this survey were first licensed before 2007. Therefore, even though our survey was conducted in 2009, our sampling frame had a lag time so that pharmacists newly licensed from 2007 through the present were not included in the sample. This limitation must be considered, especially when interpreting findings related to year of licensure, age, or other time dependent variable.

Concluding Remarks

Our results suggest that there was an increase in the proportion of licensed pharmacists actively practicing pharmacy between 2004 and 2009 and the proportion increased to a level that was similar to pharmacist work participation levels seen in 2000. Although a greater proportion of pharmacists were actively practicing pharmacy, the FTE contribution of pharmacists did not increase between 2004 and 2009 mainly due to increasing rates of part-time work among male and female pharmacists and no significant increase in hours worked among pharmacists working full-time and part-time.

One explanation for the increase in the proportion of pharmacists actively practicing pharmacy was the economic downturn in 2008 and 2009. As the economy impacted other business sectors, pharmacists working in other fields or not working at all may have decided to enter the pharmacy workforce, either on a full or part-time basis, to shield themselves and their families from the impact of the bad economy.

The prevalence of part-time work by actively practicing pharmacists has been an increasing trend since 2000. Working part-time has been an attractive option for male and female pharmacists because the demand for pharmacists has been high, allowing pharmacists to choose the amount they will work. In 2009, the economic downturn and reactions from pharmacist employers likely contributed to the rate of part-time work by pharmacists. Roughly one-third of hospitals and chain settings restructured schedules

and some settings reduced hours in reaction to the economy. It will be important for workforce researchers to track the rate of part-time work among pharmacists as the number of new pharmacy graduates increases and the economy rebounds.

An important characteristic of the pharmacist workforce is the proportion of pharmacists age 60 and older that are actively practicing pharmacy. High wages help older pharmacists deal with downturns in the stock market, the nature of trends in funding pension plans, availability of health insurance, and out-of-pocket costs associated with health insurance. The work contribution of retirement age pharmacists has been a significant factor in the dynamics of the pharmacist workforce.

Appendix A

Data Collection Forms and Letters

February 2009

Dear Pharmacist:

A few weeks from now you will receive in the mail a request to fill out a brief questionnaire for an important research project being funded by Pharmacy Manpower Project (PMP), a consortium of pharmacy organizations established in 1989 as a non-profit corporation and coordinated by the American Association of Colleges of Pharmacy. **A small token of our appreciation for participating in the survey will be included with that mailing.**

The purpose of the survey is to collect reliable information on demographic characteristics and work contributions of the pharmacist workforce in the United States during 2009. Similar surveys were conducted in 2000 and 2004.

We are conducting this survey on behalf of PMP in an objective, high quality manner so that the findings from this survey will be considered reliable and valid.

Currently, you are listed in a random sample of pharmacists for the survey. Your name was selected from the roster of all licensed pharmacists residing in the United States. Before we send the survey to our sample members, we would like to make sure that our sample of pharmacists is as error-free as possible. It is possible that some members of our sample are not pharmacists since some state board of pharmacy records include names of student pharmacists, pharmacy technicians, dispensing physicians, drug enforcement officials, or others who may not be licensed pharmacists.

At this point, we would greatly appreciate your help in letting us know if we have included you in our sample of pharmacists by mistake. If you believe that we should remove your name from our sample, please check the appropriate space on the enclosed form and mail it back to us in the postage paid envelope provided. You may also let us know by emailing Jon Schommer at schom010@umn.edu.

Please note that your responses to us will be **confidential.** Only aggregate responses will be reported. Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota or with the funder of the project. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting these relationships.

Thank you for helping us gather these workforce data. We trust the results will be useful to many pharmacists and others interested in our profession. If you have any questions or comments about the study, please contact Dr. Schommer at 612-626-9915 or at schom010@umn.edu. If you would like to talk to someone other than the researcher, you also may contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware Street, SE, Minneapolis, MN 55455; 612-625-1650.

Sincerely,

Jon C. Schommer, R.Ph., Ph.D.
Principal Investigator
University of Minnesota

2009 National Pharmacist Workforce Survey

Within the next three weeks, we plan to send survey forms to a random sample of pharmacists. Currently, you are listed in that random sample of pharmacists. Your name was selected from the roster of all licensed pharmacists residing in the United States. Before we send the survey to our sample members, we would like to make sure that our sample of pharmacists is as error-free as possible. It is possible that some members of our sample are not pharmacists or are unable to participate in the survey at this time.

At this point, we would greatly appreciate your help in letting us know if we have included you in our sample of pharmacists by mistake. If you believe that we should remove your name from our sample, please check the appropriate space below and mail this form back to us in the postage paid envelope provided. You may also let us know by emailing Jon Schommer at schom010@umn.edu.

Please remove this name from your national random sample of pharmacists for the following reason:

_____ The person to whom this letter was sent is not licensed as a pharmacist.

_____ The person to whom this letter was sent is a licensed pharmacist, but is not able to participate in the survey due to circumstances that do not permit him or her from doing so.

If you are willing to provide specific comments to help us document and understand the reason you checked above, please write them in the space below:

THANK YOU VERY MUCH FOR YOUR HELP!

March 2009

Dear Pharmacist:

I am writing to **ask your help** in a study of pharmacists being funded by the Pharmacy Manpower Project. This study is part of an effort to collect reliable information on the demographic characteristics and work contributions of the pharmacist workforce in the United States during 2009.

Results from the survey will be used to help understand trends in the pharmacist workforce and its contributions to society. The 2009 survey will add to previously completed surveys in 2000 and 2004. To review findings from those surveys, go to **www.aacp.org, click on Resources / Research / Pharmacy Manpower Project**.

Your name was selected at random from the roster of all licensed pharmacists residing in the United States. Please take a few minutes to complete and return the enclosed form. Whether you are actively practicing as a pharmacist or not, your response is valuable in helping understand the pharmacist workforce in the United States. The accuracy of our reports is dependent upon the level of participation we receive from our random sample. **Therefore, your response is very important to us and will be greatly appreciated.** A small gift is enclosed as a token of our appreciation for your help.

We greatly appreciate your assistance to continue documenting, evaluating, and sharing this important information. The findings have been useful to members of our profession, educators, policy makers, and others.

Your response is **confidential.** Only aggregate responses will be reported. By returning the survey form to us, you are providing your consent to participate in the project. An identification number is on each questionnaire to help us follow up on non-responses. Reports will be submitted to the American Association of Colleges of Pharmacy for publication in their journal.

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota or with the funder of the project. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting these relationships.

Thank you for helping us collect this information. We trust the results will be useful to many pharmacists and others interested in our profession. If you have any questions or comments about the study, please contact Dr. Schommer at 612-626-9915 or at schom010@umn.edu. If you would like to talk to someone other than the researcher, you also may contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware Street, SE, Minneapolis, MN 55455; 612-625-1650.

Sincerely,

Jon C. Schommer, R.Ph., Ph.D.
Principal Investigator
University of Minnesota

2009 NATIONAL PHARMACIST WORKFORCE SURVEY

INSTRUCTIONS: Please either check or fill in the appropriate blanks. Return your survey in the enclosed postage paid return envelope. If you would like a summary of the results, provide your name and address to Jon Schommer (schom010@umn.edu). **Even if you do not work in a pharmacy, we still ask you to complete the survey.** Please answer the questions the best you can.

SECTION 1: GENERAL EMPLOYMENT STATUS AND WORK ENVIRONMENT

1. Please check the category that best matches your employment status.

_____ Practicing as a pharmacist
_____ Employed in a pharmacy-related field or position, not practicing as a pharmacist
_____ Retired, but still working in pharmacy or employed part-time as a pharmacist
_____ Retired, do not practice pharmacy at all (Skip to SECTION 3 on page 3)
_____ Employed in a career not related to pharmacy (Describe: _____) (Skip to SECTION 3 on page 3)
_____ Unemployed (check one: __ seeking __ not seeking employment) (Skip to SECTION 3 on page 3)

2. Please check the one item that best describes your primary place of employment.

_____ Independent Community Pharmacy (fewer than 4 stores under the same ownership)
_____ Small Chain Community Pharmacy (4 to 10 stores under the same ownership)
_____ Large Chain Community Pharmacy (more than 10 units under same ownership)
_____ Mass Merchandiser (i.e. Big Box store)
_____ Supermarket Pharmacy
_____ Clinic-Based Pharmacy
_____ Mail Service Pharmacy
_____ Government Hospital / Health System (___ inpatient ___ outpatient)
_____ Non-government Hospital / Health System (___ inpatient ___ outpatient)
_____ Nursing Home / Long Term Care
_____ Home Health / Infusion
_____ Pharmacy Benefit Administration (e.g. PBM, managed care)
_____ Academic Institution
_____ Other For-Profit Corporation / Organization (describe) _____
_____ Other Non-Profit Corporation / Organization (describe) _____

3. What is the Zip Code of your primary place of employment? ___ ___ ___ ___ ___

4. How many minutes does it take for you to commute to work (one-way)? _____ minutes

5. Which of the following best describes your current position?

_____ Owner/Partner/Executive Officer (If applicable, percent ownership: _____%)
_____ Management (e.g. director, manager, assistant manager, supervisor)
_____ Staff (e.g. clinical pharmacist, consultant, staff pharmacist, relief pharmacist)
_____ Other (explain) : _____

6. Number of years employed by your present employer: _____

7. In your place of employment, what is the <u>total number</u> of: <u>full-time</u> pharmacists currently employed? _____
<u>part-time</u> pharmacists currently employed? _____

8. In your place of employment, what is the number of <u>vacant</u>: <u>full-time</u> pharmacist positions? _____
<u>part-time</u> pharmacist positions? _____

9. In your place of employment, have any of the following taken place during the past year?

Pharmacist lay offs	_____ Yes	_____ No
Mandatory reductions in pharmacist hours	_____ Yes	_____ No
Early retirement incentives for pharmacists	_____ Yes	_____ No
Restructuring of pharmacist work schedules to save labor costs	_____ Yes	_____ No

SECTION 2: YOUR WORK

1. For a typical week, estimate your percent of actual time spent and percent of time desired in the following professional activities. Please ensure that totals sum to 100%. If any activity is not applicable please write NA in the corresponding box.

Professional Activity Category	% of Actual Time Spent	% of Time Desired
Medication Dispensing: preparing, distributing, and administering medication products, including associated consultation, interacting with patients about selection and use of over-the-counter products, and interactions with other professionals during the medication dispensing process.		
Patient Care Services: assessing and evaluating patient medication-related needs, monitoring and adjusting patients' treatments to attain desired outcomes, and other services designed for patient care management.		
Business/Organization Management: managing personnel, finances, and systems.		
Research: discovery, development, and evaluation of products, services, and/or ideas.		
Education: teaching, precepting, and mentoring of students/trainees.		
Other: any activities not described in the other categories. Please Describe: _____		
Total	**100%**	**100%**

2. Do you serve as a preceptor for student pharmacists? _____ Yes _____ No

3. How would you rate your workload in your workplace? (circle your response)

excessively low low about right high excessively high

4. Compared to last year at this time, how has your workload changed? (circle your response)

greatly decreased decreased stayed the same increased greatly increased

5. Please rate how the current level of workload in your workplace affects:

	very negative	**negative**	**neutral**	**positive**	**very positive**	**does not apply**
a. your job performance	1	2	3	4	5	n/a
b. your motivation to work at your job	1	2	3	4	5	n/a
c. your job satisfaction	1	2	3	4	5	n/a
d. your mental/emotional health	1	2	3	4	5	n/a
e. your physical health	1	2	3	4	5	n/a
f. your time spent with each client/patient	1	2	3	4	5	n/a
g. the quality of care provided to patients	1	2	3	4	5	n/a
h. your ability to solve drug therapy problems	1	2	3	4	5	n/a
i. your ability to prevent potential errors	1	2	3	4	5	n/a
j. your opportunity to take adequate breaks	1	2	3	4	5	n/a
k. your ability to balance work / personal time	1	2	3	4	5	n/a

6. What are the three things you like most about your current job situation? _____
_____

7. On average, in a typical week, how many total actual hours do you work at your primary work setting? _____ hours

8. Ideally, how many hours would you choose to work at your primary work setting each week? _____ hours

9. Three years from now, do you expect to be working:
____ more hours per week than you are now?
____ about the same hours per week that you are now?
____ fewer hours per week than you are now?
____ I am not able to answer this question.

10. Of the total 52 weeks during 2008, in your primary work setting, how many weeks were you:

Employed, working?	_____	weeks
Employed, taking paid vacation?	_____	weeks
Employed, taking other types of paid leave from work?	_____	weeks
Employed, taking unpaid leave away from work?	_____	weeks
Unemployed?	_____	weeks
TOTAL	**52**	**weeks**

11. What was your gross base personal income from your primary employment during 2008? $ _____

12. Additional gross earnings during 2008, not included in your base pay: $_____ overtime
$_____ bonus
$ _____ profit sharing
$ _____ other (describe) _____

13. If you work in another setting besides your primary work setting, please describe the type of work and how much time per month you devote to this work: _____
_____

SECTION 3: INFORMATION ABOUT YOURSELF

Finally, please answer questions about yourself to help us analyze the results. Check the space next to your response or write your answer in the space provided. If any questions are not applicable to you, please feel free to leave them blank.

1. What is your age? _____ Years

2. In what year were you first licensed as a pharmacist? _____ (year of first licensure)

3. Which of the following educational experiences have you completed? (check all that apply)

_____ BS Pharm
_____ PharmD
_____ Residency
_____ Fellowship
_____ Certification Program (describe) _____
_____ Masters (__MS, __MBA, __MA, __MPH)
_____ PhD
_____ Other (describe) _____

4. What is your gender? _____ Male _____ Female

5. What is your Ethnic or Racial Background:
_____ American Indian
_____ Asian
_____ Black/African American
_____ Hispanic/Latino
_____ White/Caucasian
_____ Other (specify): _____

6. Geographic location and re-location are important to workforce planning. In what "city/town" and state did you spend most of your childhood years (birth to 18 years old)? _____ , ___ ___

7. In what state did you earn your initial Pharmacy Practice Degree? _____

8. In what states are you currently licensed as a Pharmacist? (list all states) _____

9. What is the Zip Code of your current primary residence? ___ ___ ___ ___ ___

10. What is your marital status?
□ single (never married) □ single (separated/ divorced) □ married □ widowed

11. How many children are living at home in your household? _____ What are their ages?_____

12. How many adult relatives are you providing care for: inside your home? _____
outside your home? _____

13. What was your household income from all sources during 2008? $_____

14. What was your student loan debt at your time of graduation? $ _____

15. What is the current balance of your student loan debt? $ _____

16. What is your current household debt (not including your student loans)? $ _____

17. Please think about your career plans over the next three years. Three years from now, which of the following, if any, do you think will apply to you?

_____ I will be retired.
_____ I will be working with my current employer.
_____ I will be working with a different employer, but within the same type of work I am in now.
_____ I will be working with a different employer doing different work than the type I am doing now.
_____ (please describe the different type of work)
_____ I will be out of the workforce, but would not consider myself to be retired.
_____ I am not able to answer this question at this time.

18. Finally, please describe your work history since obtaining your pharmacist license by completing the table below. You may list your jobs in chronological order starting with your first job, or in reverse order, which ever is easiest for you. **If you were out of the workforce for a period of time (e.g. illness, child-related, personal), please include this time period; under "description of employment" write "Out" and why you were not working.** If you need more space, please use a separate piece of paper.

Work Setting (refer to Section 1, Question 2 for setting types)	Approximate Start Date (month/year)	Approximate End Date (month/year)	Geographic Location (City, State)	Reason(s) for leaving

Please return your completed form in the postage paid envelope provided.
THANK YOU VERY MUCH FOR YOUR HELP!

Dear Pharmacist:

Last week a questionnaire asking about your work characteristics and contributions to society was mailed to you. Your name was drawn randomly from a list of all pharmacists licensed in the United States.

If you already have completed and returned the questionnaire to us, **THANK YOU FOR YOUR HELP!** If not, please do so today. We are especially grateful for your help because it is only by asking people like you to share your experiences that we can understand the diverse characteristics of the pharmacist workforce and its contributions to society.

If you did not receive a questionnaire, or if it was misplaced, please contact us at schom010@umn.edu and we will get another one in the mail to you today.

Sincerely,
Jon C. Schommer, R.Ph., Ph.D.
Principal Investigator, University of Minnesota

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May 2009

Dear Pharmacist:

Over the past two months, we have sent you several mailings regarding an important research study asking about your employment and work activities.

The study is drawing to a close, and we wanted to mail another survey form to the pharmacists in our sample so that you have a chance to participate.

We are sending this final contact because of our concern that people who have not responded may have different characteristics and experiences than those who have. Hearing from everyone in this study helps assure that the survey results are as accurate as possible.

Another survey form is enclosed for your convenience. Please take about 15 minutes to complete the enclosed questionnaire and then return it to us in the postage paid envelope we have provided.

Your participation is voluntary and your responses will be kept private. The aggregate results will be reported in a national health journal. The findings will be valuable to pharmacists and others interested in our profession. By returning the survey form to us, you are providing your consent to participate in the project.

Thank you very much for your time and help. Your cooperation is valued and greatly appreciated. If you have any questions or comments about the study, please contact Dr. Jon Schommer at 612-626-9915 or at schom010@umn.edu. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you also may contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware Street, SE, Minneapolis, MN 55455; 612-625-1650.

Sincerely,

Jon C. Schommer, R.Ph., Ph.D.
Principal Investigator
University of Minnesota

*** 2009 NATIONAL PHARMACIST WORKFORCE SURVEY ***

INSTRUCTIONS: Please either check or fill in the appropriate blanks. Return your survey in the enclosed postage paid return envelope. If you would like a summary of the results, provide your name and address to Jon Schommer (schom010@umn.edu). **Even if you do not work in a pharmacy, we still ask you to complete the survey.** Please answer the questions the best you can.

SECTION 1: GENERAL EMPLOYMENT STATUS AND WORK ENVIRONMENT

1. Please check the category that best matches your employment status.

_____ Practicing as a pharmacist
_____ Employed in a pharmacy-related field or position, not practicing as a pharmacist
_____ Retired, but still working in pharmacy or employed part-time as a pharmacist
_____ Retired, do not practice pharmacy at all (Skip to SECTION 3 on page 3)
_____ Employed in a career not related to pharmacy (Describe: _____) (Skip to SECTION 3 on page 3)
_____ Unemployed (check one: __ seeking __ not seeking employment) (Skip to SECTION 3 on page 3)

2. Please check the one item that best describes your primary place of employment.

_____ Independent Community Pharmacy (fewer than 4 stores under the same ownership)
_____ Small Chain Community Pharmacy (4 to 10 stores under the same ownership)
_____ Large Chain Community Pharmacy (more than 10 units under same ownership)
_____ Mass Merchandiser (i.e. Big Box store)
_____ Supermarket Pharmacy
_____ Clinic-Based Pharmacy
_____ Mail Service Pharmacy
_____ Government Hospital / Health System (___ inpatient ___ outpatient)
_____ Non-government Hospital / Health System (___ inpatient ___ outpatient)
_____ Nursing Home / Long Term Care
_____ Home Health / Infusion
_____ Pharmacy Benefit Administration (e.g. PBM, managed care)
_____ Academic Institution
_____ Other For-Profit Corporation / Organization (describe) _____
_____ Other Non-Profit Corporation / Organization (describe) _____

3. What is the Zip Code of your primary place of employment? ___ ___ ___ ___ ___

4. How many minutes does it take for you to commute to work (one-way)? _____ minutes

5. Which of the following best describes your current position?

_____ Owner/Partner/Executive Officer (If applicable, percent ownership: _____%)
_____ Management (e.g. director, manager, assistant manager, supervisor)
_____ Staff (e.g. clinical pharmacist, consultant, staff pharmacist, relief pharmacist)
_____ Other (explain) : _____

6. Number of years employed by your present employer: _____

7. In your place of employment, what is the <u>total number</u> of: <u>full-time</u> pharmacists currently employed? _____
<u>part-time</u> pharmacists currently employed? _____

8. In your place of employment, what is the number of <u>vacant</u>: <u>full-time</u> pharmacist positions? _____
<u>part-time</u> pharmacist positions? _____

9. In your place of employment, have any of the following taken place during the past year?

Pharmacist lay offs	_____ Yes	_____ No
Mandatory reductions in pharmacist hours	_____ Yes	_____ No
Early retirement incentives for pharmacists	_____ Yes	_____ No
Restructuring of pharmacist work schedules to save labor costs	_____ Yes	_____ No

SECTION 2: YOUR WORK

1. For a typical week, estimate your percent of actual time spent and percent of time desired in the following professional activities. Please ensure that totals sum to 100%. If any activity is not applicable please write NA in the corresponding box.

Professional Activity Category	% of Actual Time Spent	% of Time Desired
Medication Dispensing: preparing, distributing, and administering medication products, including associated consultation, interacting with patients about selection and use of over-the-counter products, and interactions with other professionals during the medication dispensing process.		
Patient Care Services: assessing and evaluating patient medication-related needs, monitoring and adjusting patients' treatments to attain desired outcomes, and other services designed for patient care management.		
Business/Organization Management: managing personnel, finances, and systems.		
Research: discovery, development, and evaluation of products, services, and/or ideas.		
Education: teaching, precepting, and mentoring of students/trainees.		
Other: any activities not described in the other categories. Please Describe: _____		
Total	**100%**	**100%**

2. Do you serve as a preceptor for student pharmacists? _____ Yes _____ No

3. How would you rate your workload in your workplace? (circle your response)

excessively low low about right high excessively high

4. Compared to last year at this time, how has your workload changed? (circle your response)

greatly decreased decreased stayed the same increased greatly increased

5. Please rate how the current level of workload in your workplace affects:

	very negative	**negative**	**neutral**	**positive**	**very positive**	**does not apply**
a. your job performance	1	2	3	4	5	n/a
b. your motivation to work at your job	1	2	3	4	5	n/a
c. your job satisfaction	1	2	3	4	5	n/a
d. your mental/emotional health	1	2	3	4	5	n/a
e. your physical health	1	2	3	4	5	n/a
f. your time spent with each client/patient	1	2	3	4	5	n/a
g. the quality of care provided to patients	1	2	3	4	5	n/a
h. your ability to solve drug therapy problems	1	2	3	4	5	n/a
i. your ability to prevent potential errors	1	2	3	4	5	n/a
j. your opportunity to take adequate breaks	1	2	3	4	5	n/a
k. your ability to balance work / personal time	1	2	3	4	5	n/a

6. What are the three things you like most about your current job situation? _____
_____

7. On average, in a typical week, how many total actual hours do you work at your primary work setting? _____ hours

8. Ideally, how many hours would you choose to work at your primary work setting each week? _____ hours

9. Three years from now, do you expect to be working:
____ more hours per week than you are now?
____ about the same hours per week that you are now?
____ fewer hours per week than you are now?
____ I am not able to answer this question.

10. Of the total 52 weeks during 2008, in your primary work setting, how many weeks were you:

Employed, working?	_____	weeks
Employed, taking paid vacation?	_____	weeks
Employed, taking other types of paid leave from work?	_____	weeks
Employed, taking unpaid leave away from work?	_____	weeks
Unemployed?	_____	weeks
TOTAL	**52**	**weeks**

11. What was your gross base personal income from your primary employment during 2008? $ _____

12. Additional gross earnings during 2008, not included in your base pay: $_____ overtime
$_____ bonus
$ _____ profit sharing
$ _____ other (describe) _____

13. If you work in another setting besides your primary work setting, please describe the type of work and how much time per month you devote to this work: _____
_____

SECTION 3: INFORMATION ABOUT YOURSELF

Finally, please answer questions about yourself to help us analyze the results. Check the space next to your response or write your answer in the space provided. If any questions are not applicable to you, please feel free to leave them blank.

1. What is your age? _____ Years

2. In what year were you first licensed as a pharmacist? _____ (year of first licensure)

3. Which of the following educational experiences have you completed? (check all that apply)

_____ BS Pharm
_____ PharmD
_____ Residency
_____ Fellowship
_____ Certification Program (describe) _____
_____ Masters (__MS, __MBA, __MA, __MPH)
_____ PhD
_____ Other (describe) _____

4. What is your gender? _____ Male _____ Female

5. What is your Ethnic or Racial Background:
_____ American Indian
_____ Asian
_____ Black/African American
_____ Hispanic/Latino
_____ White/Caucasian
_____ Other (specify): _____

6. Geographic location and re-location are important to workforce planning. In what "city/town" and state did you spend most of your childhood years (birth to 18 years old)? _____ , ___ ___

7. In what state did you earn your initial Pharmacy Practice Degree? _____

8. In what states are you currently licensed as a Pharmacist? (list all states) _____

9. What is the Zip Code of your current primary residence? ___ ___ ___ ___ ___

10. What is your marital status?
□ single (never married) □ single (separated/ divorced) □ married □ widowed

11. How many children are living at home in your household? _____ What are their ages?_____

12. How many adult relatives are you providing care for: inside your home? _____
outside your home? _____

13. What was your household income from all sources during 2008? $_____

14. What was your student loan debt at your time of graduation? $ _____

15. What is the current balance of your student loan debt? $ _____

16. What is your current household debt (not including your student loans)? $ _____

17. Please think about your career plans over the next three years. Three years from now, which of the following, if any, do you think will apply to you?

_____ I will be retired.
_____ I will be working with my current employer.
_____ I will be working with a different employer, but within the same type of work I am in now.
_____ I will be working with a different employer doing different work than the type I am doing now.
_____ (please describe the different type of work)
_____ I will be out of the workforce, but would not consider myself to be retired.
_____ I am not able to answer this question at this time.

18. Finally, please describe your work history since obtaining your pharmacist license by completing the table below. You may list your jobs in chronological order starting with your first job, or in reverse order, which ever is easiest for you. **If you were out of the workforce for a period of time (e.g. illness, child-related, personal), please include this time period; under "description of employment" write "Out" and why you were not working.** If you need more space, please use a separate piece of paper.

Work Setting (refer to Section 1, Question 2 for setting types)	Approximate Start Date (month/year)	Approximate End Date (month/year)	Geographic Location (City, State)	Reason(s) for leaving

Please return your completed form in the postage paid envelope provided.
THANK YOU VERY MUCH FOR YOUR HELP!

Appendix B

Code Book

2009 National Pharmacist Workforce Survey
Code Book

Variable Name	Description	Coding
IDNUM	Identification Number	Number (1 – xxxx)
MAILFORM	Form from first or second mailing Second Mailing has *** in survey title	1 = Form from first mailing 2 = Form from second mailing
SAMPLEID	ID number from sampling frame	Number (1-3000)
Actsum	Actdisp + actpcare + actmgmt + actres + actedu + actoth	Computed variable
Dessum	Desdisp + despcare + deamgmt + desres + desedu + desoth	Computed variable
EMPSTAT	Employment Status	1 = practicing as a pharmacist 2 = employed in a pharmacy-related field … 3 = retired, but still working … 4 = retired, do not practice … 5 = employed in career not related to pharmacy 6 = unemployed
CAREER	Description of career not related to pharmacy	Written description
SEEKING	Seeking or not seeking employment	1 = seeking 2 = not seeking
PRACTCODE	Primary place of employment Coded to match 2004 analysis	1 = independent community pharmacy 2 = chain 3 = mass merchandiser 4 = supermarket pharmacy 5 = hospital 6 = Other Patient Care Practice 7 = Industry 8 = Other (non-patient care)
PRACTYPE	Primary place of employment	1 = independent community pharmacy 2 = small chain community pharmacy 3 = large chain 4 = mass merchandiser 5 = supermarket pharmacy 6 = clinic-based pharmacy 7 = mail service pharmacy 8 = government hospital 9 = non-government hospital 10 = nursing home / long term care 11 = home health / infusion 12 = pharmacy benefit administration 13 = academic institution 14 = other for-profit 15 = other non-profit
PRACT2009		1 = independent community pharmacy 2 = small chain community pharmacy

		3 = large chain 4 = mass merchandiser 5 = supermarket pharmacy 6 = clinic-based pharmacy 7 = mail service pharmacy 8 = government hospital 9 = non-government hospital 10 = nursing home / long term care 11 = home health / infusion 12 = pharmacy benefit administration 13 = academic institution . 20 = HMO outpatient pharmacy 21 = nuclear 22 = industry 23 = Government (FDA,etc) 24 = Other
INOUT	Inpatient or Outpatient	1 = inpatient 2 = outpatient 3 = both
FORPROF	Description of other for-profit	Written description
NONPROF	Description of other non-profit	Written description
ZIPNEMP	Zip code (place of employment)	Number (5–digit zip code)
ZIPEMPSTR	Zip code (place of employment)	Number as a string variable so to include leading 0 in the number
COMMUTE	Commute time (in minutes)	Number (minutes)
POSITION	Current Position	1 = owner/partner/executive 2 = management 3 = staff 4 = other
POSITNCODE	Current Position	Recoded into: 1 = owner/partner/executive 2 = management 3 = staff
PERCOWN	Percent Ownership	Number (percent)
OTHPOS	Description of Other Position	Written Description
YRSEMP	Years employed by current employer	Number (years)
FTRPHEMP	Full time pharmacists currently employed	Number
PTRPHEMP	Part time pharmacists currently employed	Number
FTRPHVAC	Full time pharmacist positions vacant	Number
PTRPHVAC	Part time pharmacist positions vacant	Number

LAYOFF	Pharmacist layoffs in last year?	1 = yes 2 = no
CUTHRS	Mandatory reductions in RPh hours?	1 = yes 2 = no
EARLYRET	Early retirement incentives for pharmacists?	1 = yes 2 = no
RESTRUCT	Restructuring of RPh schedules to save labor costs?	1 = yes 2 = no
ACTDISP	% actual time in dispensing	Number (%)
ACTPCARE	% actual time in patient care services	Number (%)
ACTMGMT	% actual time in management	Number (%)
ACTRES	% actual time in research	Number (%)
ACTEDU	% actual time in education	Number (%)
ACTOTH	% actual time in other	Number (%)
ACTOTHDES	Description of Other Actual % Time	Written description
DESDISP	% actual time in dispensing	Number (%)
DESPCARE	% actual time in patient care services	Number (%)
DESMGMT	% actual time in management	Number (%)
DESRES	% actual time in research	Number (%)
DESEDU	% actual time in education	Number (%)
DESOTH	% actual time in other	Number (%)
DESOTHDES	Description of Other Actual % Time	Written description
PRECEPT	Serve as a preceptor?	1 = yes 2 = no
WORKLOAD	How would you rate your workload?	1 = excessively low 2 = low 3 = about right 4 = high 5 = excessively high
WORKCHG	… how has your workload changed?	1 = greatly decreased 2 = decreased 3 = stayed the same 4 = increased 5 = greatly increased

Please rate how the current level of workload in your workplace affects:

JOBPERF	… job performance	1 = very negative 2 = negative 3 = neutral 4 = positive 5 = very positive 9 = does not apply
MOTIV	… motivation to work	1-5, 9
JOBSAT	… job satisfaction	1-5, 9
HEALTH	… mental/emotional health	1-5, 9
PHYSICAL	… physical health	1-5, 9
TIME	… time spent with each patient/client	1-5, 9
QUALITY	… quality of care provided to patients	1-5, 9
SOLVE	… ability to solve drug therapy problems	1-5, 9
PREVENT	… ability to prevent potential errors	1-5, 9
BREAKS	… opportunity to take adequate breaks	1-5, 9
BALANCE	… ability to balance work / personal time	1-5, 9

THING1 THING2 THING3	Three things you like most about your job	Written descriptions (up to three things)
ACTHOURS	Hours worked in a typical week at primary work setting	Number (hours)
IDEALHRS	Ideal number of hours you would choose to work at primary work setting	Number (hours)
THREEYRS	Three years from now, expect …	1 = more hours per week 2 = about the same hours per week 3 = fewer hours per week 4 = unable to answer

Of the total 52 weeks during 2008, in your primary work setting how many weeks were you:

WORKING	Working	Number (weeks)
VACATION	Taking paid vacation	Number (weeks)
PAIDLE	Taking paid leave	Number (weeks)
UNPAIDLE	Taking unpaid leave	Number (weeks)

UNEMPL	Unemployed	Number (weeks)
INCOME	Base income from primary employment during 2008	Number (dollars)
OVERTIME	Addition earnings from Overtime	Number (dollars)
BONUS	Bonus	Number (dollars)
PROFSHAR	Profit Sharing	Number (dollars)
OTHEARN	Other earnings	Number (dollars)
EARNDESC	Description of other earnings	Written description
OTHWORK	Description of Other Work	Written description
TIMEMONTH	Time per month devoted to other work	Number (days per month) Hour converted to days (8 hours = 1 day; 4 hours = 0.5 days)
AGE	Respondent age	Number (years)
AGECODE4	Respondent age recoded into four categories	1 = less than or equal to 30 2 = 31 to 45 3 = 46 to 60 4 = > 60
AGECODE10	Respondent age recoded into ten categories	1 = lo to 30 2 = 31 to 35 3 = 36 to 40 4 = 41 to 45 5 = 46 to 50 6 = 51 to 55 7 = 56 to 60 8 = 61 to 65 9 = 66 6o 70 10 = greater than 70
YRLIC	Year of first licensure	Number (year of licensure)
BSPHARM	Completed BS Pharm	1 = yes 2 = no
PHARMD	Completed PharmD	1= yes 2 = no
RESIDEN	Completed Residency	1 = yes 2 = no
FELLOW	Completed Fellowship	1 = yes 2 = no
CERT	Completed Certification	1 = yes 2 = no

CERTDESC	Description of Certification Program	Written description
MS	Completed MS	1 = yes 2 = no
MBA	Completed MBA	1 = yes 2 = no
MA	Completed MA	1 = yes 2 = no
MPH	Completed MPH	1 = yes 2 = no
PHD	Completed PhD	1 = yes 2 = no
OTHDEG	Completed Other Experience	1 = yes 2 = no
DEGDESC	Description of Other Experience	Written Description
GENDER	Respondent Gender	1 = male 2 = female
SAMPLE	Computed variable that identifies our study's "ANALYTICAL SAMPLE"	1 = analytical sample Provided useable answers for the variables: empstat, acthrs, gender, practype, and age. (n = 1,344)
ETHNIC	Respondent Ethnic or Racial Background	1 = American Indian 2 = Asian 3 = Black / African American 4 = Hispanic / Latino 5 = White / Caucasian 6 = Other
OTHETHNIC	Description of Other Ethnic or Racial Background	Written Description
CITYNAME	Name of city/town in which respondent spent most of childhood	Written name
CITYZIP	Zip code for city/town in which respondent spent most of childhood	Number (5-digit zip code) 00000 = international location
STATE	State in which spent most of childhood	Two-Letter State Code
INITIALDEG	State in which earned initial pharmacy practice degree	Two-Letter State Code

In what states are you currently licensed as a pharmacist?

STATE1	1st state listed	Two-Letter State Code
STATE2	2nd state listed	Two-Letter State Code

STATE3	3rd state listed	Two-Letter State Code
STATE4	4th state listed	Two-Letter State Code
STATE5	5th state listed	Two-Letter State Code
NUMSTATE	Number of states listed for 'currently licensed in' question	Number
ZIPRES	Zip code (primary residence)	Number (5–digit zip code)
MARITAL	Marital Status	1 = single (never married) 2 = single (separated /divorced) 3 = married 4 = widowed
CHILDREN	Number of children living at home	Number
CHILD1	Age of oldest child	Number (in years)
CHILD2	Age of 2nd oldest child	Number (in years)
CHILD3	Age of 3rd oldest child	Number (in years)
CHILD4	Age of 4th oldest child	Number (in years)
CHILD5	Age of 5th oldest child	Number (in years)
CHILD6	Age of 6th oldest child	Number (in years)
CHILD7	Age of 7th oldest child	Number (in years)
ADULTIN	Number of adult relatives you are providing care for inside your home	Number
ADULTOUT	Number of adult relatives you are providing care for outside your home	Number
HOUSEINC	Household income during 2008	Number (dollars)
SLOANGRAD	Student loan debt at time of graduation	Number (dollars)
SLOANNOW	Student loan debt now	Number (dollars)
HOUSEDEBT	Current Household Debt (not including student loans)	Number (dollars)
PLAN3YR	Three years from now, which of the following, if any, do you think will apply to you?	1 = retired 2 = working with current employer 3 = different employer, same type of work 4 = different employer, different type of work 5 = out of workforce, but not considered retired 6 = not able to answer at this time
DESCOTHWK	Description of "different type of work"	Written description

NUMWORK	Number of work settings listed	Number
WORKSET1 WORKSET2 WORKSET3 WORKSET4 WORKSET5 WORKSET6 WORKSET7 WORKSET8 WORKSET9 WORKSET10 . . . WORKSET19	Work Settings **In chronological order beginning with the earliest one listed and ending with the most recent one listed (WORKSETNOW).**	1 = independent community pharmacy 2 = small chain community pharmacy 3 = large chain 4 = mass merchandiser 5 = supermarket pharmacy 6 = clinic-based pharmacy 7 = mail service pharmacy 8 = government hospital 9 = non-government hospital 10 = nursing home / long term care 11 = home health / infusion 12 = pharmacy benefit administration 13 = academic institution 14 = other for-profit 15 = other non-profit
WORKSETNOW	**→ Current Setting**	99 = "out" ("out" could include maternity, parenting, caregiving, military service, attending school, etc)
START1 START2 START3 START4 START5 START6 START7 START8 START9 START10 . . . START19	Start date for each corresponding work setting Months receive the corresponding decimal values: January = 0.083 July = 0.583 February = 0.167 August = 0.667 March = 0.250 September = 0.750 April = 0.333 October = 0.833 May = 0.417 November = 0.917 June = 0.500 December = 1.000 **→ Current Setting**	Year.Month For example: January 1967 = 1967.083 May 1985 = 1985.417 November 2008 = 2008.917 December 2008 = 2009.000 !!
STARTNOW		
END1 END2 END3 END4 END5 END6 END7 END8 END9 END10 . . .	End date for corresponding work setting Months receive the corresponding decimal values: January = 0.083 July = 0.583 February = 0.167 August = 0.667 March = 0.250 September = 0.750 April = 0.333 October = 0.833 May = 0.417 November = 0.917 June = 0.500 December = 1.000	Year.Month For example: January 1967 = 1967.083 May 1985 = 1985.417 November 2008 = 2008.917 December 2008 = 2009.000 !!

END19	→ **artificially set at June 2009** →	**ENDNOW** = JUNE 2009 → **2009.500**

ENDNOW

ZIP1 ZIP2 ZIP3 ZIP4 ZIP5 ZIP6 ZIP7 ZIP8 ZIP9 ZIP10 . . . ZIP19	Zip code for reported geographic location for each corresponding work setting → **Current Setting**	Number (5–digit zip code)
ZIPNOW		
LEAVE1 LEAVE2 LEAVE3 LEAVE4 LEAVE5 LEAVE6 LEAVE7 LEAVE8 LEAVE9 LEAVE10 . . . LEAVE18	Reason for leaving corresponding work setting (first reason listed if list more than one)	1 = work schedule 2 = salary 3 = benefits 4 = stress level 5 = treatment by management 6 = workload 7 = pharmacist co-workers 8 = spouse / family relocation 9 = pharmacist staffing levels 10 = technician staffing levels 11 = technician co-workers 12 = relationships with management 13 = intellectual challenge 14 = desire a change 15 = advancement opportunity 16 = relationships with patients 17 = amount of patient contact 50 = other
ZIPEMP	Zip code (place of employment)	Number as a string variable so to include leading 0 in the number
RUCA2EMP	RUCA code for zipemp	Refer to http://depts.washington.edu/uwruca/approx.html
STATEZIPEMP	2-digit state code in which respondent is employed	String variable (two-letters) for state
RUCA2RES	RUCA code for zipres	Refer to

		http://depts.washington.edu/uwruca/approx.html
STATEZIPRES	2-digit state code in which respondent resides	String variable (two-letters) for state
EMPSTRECODE	Recode for EMPSTAT	1 = active (EMPSTAT = 1, 2, or 3) 2 = retired 3 = working, but not in pharmacy 4 = not working
PARTTIME	Recode of acthrs	1 = Yes (acthrs less than or equal to 30 hrs) 0 = No
FTE	Computed variable for "full time equivalent"	(acthrs * working) / 2080
URBAN4	Recode for zipemp (place of employment)	1 = urban 2 = large rural 3 = small rural 4 = isolated Refer to: http://depts.washington.edu/uwruca/approx.html
URBAN2	Recode for zipemp (place of employment)	1 = urban 0 = rural Refer to http://depts.washington.edu/uwruca/approx.html
DEGRECODE	Recode based on BSPHARM and PHARMD variables	1 = BS 2 = PharmD 3 = Both BS and PharmD
BSNEW	Recode for BSPHARM based on respondents who answered no to both BSPHARM and to PHARMD	1 = BS, yes (that is, degrecode = 1 or 3) 2 = BS, no
TIME1 TIME2 TIME3 TIME4 TIME5 TIME6 TIME7 TIME8 TIME9 TIME10 . . . TIMENOW	Time spent in each corresponding work setting **COMPUTED VARIABLE** END1 – START1 END2 – START2 And so on……	Computed as the difference between end date and start date. For example: End Date: January 2008 2008.083 Start Date: November 1999 1999.917 Difference = 8.167 Time spent = 8 years, 2 months