

Findings from the 2019 National Pharmacist Workforce Study

*Prepared for the APhA Annual Meeting & Exposition
Gaylord National Resort & Convention Center, National Harbor, MD*

Introduction and Background

William R. Doucette, PhD

University of Iowa

College of Pharmacy

william-doucette@uiowa.edu

Acknowledgment

The 2019 National Pharmacist Workforce Study (NPWS) was funded by the Pharmacy Workforce Center, Inc. The PWC is a coalition of non-profit corporations whose mission is to serve the pharmacy profession and the public by actively researching, analyzing and monitoring the size, demography and activities of the pharmacy workforce.

Pharmacy Workforce Center

The PWC Board of Directors is comprised of:

- American Pharmacists Association (APhA)
- American Association of Colleges of Pharmacy (AACCP)
- American College of Clinical Pharmacy (ACCP)
- American Society of Health-System Pharmacists (ASHP)
- Board of Pharmacy Specialties (BPS)
- National Alliance of State Pharmacy Associations (NASPA)
- National Association of Chain Drug Stores (NACDS) Foundation
- National Community Pharmacy Association (NCPA)
- Pharmacy Technician Certification Board (PTCB)

PWC Observer organizations include:

- Health Resources & Services Administration (HRSA)
- Bureau of Health Workforce (BHW)
- National Association of Boards of Pharmacy (NABP)

Advisory Committee

LYNETTE BRADLEY-BAKER, PhD

American Association of Colleges of Pharmacy

ELIZABETH CARDELLO, Senior Director

American Pharmacists Association

Disclosures

- The members of the research team are representatives of their respective academic institutions and collaborate as the Midwest Pharmacy Workforce Consortium.
- There are no other affiliations to disclose.



Research Team



William R. Doucette, PhD
Professor
University of Iowa



Matthew Witry, PharmD, PhD
Assistant Professor
University of Iowa



Caroline A. Gaither, PhD
Professor
University of Minnesota



Jon C. Schommer, MS, PhD
Professor
University of Minnesota



David H. Kreling, PhD
Professor Emeritus
University of Wisconsin



David A. Mott, PhD
Professor
University of Wisconsin



Brianne Bakken, PharmD, MHA
Assistant Professor
Medical College of Wisconsin



Vibhuti Arya, PharmD, MPH
Associate Professor
St. John's University

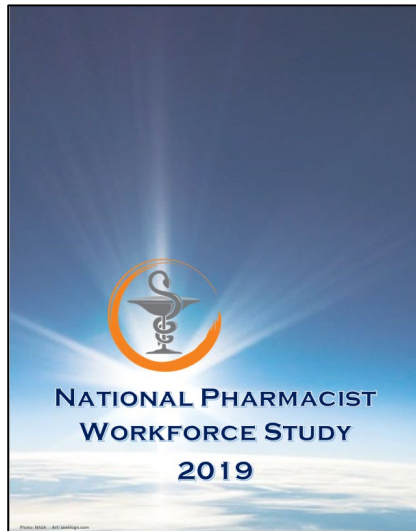


Session Topics

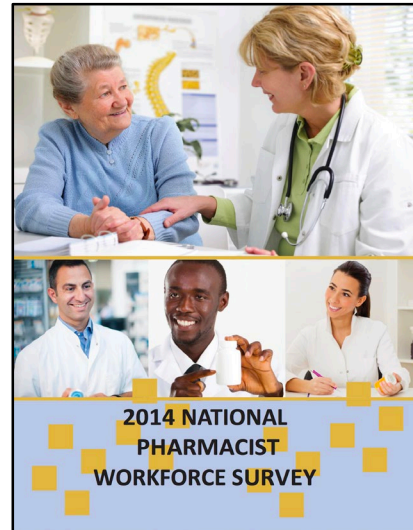
- Introduction and Background
- Trends in Work Characteristics of Pharmacists
- Pharmacist Contributions to the U.S. Health Care System
- The Job Market: Pharmacists' Point of View
- Quality of Pharmacists' Work Life
- Burnout and Fulfillment for Employed Pharmacists
- Ambulatory Care Pharmacy
- Discrimination & Harassment
- Naloxone in the Community Pharmacy Setting

National Pharmacist Workforce Study

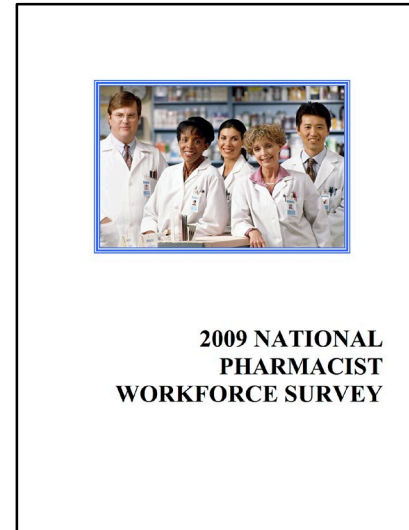
National survey of pharmacists conducted every 4-5 years



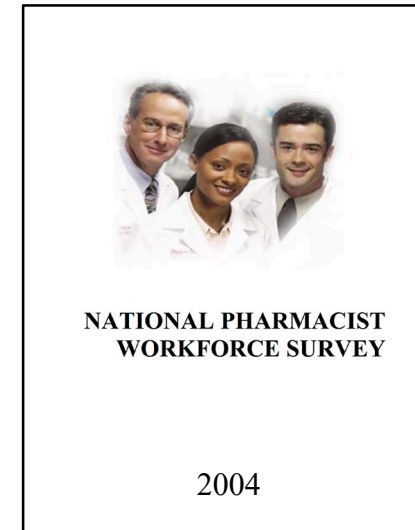
Available March 2020



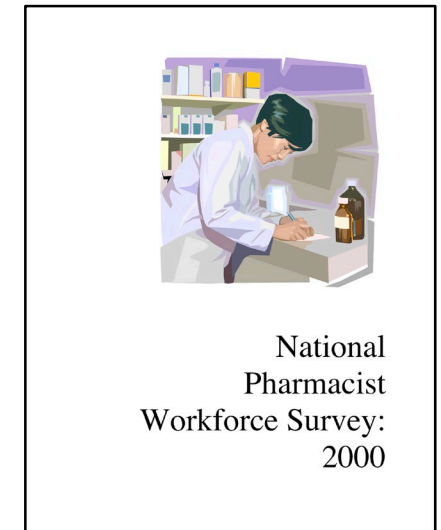
Final Report



Final Report



Final Report



Final Report

Final reports are currently archived at [www.aacp.org/article/\[year\]-national-pharmacist-workforce-study](http://www.aacp.org/article/[year]-national-pharmacist-workforce-study)

Objectives for the 2019 NPWS

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

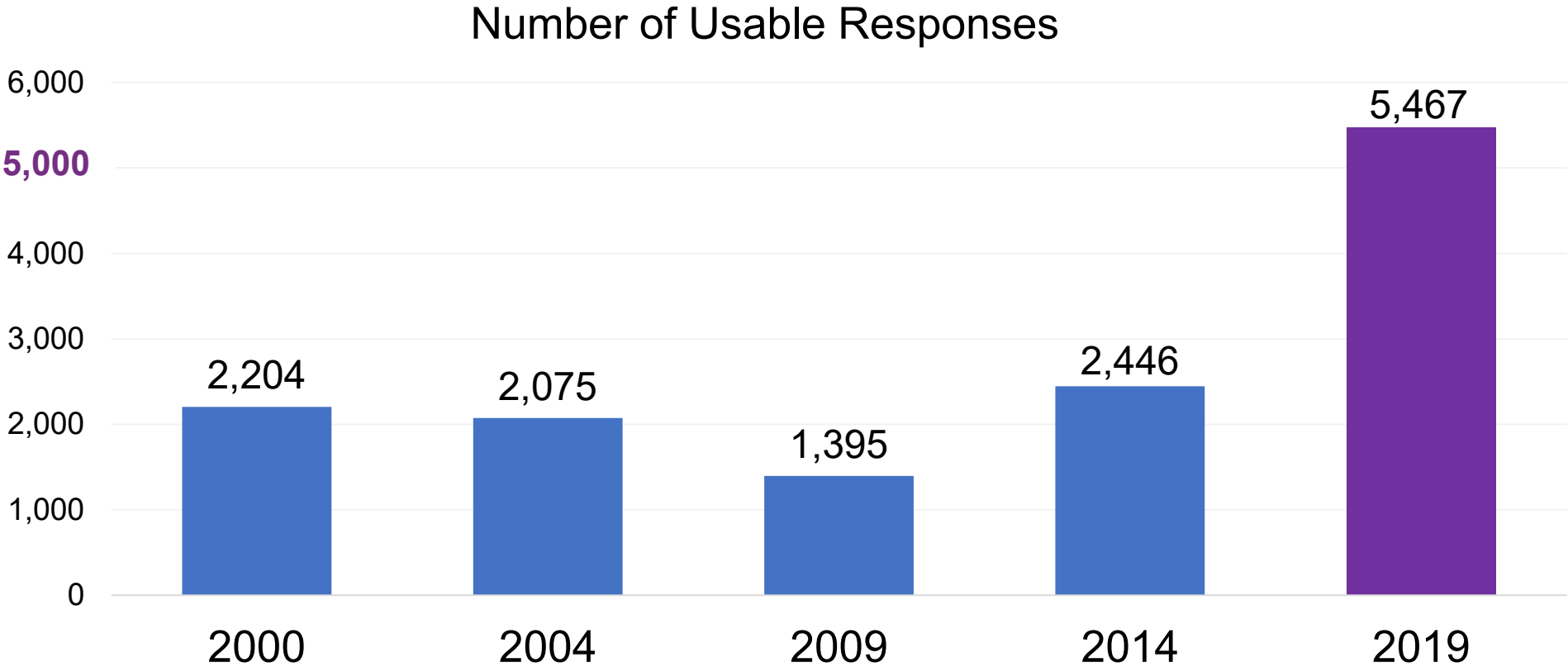
Methods for the 2019 NPWS

- On-line survey of a random sample of 96,110 licensed pharmacists
 - Coordinated with NABP Foundation
- Three email waves sent to sample with a survey link
- Survey asked about:
 - Work status
 - Work setting
 - Job characteristics
 - Work life variables
 - Discrimination and harassment in the workplace
 - Opioid issues
- Descriptive statistics calculated for all variables

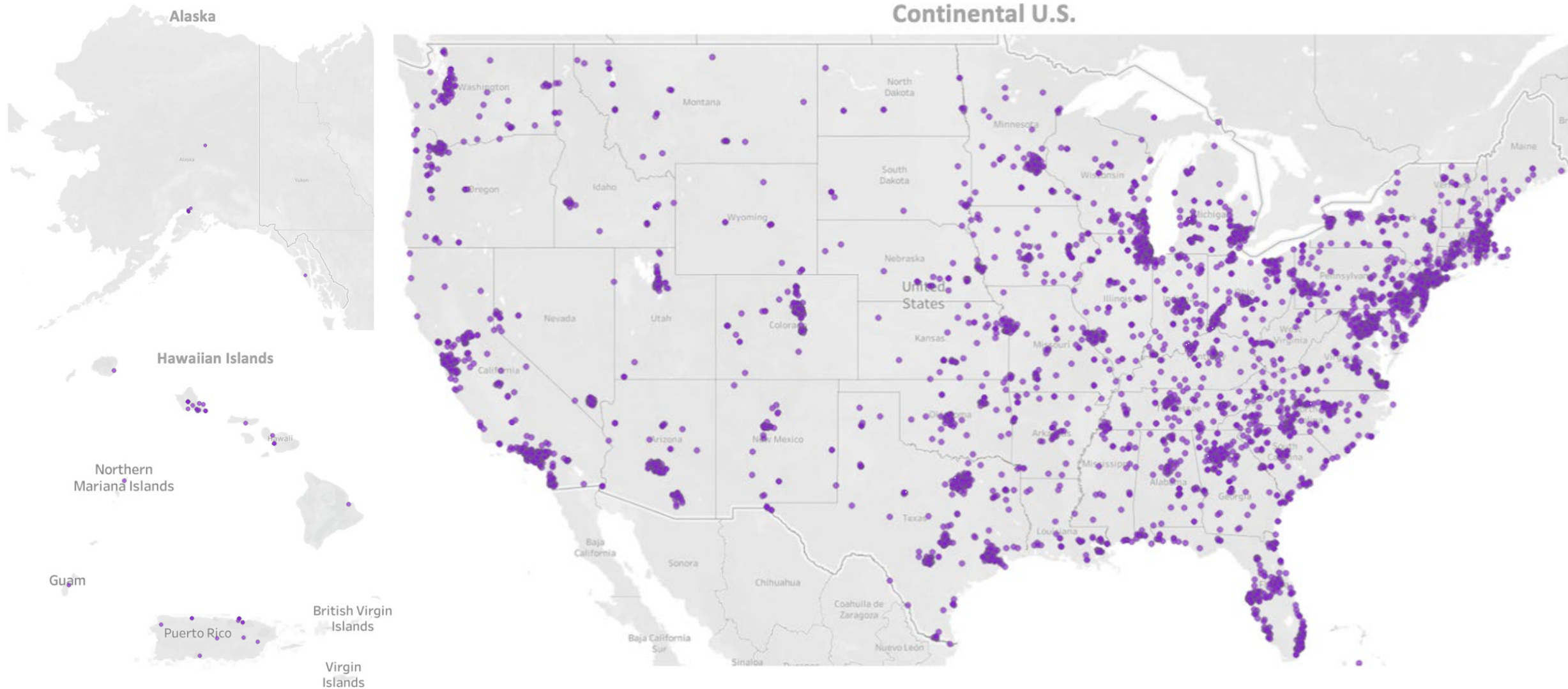
2019 Response Summary

- First time an electronic survey was used for NPWS
 - 96,100 randomly sampled licensed pharmacists from the NABP
 - 94,803 emails were verified as received to an inbox
 - 8,466 pharmacists clicked on the survey link
 - **5,467 usable responses** were received (5.8%^{*})
 - Usable defined as no missing data for each of five key variables: work status, gender, age, hours worked weekly and practice setting
- ^{*}Using the number of pharmacists who clicked on the survey link as a denominator, 64.6% provided a usable response set

NPWS Response History



Distribution of Responding Sample



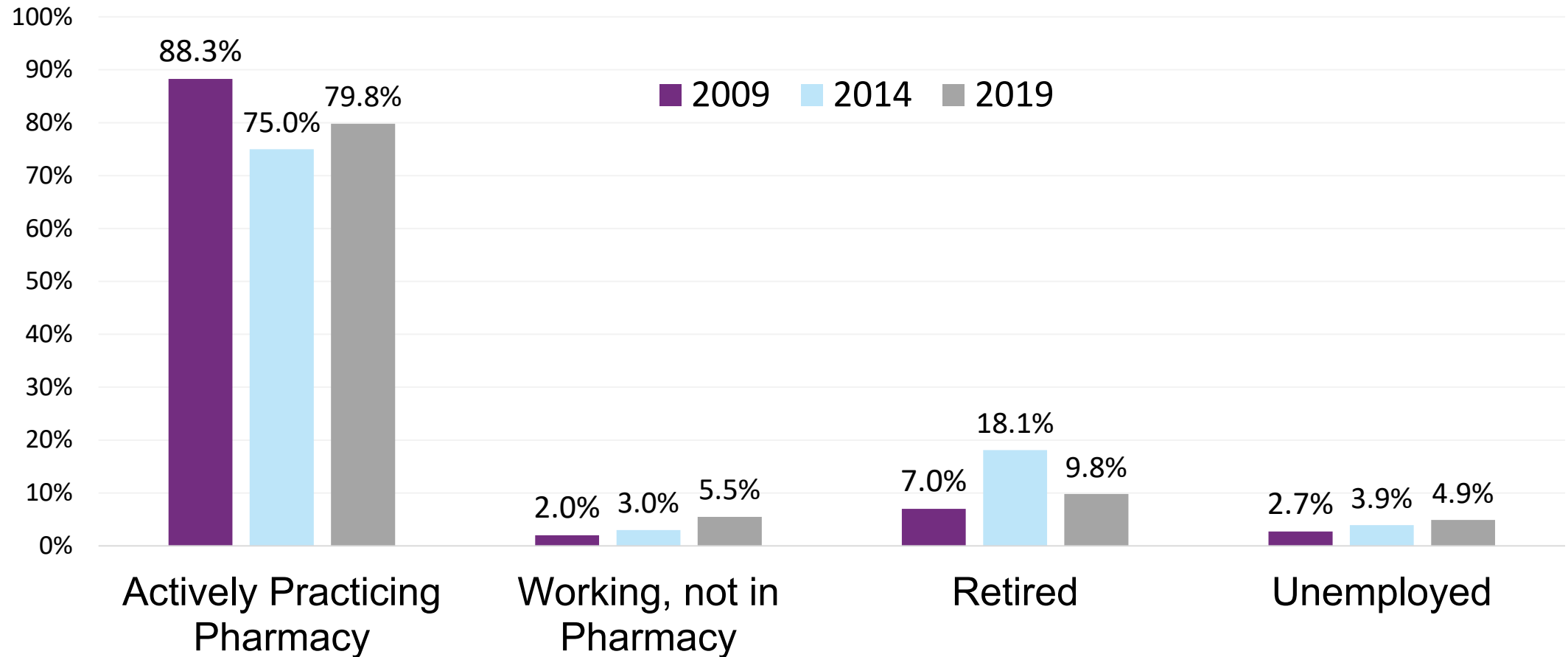
Trends in Work Characteristics of Pharmacists

David Mott, PhD

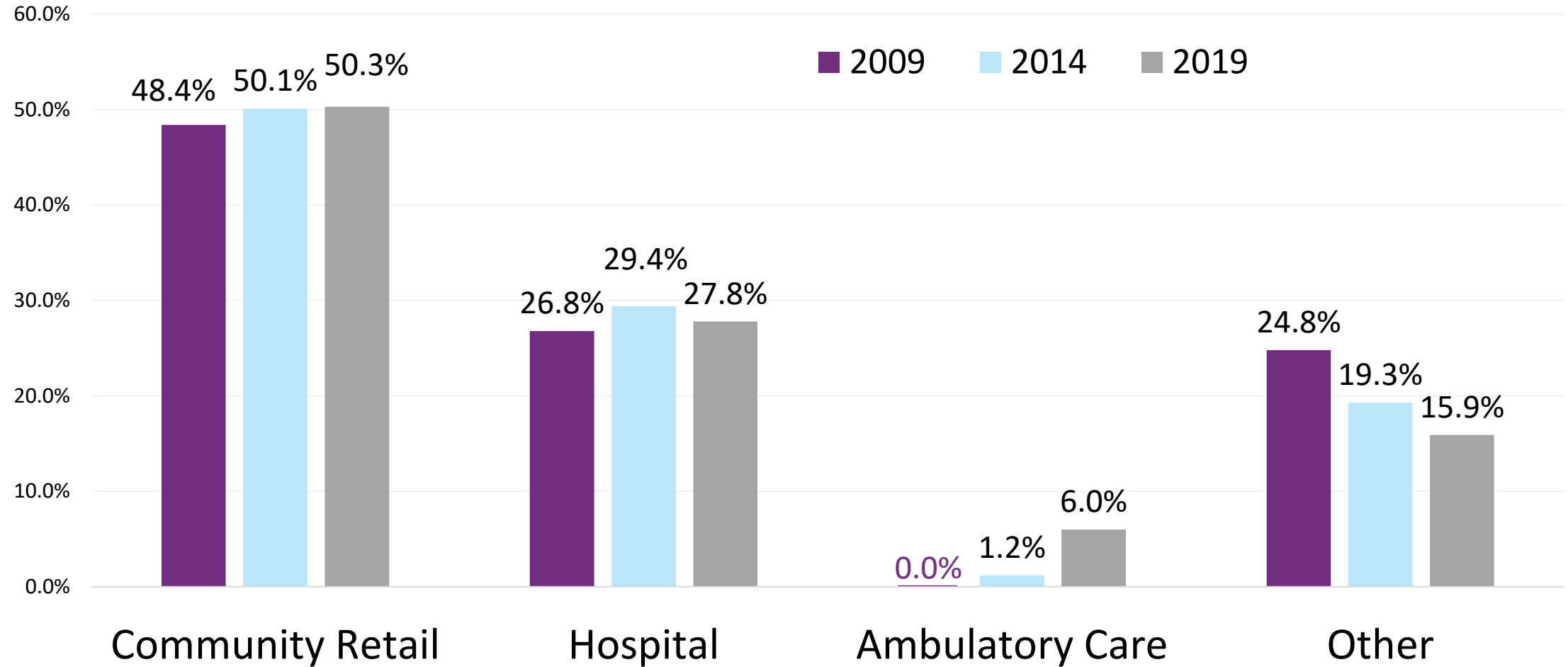
University of Wisconsin

david.mott@wisc.edu

Trends in Licensed Pharmacists' Work Status

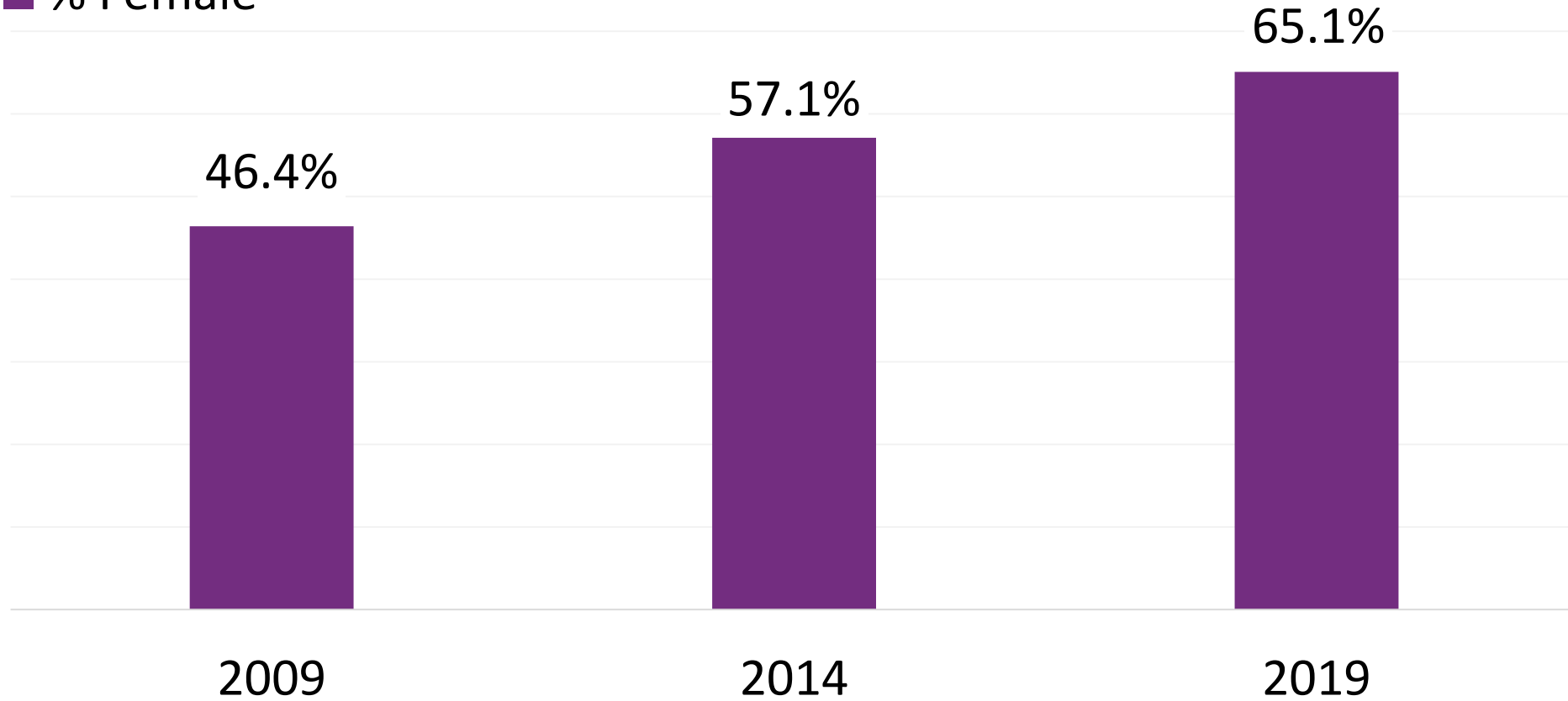


Actively Practicing Pharmacists by Setting

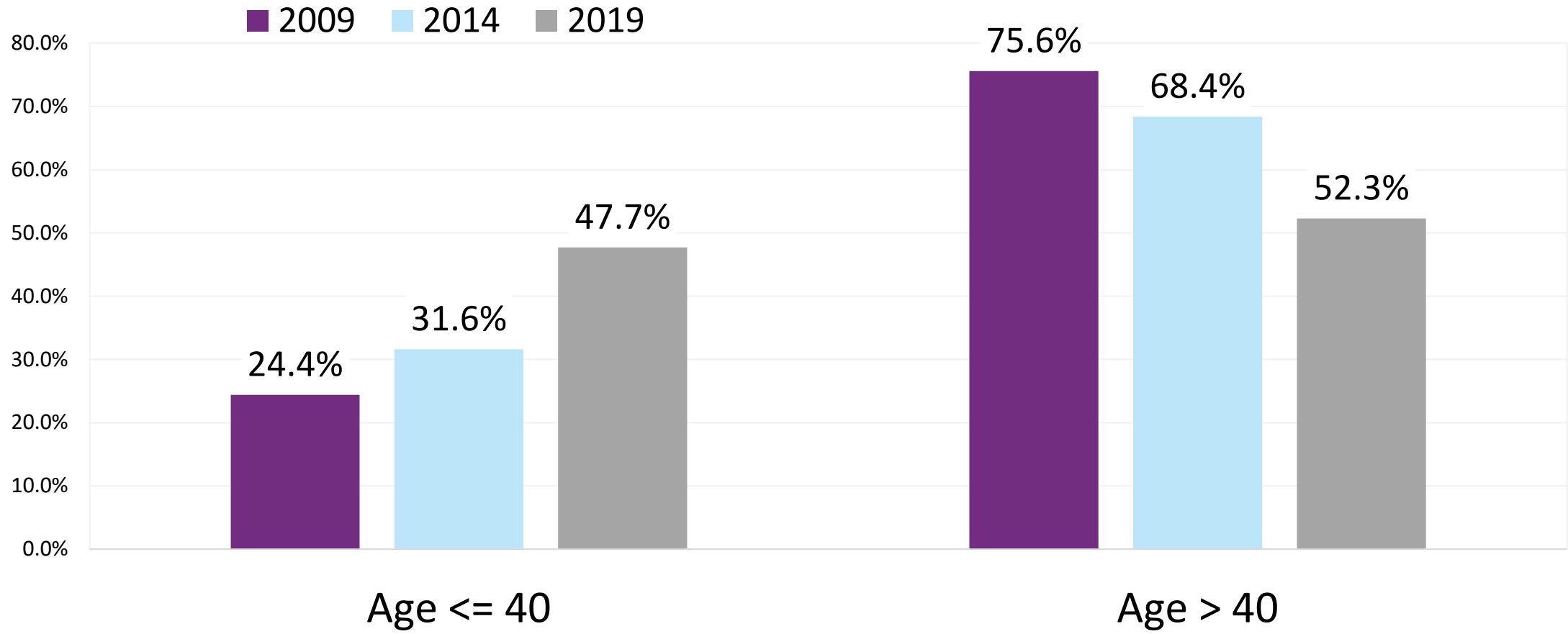


Actively Practicing Pharmacists: % Female

■ % Female



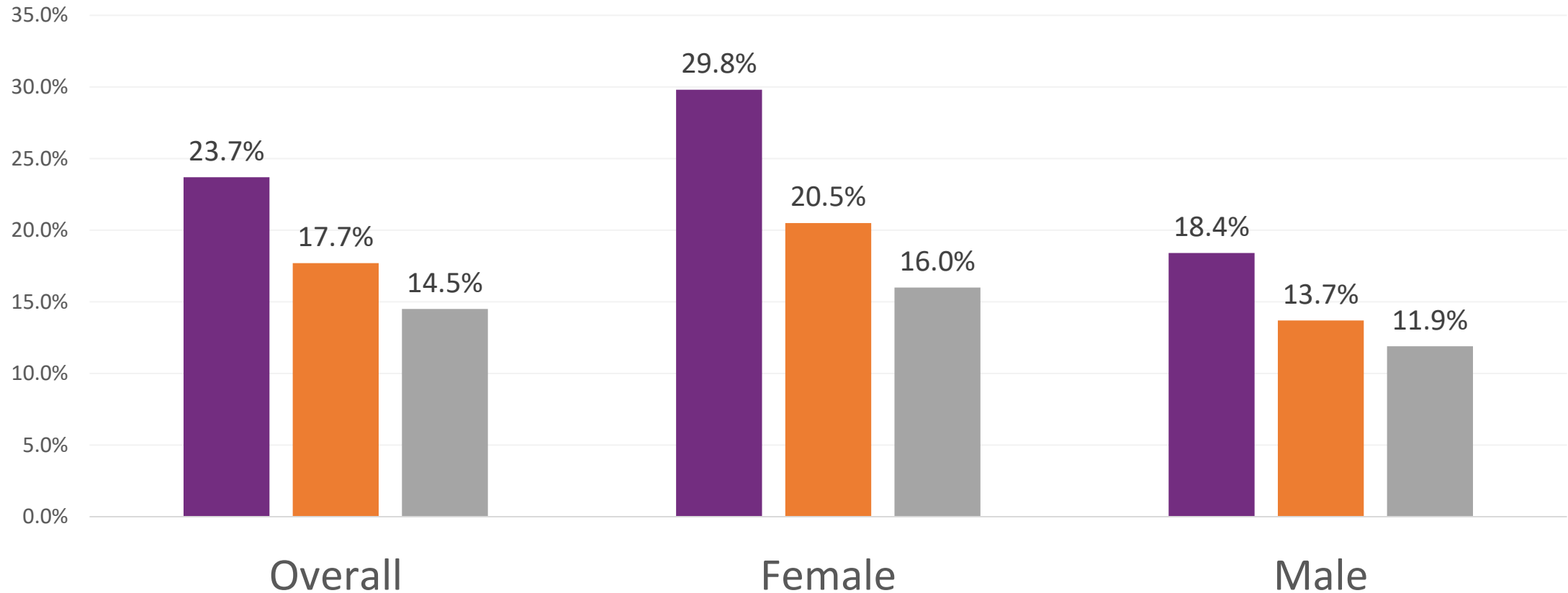
Actively Practicing Pharmacists by Age Category



Actively Practicing Pharmacists Working Part-time

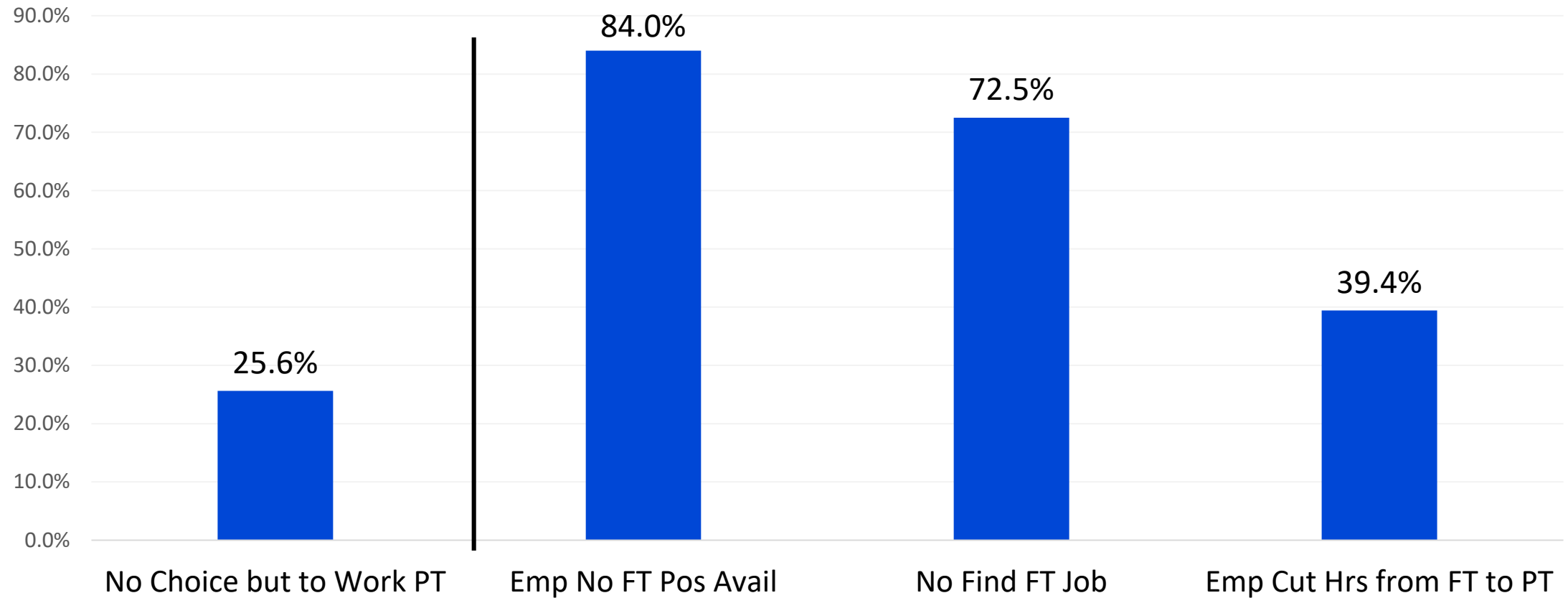
Working \leq 30 hrs/week at primary employer

■ 2009 ■ 2014 ■ 2019



Reasons for Part-time Work: 2019

% Moderately and Very Influential in Decision to Work PT



Pharmacist Contributions to the U.S. Health Care System

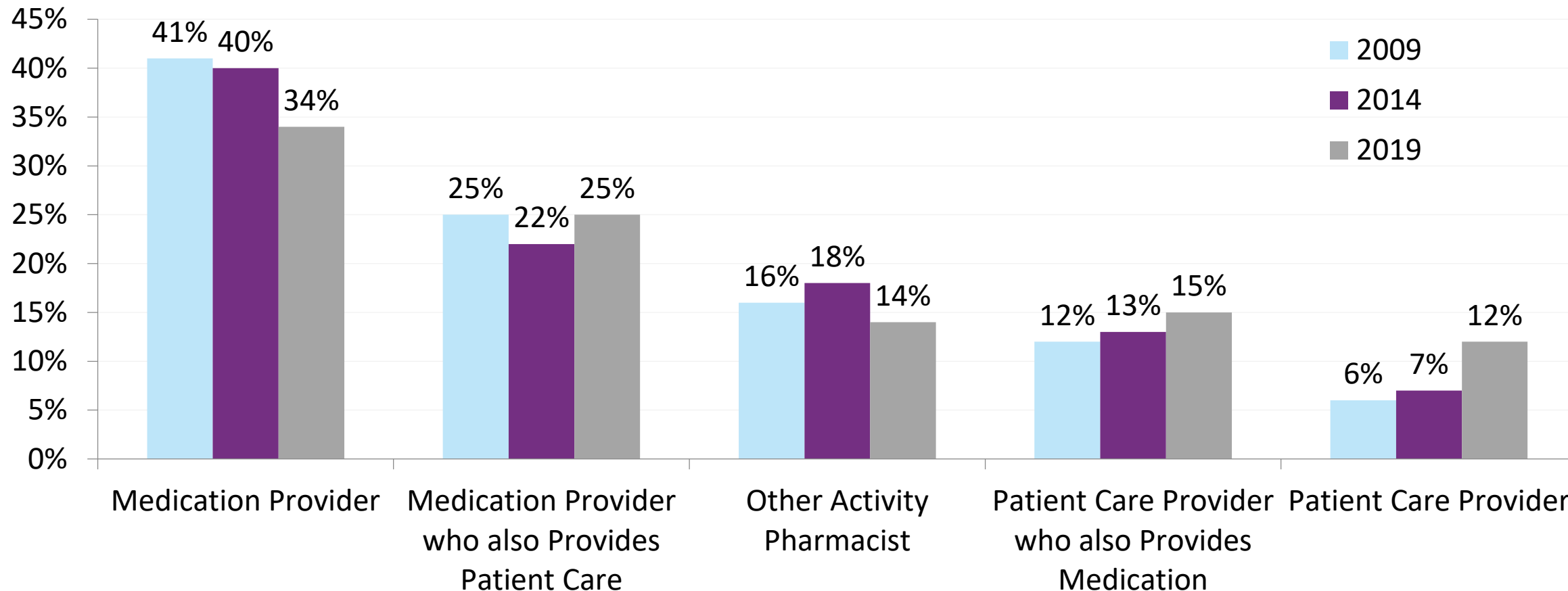
Jon C. Schommer, RPh, PhD, FAPhA

Professor

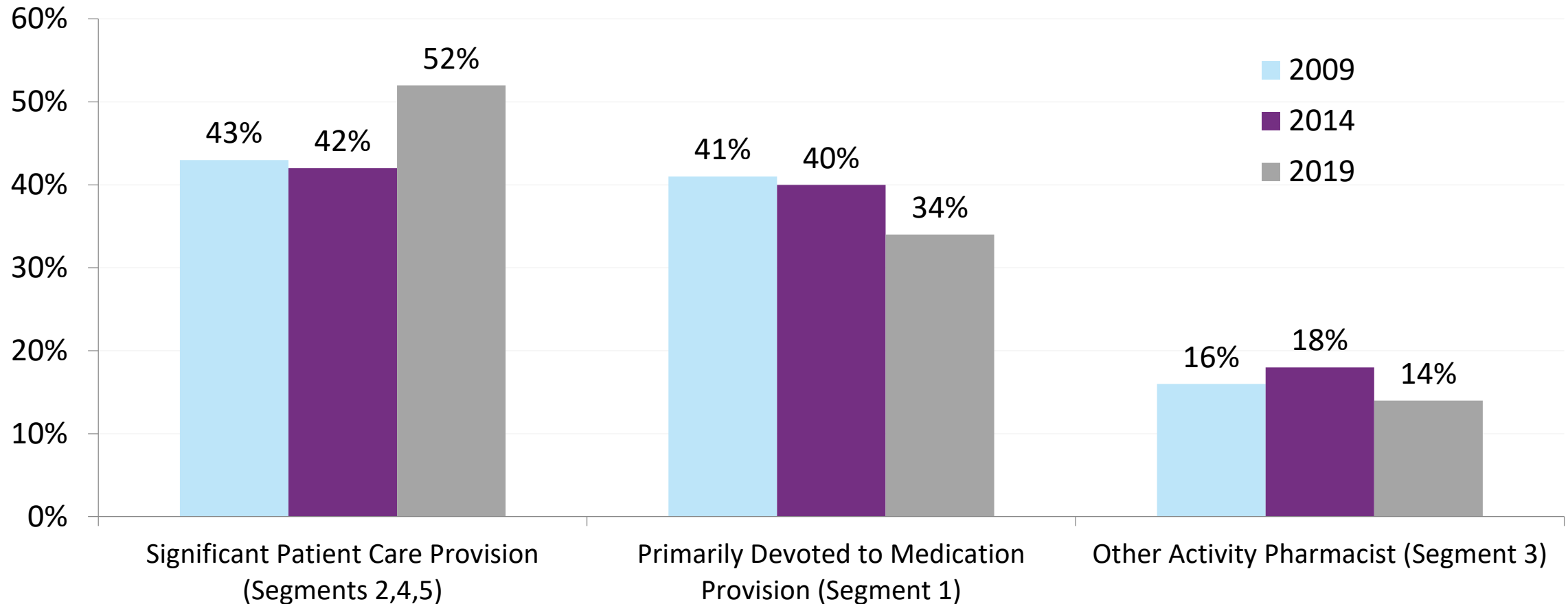
University of Minnesota

schom010@umn.edu

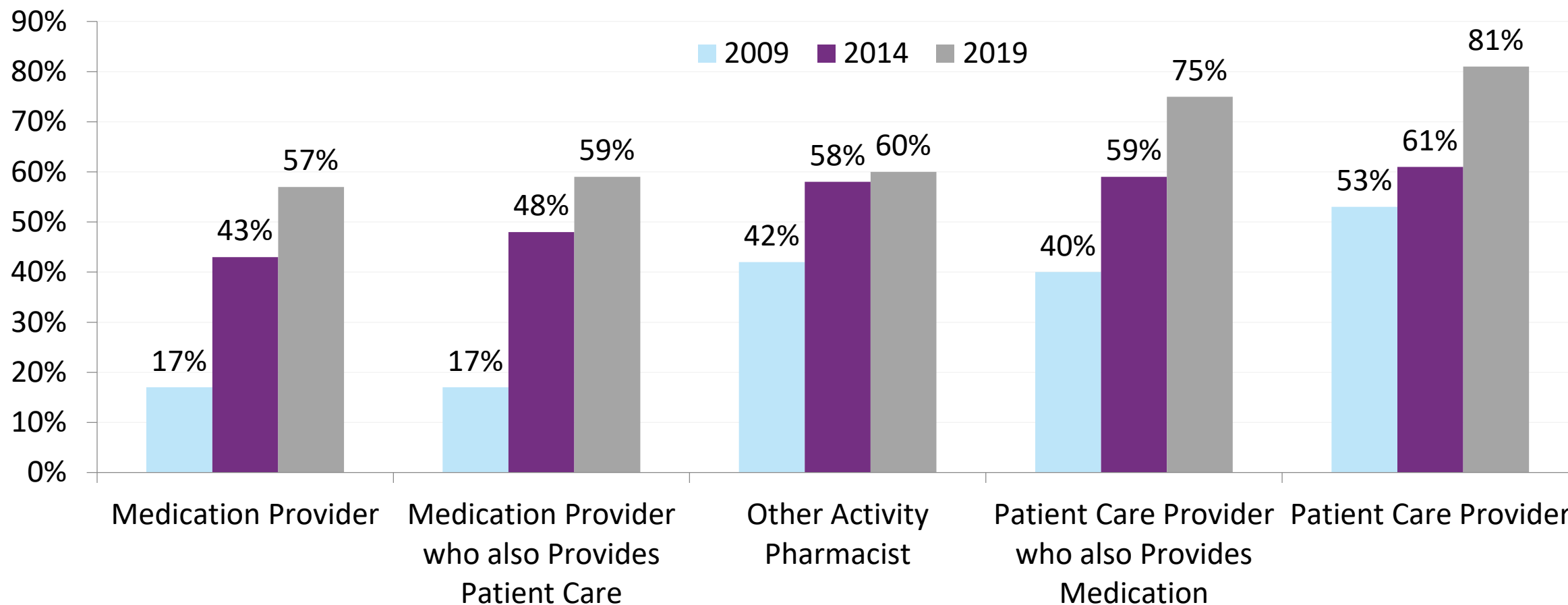
Proportion of U.S. Pharmacists by Segment 2009, 2014, 2019



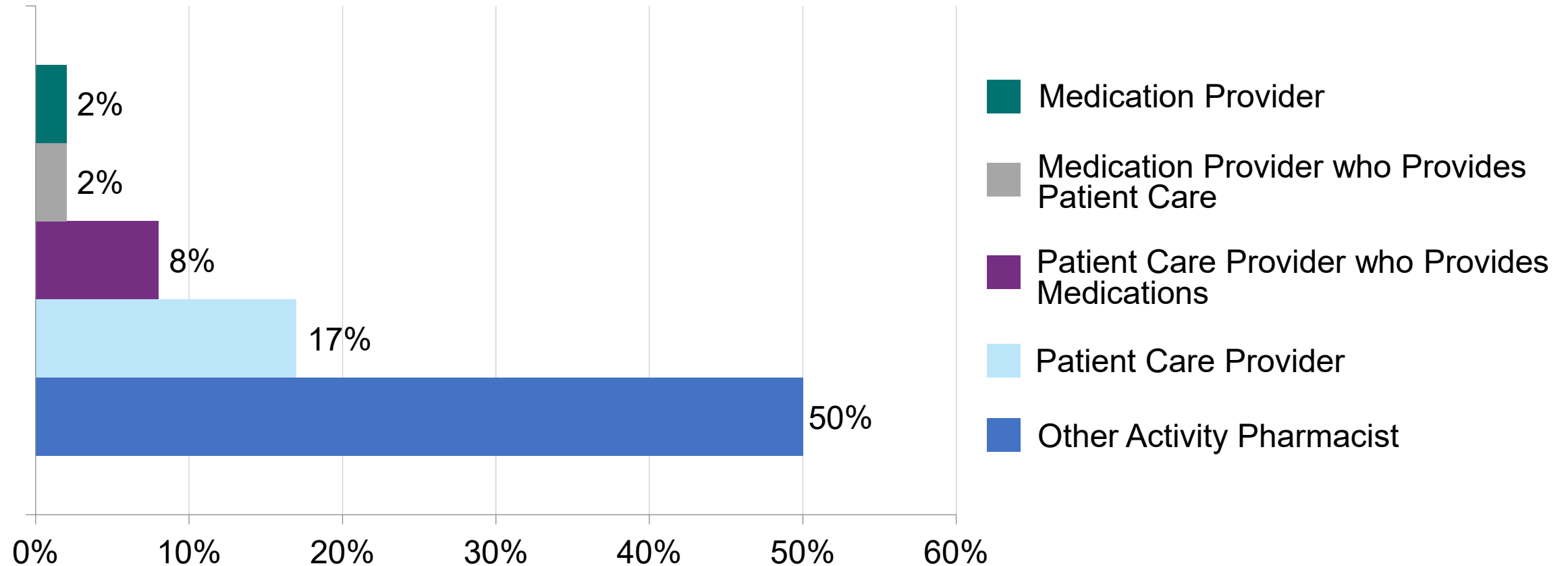
Proportion of U.S. Pharmacists by Segment 2009, 2014, 2019



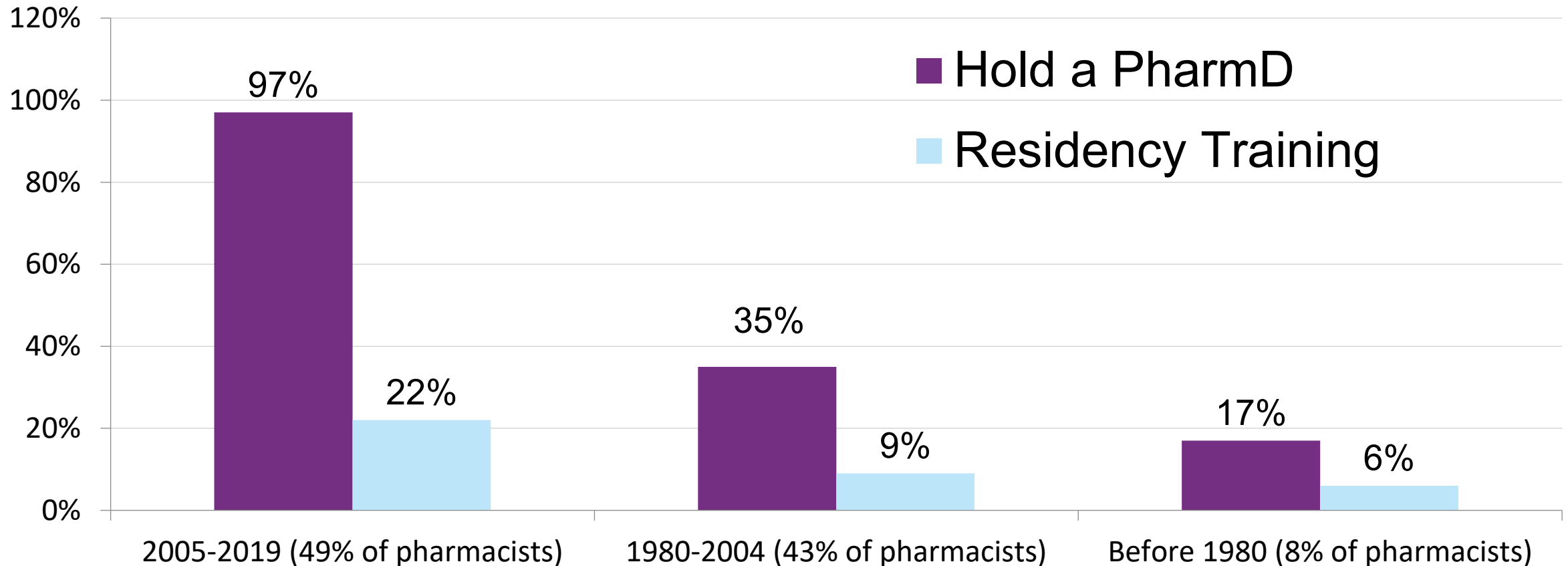
Proportion Holding PharmD Degree by Segment 2009, 2014, 2019



Proportion Working in 'Other Setting – Non-Pharmacy' by Segment (2019)



Year-of-Licensure Cohorts



The Job Market: Pharmacists' Point of View (POV)

David H. Kreling, Ph.D.

Professor Emeritus

University of Wisconsin-Madison School of Pharmacy

david.kreling@wisc.edu

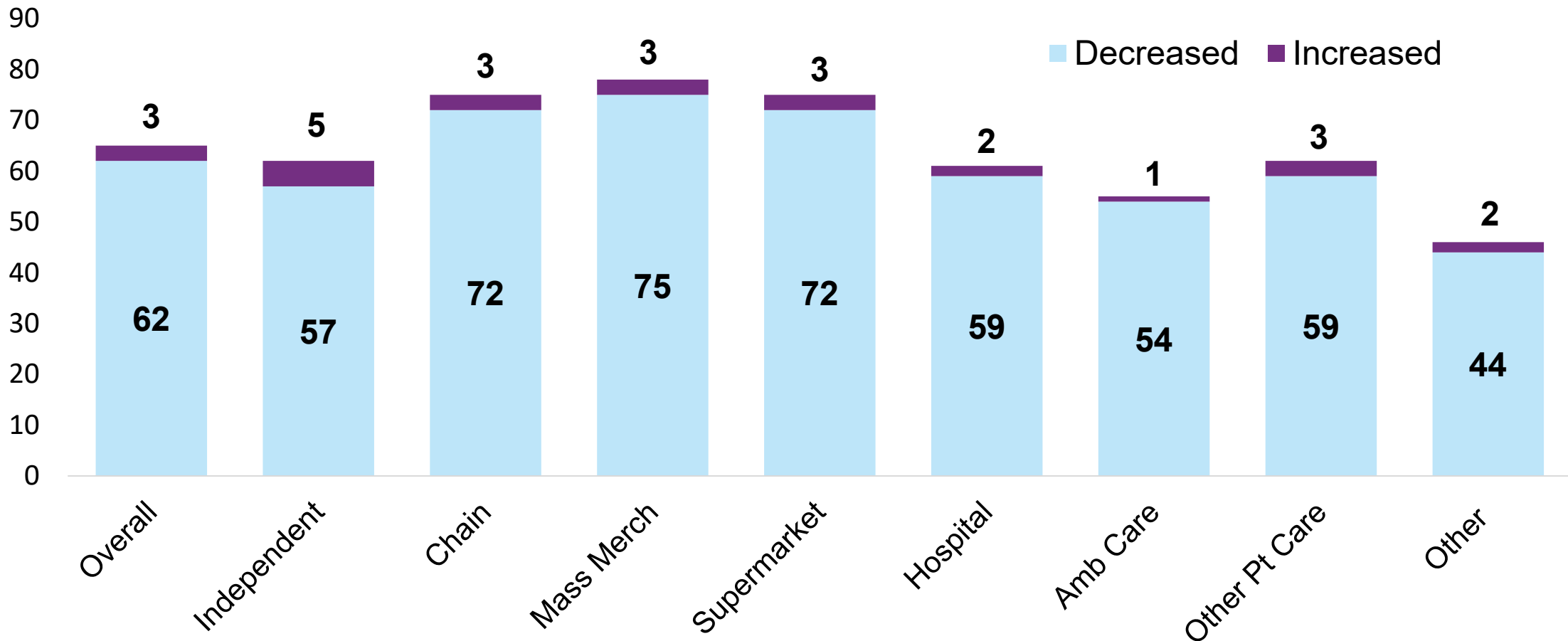
The Job Market: Pharmacists' POV

- Ease of Finding Work & Job Security
- Available Positions & Intention to Leave their Job
- Demand for Pharmacists

Ease of Finding a Job

How has the following changed in the past year?

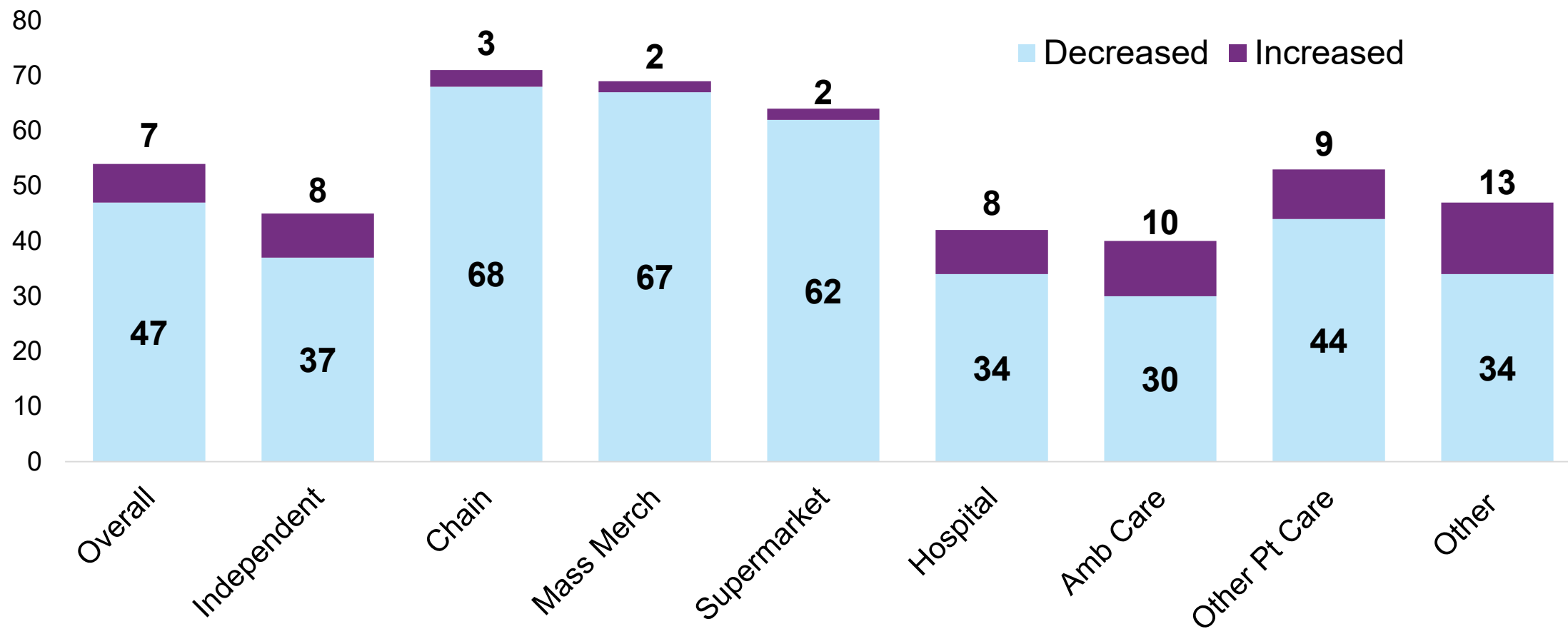
- Ease of pharmacists in your community finding work



Job Security

How has the following changed in the past year?

- Your feeling of job security



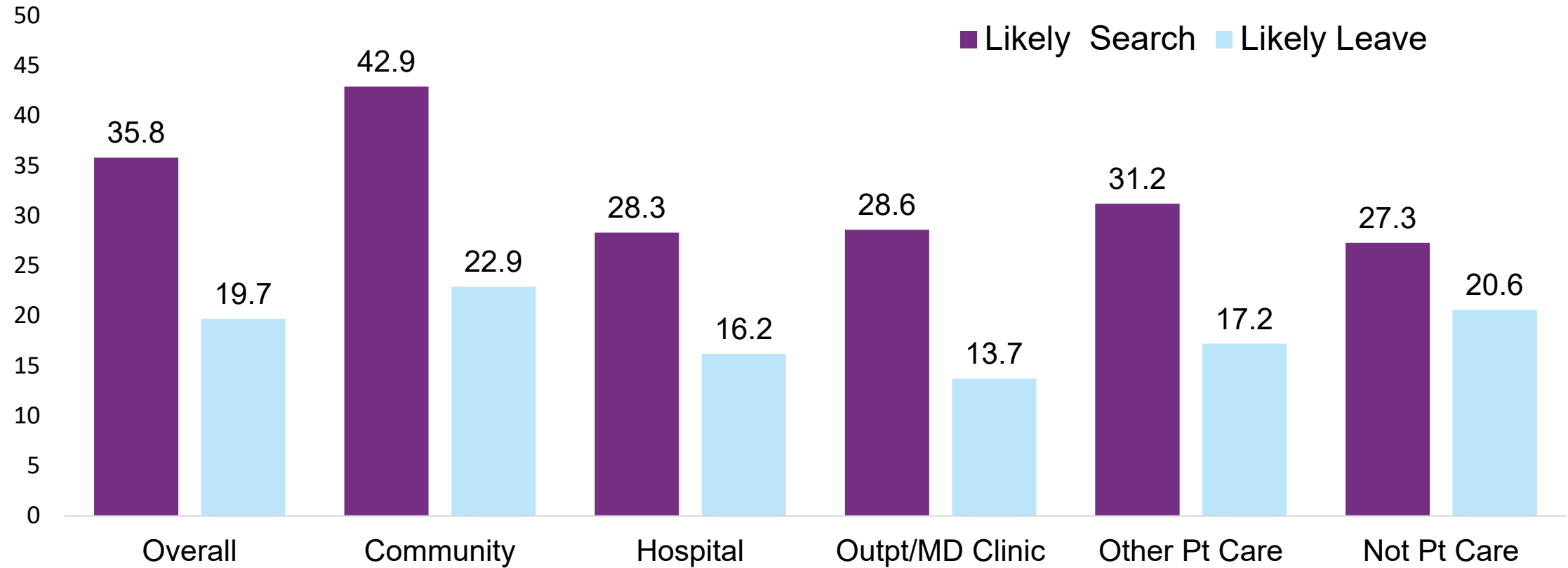
Job Prospects and Mobility

- I am aware of vacant openings that would be a good fit for me.
- How likely is it that you will search/actually leave in the next year?

Variable	n	Aware of Jobs (%)	Likely to Search (%)	Likely to Leave (%)
Overall	3,725	22.5	35.8	19.7
Gender				
Male	1,332	24.6	33.6	18.5
Female	2,387	21.3	36.9	20.4
Position				
Owner, Partner	110	13.6	8.3	7.4
Manager	975	22.6	38.8	20.8
Staff	2,505	22.1	36.3	20.2

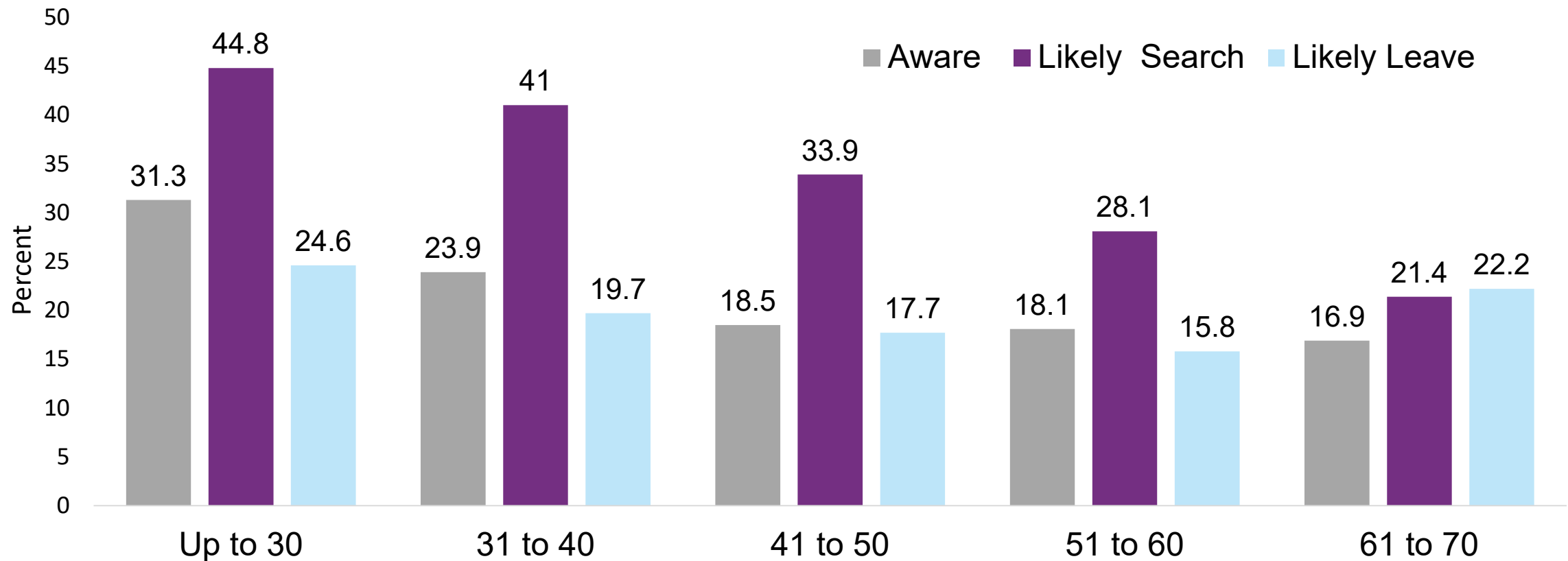
Job Mobility (by setting)

How likely is it that you will search/actually leave in the next year?



Job Prospects and Mobility (by age)

- I am aware of vacant openings that would be a good fit for me.
- How likely is it that you will search/actually leave in the next year?



Demand for Pharmacists

How would you rate the demand for generalist/staff pharmacists in your local practice area?

5 = High demand: open positions difficult to fill

4 = Moderate demand: some difficulty filling open positions

3 = Demand in balance with supply

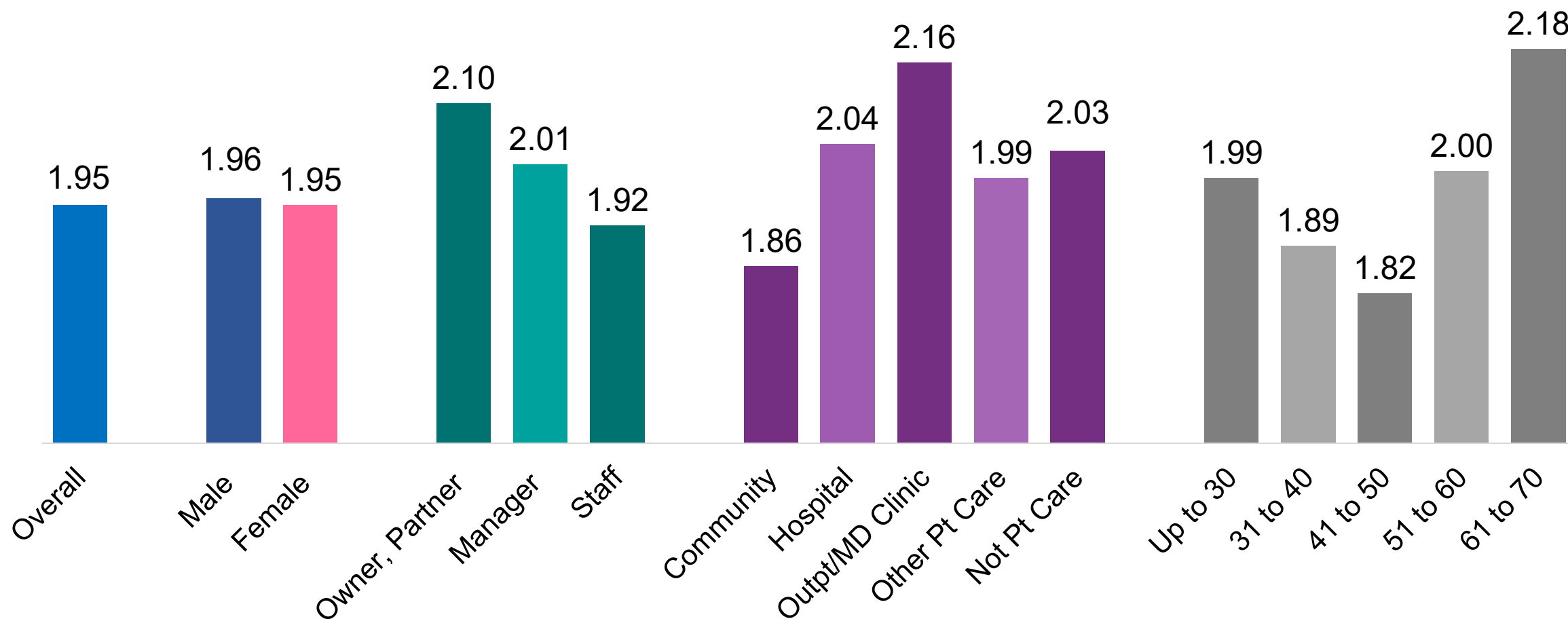
2 = Demand is less than the pharmacist supply available

1 = Demand is much less than the pharmacist supply available

Overall Average Rating: 1.95

Supply/demand balance rating scale used since 2000 to gather employer views in Pharmacy Workforce Center project.

Demand for Pharmacists



Closing Remarks/Conclusions

- Pharmacists recognize that the market is tightening with regard to opportunities and the demand for pharmacists.
 - There is awareness of diminished potential mobility and job security.
 - There is some likelihood to search for other employment, but less for actually leaving current employment.
 - Views on the market demand for pharmacists reveal perceptions that the supply is greater than demand.

Quality of Pharmacists' Work Life

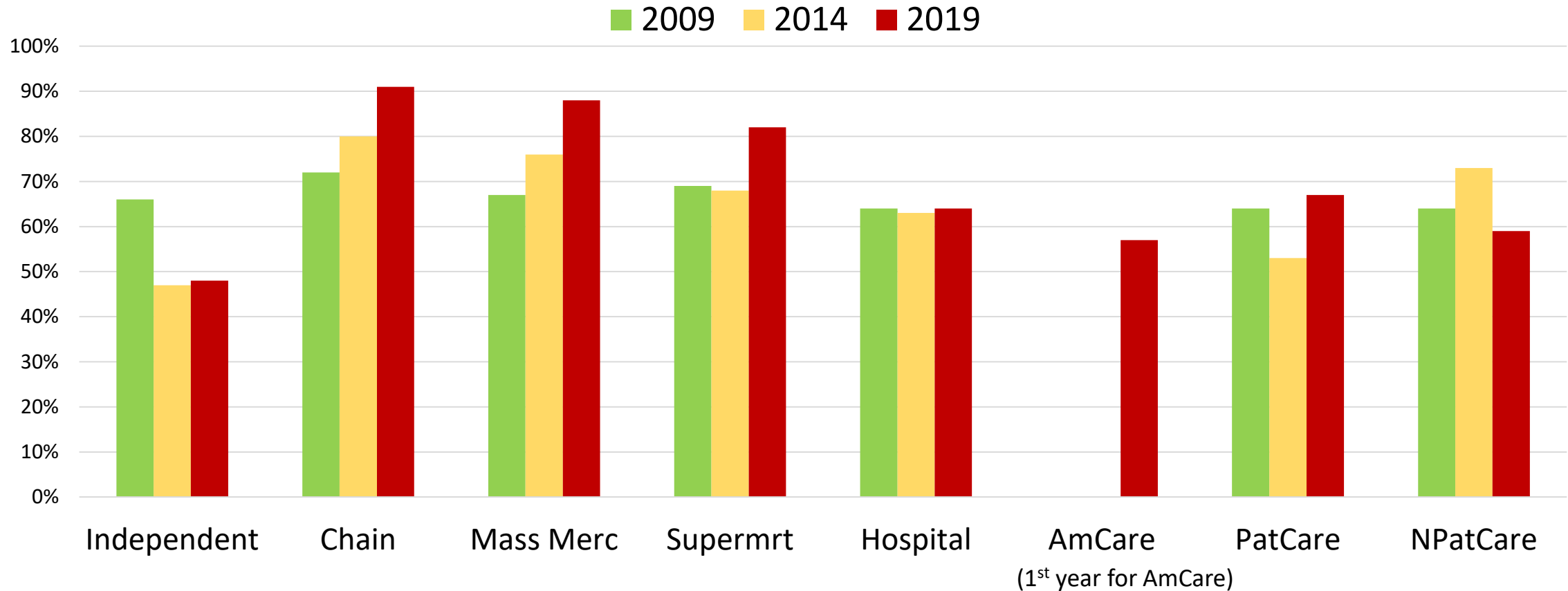
Caroline A. Gaither, PhD

University of Minnesota, College of Pharmacy

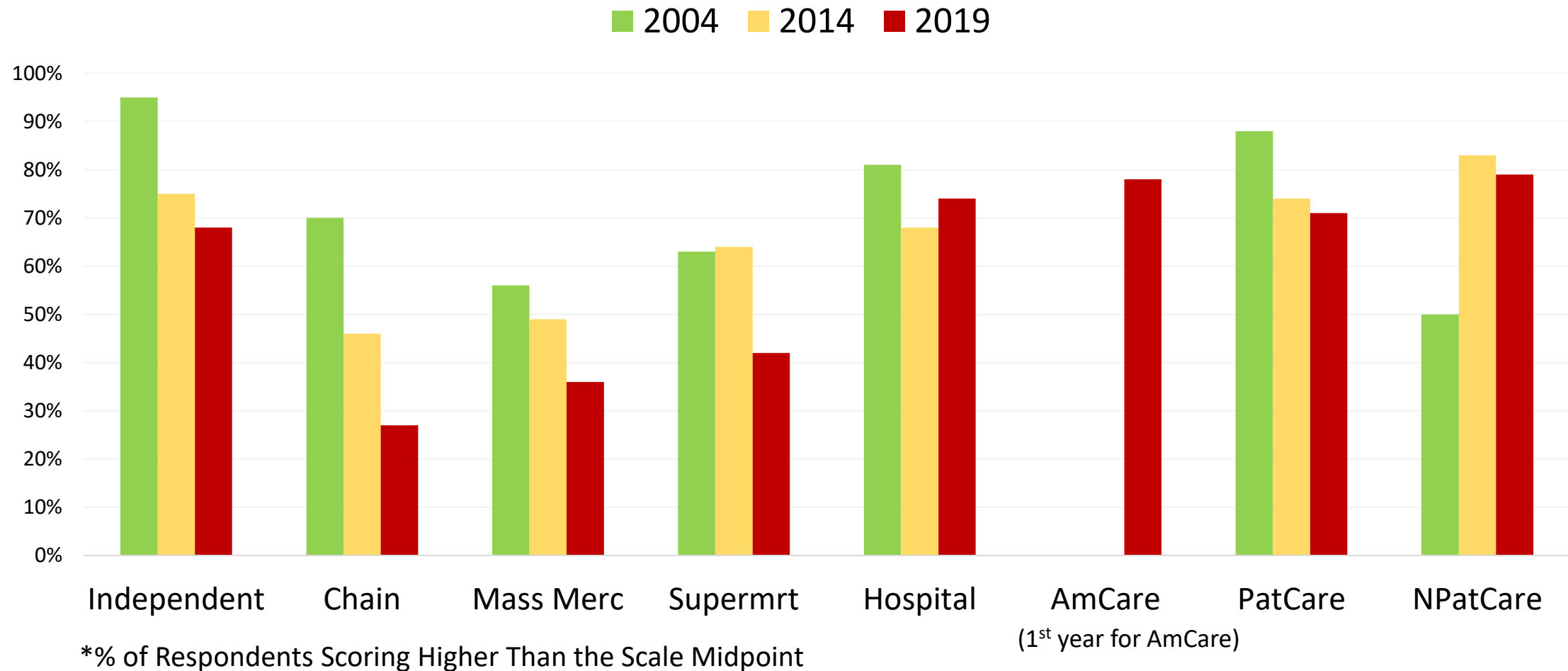
cgaithe@umn.edu

Ratings of Workload* by Practice Setting 2009, 2014 & 2019

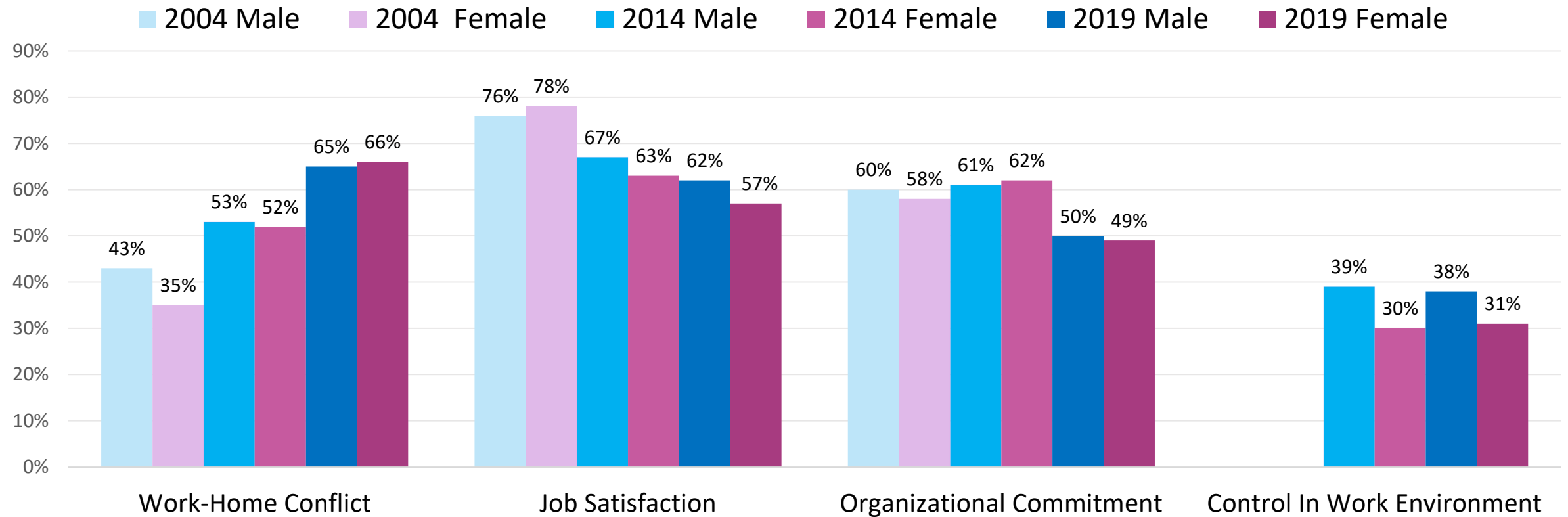
*% of Respondents Rating Workload High or Excessively High



Ratings of Job Satisfaction* by Practice Setting 2004, 2014 & 2019

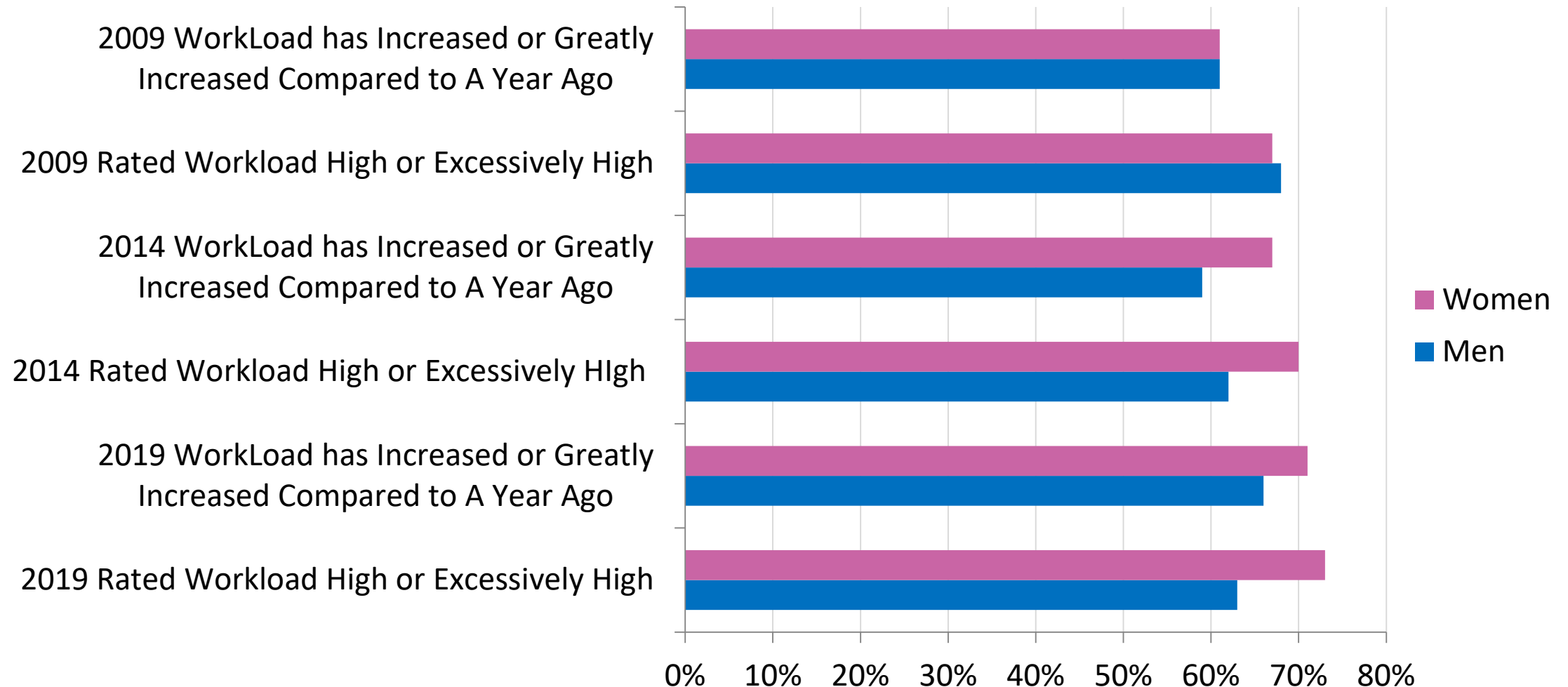


Quality of Work Life Variables* by Gender 2004, 2014, 2019

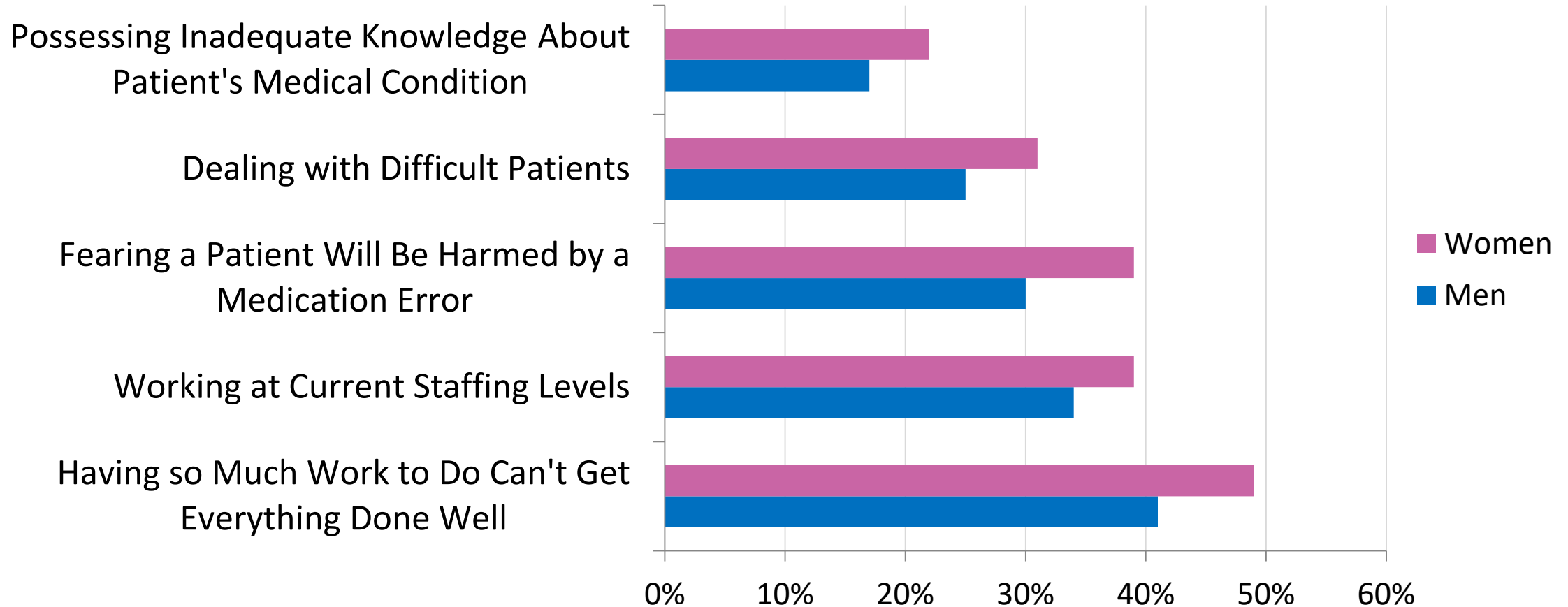


*% of Respondents scoring higher than item or scale midpoint

Ratings of Workload by Gender 2009, 2014 & 2019



Ratings of Highly Stressful Events by Gender 2019



Observations

- Pharmacists' perceptions of their workload continues to increase in a number of settings
- Now that females make up the majority of pharmacists, they are experiencing higher levels of stress, lower levels of control and more fear that a patient may be harmed from a medication error as compared to male pharmacists
- Both males and females are experiencing increased levels of work-home conflict and decreased levels of organizational commitment
- Action must be taken at all levels (societal, system, legal and organizational) to address these issues

Burnout and Fulfillment for Employed Pharmacists

Matthew Witry, PharmD, PhD
University of Iowa College of Pharmacy
matthew-witry@uiowa.edu

Professional Fulfillment Index

Trockel M, Bohman B, Lesure E, Hamidi MS, Welle D, Roberts L, Shanafelt T. A brief instrument to assess both burnout and professional fulfillment in physicians: reliability and validity, including correlation with self-reported medical errors, in a sample of resident and practicing physicians. *Academic Psychiatry*. 2018 Feb 1;42(1):11-24.

- 16 items originally developed for physicians
 - Work exhaustion
 - Interpersonal disengagement
 - Professional fulfillment
- Correlates to Maslach Burnout Inventory (MBI) domains
- Correlates to self-reported medical errors

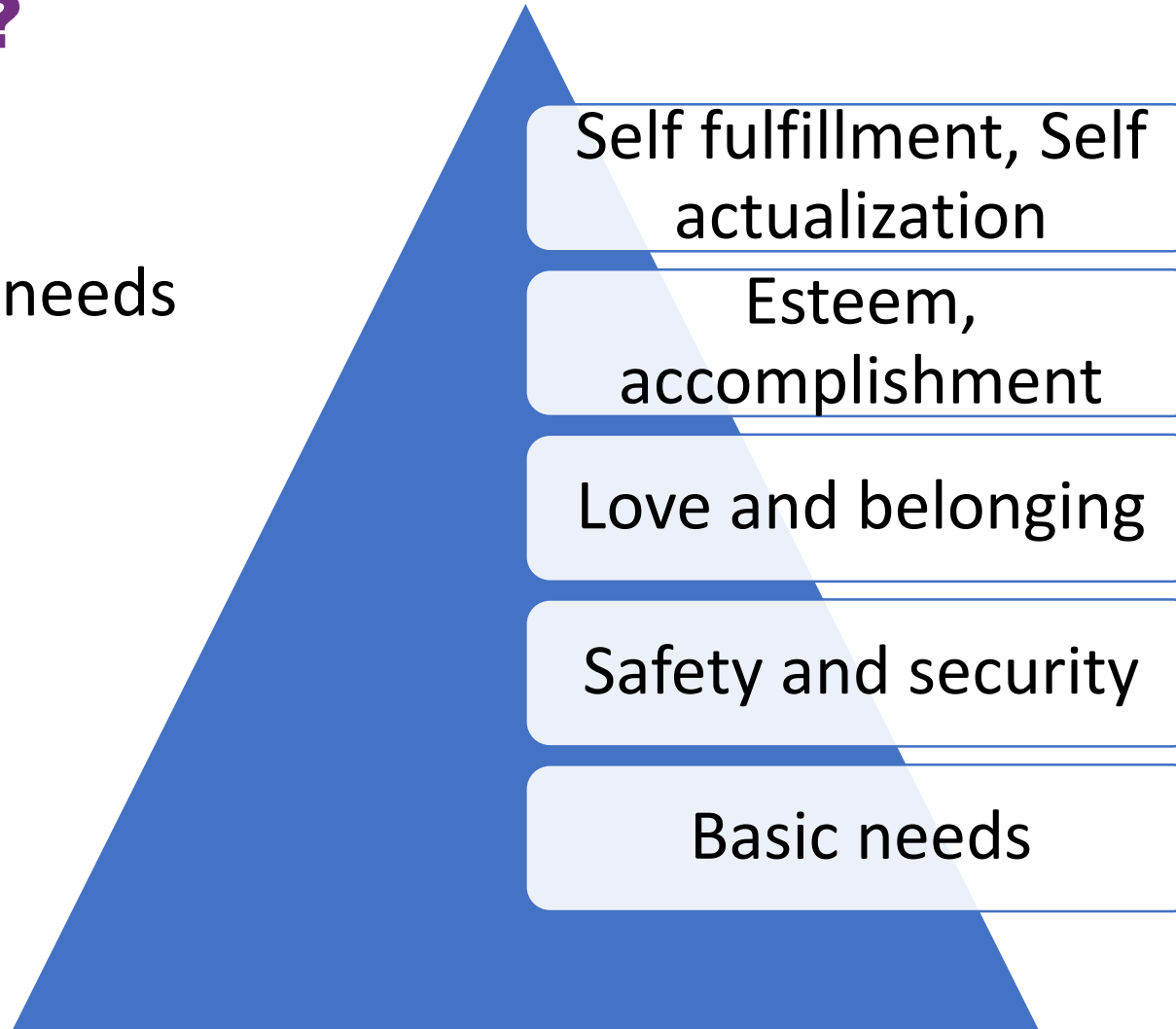
Scores on Professional Fulfillment Index

Mean by Setting	Work Exhaustion ^A	Interpersonal Disengagement ^A	Personal Fulfillment ^B
All Community	3.21	2.33	2.79
Ambulatory Care	2.54	1.99	3.36
Hospital	2.58	1.95	3.24
Other patient care	2.52	1.97	3.15
Not patient care	2.35	1.87	3.38
Overall	2.83	2.12	3.05

NOTE: All items rated on 5-point scales A: Lower is better B: Higher is better

Are pharmacists having their needs met at work?

Hierarchy of needs



Maslow AH. A theory of human motivation. Psychological review. 1943 Jul;50(4):370.

Physical and emotional needs of practicing pharmacists (selected)

Work Exhaustion (N % reporting feeling a lot or totally)	Independent N=398	Chain N=1,009	Mass Merchandiser N=380	Supermarket N=320	Hospital N=1,220	Total N=3,327
Physically exhausted at work	83 (20.9)	564 (55.9)	214 (56.3)	159 (49.7)	260 (21.3)	1,280 (38.5)
Emotionally exhausted at work	81 (20.4)	506 (50.1)	196 (51.6)	155 (48.4)	278 (22.8)	1,216 (36.5)

NOTE: All items rated on 5-point scales. Lower percent = Less exhaustion

Belonging needs of practicing pharmacists (selected)

Interpersonal Disengagement (N % reporting feeling a lot or totally)	Independent N=398	Chain N=1,009	Mass Merchandise N=380	Supermarket N=320	Hospital N=1,220	Total N=3,327
Less empathetic with my patients	16 (4.0)	134 (13.3)	46 (12.1)	29 (9.1)	50 (4.1)	275 (8.3)
Less empathetic with my colleagues	27 (6.8)	152 (15.1)	65 (17.1)	43 (13.4)	142 (11.6)	429 (12.9)

NOTE: All items rated on 5-point scales. Higher percent = Greater disengagement, disconnection

Fulfillment, autonomy, and accomplishment needs (selected)

Professional Fulfillment (N % reporting very true or completely true)	Independent N=398	Chain N=1,009	Mass Merchandiser N=380	Supermarket N=320	Hospital N=1,220	Total N=3,327
I feel in control when dealing with difficult problems at work	182 (45.7)	242 (24.0)	91 (23.9)	71 (22.2)	385 (31.6)	971 (29.2)
My work is meaningful to me	259 (65.1)	400 (39.6)	164 (43.2)	118 (36.9)	746 (61.1)	1,687 (50.7)
I'm contributing professionally in the ways I value most	224 (56.3)	267 (26.5)	96 (25.3)	79 (24.7)	579 (47.5)	1,245 (37.4)

NOTE: All items rated on 5-point scales. Higher percent = Greater fulfillment at work

Closing Remarks/Conclusions

Burnout in all domains was associated with greater likelihood to leave job $p<.001$

- ID $R=0.22$, WE $R=0.29$, PF $R=-0.31$

How and should larger pharmacies seek to boost fulfillment and lower exhaustion?

- Could there be confounding factors?

Interpersonal disengagement appears to be resilient, but could it be at risk?

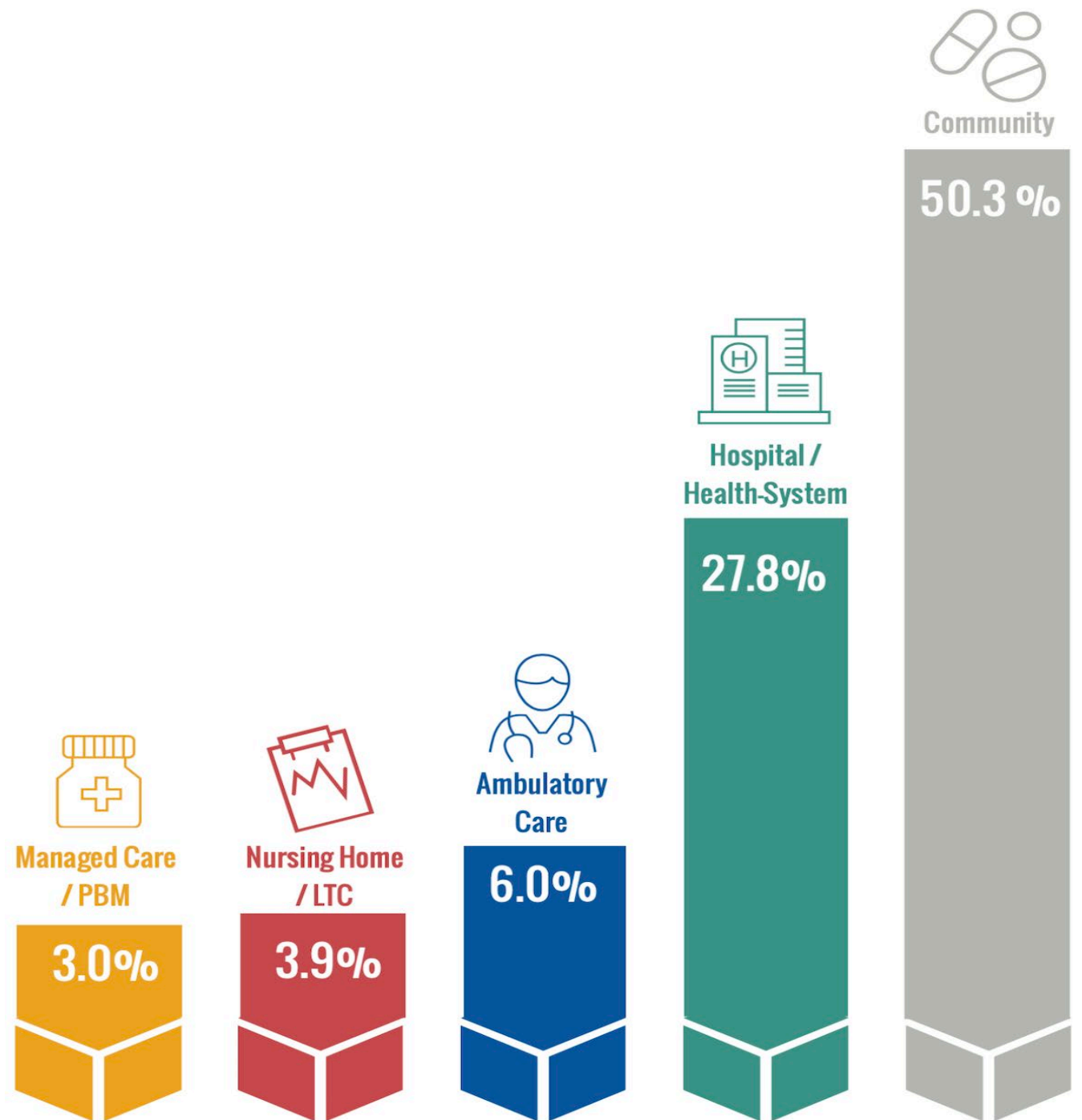
Ambulatory Care Pharmacy

Brianne K. Bakken, PharmD, MHA

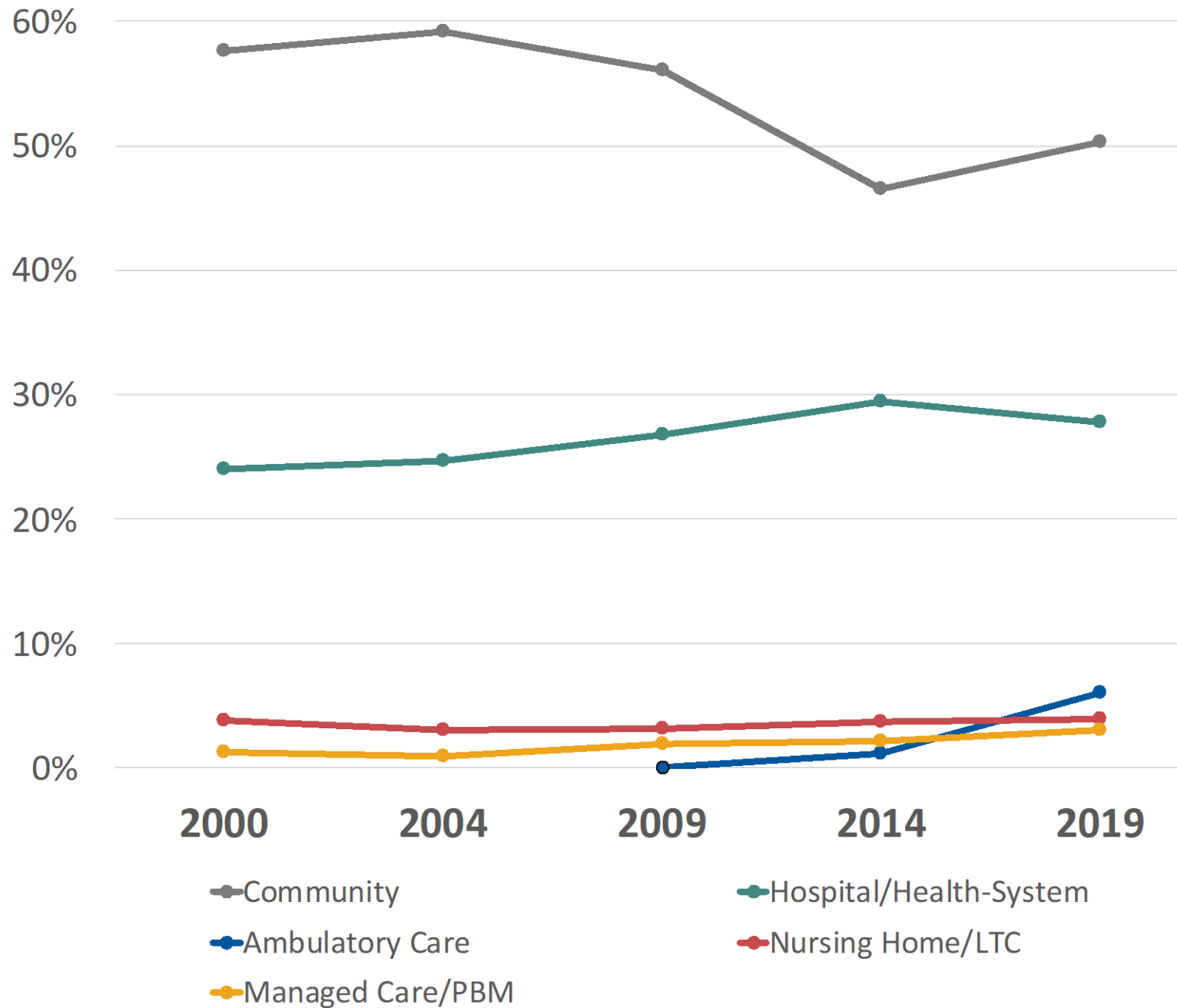
Medical College of Wisconsin School of Pharmacy

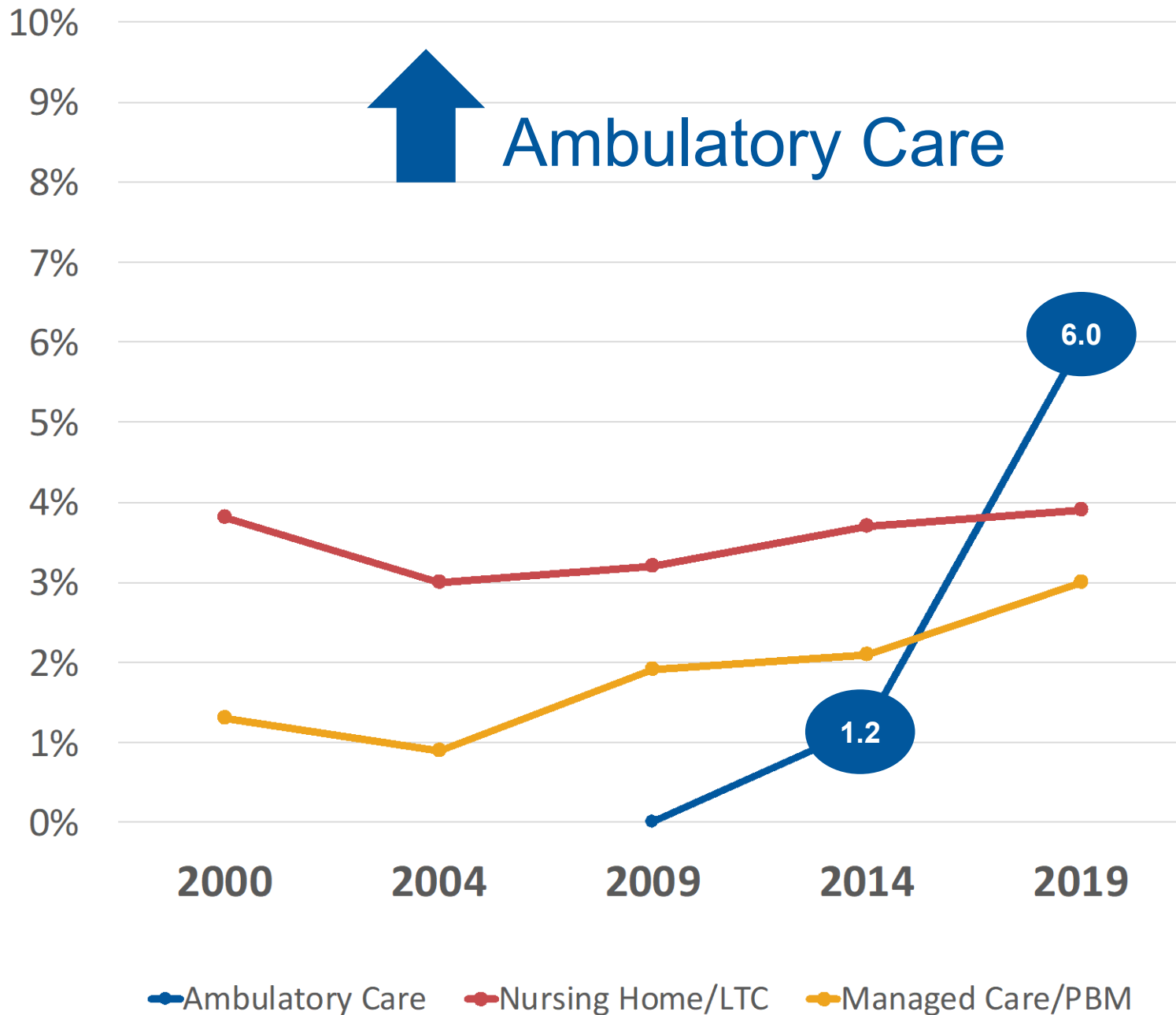
bbakken@mcw.edu

Pharmacist Practice Settings



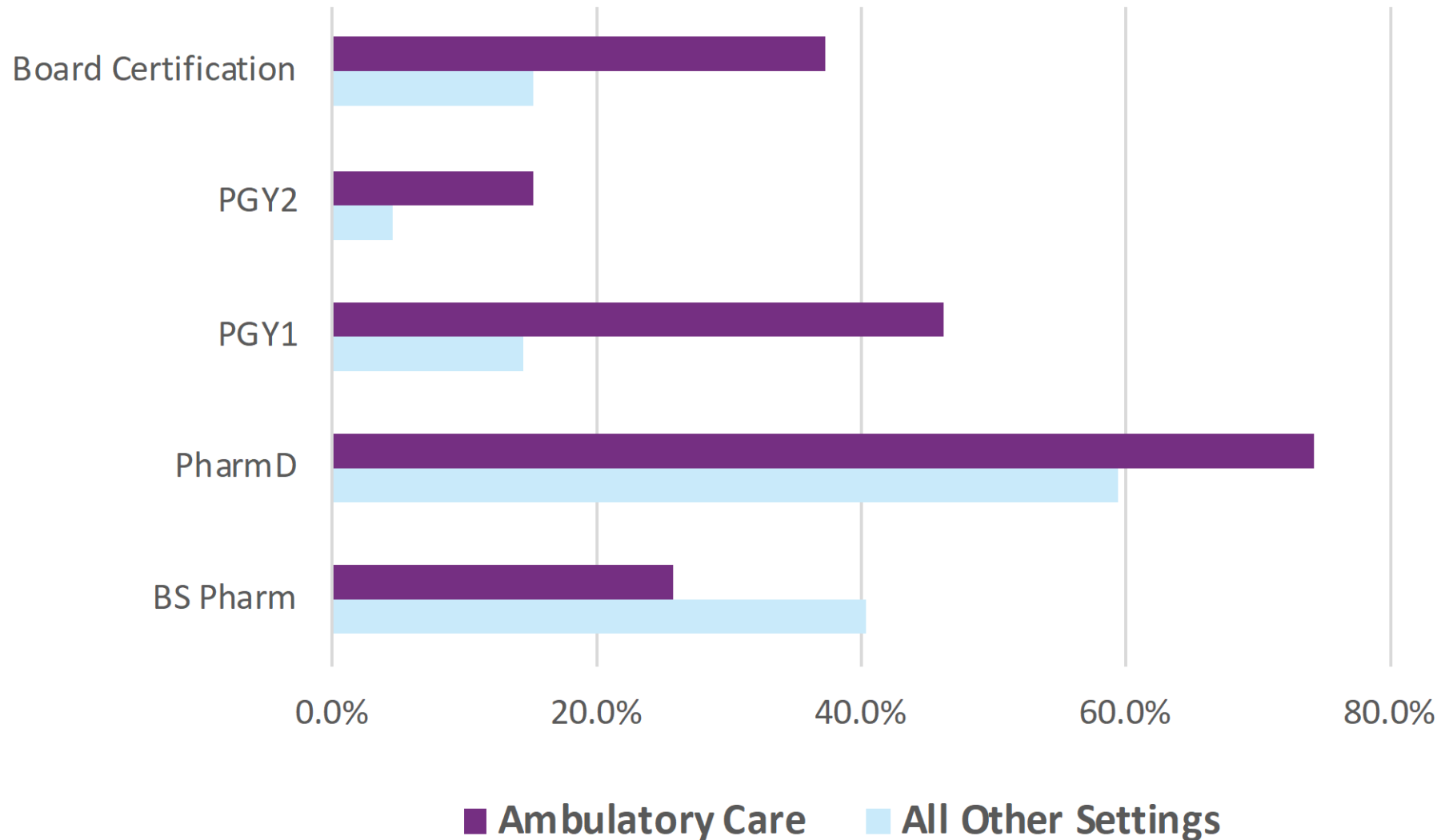
Practice Setting Changes 2000-2019





Practice Setting Changes 2000-2019

Education & Training



Year of First License

Year First License	Ambulatory Care	All Other Settings
Up to 1960	0.4%	0.1%
1961 to 1970	1.8%	1.2%
1971 to 1980	4.8%	7.9%
1981 to 1990	12.8%	16.7%
1991 to 2000	13.2%	18.0%
2001 to 2010	17.9%	15.6%
2011 to 2019	49.1%	40.5%

Year First License	Ambulatory Care	All Other Settings
Before 2000	33.0%	43.9%
2001 to 2019	67.0%	56.1%

Top 10 Ambulatory Care Clinic Specialty Areas

Clinic Specialty Area	N	%
Anticoagulation	76	14.4%
Endocrinology	69	13.0%
Hematology/Oncology	57	10.8%
Primary Care/General Medicine	57	10.8%
Cardiology	43	8.1%
Geriatrics	30	5.7%
HIV/AIDS	18	3.4%
Psychiatry/Mental Health	18	3.4%
Pain Management	17	3.2%
Infectious Diseases	16	3.0%

Clinical Activities	N	%
Medication education or counseling	216	13.1%
Medication reconciliation	170	10.3%
Start, modify, or stop drug therapy	153	9.3%
Therapeutic interchange	144	8.7%
Comprehensive medication management	134	8.1%
Disease state management	134	8.1%
Ordering laboratory tests	131	7.9%
Device education or training	128	7.8%
Drug level monitoring	118	7.1%
Patient medication assistance	116	7.0%

Top 10 Services Provided By Ambulatory Care Pharmacists

Ambulatory Care Patient Visits

How are you seeing patients?	N	%
Telephone calls	153	29.8%
Consulted during scheduled visit with provider	142	27.6%
Scheduled visits with the pharmacist	127	24.7%
Visit with patient on the inpatient unit/floor	69	13.4%
Telehealth visits	23	4.5%

How many patients are you seeing?	N
Average patient visits per day	17

Discrimination & Harassment

Brianne K. Bakken, PharmD, MHA

Medical College of Wisconsin School of Pharmacy

bbakken@mcw.edu

Background

- In 2018, the United States Equal Employment Opportunity Commission (EEOC) filed charges on behalf of:
 - 76,418 individuals for discrimination
 - 26,699 individuals for harassment
- According to the PEW Research Center, 42% of women and 22% of men have experienced some form of harassment at work
- No studies on discrimination and only two studies conducted in Illinois and Ohio on harassment could be identified in the recent US pharmacy literature
- These studies indicated that female pharmacists experienced harassment to a greater extent than males, and pharmacists were not quite sure what to do when it happened

Definitions

Discrimination – Unfair treatment related to employment because of race, color, religion, sex (including pregnancy, gender identity, and sexual orientation), national origin, disability, age (age 40 or older), or genetic information

Sexual Harassment – Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when this conduct explicitly or implicitly affects an individual's employment, unreasonably interferes with an individual's work performance, or creates an intimidating, hostile, or offensive work environment

Most Common Basis/Type

Discrimination Basis

	Total
Age	882 (31.3)
Gender	823 (29.2)
Race or Ethnicity	467 (16.6)
Marital Status	160 (5.7)
Religion	135 (4.8)
Other*	353 (12.5)
Total (All Forms)	2,820

Number (% of Column)

Type of Harassment

	Total
Hearing demeaning comments related to race/ethnicity	Yes 728 (15.7)
Hearing or observing offensive behavior of a sexual nature	Yes 634 (13.7)
Hearing demeaning comments related to gender identity	Yes 620 (13.4)
Unwanted advances of a sexual nature	Yes 240 (5.2)
Unwanted touching of a sexual nature	Yes 89 (1.9)

Number (% of Column)

Discrimination Reporting



84.1% Did NOT report discrimination to employer

15.9% Reported discrimination to employer



56.1% were “Very Unsatisfied” with the results of reporting

Harassment Reporting



82.8% Did NOT report harassment to employer

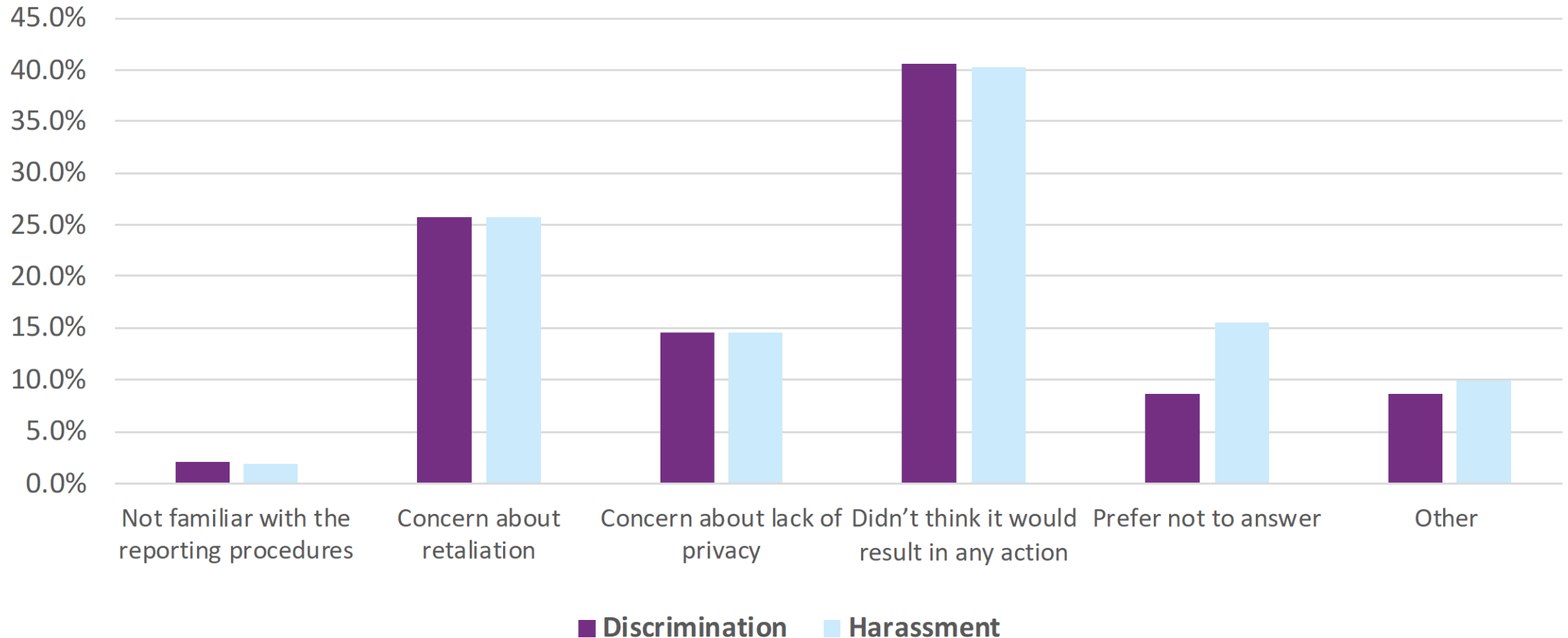
17.2% Reported harassment to employer



45.8% were “Very Unsatisfied” with the results of reporting

Reasons For Not Reporting

Reasons For Not Reporting Discrimination / Harassment



Satisfaction With Reporting

Satisfaction With Results of Reporting Discrimination / Harassment



Conclusions

- With shifting demographics of pharmacy (more younger females and older males, slightly more racial/ethnic diversity), it is imperative that we address issues of discrimination and harassment
- Education concerning the specific behaviors that constitute discrimination and harassment must be provided by pharmacy schools, continuing education and employers
- Employers must have and enforce mechanisms that hold offenders accountable for their behavior and communicate processes to employees
- Pharmacists can and should report incidents to their human resources office and/or local, state and federal agencies charged with investigation of these issues

Naloxone in the Community Pharmacy Setting

Vibhuti Arya, PharmD, MPH

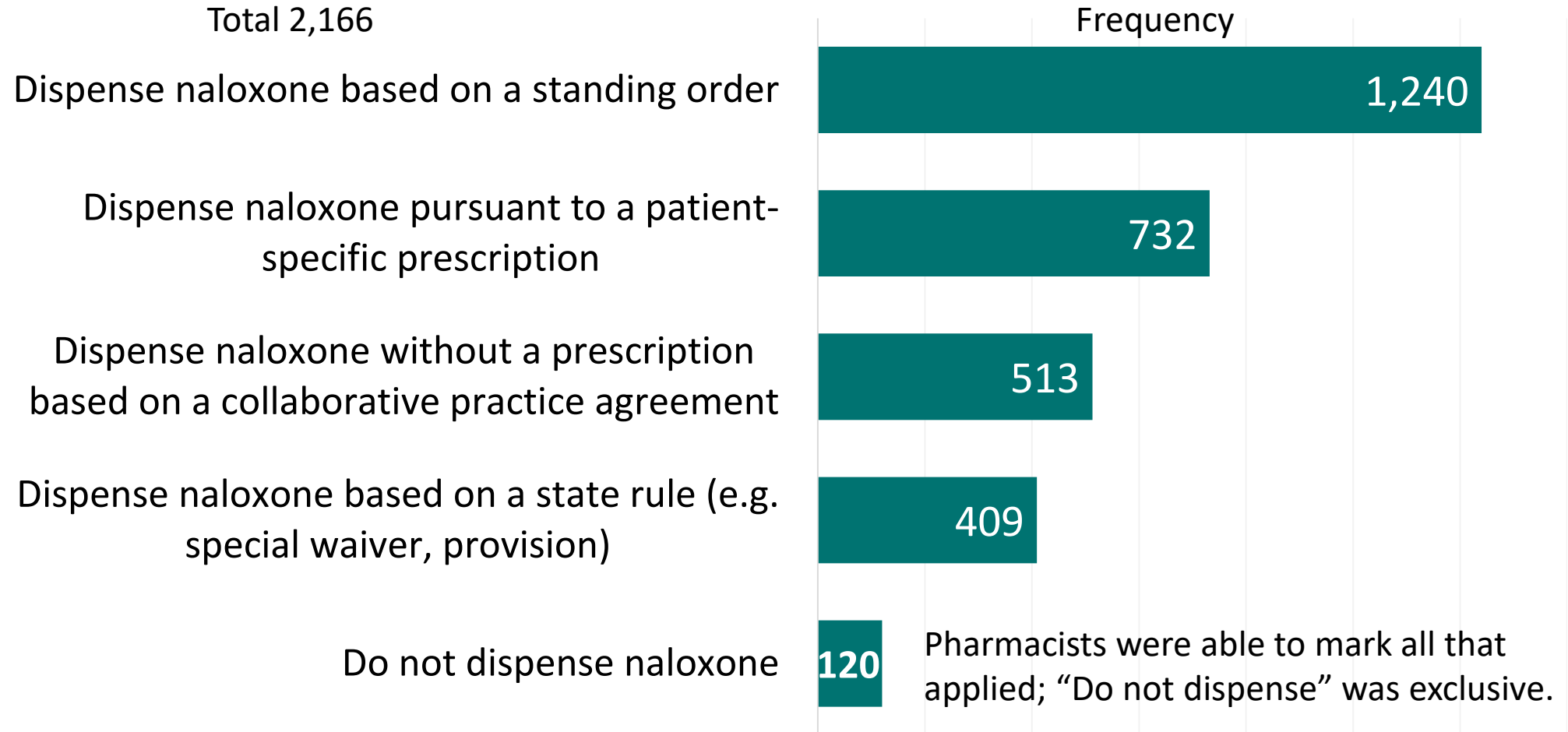
St. John's University

aryav@stjohns.edu

Naloxone Dispensing

- Among one of the activities reported by majority of practicing community pharmacists
 - Vaccines (90.0%)
 - Patient medication assistance (83.4%)
 - **Dispensing naloxone (72.2%)**
 - MTM services (66.7%)
 - Medication synchronization (66.5%)

Naloxone Dispensing Activities

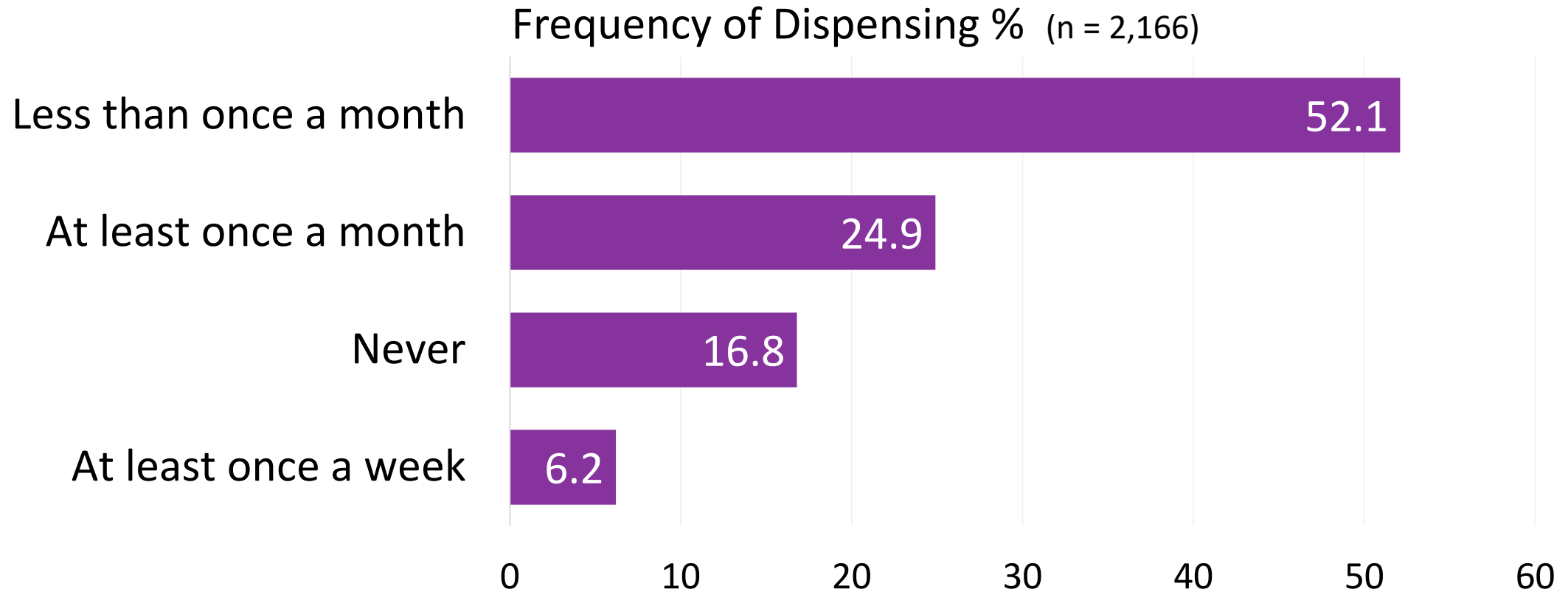


Naloxone Dispensing by Setting

Naloxone Dispensing Activities	Independent n=401	Small Chain n = 63	Large Chain n = 944	Mass Merchandiser n = 381	Supermarket n = 321	Health System Retail n = 56	Total n = 2166
(% Yes)							
Dispense naloxone without a prescription based on a collaborative practice agreement	12.5	14.3	30.1	22.3	23.4	17.9	23.7
Dispense naloxone based on a standing order	27.9	36.5	63.3	76.6	57.9	51.8	57.2
Dispense naloxone based on a state rule (e.g. special waiver, provision)	27.2	22.2	18.9	12.3	16.8	12.5	18.9
Dispense naloxone pursuant to a patient-specific prescription	44.4	44.4	29.8	24.4	37.7	55.4	33.8
Do not dispense naloxone*	18.0	17.5	2.1	1.6	2.8	3.6	5.5

*Pharmacists were able to mark all that applied; “Do not dispense” was exclusive.

Naloxone Dispensing Frequencies

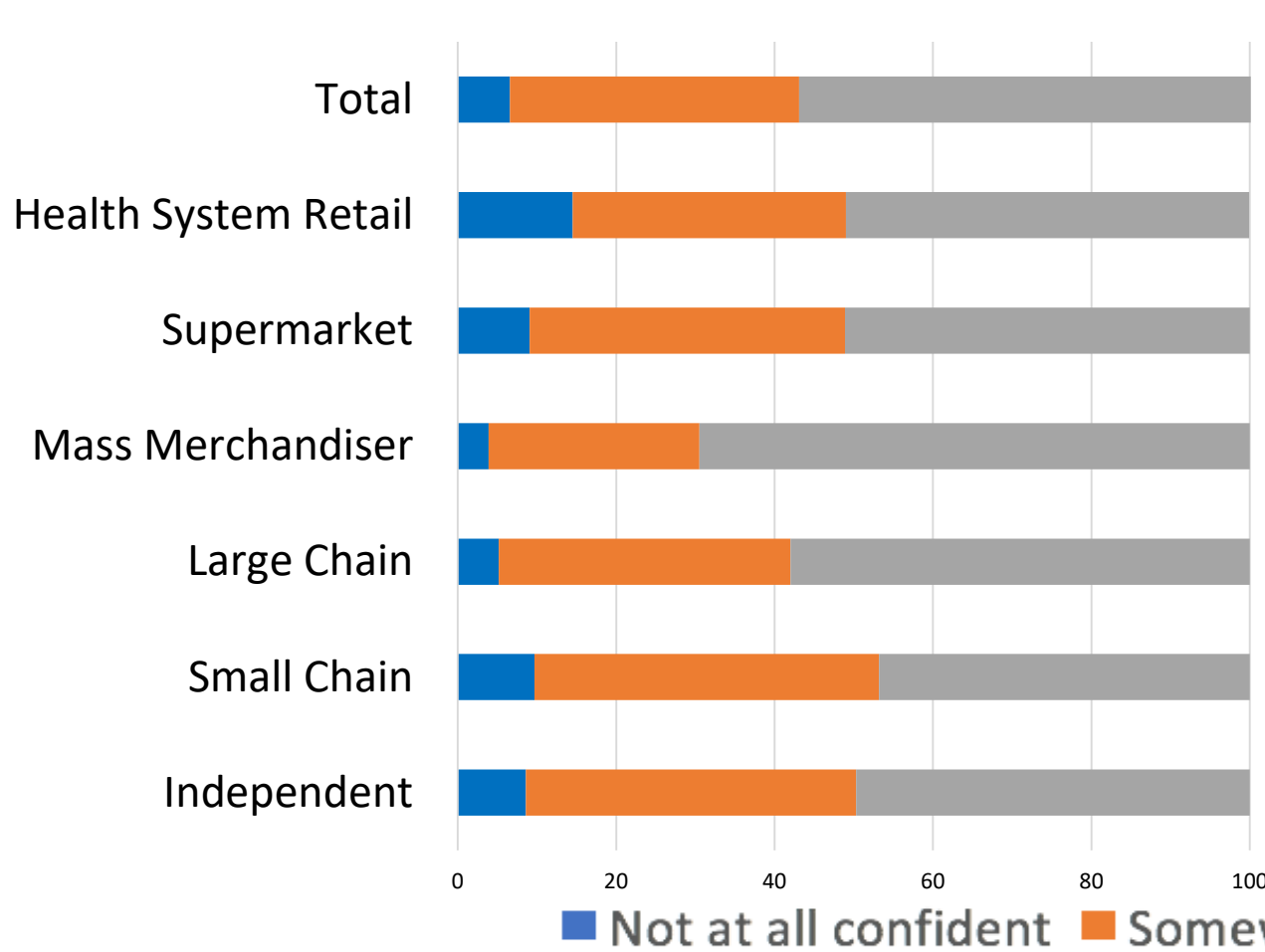


Naloxone Attitudes

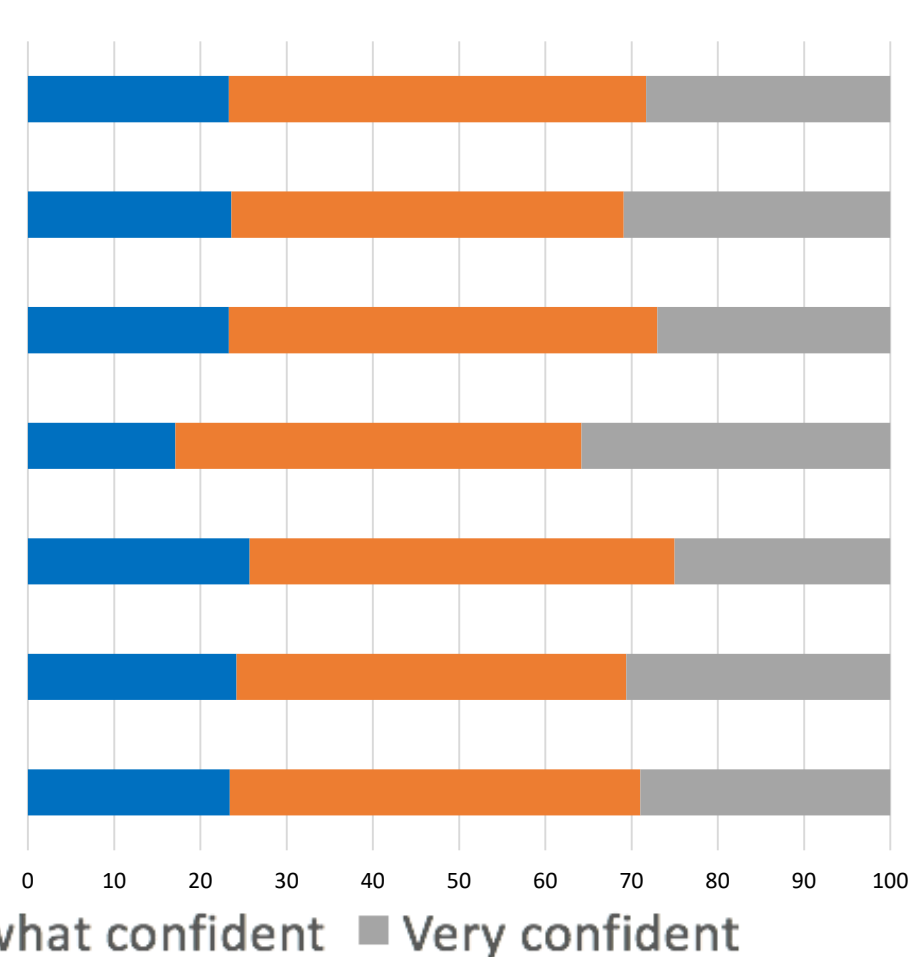
Support level for pharmacists or pharmacies dispensing naloxone without a prescription n = 2166	Overall n (%)
Strong support	1,198 (55.8)
Some support	438 (20.4)
Mixed	399 (18.6)
Some against	51 (2.4)
Strong against	62 (2.9)

Naloxone Confidence Ratings

RECOMMENDING Naloxone



ADMINISTERING Naloxone



Observations

- Variable naloxone activity among pharmacists in general
- Some pharmacists need to use their judgment to recommend naloxone to patients, along with co-prescribing
- Administration of naloxone – More pharmacist training needed
- Pharmacists' roles in public health are expanding

Appreciation for Participation

- Thank you to all pharmacists who participated in the 2019 National Pharmacist Workforce Study
- We depend on your involvement to be able to learn about pharmacy practice and your experiences at work

THANK YOU

Final Questions



Research Team



William R. Doucette, PhD
Professor
University of Iowa
william-doucette@uiowa.edu



Matthew Witry, PharmD, PhD
Assistant Professor
University of Iowa
matthew-witry@uiowa.edu



Caroline A. Gaither, PhD
Professor
University of Minnesota
cgaither@umn.edu



Jon C. Schommer, MS, PhD
Professor
University of Minnesota
schom010@umn.edu



David H. Kreling, PhD
Professor Emeritus
University of Wisconsin
david.kreling@wisc.edu



David A. Mott, PhD
Professor
University of Wisconsin
david.mott@wisc.edu



Brianne Bakken, PharmD, MHA
Assistant Professor
Medical College of Wisconsin
bbakken@mcw.edu



Vibhuti Arya, PharmD, MPH
Associate Professor
St. John's University
aryav@stjohns.edu

