

Pharmacy Workforce Center (PWC) Update

Elizabeth A. Cardello, BS Pharm.
PWC President

David H. Kreling, Ph.D.
Pharmacist Demand Indicator Principal Investigator

JCPP Quarterly Meeting: November 29, 2016



Presentation Elements

- Overview of the Pharmacy Workforce Center (PWC)
- PWC Funded Projects
 - National Pharmacist Workforce Surveys
 - National Pharmacy Technician Workforce Study
 - Pharmacy Demand Indicator (formerly the Pharmacy Aggregate Demand Index [ADI])
- A Call to Action for JCPP

Mission of PWC

To serve the pharmacy profession and the public by actively researching, analyzing, and monitoring the size, demography and activities of the pharmacy workforce

PWC Board of Directors

- American Association of Colleges of Pharmacy (AACCP)
- American College of Clinical Pharmacy (ACCP)
- American Pharmacists Association (APhA)
- American Society of Health-System Pharmacists (ASHP)
- Board of Pharmacy Specialties (BPS)
- Hematology Oncology Pharmacy Association (HOPA)

- National Alliance of State Pharmacy Associations (NASPA)
- National Association of Chain Drug Stores (NACDS) Foundation
- National Community Pharmacists Association (NCPA)
- Pharmacy Technician Certification Board (PTCB)

Observer Organizations

- Bureau of Health Workforce (BHW)
- National Association of Boards of Pharmacy (NABP)

Pharmacy Manpower Project (PMP)

1989

- Initial purpose was to examine and report on the supply of pharmacists in the United States
- Purpose expanded to the related issue of the changing demand for pharmacists as they assumed patient care roles

1990-2000

- Katherine Knapp spent several months during the 1996-97 academic year as a resident scholar on pharmacy workforce issues
- Pharmacy Aggregated Demand Index was initiated by K. Knapp (2000)
- Funding of the first National Pharmacist Workforce Study (2000)
- Contributed to the HHS report *The Pharmacist Workforce: A Study of the Supply and Demand for Pharmacists* (2000)

2001-2010

- Funding of the conference and subsequent report "Professionally Determined Need for Pharmacy Services in 2020" (2001)
- PWC member organizations contributed to the HRSA-sponsored *Tenth Report on Health Personnel in the U.S.: 2000-2015* (2001-02)
- Contributed to the HHS report *The Adequacy of Pharmacists Supply: 2004-2030* (2008)
- Pharmacy ADI reporting enhanced
- National Pharmacist Workforce Study (2004, 2009)



5

Pharmacy Workforce Center (PWC)

2011

- Name change to PWC to align with the National Center for Health Workforce Analysis and the National Health Workforce Commission
- Convened stakeholders to identify a minimum data set of core demographic and practice pattern questions for pharmacy in response to HRSA Health Professions Minimum Data Set

2012-2016

- Established a Memorandum of Understanding (MOU) with NABP to obtain pharmacist aggregate data (2014)
- National Pharmacist Workforce Survey (2014)
- Retirement of Katherine Knapp, original PI of Pharmacy ADI (2014)
- National Pharmacy Technician Workforce Survey (2015)

Beyond 2016

- National Pharmacist Workforce Survey (2019)
- Pharmacist Demand Index (PDI)
- ???



6

Workforce Research Datasets

- Pharmacy Workforce Center
 - Aggregate Demand Index (now the Pharmacist Demand Indicator)
 - National Pharmacists Workforce Survey
 - National Technician Workforce Study
- Bureau of Labor Statistics
 - Employment data
 - Unemployment data
- AACP
 - Graduates
 - National (annual)
 - State (annual)
- IMS Health (courtesy of NACDS Foundation)
 - Prescription drug growth rates (annual)

PWC NPWS Project Coordinators



2000 – Craig Pedersen,
The Ohio State University,
Project Coordinator



2004 – Dave Mott,
University of Wisconsin- Madison,
Project Coordinator



2009 – Jon Schommer,
University of Minnesota,
Project Coordinator



2014 – Caroline Gaither,
University of Minnesota,
Project Coordinator



MPWC: Gaither, Schommer, Mott, Keeling, Doucette

7



National Pharmacist Workforce Surveys: 2000 – 2014

9

History of the National Pharmacist Workforce Surveys

- Due to predicted shortages and unprecedented demand for pharmacists, researchers from 5 Universities were contacted by the Pharmacy Manpower Project, Inc.,* to conduct a national survey of pharmacists
- The purpose of the survey was to collect reliable information on demographic and practice characteristics of the pharmacist workforce

* Name changed to PWC in May 2011

10

Overall Methods of the NPWS

- Cross-sectional, descriptive survey design
- Survey instrument (4 – 11 pages) mailed to the home addresses of licensed pharmacists
- Sampling frame obtained from a national medical marketing data warehouse
- Random samples of 3,000-5,200 pharmacists were drawn
- Each subject contacted up to five times
- Responses rates: 46% (2000), 44% (2004), 52% (2009) and 48% (2014)

11

National Pharmacist Workforce Surveys Methods and Questionnaires

2000 - 2004
5,000 pharmacists received an - 11-page questionnaire:
- Employment status
- Workload
- Work activities
- Quality of work life
- Work history
- Response rate: 46%

2004 - 2009
Five groups of 1,000 pharmacists randomly received a core questionnaire and/or one of three supplemental questionnaires:
- Workplace characteristics: use of technology, services offered, resources available
- Career history: past jobs, work history
- Quality of work-life: job satisfaction, job stress, amount of control and what you in a value in a job
- Response rate: 44%

2009 - 2014
5,200 pharmacists received an 11-page questionnaire
Biggest changes:
- Monitoring patient outcomes and safety
- Participation in ACA activities
- Ease of finding a different job
- Quality of work life
- Response rate: 48%

National Pharmacist Workforce Surveys Historical Context

2000 - 2004

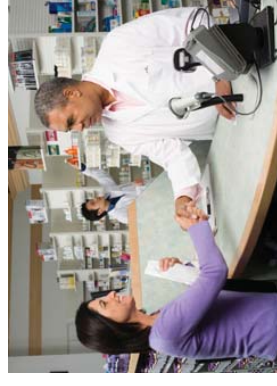
Prescription volume increased while the number of pharmacists remained relatively stable
 Increase in the number of pharmacy schools and graduates
 Increased use of dispensing technology and technician; pharmacist ratios
 Continued call for pharmacists to be involved in direct patient care

2004 - 2009

Continued expansion of pharmacists' roles
 Increased efficiencies in medication distribution
 Documented shortage of pharmacists in the United States
 Continued growth in the number of pharmacy school graduates
 An economic recession which persisted throughout the time the study was conducted

2009 - 2014

Continued growth in the number of pharmacy school graduates
 Passage of the Patient Protection and Affordable Care Act of 2010
 Increased opportunities for team-based care and participation in medical homes
 "Greying" of the population
 Other occupations moving into the health care arena
 Reduction in the ADI



14

2015 National Pharmacy Technician Workforce Study

Background and Rationale

- Recent Evolutions in Pharmacy Practice and the Role of the Pharmacist
- Evolution in the profession would suggest that the roles and preparation of pharmacy support personnel have shifted
- There have been calls for the study and advancement of the professional careers of pharmacy technicians for over a decade
- Pharmacy technician research is limited

15

Study Methods

- Qualitative Phase
 - Purpose: to inform subject areas for the quantitative phase and provide richness of information about CPHT quality of work life not described previously in the literature
 - Semi-structured, in-depth interviews using a convenience sample
 - \$20 gift cards for participants
- Quantitative Phase
 - Questionnaire Survey (Online)
 - Pilot Testing
 - Convenience sample
 - Survey
 - 5,000 email addresses acquired from PTCB
 - Modified Dillman Survey Method

16

Qualitative (Semi-structured, in-depth Interviews)

Career Impetus

- Began in another job in a pharmacy or health care organization
- Pharmacists and peers were effective at recruiting technicians into this career
- Technicians came from varied backgrounds
- Many were uninspired in their past career and sought a profession where one could help other people

Job Responsibilities

- View themselves as the "Face" of the pharmacy
- Assisting the pharmacist to provide the best care possible for patients
- Completing paperwork and talking to various stakeholders on the phone
- There are very few responsibilities/functions that technicians view they do not carry out, and they stay busy most of the time

Quality of Work Life

- Patients were reported to often be the biggest source of stress and satisfaction for technicians
- Technicians indicated short-staffed pharmacies as being stressful
- Variability in each day was a source of satisfaction for technicians

Equitable Partnership

- Technicians reported that they would like to remain in their jobs but would like to see creative ways to incent them into higher positions and wages
- Technicians reported that some peers do not carry their weight
- Many technicians saw their work as a partnership between them and their employer

17

Findings with Regard to Practice Setting

- In Community Pharmacy:
 - CPhTs more involved in patient counseling reported higher stress
 - CPhTs involved in the use of technology reported higher profession commitment
- In Hospital/Health-systems Pharmacy:
 - Higher stress was reported by those CPhTs involved in compounding chemotherapeutic agents and in criteria-based screening of medication records
 - Lower stress reported by those involved in purchasing activities
 - CPhTs with higher involvement in floor stock maintenance, inventory management, controlled substance management, billing activities, and repackaging reported higher levels of profession commitment

18

Quantitative Analyses

- Higher commitment (profession & employer) reported by those working more hours/week
- Females reported higher levels of employer and especially profession commitment
- Higher profession commitment reported by those who became a technician through recommendation of a friend or due to a desire to help people
- Satisfaction highly correlated with employer & profession commitment and highly inversely correlated with stress
- Stress levels are inversely correlated with employer and profession commitment
- Strong associations/correlations between perceived utility of education/training modality with satisfaction, stress, and commitment.

19

Pharmacy Aggregate Demand Index (ADI)

Aggregate Demand Index

Supported by Pharmacy Workforce Center Inc.

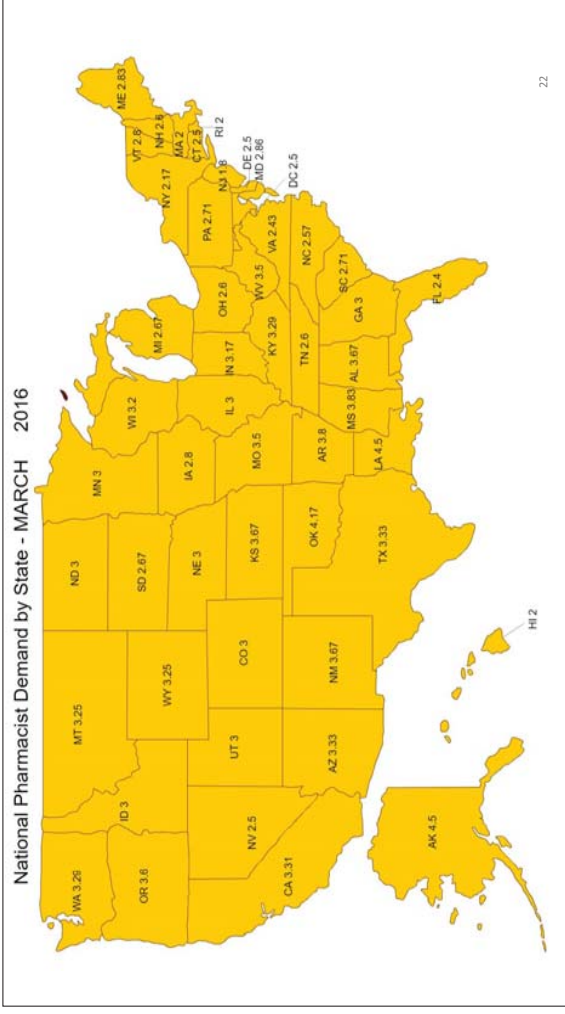


20

Pharmacy Aggregate Demand Index (ADI)

- Began in 2000 (updated monthly)
- Derived from a panel of pharmacist employers
- Addresses “How difficult is it to fill open pharmacy positions?”
- Demand Categories
 - 5 = High demand: difficult to fill open positions
 - 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
- National Average (March 2016): 2.94

21

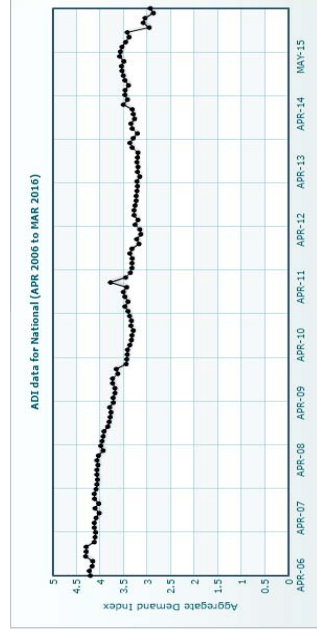


22

Pharmacy Aggregate Demand Index Strengths

- Panelists represent the major geographic and practice sectors of pharmacy practice
- Identities of panelists is confidential
- Consistent methods provide longitudinal data
- State level information is available, plus aggregation for Regions
- Panelists are not compensated for participation

24



23

Pharmacy Aggregate Demand Index Challenges

- Panelists report data based on their perspectives of the demand and supply of pharmacists in the state(s)/area(s) where they employ pharmacists
- ADI reflects the views of employers and is an indicator of the demand and supply of pharmacists
- ADI is not an objective gauge or quantification of demand
- Recruitment and retention of panelists

25

Pharmacy Aggregate Demand Index Challenges

- Panelists report data based on their perspectives of the demand and supply of pharmacists in the state(s)/area(s) where they employ pharmacists
- ADI reflects the views of employers and is an indicator of the demand and supply of pharmacists
- ADI is not an objective gauge or quantification of demand
- Recruitment and retention of panelists

25

Aggregate
Demand Index
(ADI)



Pharmacist
Demand
Indicator (PDI)

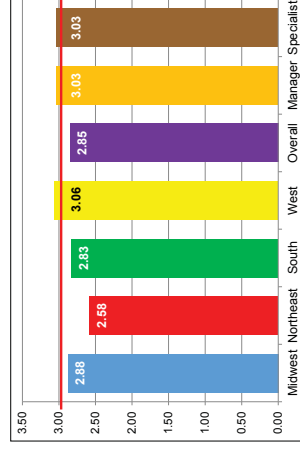
26

Pharmacist Demand Indicator (PDI)

- PDI Contract with Midwest Pharmacy Workforce Research Consortium in July 2015
 - New PI recommended several changes in early 2016
- Focused recruitment of new panelists
- New changes to the PDI became effective September 2016
 - Enhancement of data collected from panelists
 - Evolution from manual reporting of data to electronic reporting of data
 - Transition from monthly reporting to quarterly reporting

27

Pharmacist Demand Indicator (PDI)



PDI averages weighted by number of panelist responses.

Source: Preliminary PDI Data for September 2016

28

Pharmacist Demand Indicator (PDI) Indicator Ratings – September 2016

	Staff/Generalist	Manager	Specialist
Midwest	2.88	3.13	2.86
Northeast	2.58	2.90	2.90
South	2.83	2.95	3.05
West	3.06	3.13	3.27
Overall	2.85	3.03	3.03

PDI averages weighted by number of panelist responses.

Source: Preliminary PDI Data for September 2016

29

Pharmacist Demand Indicator (PDI) Continuing Work/Progress

- Web site transition
- Objective measures & observations
- Increased granularity – “Heat maps”
- Open enrollment

30

A Call to Action for JCPP

- Consider joining the Pharmacy Workforce Center (PWC)
- Share PWC-funded work and priorities to your members and other stakeholders
- Refer potential panelists to the PDI Principal Investigator
- Provide introductions to other organizations and agencies interested in pharmacy and other health-related workforce issues
- Disseminate ideas for current and future pharmacy-related workforce priorities and projects

31

Q&A



32

Liz Cardello, R.Ph.

PWC President

ecardello@aphanet.org

David Kreling, R.Ph., Ph.D.

Pharmacist Demand Indicator PI

david.kreling@wisc.edu

