Manpower (Personnel) in Pharmacy

Holly L. Mason, Ph.D., R.Ph.
PHRM 831
Objectives for lecture:

1. **Define** the following terms: pharmacist, reciprocity, practicing pharmacist, and non-practitioners.

2. **Explain** the **four** requirements that must be met in order to be licensed as a pharmacist.
Objectives:

3. **Describe** the percentage distribution of pharmacists among the major practice settings.
4. Identify and explain the factors that favor an oversupply or undersupply of pharmacists for the future.

5. Describe trends in beginning salaries for pharmacists and the problem of “salary compression”.

Objectives:
Define operational terms

- Pharmacist—Graduate of a U.S. or foreign school of pharmacy with a professional degree (B.S. Pharmacy or Pharm.D.)

- Can be a pharmacist without being eligible to practice
Define operational terms

- To be Eligible to Practice Pharmacy –
  - You must be licensed by a State Board (licensed or registered pharmacists = R.Ph.)
Explain the **four requirements** to be met to be licensed.

1. Graduate from a U.S. accredited school or college of pharmacy or qualify through the **Foreign Pharmacy Graduate Equivalency Exam (FPGEE) Process**

2. Complete a practical experience requirement (varies by state, typically 1500 hours—Purdue includes in curriculum)
North American Pharmacy Licensing Exam (NAPLEX) – Purdue 90–100% (94% in 2017—Natl. 88%)

Federal Law Exam (MPJE) – Purdue 90–100% (90% in 2017–Natl 85%)

State law examination (embedded in MPJE)

Laboratory or other practical examination (12 states)
Requirement 4 – Maintain Professional Competency

- Continuing Professional Education (varies, but usually 15 hours/year); recorded on-line with NABP via your “e-profile”

- Continuing Professional Development (CPD) Plan (being piloted—near future?)

- Re-licensure exams (future?)
Board of Pharmacy actions can also affect status of license

- Approximately 5,000 board actions (<1% of licensees) annually. Of these actions:
  - 30% -- Fines / monetary penalty
  - 13% -- License probation
  - 7% -- License suspended
  - 9% -- Revoke license
  - 12% -- Practice penalties (e.g. specific CE)
  - 10% -- Emergency suspension of license
  - 9% -- Voluntary license surrender
Term -- Reciprocity

-- To practice pharmacy in a state other than that of original license you reciprocate ("exchange your credentials or privileges")

-- Keep your original state license or you may have to retake exams! (still may need to do so depending on time away from practice)
Term -- Practicing Pharmacist

--Defined in terms of "distance of the pharmacist from the specific patient."

--Pharmacists involved in functions dealing with specific patients are considered practicing pharmacists ("practitioners").

--Pharmacists who don’t deal directly with patients are not considered to be practicing (non-practitioners)
Describe the distribution of pharmacists among practice settings
55% of all pharmacists

--Independent (20%); less than 4 units under same ownership

--Chain (35%); small = 4–9 units, and large = 10 or more units
Hospital pharmacy

- 20% of all pharmacists

(“hospital” includes a variety of institutional settings including nursing homes and prisons)
Other practitioners and non-practitioners

- 25% of all pharmacists
  -- 11% are practitioners in clinics, specialty pharmacies, nursing homes, home care agencies, consultants, HMOs, mail order, Indian Health Service, and other settings.
  -- 5% are employed as non-practitioners (education, govt., industry)
  -- 9% are inactive, but still licensed
Professions Manpower Trends

Pharmacy is the 3\textsuperscript{rd} largest health care profession

Only Nursing and Medicine have more practitioners

Will discuss other providers next lecture .. But first, are there too many pharmacists?
Too Many Pharmacists?

Is there a surplus of pharmacists?
Surplus?

- The Pharmacist Demand Index indicates a relative balance exists at the present time.
- However, parts of the country (e.g., Northeast, IL, FL, NC, +most larger cities) have a tighter job market.
Pharmacist Demand Index* by Region in December 2018

Northeast – 2.89
Midwest – 2.93
South – 2.90
West – 2.93

Indiana was ~3.30 on the scale in December 2017, low response rate for 2018 (so no update figure)

*1–5 Scale, where 1=supply much higher than jobs available, 3=balanced supply, 5=high demand
Pharmacist Demand Indicator – 2007–2017
Finding Permanent Employment in 2017 was “Difficult / Extremely Difficult”

- Rutgers 22%
- Minnesota 20%
- Ohio State 19%
- Nebraska 18%
- Illinois 17%
- Michigan 15%
- Maryland 14%
- **Purdue** 14%
- Iowa 11%
- Wisconsin 6%
Explain factors favoring an oversupply of pharmacists

1. Increasing number of R.Ph.s
2. Competition from other professions
3. Increased role for technicians
4. Technological changes
5. Retirement decisions
Pharmacists per 100,000 people
There were a total of 72 schools for 30+ years, up until 15 years ago -- graduated 7,000 students a year

Now have 146 schools, including 40 with satellite campuses -- graduating 16,000 students a year!
Growth in Pharmacy School Graduates*
2000 - 2017

* Data represents first professional degrees including B.S. Pharmacy, B.Pharm., and Pharm.D. Graduation projection figure based on enrollment data.

Source: American Association of Colleges of Pharmacy (AACP) 2014 Enrollment Data
The number of physicians, PAs, and nurses is growing at similar pace as pharmacy.

- Physicians can dispense medications (but most don’t) but do manage therapy.
- Nurses, PAs, and physicians can counsel on medications, but most don’t extensively.
Technicians

- Supervisory requirements vary greatly by state (from 1:1 to 1:unlimited)

- Increasing role in dispensing process (“tech check tech” in hospitals)

- Large employers pushing for greater tech role and modified state regulations in community practice
Technology

- Biotechnology–related products often administered in MD offices
- Central fill / Mail order
- Dispensing kiosks in nursing homes
- Long–term dosage forms (e.g., implants)
“Baby Boomer” pharmacists have not been retiring as quickly as in past.
-- Economy has been a factor
-- Generally good health status is a factor
So, are prospects poor for the future?

Not Necessarily . . .
Factors favoring a pharmacist shortage

- Expanded roles / scope of practice
- New product types / specialty
- Demand for dispensing services
- Proportion of female pharmacists
- Retirement (again)
Expanded Practice Roles

- Medication Therapy Management
- Immunizations
- Provider Status on Horizon
- Specialty Products
Other Expanded Roles

- **Prescribing Roles** (via protocol, oral contraceptives in several states)

- **Non-Practitioner** roles are expanding (managed care, insurance, government, teaching, industry)

- **Non-Traditional** practice roles are expanding (mail service, specialty pharmacy, long term care, home infusion, consulting)
  -- fastest growing segment by %
New Product Types / Specialty Practice

- **New products** for rarer diseases
- **Biotech**–related products, including genetic–specific treatments
- **Point of care** diagnostics (~120 tests)
- **Lifestyle** treatments – erectile dysfunction, low testosterone, hair loss
- Longer term **monitoring** of effects and need for follow–up on adherence
Specialty drugs – HIV, MS, Hep. C, Oncology, etc.

- Was 50% of total drug spend in 2018
- Treatments cost $2,000–$50,000/Rx
- 3–5% of population use these drugs
- Even with insurance, co–pays often $2,000 or more
- Need 3–4x as many RPhs and Techs as typical pharmacy.
Demand for Dispensing Services

- Prescription volume and associated cost continues to rise dramatically
- Population is aging / chronic diseases
- Drug coverage has expanded (i.e., Medicare Part D)
U.S. PRESCRIPTION DRUG COSTS FORECAST TO INCREASE AT A CAGR OF 9.2%

2013-23 CAGR:
Outpatient Rx 5.9%
Specialty Rx 13.5%

Sources: CMS; Dr. Schondelmeyer PharmD, PhD, Director of PRIME Institute, College of Pharmacy, UMN
Proportion of Female Pharmacists

- About 25% work part-time at some point
- Others out of workforce for a period of time
- The percentage of female pharmacists now exceeds the percentage of male pharmacists
- 70% of student pharmacists are female
Retirement Decisions

- The economy again!! (improving = increased retirements)

- Employer expectations for increased practice skills (e.g., MTM, immunizations, and credentials needed—next class) is encouraging retirement
Factors favoring a pharmacist shortage/balance -- summary

- Expanded roles / Scope of practice
- New product types / specialty
- Demand for dispensing services
- Proportion of female pharmacists
- Retirement (again)
(My observation – things tend to go in cycles, but it is difficult to predict exactly where we are in the current cycle. My impression is that the market will be tight for the next few years)
Describe trends in beginning salaries for pharmacy graduates
Resident/Fellow: 44.0% (~$ 46,000)
Chain: 36.0 % (~$ 117,000)
Hospital: 5.3 % (~$ 107,000)
Industry 1.3 % (~$ 97,000)
Nuclear 2.2 % (~$ 115,000)
Other/Not Spec. 5.2 %
Continuing Edu. 2.0 %

Seeking/Undecided 4%
Self-Reported Debt -- 2017*

- Minnesota $175,000
- Illinois $150,000
- Iowa $148,000
- Maryland $147,000
- Ohio State $131,000
- Michigan $130,000
- Wisconsin $115,000
- Nebraska $104,000
- **Purdue** $88,000
- Rutgers $80,000

*includes pre-pharmacy education
Explain the problem of salary compression.
Base hourly wage for staff RPhs by years in practice & gender

$/Hour

0-5  6-10  11-15  21-25  26-30  31-35  >36

yrs in practice

Males
Females
Pharmacist Job Satisfaction by Time

----3---- Time in Years ----5----
Satisfaction goes back up---

- Those that like their role continue to be satisfied
- Some pharmacists change settings to find increased satisfaction
- Some pharmacists take on new clinical or managerial roles to find increased satisfaction
Questions?