

A Career in Pharmacy: Science, Medicine, Innovation, and Impact

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- Director of Pharmacy Clinical Operations (Nemours Children's Hospital, Delaware)
- Practicing in hospital Pharmacy for 29 years
- Clinical Expertise: Infectious Disease and Antibiotic Use
- Spent 22 years practicing in the field of Antimicrobial Stewardship
- Transition to the current role in pharmacy leadership for the past 4 years



Today's Roadmap

What students will know by the end of the talk.

What pharmacists do

Medication safety + patient support

Education path

High school to pharmacy school

Practice areas

Retail, hospital, industry, FDA

Advanced training

Residency and fellowship

Salary snapshot

High-level ranges by path

How to explore

Shadow, volunteer, ask questions

What Is a Pharmacist?

Medication experts who connect science, safety, and people.



- Help patients use medications safely
- Improve systems so medication use is safer
- Check doses, allergies, interactions, and side effects
- Collaborate with doctors, nurses, and other care teams
- Develop new medications
- Conduct medication related research

Plain language: pharmacists make sure the right medicine is used the right way.

What Pharmacists Actually Do

More than filling prescriptions — pharmacists solve medication problems.

**Review medication
orders and prescriptions**

**Educate and Counsel
patients on medication
use**

**Prevent medication
errors**

**Monitor therapy to
ensure for efficacy and
safety**

Educate care teams

Improve systems

How Do You Become a Pharmacist?

Typical journey after high school.



High School: What Helps Now

You do not need to have everything figured out today.

Science

Biology, chemistry, anatomy, health sciences

Math

Algebra, statistics, dosage thinking

Communication

Explain complex ideas in simple words

Service

Volunteer, tutor, help others learn

Curiosity

Ask “why?” and “what could go wrong?”

Teamwork

Practice listening and collaboration

The big picture: college → pharmacist

There is more than one route, but most students move through these milestones.



Key message: pick prerequisite courses intentionally and keep checking requirements for each pharmacy school you are considering.

After Pharm.D.: optional advanced training

Not every pharmacist needs postgraduate training, but it opens doors for specialized paths.

Residency

- Usually patient-care focused
- Often supports hospital, clinic, and specialty roles
- PGY1 = broad; PGY2 = specialty focus

Fellowship

- Often research or industry focused
- Common areas: drug development, medical affairs, safety, regulatory science

Direct practice

- Many pharmacists work after licensure without residency or fellowship
- Career growth can continue through experience, certifications, and leadership

Practice Path #1

Retail / Community Pharmacy

Retail / Community Pharmacy

Often the most visible pharmacist role.



- Verify prescriptions and screen for safety issues (e.g. drug interactions)
- Counsel patients and families (on prescriptions drugs and over the counter products)
- Administer vaccines and support prevention
- Help patients manage chronic conditions
- Lead pharmacy technicians and daily workflow
- Serve as the most accessible and trusted medical resource for the community

Great fit if you enjoy a fast pace, direct patient contact, and being a trusted community resource.

Practice Path #2

Hospital / Acute Care Pharmacy

Hospital / Acute Care Pharmacy

Medication experts embedded in patient care teams.

- Review orders for patients who are very sick
- Ensure patients' pharmacotherapy is optimal (right drug, dose, indication)
- Design dosing for high-risk medications and IV therapies (e.g. cancer drugs)
- Monitor patients' response to therapy
- Round with doctors, nurses, and clinicians
- Respond to urgent medication needs
- Support emergency medicine, intensive care, oncology, infectious diseases, and pediatrics



Clinical Specialty Examples

Some pharmacists become experts in one type of patient care.

Pediatrics

Medication dosing for infants, children, and teens

Critical Care

Very sick patients in intensive care units

Oncology

Cancer medication treatment plans

Infectious Diseases

Antibiotics and stewardship

Emergency Medicine

Rapid decisions during urgent care

Ambulatory Care

Chronic disease management in clinics

Takeaway: pharmacy is a choose-your-own-adventure health career.

Practice Path #3 Pharmaceutical Industry

Pharmaceutical Industry

Where new medications are researched, tested, explained, and monitored.



- Clinical research and drug development
- Clinical trials and medical writing
- Drug safety and pharmacovigilance
- Medical affairs and scientific communication
- Regulatory strategy and quality work
- Field-based medical science liaison roles

Practice Path #4

FDA / Regulatory Pharmacy

FDA / Regulatory Pharmacy

Pharmacists can influence medication safety at a national scale.

- Evaluate drug proposals submitted by drug companies
- Monitor marketed drugs for safety and efficacy
- Advise on significant new drugs and developments
- Support public health through regulation and scientific review
- Some FDA pharmacist positions involve research, drug therapy advice, or prescription-related duties



Other Pharmacy Career Paths

A pharmacy degree can open doors beyond traditional hospital and retail practice.

Big idea

Pharmacists can combine drug knowledge with technology, teaching, community impact, business strategy, and specialized patient care.



Tech + Data

- Informatics
- Healthcare technology



Teaching + Impact

- Academia
- Public health



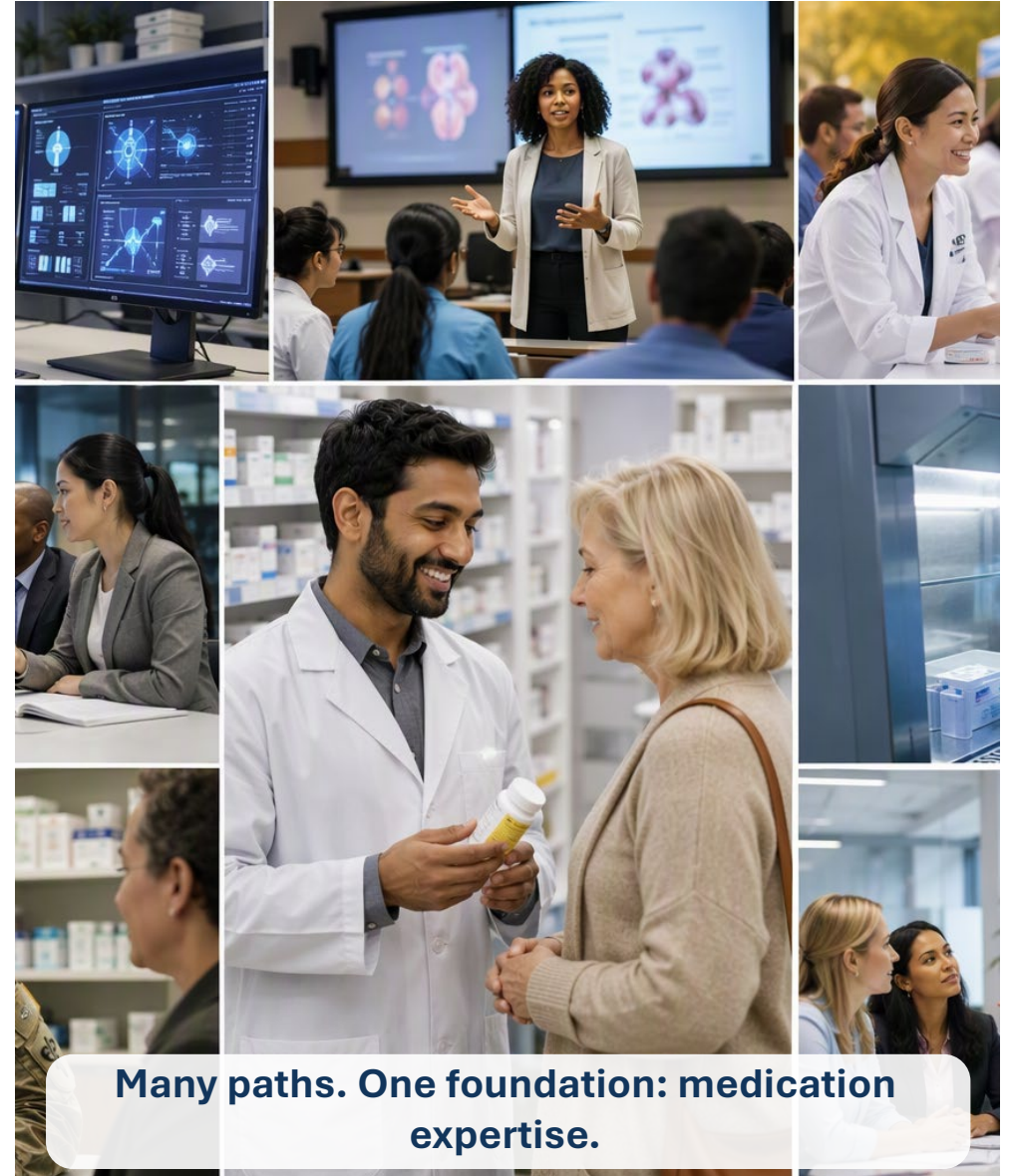
Business + Access

- Managed care
- Consulting



Specialized Practice

- Specialty pharmacy
- Nuclear pharmacy
- Military pharmacy



Pharmacy Leadership Roles

What do pharmacy leaders oversee?

Pharmacy leadership connects people, medications, systems, and patient safety.

Medication safety

Design systems that prevent medication errors and improve safe use.

People + teams

Develop staff, future leaders, learners, pharmacists, and technicians.

Resources

Use pharmacy time, staff, technology, and medication supply wisely.

Patient care

Strengthen the pharmacist's role in patient care.

Simple definition: pharmacy leaders make it easier for the whole team to do the right thing for patients.

A day in the life of a pharmacy leader

The work may look different by setting, but the pattern is similar: listen, decide, communicate, improve.

Start with safety

Review risks, issues, drug shortages, staffing, or urgent needs.

Support people

Coach teammates, remove barriers, and clarify priorities.

Solve system problems

Improve workflows so the safe choice is the easy choice.

Communicate clearly

Translate medication issues for nurses, physicians, leaders, patients, and families.

Plan ahead

Prepare for future needs, growth, technology changes, or emergencies.

Measure progress

Use data, feedback, and outcomes to keep improving.

Team leadership: pharmacists connect many people

Medication safety depends on collaboration across the healthcare team.



Who pharmacy leaders work with

Pharmacists, pharmacy technicians, nurses, physicians, learners, and other healthcare team members.

What they influence

Safer medication use, clearer processes, better communication, and stronger teamwork.

Why it matters

A good leader helps the whole team succeed — especially when work is complex or high-risk.

Salary Snapshot

Approximate annual U.S. ranges; pay varies by location, setting, role, experience, and benefits.

Retail / community	\$125K–\$145K
Hospital / acute care	\$135K–\$165K
Clinical specialist / manager	\$145K–\$180K+
Industry / biotech / pharma	\$140K–\$200K+
FDA / federal regulatory	GS-9 to GS-13 base: about \$53K–\$118K before locality; higher grades exist

National median pharmacist pay: \$137,480 per year (May 2024).

These ranges are for career awareness, not salary guarantees.

My Pharmacy Career Path

Curiosity, mentors, and a passion for problem-solving shaped the journey.

Student takeaway

You do not need to know your exact destination in high school. Start with what sparks your curiosity, then keep exploring.

1

High school: science + healthcare

I knew I wanted healthcare, but only knew the obvious paths: doctor or nurse.

2

Chemistry became the spark

I became fascinated by how medicines can cure disease — and also cause harm if used incorrectly.

3

A mentor opened the door

Guidance from a mentor helped me discover pharmacy as a career.

4

Pharmacy school shaped my focus

A professor made infectious diseases and antibiotics feel practical, interesting, and full of common sense.

5

Residency + stewardship practice

After a 1-year post-PharmD residency, I practiced antimicrobial stewardship in adult care, then pediatrics.

6

Leadership: broader impact

Today, I help solve problems, improve medication safety, coach others, and influence patient care systems.

Core message: Pharmacy can be a career of science, service, problem-solving, leadership, and lifelong learning.

"I did not start with a perfect plan. I followed what fascinated me — and let great mentors help me see the path."



Skills That Make a Strong Pharmacist

The best pharmacists combine science with people skills.



Science



Safety



Communication



Teamwork



Adaptability



Leadership

A pharmacist's superpower

Taking complicated science and translating it into clear, safe action for patients and teams.

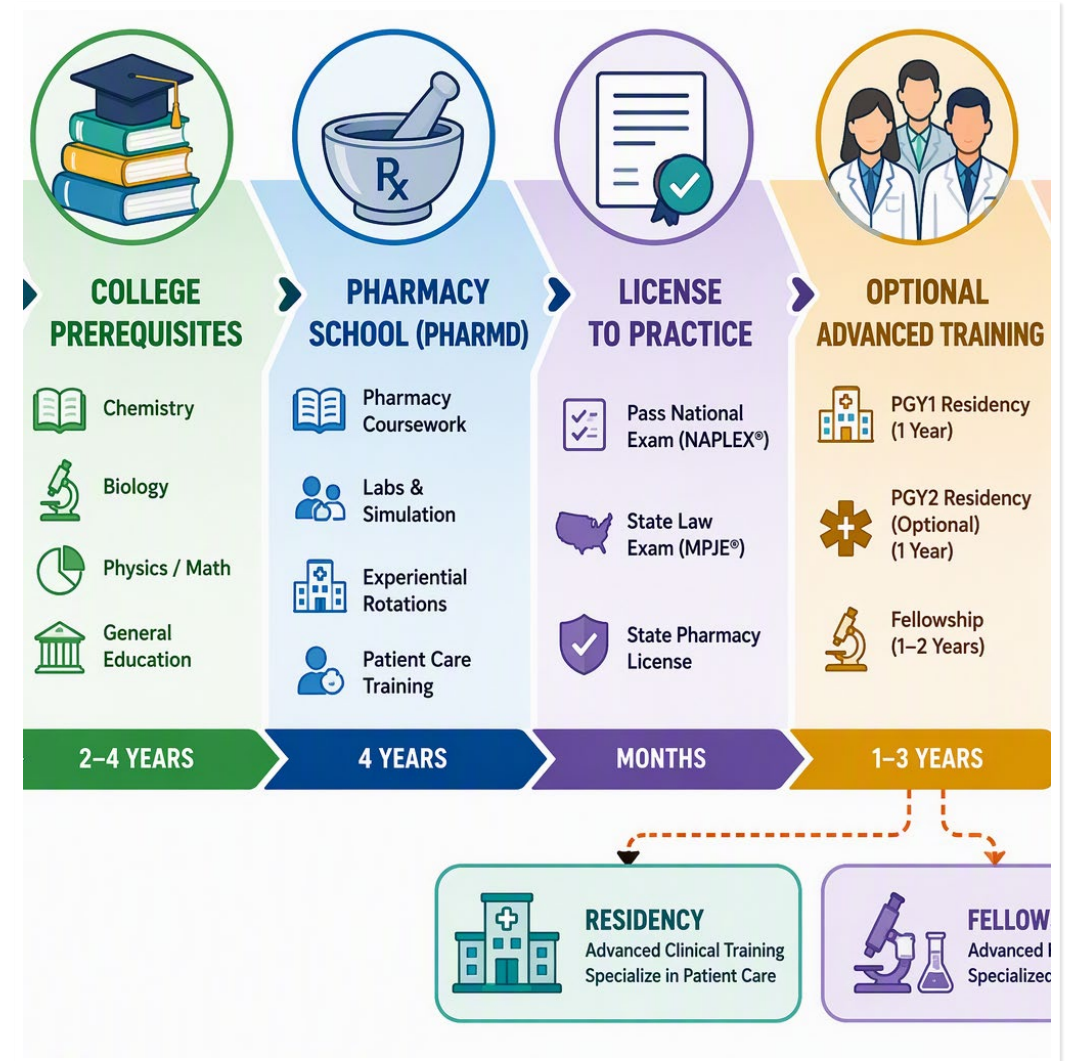
A skill students can build now

Practice explaining one complex idea in one minute without using jargon.

How to Explore Pharmacy Now

Small steps can reveal a lot.

- Volunteer in a healthcare setting
- Ask to shadow a pharmacist
- Interview a pharmacy student or resident
- Take science classes seriously, but do not ignore communication
- Look for pharmacy technician opportunities when age-eligible
- Keep a “career curiosity” list of questions



Pharmacy is not one job.

It is a profession with many possible futures — patient care, science, technology, research, policy, leadership, and public health.

Questions?