



Exploring the World of Pharmacy

10/8/2025

Candice Watts CPhT
Katherine Jarmon, PharmD
Carl Popelas PharmD, BCOP
Cheri Briggs PharmD, MBA





Bayhealth Pharmacy Technician Presentation

10.8.2025





BAYHEALTH'S CORE VALUES

COMPASSION

We are kind and caring to everyone we encounter

ACCOUNTABILITY

Each of us is responsible for our words, our actions, and our results

RESPECT

We value everyone and treat people with dignity and professionalism

INTEGRITY

We build trust through responsible actions and honest relationships

TEAMWORK

We achieve more when we collaborate and all work together

Inpatient Pharmacy Technician

The Certified Pharmacy Technician is responsible for distributing pharmaceuticals, performing inventory control, preparation and distribution of intravenous admixtures, maintenance in the Clean Room, compliance audits, providing customer service, and maintaining pharmacy records



What do we do all day?

- Deliver medications to Pyxis Medstations
- Prepare Pyxis deliveries
- Compound IVs for the entire hospital
- Compound chemotherapy for Oncology patients
- Record keeping
- Inspections
- IV room/hood cleaning and maintenance
- Repackaging of bulk medications
- Triage phone calls
- Assist Nurses with Pyxis/Delivery related issues
- Assist Pharmacists in daily tasks
- Supports the organization by maintaining a High Reliability Environment by following all safety measures.

Outpatient Pharmacy Technician

The Certified Pharmacy Technician is responsible for distributing pharmaceuticals, performing inventory control, preparation and distribution of intravenous admixtures, maintenance in the Clean Room, compliance audits, providing customer service, and maintaining pharmacy records

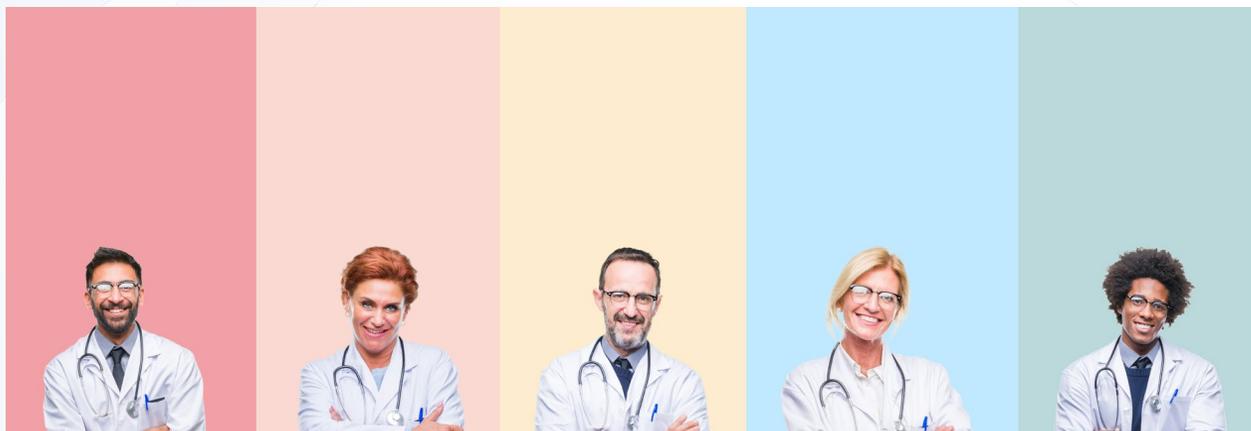
What do we do all day?

- Process prescriptions
- Bill 3rd party insurance
- Administer immunizations
- Inventory control
- Record keeping
- Inspections
- Triage phone calls
- Meds to Beds
- Medication Ordering
- Assist Pharmacists in daily tasks
- Supports the organization by maintaining a High Reliability Environment by following all safety measures.

Is There Room for Growth at Bayhealth?

YES! There are many different positions that Bayhealth offers Technicians.

What are the specialty positions?



- Automation Technician
- Pharmacy Buyer
- Inventory Specialist
- Medication Reconciliation
- Certified Pharmacy Technician II
- Sterile Products Lead Technician
- 340B Specialist
- Regulatory Readiness Technician
- Operating Room Inventory Pharmacy Technician
- Outpatient/Inpatient Technician Supervisor

Bayhealth Benefits

Health and Wellness

- Basic and supplemental accidental death and dismemberment (AD&D) coverage
- Basic and supplemental life insurance
- Bayhealth Child Care Center (Kent Campus)
- Dental Insurance
- Dependent life insurance
- Employee Assistance Program (EAP) for employees with personal and/or work-related problems
- Flexible health insurance benefits
- Flexible spending accounts (FSAs) – healthcare and dependent daycare
- Prescription coverage
- Short – and long-term disability coverage
- Vision care
- Workers' compensation



Bayhealth Benefits

Time Off

- Extended sick time
- Family and medical leave
- Jury duty – Bayhealth allows full-time and part-time employees to fulfill this civic duty without loss of compensation for up to one month
- Leaves of absence
- Paid time off (PTO) and holidays

Recognition and Career Growth

- Annual performance reviews
- Service awards
- Tuition Reimbursement

Additional Benefits

- Employee cafeteria discounts
- Retirement savings plan – 401(k) and 403(b)





Our Commitment Runs Deep



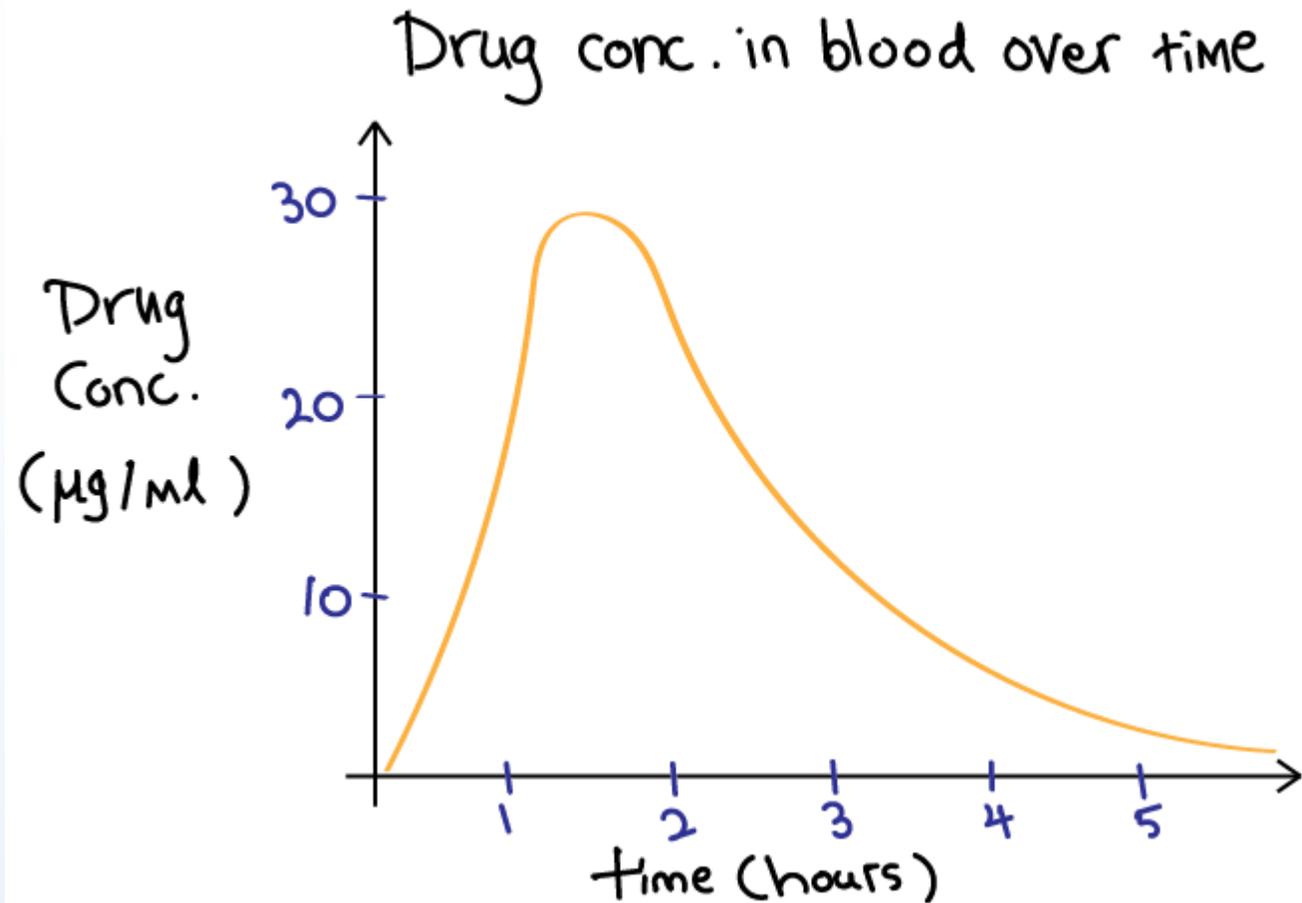
Xylazine and you:
Why awareness
matters

10/8/2025

Katherine Jarmon, PharmD
Inpatient Pharmacist
Bayhealth Medical Center



How do drugs work?



What is Xylazine?

- FDA approved for **VETERINARY USE ONLY** for procedural sedation.
 - Causes muscle relaxation to help animals fall into a sleep like state.
 - Usually used in combination with other medications
 - Note: xylazine is **NOT FDA APPROVED IN HUMANS** because it slows our heart too much and we have severe side effects such as drowsiness, fatigue, dizziness, confusion, disorientation, slowed breathing, and poor concentration to name a few

Origin Timeline

- Discovered in 1962 in Leverkusen, Germany to help lower blood pressure
- FDA approved in 1972 for veterinary medicine for procedural sedation
- Early 2000s
 - First emergence of illicit drug use in Puerto Rico and Philadelphia

What is Xylazine?

Trade Names:

- AnaSed®
- Rompun®
- Sedazine® or Sedazin®
- Nerfasin 100™
- XylaMed™

Street Names:

- Anestecia de caballo
- Philly Dope
- Tranq
- Tranq Dope
- Sleep-Cut
- Zombie Drug



Side Effects (Animals)

- Bradycardia (slow heart rate)
- Blurry Vision
- Coma
- Death
- Decreased perception of pain stimuli
- Drowsiness
- Disorientation
- Hyperglycemia (elevated blood sugar)
- Hypotension (low blood pressure)
- Miosis (small constricted pupils in the eye)
- Muscle relaxation
- Respiratory depression (slowed breath)
- Sedation (being put "to sleep")

Human Overdose/Withdrawal Symptoms

- Disorientation
- Hypertension (high blood pressure)
- Increased breathing rate
- Miosis (small constricted pupils in the eye)
- Tachycardia (fast heart rate)
- Severe withdrawal symptoms
- Skin wounds

Overdose Reversal



- Narcan will not reverse xylazine but, it is given anyway to reverse the other drugs ie. Fentanyl and Heroin.
 - Larger doses of Narcan may be needed because patients typically remain sedated.
- Currently there is **NOT** an FDA approved medication, or treatment plan, for patients having a xylazine related drug overdose/withdrawal.
 - Note: Reversal agents that are used in veterinary practice (Atipamazole, Tolazine, and Yohimbine) are not known to be safe and effective in humans in and should not be used for a human overdose.

XYLAZINE WOUNDS



Xylazine wounds can appear anywhere on the body regardless of where you are injecting, particularly in **YELLOW** areas.

Check these areas regularly for any wounds that may develop.

Wounds can occur even if you're just snorting or smoking.

RED FLAGS to SEEK MEDICAL CARE

- Fever or chills
- Skin turns dark or black
- Skin is red, hard, & hot to touch
- Thick, smelly yellow or green drainage
- Severe or worsening pain at wound site
- Pain & decreased ability to move joint
- Pieces of tissue falling off
- Exposed bone or tendon
- New numbness



Xylazine wounds can look like a combination of:

- Blisters
- Large ulcers
- Small scabs
- Eschar (dark/black pieces of dead tissue)



HELPFUL TIPS

- Keep your skin moisturized with A+D ointment
- Avoid using alcohol/hydrogen peroxide on wounds
- Keep wounds covered with a clean bandage
- Wear long sleeves, pants, socks, and gloves to prevent yourself from scratching your skin
- Eat protein & stay hydrated to help with healing
- Avoid injecting into or around your wounds
- Use new supplies every time and avoid sharing
- Not every wound is infected. Avoid taking non-prescribed antibiotics

Even though xylazine isn't an opioid, you should still give naloxone in an overdose as opioids are often present.



Skin wounds

- Wounds increase risk of:
 - Bacteremia – infection in the blood
 - Endocarditis – infection in the heart
 - Limb amputation
 - Death

Did you know?

“In 2023, xylazine was involved in 38% of all unintentional overdose deaths in Philadelphia. 100% of xylazine deaths also involved fentanyl and/or fentanyl analogues”

(Department of Public Health -City of Philadelphia)

Why has xylazine become a problem?

- Inexpensive and easy to obtain
- By adding xylazine to the drug supply, it stretches the dealer's supply allowing the drug dealer to have more "bundles" they can sell to their customers.
- Currently, we think xylazine has a synergistic effect (meaning it works together) with opioids, such as fentanyl or heroin
 - The "high" from fentanyl doesn't last as long as the high from heroin or other opioids.
 - Xylazine is added to extend fentanyl's effects and "mimic" the high of heroin

What is the Government doing to help?

State vs Federal

- Several states have enacted legislation to make xylazine a controlled substance
 - In Delaware, xylazine was declared a CIII Controlled Substance under an emergency regulation on May 5, 2023
- Federally, xylazine is not currently a controlled substance, although it does require a prescription and is not sold over the counter.
 - July 2023, The White House released the "*Fentanyl Adulterated or Associated with Xylazine Response Plan*" to provide groundwork for a nationwide response.
 - "*Combating Illicit xylazine Act*" was introduced to Committee on February 12, 2025
 - Both H.R. 1266 and S. 545 are identical bills
 - To become a law, this bill still needs to: Pass Senate, Pass House of Representative, be signed by the president, then it can become a law.

References

1. Anased. Package Insert. Lloyd, Inc., (n.d.) Accessed 26 August 2025
2. Boston Medical Center. Grayken Center for Addiction. Xylazine Wound Care Supplies – Xylazine Wounds. [Xylazine.Handout BMC.pdf](#). Accessed September 2025.
3. [Department of Public Health, City of Philadelphia. \(n.d.\). xylazine \(Tranq\): What you need to know about the new street drug taking over Philly. Substance Use Philly. — Substance Use Philly. <https://www.substanceabusephilly.com/tranq>. Accessed 25 May 2025.](#)
4. Division of Professional Regulation Controlled Substance Advisory Committee. Uniform Controlled Substance Act Regulations. Emergency order. Emergency rule placing illicit xylazine in Schedule III. 16 Delaware Code, Section 4731. May 2023. <https://dpr.delaware.gov/wp-content/uploads/sites/93/2023/06/06.02.2023-Secretary-of-State-Emergency-Classifying-xylazine-as-Schedule-III-Controlled-Substance.pdf>
5. Drug Enforcement Administration Diversion Control Division Drug & Chemical Evaluation Section. November 2022. *xylazine*. www.dea.gov/diversion-control-division-drug-chemical-evaluation-section
6. H.R. 1266 - 119th Congress (2025-2026)
7. Korn WR, Stone MD, Haviland KL, Toohey JM, Stickle DF: High prevalence of xylazine among fentanyl screen-positive urines from hospitalized patients, Philadelphia, 2021. *Clin Chim Acta*. 2021, 521:151-4. 10.1016/j.cca.2021.07.010
8. Lopez, M., Preuss, C., Tadi, P., National Library of Medicine. Drug Enforcement Administration Drug Scheduling. 30 July 2023
9. Philadelphia Department of Public Health, Division of Substance Use Prevention and Harm Reduction. Recommendations for caring for individuals with xylazine-associated wounds. January, 8th, 2024. [https://hip.phila.gov/document/4148/Recommendations for Caring for People with xylazine-Associated Wounds 1.12.pdf](https://hip.phila.gov/document/4148/Recommendations%20for%20Caring%20for%20People%20with%20xylazine-Associated%20Wounds%201.12.pdf)
10. Ruiz-Colón K, Chavez-Arias C, Díaz-Alcalá JE, Martínez MA: xylazine intoxication in humans and its importance as an emerging adulterant in abused drugs: A comprehensive review of the literature. *Forensic Sci Int*. 2014, 240:1-8. 10.1016/j.forsciint.2014.03.015
11. S.545 - 119th Congress (2025-2026)
12. Sedazin. Package Insert. Atlas Veterinaire, November 2022
13. U.S. Department of Justice, Drug Enforcement Administration, The growing threat of xylazine and its mixture with illicit drugs: DEA Joint Intelligence Report (2022). Washington, D.C.
14. Xylamed. Package Insert. Bimeda, Inc., April 2024



Clinical Pharmacy

Carl Popelas PharmD, BCOP

10/8/2025



Objectives

- Understand the role of a Clinical Pharmacist
- Explain cancer medications
- Present a patient case



What is Clinical Pharmacy?

- Pharmacists work closely with Doctors, Nurses, other specialties and patients
 - Goal is to achieve the best possible outcomes
 - Improve medication therapy



Clinical Programs

- Antibiotic Stewardship
 - Appropriate use of antibiotics
- Pain Management
 - Improve pain control
- Anticoagulation Clinics
 - Blood thinners



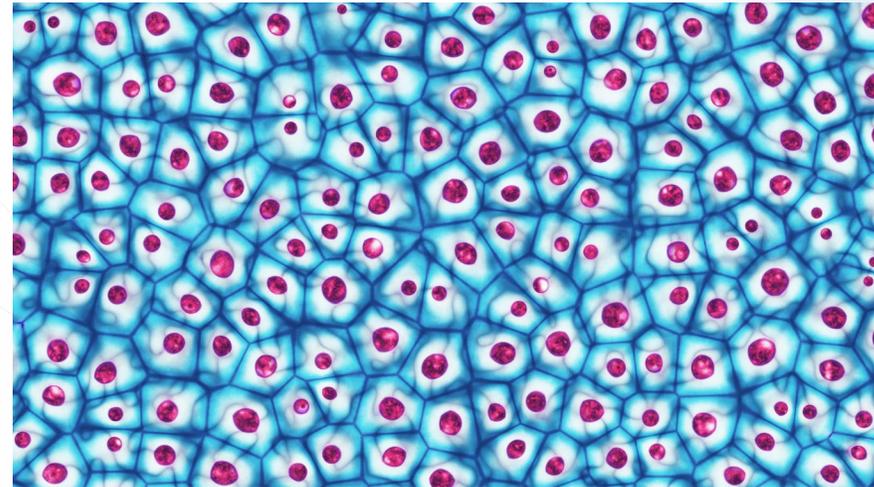
Clinical Programs (cont.)

- Emergency Medicine
 - Manage patients who need care urgently
- Critical Care / Intensive Care
 - Extremely sick patients
- Oncology
 - Cancer medications



What is Cancer?

- Cells grow uncontrollably
 - Take over healthy cells
 - Ability to spread



Treatment of Cancer

- Several different ways to treat cancer
 - Surgery
 - Radiation
 - Medications



Chemotherapy

- Designed to kill any cells that are rapidly growing
 - Disrupt cell cycle
 - Affect DNA
 - Block enzymes
 - Block proteins



Chemotherapy (cont.)

- Unfortunately damages healthy cells
- Typical side effects
 - Stomach and intestines
 - Hair
 - Bone marrow

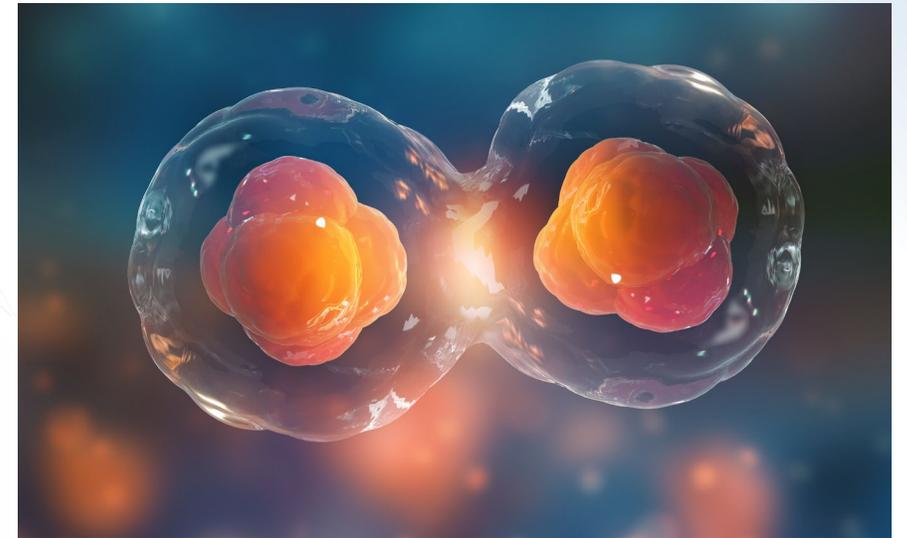


Immune therapy

- Use patient's own immune system
 - Recognize and kill bad cells
- Unique side effects
 - Result of hyperactive immune system
 - Inflammation

Targeted therapy

- Normally cells receive signals to stop growing
- Mutations can create and send their own signals
 - Cause cells to grow on their own
- Targets specific mutations



Patient Case

- Patient diagnosed with cancer who has a history of heartburn. The Physician decides to treat the patient's cancer with with:
 - Capecitabine
 - Targets enzymes
 - Oxaliplatin
 - Targets DNA



Patient Case (cont.)

- What needs to be reviewed?
 - Patient height and weight
 - Kidney / liver function
 - Other diseases the patient may have
 - Medication interactions

Patient Case (cont.)

- Patient height and weight
 - Chemotherapy is dosed according to body surface area (BSA)
 - Correlate body size with functions

Patient Case (cont.)

- Kidney function
 - Calculated using serum creatinine (SCr)
 - Marker of muscle breakdown removed by kidneys
 - Formula is known as creatinine clearance (CrCl)
- Liver Function
 - Determined by using enzymes specific to liver



Patient Assessment (cont.)

- Patient is 6 feet tall and weighs 170 pounds (77 kg)
 - Body surface area (BSA) = 1.97 m^2



Patient Assessment (cont.)

- Kidney function
 - Serum creatinine (SCr) = 2.1 mg/dL
 - Creatinine clearance (CrCl)

$\frac{(140 - \text{age}) \times \text{weight (kg)}}{72 \times \text{SCr}}$

$(140 - 76) \times 77 \text{ kg} / 72 \times 2.1 = \mathbf{33 \text{ mL/min}}$

Patient Assessment (cont.)

- Liver function
 - Normal
- Other health issues
 - Heartburn

Patient Medication List

- Current medication list
 - Pantoprazole 40 mg by mouth once daily for heartburn
 - Multivitamin by mouth once daily

Chemotherapy Dosing

- Oxaliplatin 130 mg/m² every 21 days for 4 cycles
 - 130 mg/m² x 1.97m² = 256 mg
- Capecitabine 1000 mg/m² by mouth twice daily on days 1-14 every 21 days for 4 cycles
 - 1000 mg/m² x 1.97m² = 1970 mg twice daily



Medication Assessment

- Kidney function
 - CrCl = 33 mL/min
 - Requires a reduced dose for capecitabine
 - Reduce dose to 1,500 mg twice daily on days 1-14 every 21 days for 4 cycles

Medication Assessment

- Pantoprazole 40 mg daily for heartburn
 - May decrease how well capecitabine works
 - Counsel patient to consider stopping pantoprazole if possible
 - Use antacids instead

Patient Counseling

- Counsel about medications
 - How to take it, handle it, store it, and dispose of it
 - Possible side effects
 - Prevention
 - Management

References

- www.accp.com/stunet/compass/definition.aspx
- Lala V, Zubair M, Minter D *Liver Function Tests* National Library of Medicine StatPearls. Accessed 9/29/2025
- Flint B, Das J, Hall C *Body Surface Area* National Library of Medicine StatPearls. Accessed 9/29/2025
- Emadi A, Karp J *Cancer Pharmacology*. Springer Publishing Company LLC 2020
- Xeloda® manufacturer's data Genentech USA. Revised 2015



Our Commitment Runs Deep



Cheri Briggs
Senior Director of
Pharmacy



My Pharmacy Career Path

Started as a cashier in the front end of a pharmacy

Went to Gannon University In Erie, PA – majoring in pre-pharmacy (a program affiliated with Dusquene University in Pittsburgh, PA)

Transferred into Philadelphia College of Pharmacy & Sciences (now known as Saint Joseph's University) after completion of pre-professional program

Worked 2 jobs – hospital and retail while in college

Took two P4 APPE rotations in pharmacy leadership at Jefferson University and the Hospital of the University of Pennsylvania

One person
made a
difference!

Gerry Meyer
spoke to me

My Pharmacy Career Path (cont.)

After college

Worked in a pharmacy that serviced 80 nursing homes in the Midwest

Promoted to IV supervisor from my experience working in hospital as a student

Moved back to the east coast and worked in home infusion as a director before returning to hospital pharmacy as a director where I currently am

Now, professionally involved locally, nationally, and on the Delaware Board of Pharmacy & Controlled Substances Advisory Commission

Pharmacist's Oath

I promise to devote myself to a lifetime of service to others through the profession of pharmacy

I will utilize my knowledge, skills, experiences, and values to prepare the next generation of pharmacists

Oversee Pharmacy Department from a Global Perspective

Align pharmacy departmental objectives and work with the organizational objectives

Coordinate care from inpatient, outpatient, ambulatory, and specialty practice settings to improved patient outcomes

Focus on providing quality of care from medications and medication safety

Bring best practice viewpoints national pharmacy practice to the local organization

Visionary
Leadership

New Innovative Pharmacy Practice at Bayhealth

Population Health Pharmacy

- Population health pharmacists oversee medication adherence, polypharmacy, side effects, and the appropriateness of prescribing for a patient's particular disease state as a valued part of the medical team
- Care is provided either embedded in a physician's practice or via telephone encounter with patients over the phone
- The pharmacists are credentialed members of the Bayhealth Medical Staff and work either through a collaborative practice agreement or independently to keep patients healthy and out of the hospital

Population Health focuses on disease prevalence, life expectancy, and the quality of life within a population of people

Educational Requirements for Pharmacy Leadership

Advanced management training/ degrees – beyond Doctorate in Pharmacy

- Collegiate
 - Masters Business Administration (MBA)
 - Masters in Healthcare Administration (MHA)
- Healthcare Professional
 - Fellow of the American Academy of Healthcare Executives (FACHE)
- Pharmacy Organization
 - Diplomat of Pharmacy Leadership Academy (DPLA)
 - Certified Pharmacy Executive Leader (CPEL)

Lifetime
Learning is
key!

What Piqued my Interest in Pharmacy?

Love of math, science, learning how things work in the body

Many members of my personal family with chronic healthcare issues, but hesitant to ask the questions out of reverence and respect for the title/ position of the physician

Wanted to be a visible, approachable, respected member of the community when needed





Questions?

