Leveraging Disruptions to Improve Patient Care

pshp ANNUAL ASSEMBLY

BRIDGING THE FUTURE OF PHARMACY 2022

PITTSBURGH, PA | NOVEMBER 2-5, 2022

Rebecca A. Taylor, PharmD, MBA, BCPS, FASHP
Senior Director, Pharmacy Services
University of Pittsburgh Medical Center
Immediate-Past President, OSHP

Arpit Mehta, PharmD, MPH, MHA
Director of Pharmacy
AHN Allegheny General Hospital
President, PSHP

Financial Disclosures / COI

- UPMC Health System has vendor relationships with Omnicell and BD
- AHN has vendor relationships with Omnicell

Learning Objectives

- Discuss financial pressures and changes in health system pharmacy that require leaders and pharmacy personnel to pivot to a focus on outpatient and ambulatory care as part of a central strategy
- Review post-pandemic changes that have impacted the pharmacy workforce as well as pressures to compete with remote work changes outside of healthcare
- Review trends in pharmacy automation to support new staffing models and improved efficiency and safety
- Explore centralized pharmacy service centers (CPSC) rationale and executional design to support multiple hospitals in a geographic region

Report: Hospitals face worst year financially since start of COVID-19 pandemic, jeopardizing access to patient care

Sep 15, 2022 - 04:01 PM

As labor shortages and inflation drive up expenses, U.S. hospitals and health systems this year face the worst financial crisis since the COVID-19 pandemic began, according to a report prepared for AHA by Kaufman Hall.

Report: Hospitals face worst year financially since start of COVID-19 pandemic, jeopardizing access to patient care | AHA News

US hospitals face liquidity crises as they treat the nation's COVID-19 patients

Figure 1: Hospitals have many options when addressing a liquidity crisis caused by the pandemic

		Short-Medium Term	Long-Term	Example actions
1	Understand liquidity requirements	✓	✓	• Create and/or review the Immediate 13 week short term cash flow forecast • Identify the cost reduction levers available to the business to improve the liquidity position
2	Deal with the capital structure	✓	✓	• Review flexibility within the loan agreements to change interest periods, PIK toggle interest or change amortization payments and timing • Assess ability to finance existing assets
3	Identify working capital and cost management options	✓	✓	• Stand up a war room or cash cockpit • Deploy targeted analytics to prioritize and focus the efforts of operational teams • Recalibrate short term replenishment triggers and controls in the face of lead time and demand volatility
4	Develop a comprehensive workforce plan	✓	✓	• Issue regular updates and communication to employees to ensure continued engagement • Consider partnering with other companies in the supply chain to redeploy people
5	Create short-term and medium-term tax strategies	✓	✓	• Take advantage of the employee retention tax credit under the CARES Act • Use new interest expense deductions • Utilize losses and amend prior year returns
6	Procure new sources of revenues	✓	✓	• Apply for funding under the CARES Act • Optimize reimbursements for telehealth visits • Ensure coding secures Medicare add-on for COVID-10 treatments

Source: PwC Health Research Institute analysis

[COVID-19 has triggered a liquidity crisis for hospitals : PwC]

Takeaways at a Glance

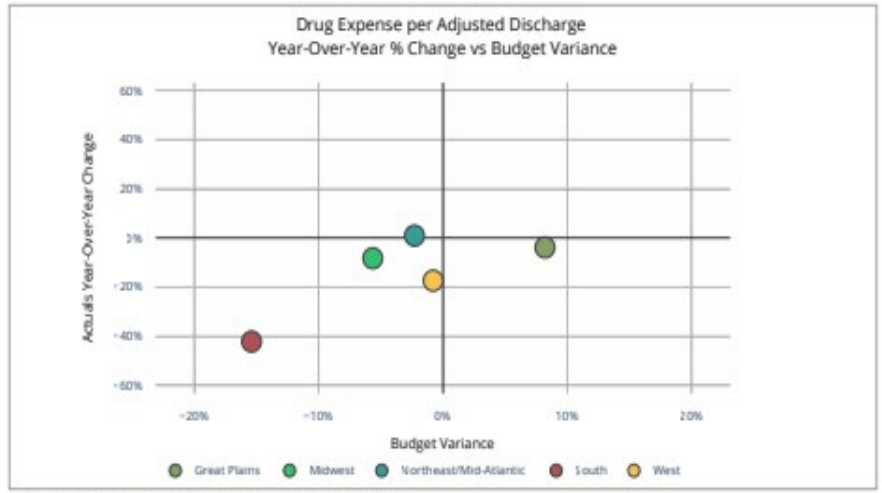
1. **Volumes were higher in August than in July, boosting revenue.**
   However, costs still climbed slightly month-over-month as hospitals and health systems continue to shoulder heightened expense loads.

2. **Expenses rose, but not as much as revenue.**
   Supplies and expensive drugs contributed to this uptick more than labor costs, which remain elevated.

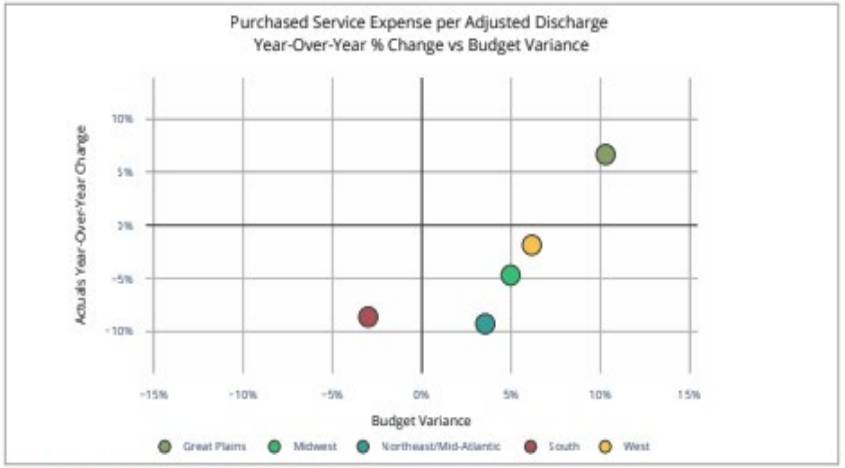
3. **Outpatient revenue slightly drove up margin.**
   This metric is substantially higher than it was in August of 2021. It demonstrated the most growth month-over-month as patients scheduled more elective procedures.

4. **Hospitals are still facing extreme difficulty.**
   Nine months into a challenging year, margins have fluctuated wildly. Although most metrics improved from July to August, organizations are still operating with negative margins and well below pre-pandemic levels.

5. **New market entrants present strategic challenges.**
   As disruptors chip away at outpatient volume, hospitals should reimagine how to deliver care in non-hospital settings as part of their long-term planning.



Source: Kaufman Hall *National Hospital Flash Report*, September 2022



Source: Kaufman Hall *National Hospital Flash Report*, September 2022

[National Hospital Flash Report: September 2022 | Kaufman Hall]

The race to buy primary care providers

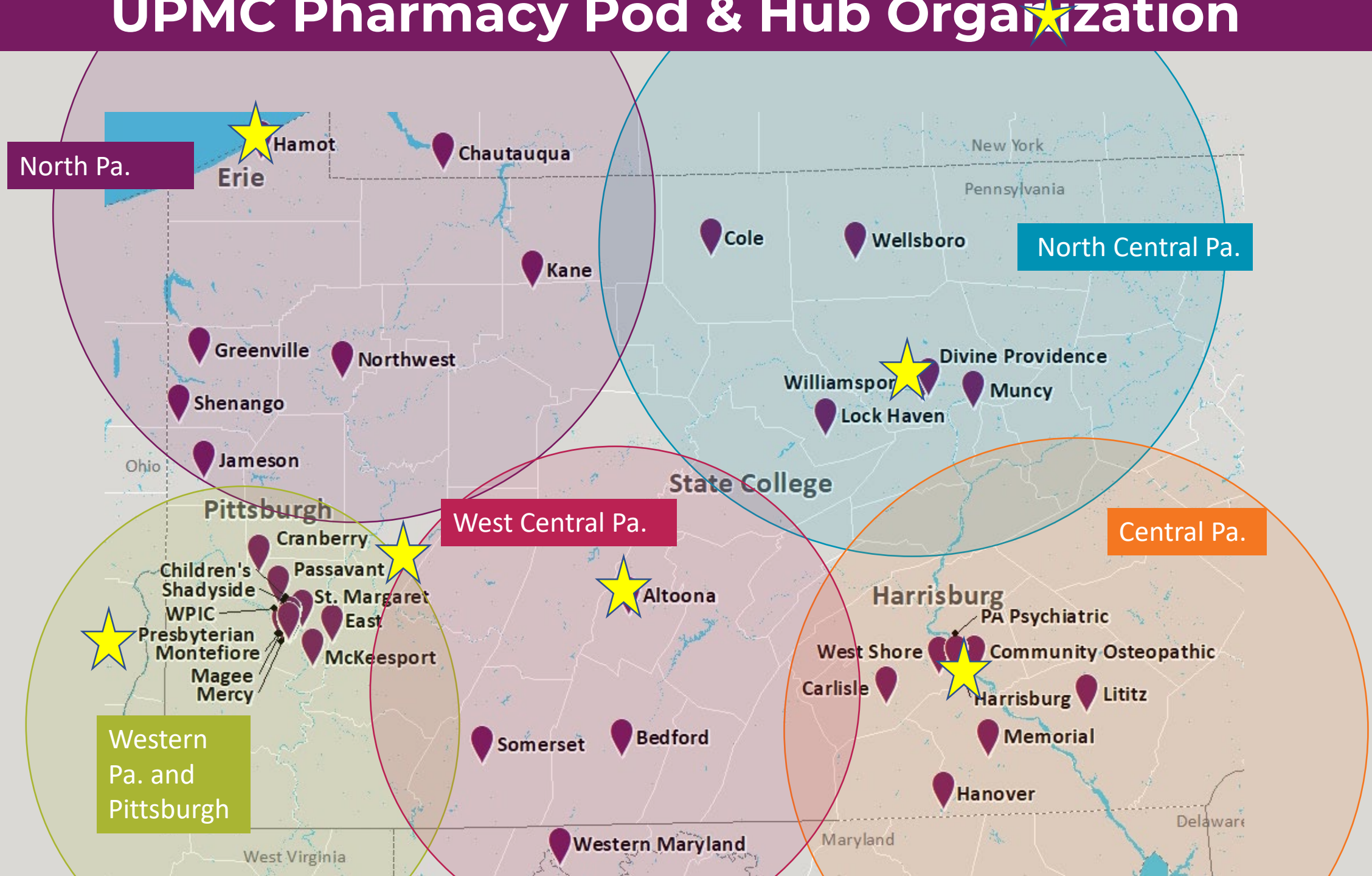
- Walgreens Health – interview with Chief Clinical Officer Dr. Sashi Moodley
  - Village MD clinics (1000 locations); Health Corner (3000 locations)
  - 60 million vaccines provided; 30 million tests
  - **What does Walgreens have that Amazon doesn't?**
  - Walgreens robotics and centralization strategies – 22 by 2025
  - No pilots; scalable; **BIG BETS**; Move fast
- Amazon
  - One Medical; Shutting down Amazon Care; PillPak
  - Willing to iterate; trial; adjust. **What does Amazon have?**

Health care disruptors: Walgreens | Radio Advisory Podcast | Episode 131 – YouTube
Robo-pharmacies will transform how Walgreens operates its business – RetailWire
Health care disruptors: How afraid of Amazon should you be? | Radio Advisory Podcast | Episode 133 - YouTube

How do we partner / leverage / unlock?

- Internal prescription capture (specialty, specialty-light, retail)
- Maximize 340b savings & revenues
- Manage the expenses; embrace tele-pharmacy; **prioritize high value work**
- How do we become **more efficient across a health system** (and quickly)
- Maximize and optimize vendor space
- Value-based care & primary care reinvention

UPMC Pharmacy Pod & Hub Organization



Does The Great Resignation exist in healthcare?

- Among top three industries impacted
- Shortage of up to 3.2 million healthcare workers by 2026?

Low-wage jobs with limited opportunities for career growth

Rising costs of child care

Increasing responsibility and poor working conditions amid COVID-19 surges

Pandemic fatigue

Relative increase in job opportunities

The 'Great Resignation': What health care leaders needs to know now. Daily Briefing. The Advisory Board Company. 2022 January 7.
Morse SM. Healthcare second largest sector hit by Great Resignation. Healthcare Finance News. 2022 January 5.
Woods R (host). It's not the great resignation; it's the great realignment. Radio Advisory. 2022 July 26.

Thought provokers…

- Growth in healthcare roles & executive roles that are more flexible and remote
- Future of clinical pharmacy – how do we manage populations?
  - How will we compete for this small labor pool?
  - Where are you losing talent to?
  - Is there a way to still care for patients **and** offer flexibility?
  - Who needs to be at the bedside?
- Pharmacy technician shortage – how are we going to pivot and retain and rebuild this critical resource?

Tele-health and virtual care trends

- 2019 – 11% patients utilized tele-health → now up to 46%
- Patients having access to their own information engages them in their care
- They will be expecting pharmacy services to also move in this direction
- What telehealth and virtual care options have been successful in your organizations?
- Are you part of this trend in pharmacy?

Multicosts of Multitasking - PMC (nih.gov)

Telehealth and health inequities

Reasons supporting tele and virtual health options

- Geographic and rural care barriers
- Stigma
  - Veterans mental health care
  - Contraception for Mexican Americans
  - Muslims afraid to seek care for fear of family

U.S. Adults' Mobile Phone Ownership

Adult Demographic	Own a Cellphone (%)	Own a Cellphone That Is a Smartphone (%)
Aged 65+ years	92%	61%
Annual income of <$30,000	95%	71%
High school education or less	96%	75%

Source: References 16, 17.

US Pharm. 2022;47(6):28-32.

Anticipated Barriers

- Starts at the top – what's your CEO's philosophy on work-life flexibility
- Physical workspaces/office space – infrastructure considerations (office spaces shrinking)
- Offsite technology options and support
- Clinician considerations & telehealth arrangements in medicine (ex: E-ICU, Tele-Neurology) – how are we embedded?
- Internal barriers – "this is what we've always done" ; generational impact and perceptions

Generational impact on remote work

Gen Z

- Prefer remote
- Work fewer hours
- Need modeling from supervisors
- Flexibility >> Culture

Gen X & Millennials

- Remote is positive
- Saves time and money
- Prefers in-person or hybrid
- Dislikes hotel space

Boomers

- Apply for the most remote jobs
- Take fewer days off
- Work more hours
- Job security is paramount

How different generations feel about remote work | WNCT
How To Ensure Every Generation Has A Great Remote Work Experience (forbes.com)

Automation

Safety and Efficiency

Selecting Automation that Aligns with Strategic Goals of Organization

Autonomous Pharmacy Vision

The Vision

The Autonomous Pharmacy is a bold new vision for the future of medication management that seeks to replace manual, error-prone activities with automated processes that are safer and more efficient. The goal? To reallocate talent to higher-value tasks, improving clinician satisfaction and patient outcomes.

Autonomous Pharmacy Framework

Level 1

Non-Autonomous Pharmacy

- Minimal to no automation
- Data primarily managed on paper or in disparate spreadsheets
- Pharmacists heavily engaged in distribution with little direct patient interaction. Technicians and nurses spend time on manual drug management (purchasing, locating, counting)

Level 2

Limited Autonomous Pharmacy

- Some automation, including some barcode tracking
- Data managed disparately across sites with some visibility
- Pharmacists largely focused on distribution and verification. Technicians and nurses manually responsible for most drug management with light automated support

Level 3

Intermediate Autonomous Pharmacy

- Majority of processes automated, with barcode tracking applied widely
- Data integrated across enterprise and mostly visible
- Pharmacists somewhat focused on medication distribution, with some direct patient care. Technicians focus on manual procurement and controlled substances, and nurses rely on automated dispensing

Level 4

Highly Autonomous Pharmacy

- Extensive automation with few gaps across processes
- Near complete data visibility, offering workflow optimization and real-time insights
- Pharmacists routinely involved in direct patient care, population health initiatives, and clinical programs. Technicians maintain automation and use workflow app, and nurses focus most of their time on patient care

Level 5

Fully Autonomous Pharmacy

- Complete process automation, tracking each dose as a node on the network
- Complete data visibility, real-time workflow optimization, and predictive intelligence
- Pharmacists realize full scope of their role in direct patient care and clinical program optimization. Technicians ensure optimal function of automation and use workflow app, and nurses focus on direct patient care

Outcomes

0

- ✓ Medication Errors
- ✓ Medication Waste
- ✓ Human Touches Pre-administration To Patient

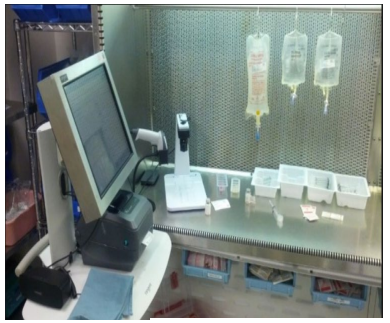
100%

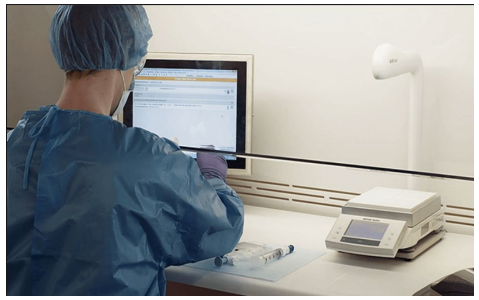
- ✓ Data Visibility
- ✓ Time Spent on Clinical Activity
- ✓ Regulatory Compliance

Performance Elements: Safety, Financials, Efficiency, Compliance, People

Automation in Sterile Compounding areas

IV Workflow Solution



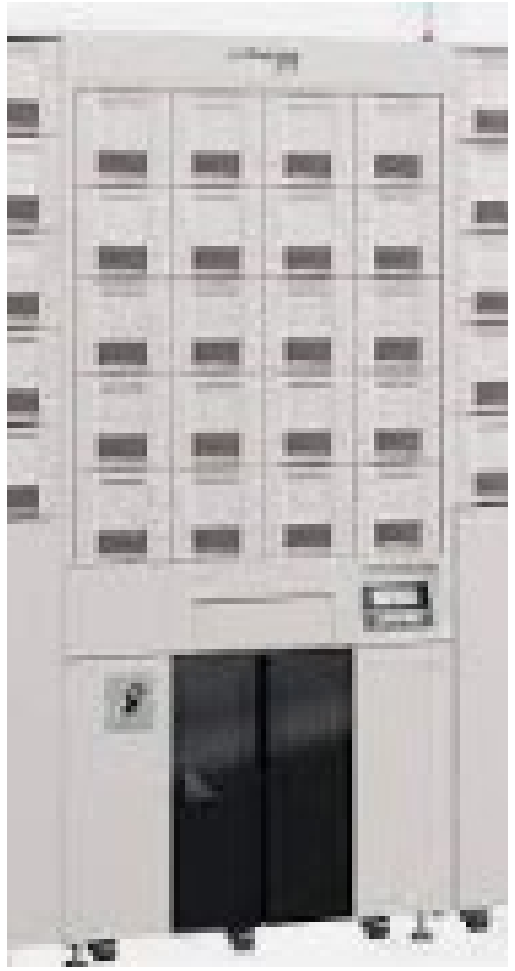


There is also Epic Dispense Prep – NOT a true IV Workflow Solution

IV Robotics

Automation in Dispensing and other areas

Solving for Patient Safety and Regulatory



Solving for Staffing

Solving for Efficiency & Savings

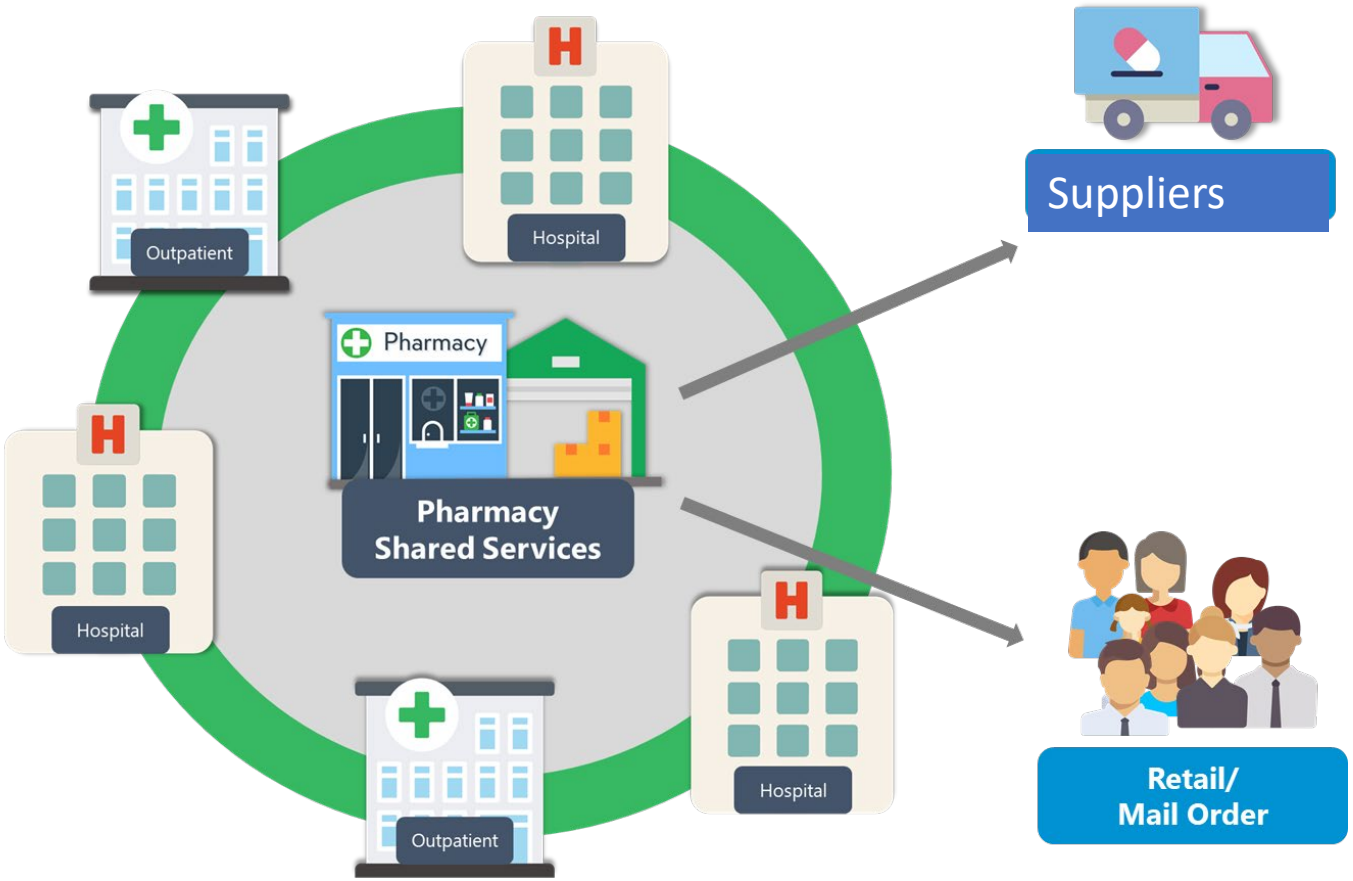
Centralized – Orders processed by pharmacy and sent to Nursing Units

Hybrid – Pharmacy utilizes ADCs for some meds (prns, controls, etc.) and fills patient specific orders and sends to nursing unit

Decentralized – Orders processed by Pharmacy and nursing utilizes ADCs to retrieve medications

Preparing for Implementation of Automation

Centralized Pharmacy Service Centers (CPSC)



Strategic Plan – CPSC

- Understanding organization's strategic plan
- What is serviced out of the CPSC – hospitals, clinics, etc.
- State Licensure requirements
- Regulatory status and risks / tolerance of the organization
- Space availability and opportunity to partner with supplies
- What is centralized – meds, 503B, re-packaging, RFID tagging, IV compounding, Specialty pharmacy, LUM, Retail/Mail order pharmacy, Call/PI center, etc.

Strategic Plan – CPSC continued

- Is there an ROI?
- Adequate space based on doses dispensed
- Automation needs for safety and efficiency
- Collaboration with pharmacies within organization – which meds come from CPSC vs. wholesaler
- Ordering process – centralized, decentralized or some sort of hybrid
- Delivery distribution

Benefits of CPSC

- Efficiency gained by centralization
  - Repackaging
  - RFID Tagging
  - IV Compounding
  - Centralized purchasing
- Inventory consolidation
  - Increased ability for contract compliance
  - Aggregate purchasing volumes
  - LUM distribution
- Space consolidation
  - Save space at local sites
- Financial Savings
  - Centralization allows for efficiency, one-time inventory reduction, etc. allowing for financial savings
- Freeing up pharmacists and technicians to focus on direct patient care activities

CPSC – Design Consideration

- Location of CPSC in relation to organization facilities
  - Centrally located
  - Delivery routes/times
  - Partnering with supply distribution

- Design and Construction
  - Space needed (Sq ft) for all identified services
  - Pharmacy regulations – license as pharmacy, not wholesaler
  - If IV compounding, building clean room suites, considering IV automation/robotics

CPSC – planning

- Not one size fits all
- Build a model based on organization's strategic plan
- Build for the future
  - Considering future growth
  - Considering automation and space needed
- Start small and add services over time
- Balance distribution between wholesaler and CPSC – look for value-add services

Leveraging Disruptions to Improve Patient Care

pshp ANNUAL ASSEMBLY

BRIDGING THE FUTURE OF PHARMACY 2022

PITTSBURGH, PA | NOVEMBER 2-5, 2022

Rebecca A. Taylor, PharmD, MBA, BCPS, FASHP
Senior Director, Pharmacy Services
University of Pittsburgh Medical Center
Immediate-Past President, OSHP

Arpit Mehta, PharmD, MPH, MHA
Director of Pharmacy
AHN Allegheny General Hospital
President, PSHP