



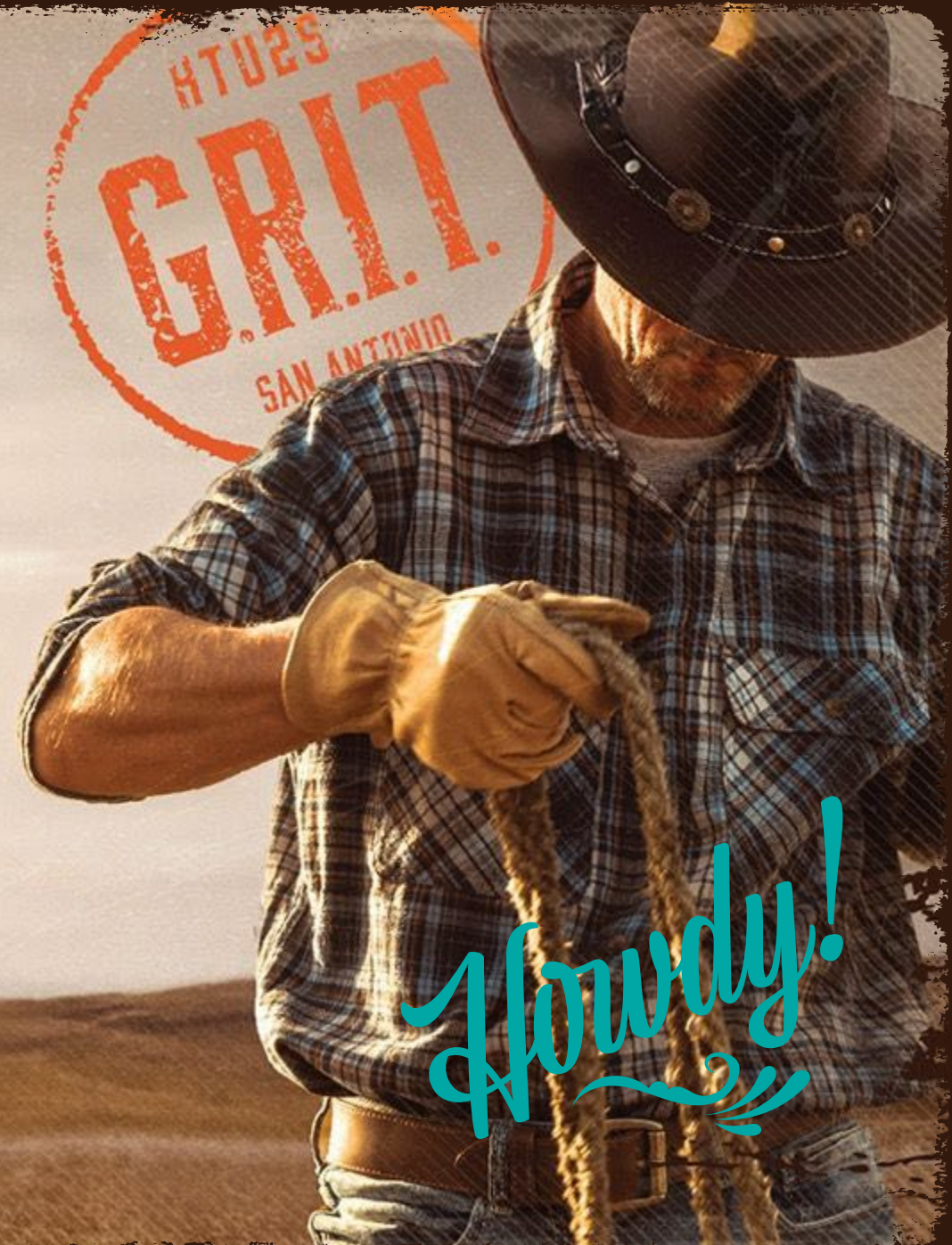
HEALTHTRUST®
UNIVERSITY CONFERENCE

The Pharmacologic Clock Is Ticking— Comprehensive Alignment to Timely Formulary Adoption

THIS SESSION IS NOT OPEN TO SUPPLIERS

Applying for CE credit or need a Certificate of Participation? Be sure to snap a pic of the code shown at the end of this session.

CE Deadline: 09/30/25



Today's Presenters



**Erin Graden,
PharmD, MBA**

Director, Consolidated
Pharmacy Services
HCA Healthcare



**Athena Markos,
RPh, CPh**

Regional Distribution
Center Pharmacy
Director

HCA/HealthTrust
Supply Chain for
East & West Florida



**Laurie Perkins,
PharmD**

Director, Clinical
Pharmacy Operations
HealthTrust



Disclosures



The presenters have no real or perceived conflicts of interest related to this presentation

Note: The content presented is for informational purposes only and is based upon the presenter(s) knowledge and opinion. It should not be relied upon without independent consultation with and verification by appropriate professional advisors. Individuals and organizations shall have sole responsibility for any actions taken in connection with the content herein. HealthTrust, the program presenter(s) and their employers expressly disclaim any and all warranties as to the content as well as any liability resulting from actions or omissions of any individual or organization in reliance upon the content.

This program may contain the mention of suppliers, brands, products, services or drugs presented in a case study or comparative format using evidence-based research. Such examples are intended for educational and informational purposes and should not be perceived as an endorsement of any particular supplier, brand, product, service or drug.

Learning Objectives



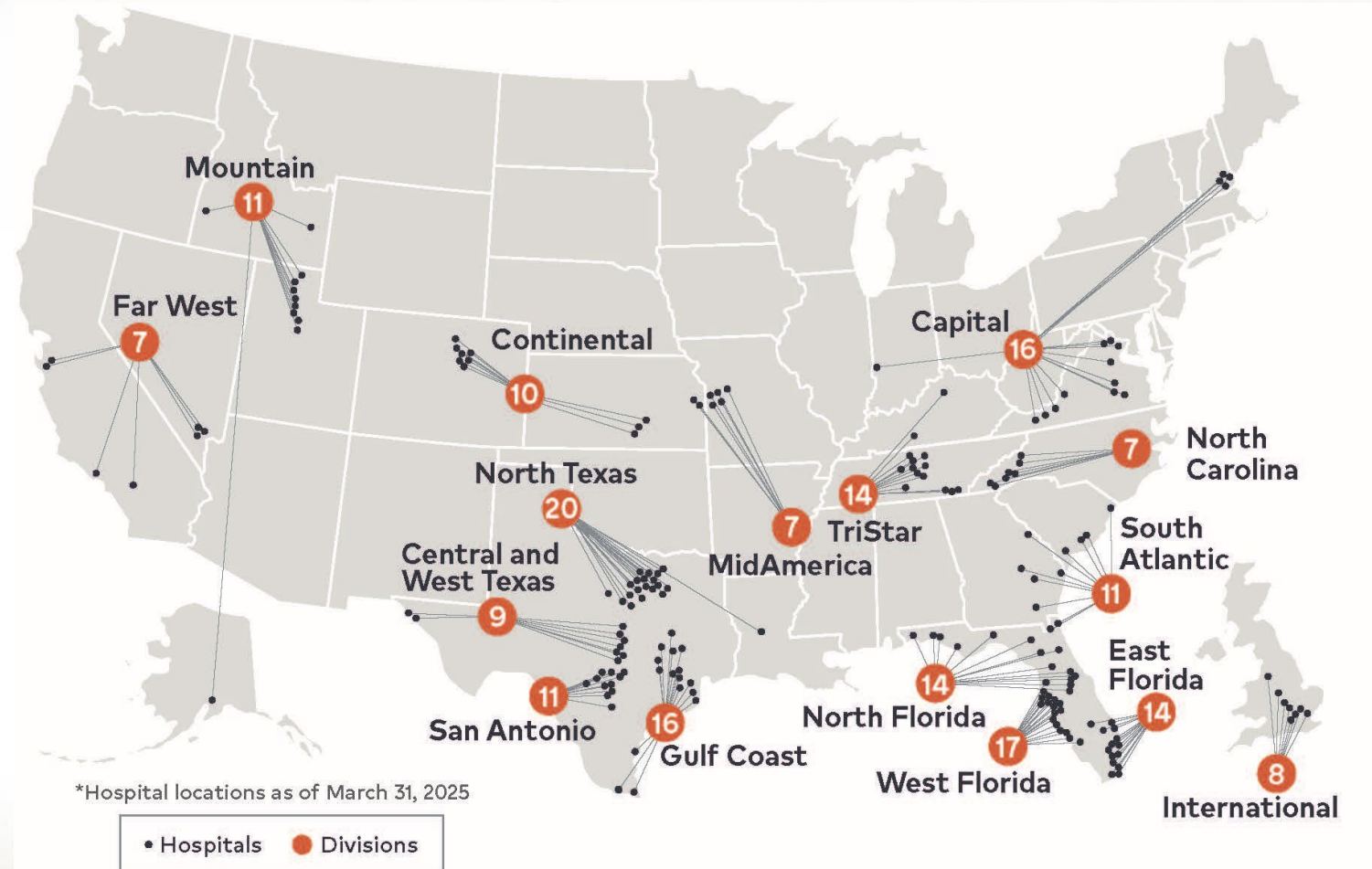
At the end of this session, participants should be able to:

- Identify key collaborative teams and decision-makers to drive momentum in implementing pharmacy initiatives.
- Recall key operational steps that can stall pharmacy initiatives if left incomplete.
- Recognize key communication strategies for delivering a successful pharmacy initiative implementation.

Getting to Know HCA Healthcare



- ✓ 20 States & United Kingdom
- ✓ 192 Hospitals
- ✓ 15 Divisions
- ✓ 2,500 Ambulatory care sites





Formulary

- ✓ **Dynamic**
- ✓ **Consistent**
- ✓ **Objective**
- ✓ **Informative**
- ✓ **Transparent**
- ✓ **Flexible**

- Drug Formulary System (Medication Management)
 - Ongoing interdisciplinary process
 - Establishes which medications are used within a health system
 - Identifies most medically appropriate and cost-effective medication therapies that serve a patient population
 - Evidence-based decisions considering risk benefits, safety, efficacy, therapeutic needs and cost
- Drug Formulary
 - List of medications continually updated
 - Represents clinical judgement of physicians, pharmacists and other healthcare professionals

Source: Principles of a sound drug formulary system. American Society of Health-System Pharmacists. Updated 2025. Accessed May 23, 2025. <https://www.ashp.org/-/media/assets/policy-guidelines/docs/endorsed-documents/endorsed-documents-principles-sound-drug-formulary-system.pdf>.

Formulary Status



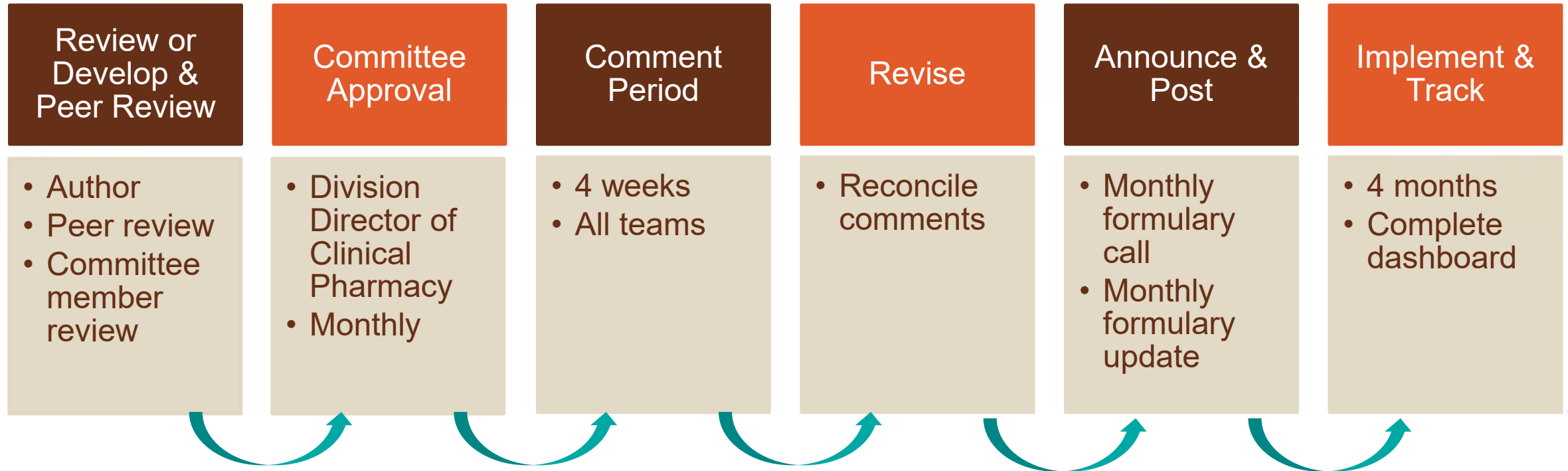
Formulary Status	Formulary	Formulary Restricted	Non-formulary Restricted	Non-formulary
Clinical Evidence	Yes	Yes	Yes	Yes / No
Routine Use	Yes	Yes	Yes / No	No
Eligible for Approved Inventory List	Yes	Case by Case Evaluation	Case by Case Evaluation	No
Ordering Criteria	No	Yes	Yes	Therapeutic Interchange Patient specific
Routinely Stocked	Yes	May require 24 to 48 hours to procure	May require 24 to 48 hours to procure	No
Request Process	No	No	Yes	Yes
Example	Aspirin 81 mg	Indomethacin Suppository	Omadacycline	Andexanet alfa

Not reviewed but purchased – product purchased and not officially reviewed for formulary yet or not going to undergo extensive review.

Sources: Principles of a sound drug formulary system. American Society of Health-System Pharmacists. Updated 2025. Accessed May 23, 2025. <https://www.ashp.org/-/media/assets/policy-guidelines/docs/endorsed-documents/endorsed-documents-principles-sound-drug-formulary-system.pdf>.

Martino JG, et al. Formulary reconciliation: implementation of a comprehensive approach to formulary maintenance and standardization. 2024. TOHSPJ. 2024;61:1-6.

Medication Evaluation



Source: HCA Healthcare. Not for reuse without permission of HCA Healthcare.

Formulary Update



FORMULARY UPDATE

05/31/2025

Class Review Revisions	Page 2
Macrolide Class Review	Page 2
Topical Antipruritics & Anesthetics Class Review	Page 2
Summary Table Final Documents Posted to RX Corner	Page 2 to 3
Medication Guidance/Position Statement	Page 3 to 4
Detailed Summary Shortage Documents	Page 4 to 6
Detailed Summary Monographs	Page 6 to 7
Detailed Summary Class Reviews	Page 8 to 15
Formulary Resources	Page 16

Monograph Documents

Aztreonam Formulary Monograph AHFS 08.12.07.16

Medication	Category	Restrictions
Aztreonam	FR	For formulary status, it is recommended that facilities aztreonam orders and ensure it is used for 1 of the <ul style="list-style-type: none">Severe, life-threatening allergy to beta-lactam tolerate cephalosporins or carbapenems

Oxytocin Shortage Guidance 2025

Document Notes

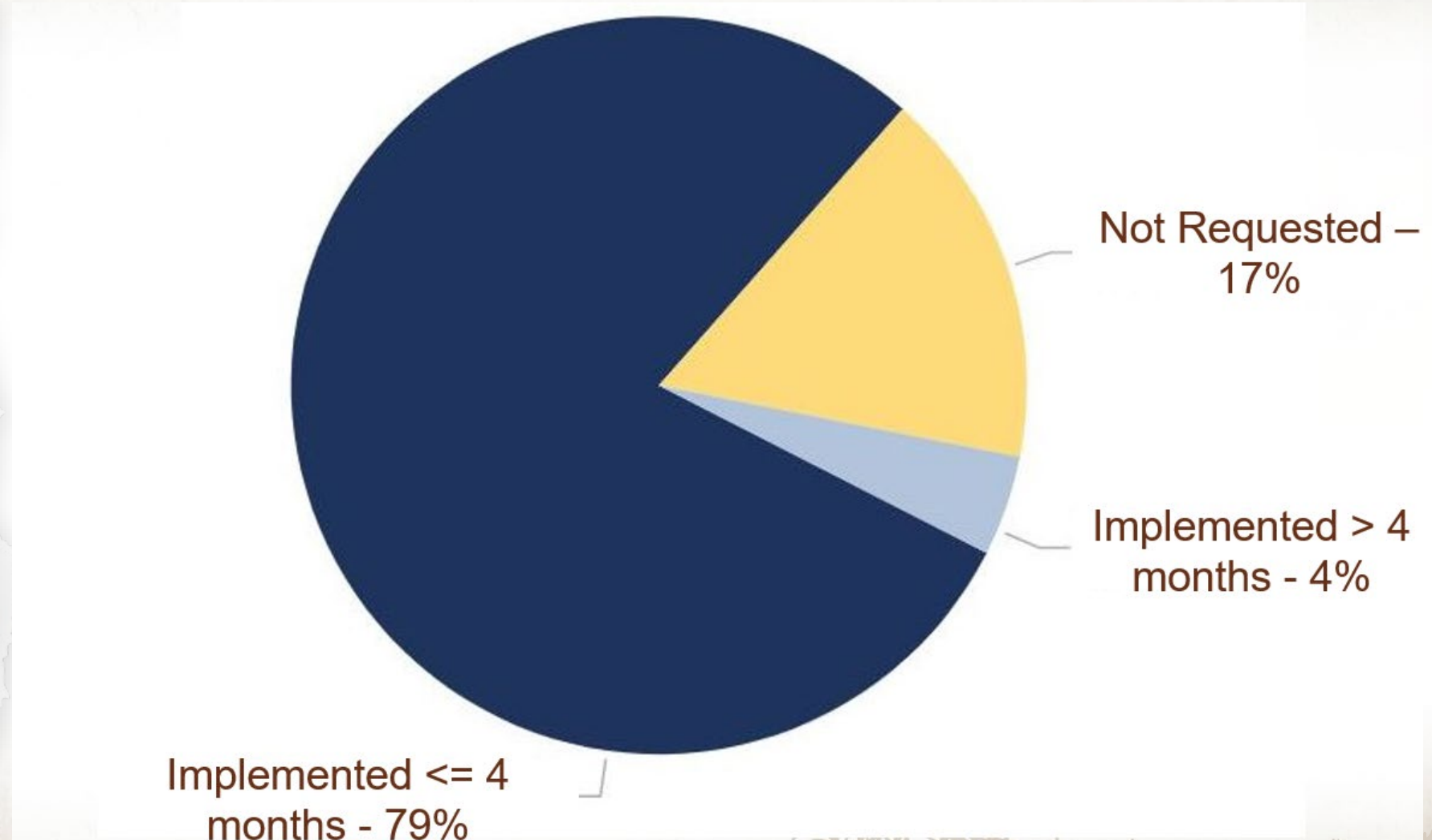
Document Type:	<ul style="list-style-type: none">Shortage guidance document for review and revision
Document Update:	<ul style="list-style-type: none">Updated Alternative options for induction of labor section<ul style="list-style-type: none">Consider dinoprostone vaginal insert (usually formulary res misoprostol not available for cervical ripening and induction appropriate

Source: HCA Healthcare. Not for reuse without permission of HCA Healthcare.

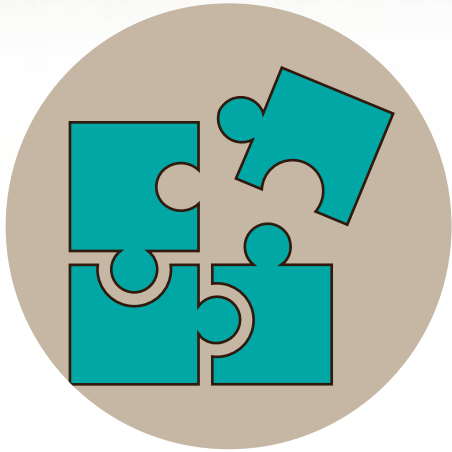
Formulary Implementation Tracker



- 2025
- Division Formulary Overview



Medication Formulary Status = Formulary

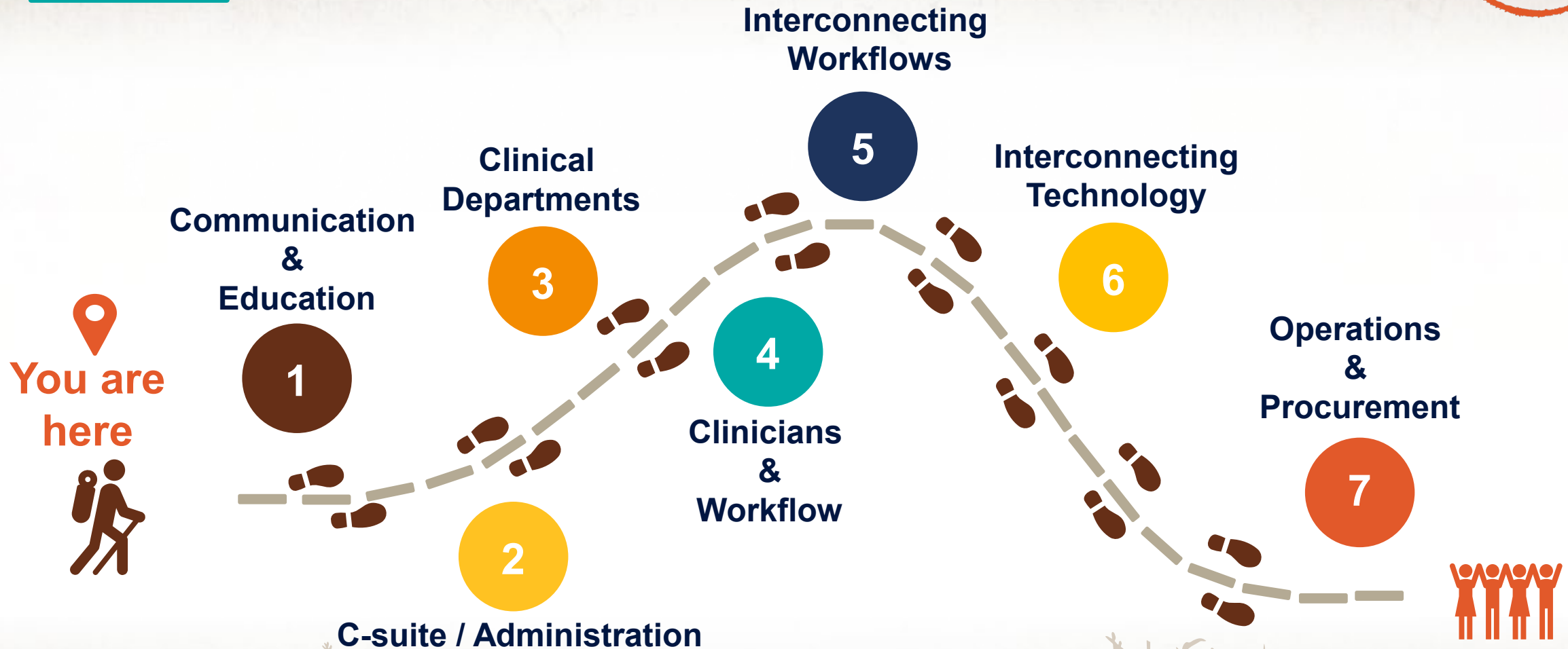


Putting the Pieces Together

Collaborate
Communicate
Complete

Contracts / Vendors	Information Technology	Clinical RX Monitoring	IV Room Software
Wholesaler Inventory	Communication / Education All Teams		IV Pumps
Warehouse Inventory	Formulary		Medication Reconciliation
Facility Inventory			Medication Diversion
Dispensing Machine	Workflows All Teams		Medication Safety
Product Ordering	Shortage Mitigation	Pharmacy Billing	Regulatory

Mapping Out Success



Sources: 1. Karel, LI et al. Implementation of a formulary management process. Am J Health-Syst Pharm. 2017;74(16):1245-1252; 2. Urbanski C et al. Formulary management guiding principles for automated systems. Am J Health-Syst Pharm. 222;79(18):1599-1606.

Mapping the Details



Enterprise

- ✓ Formulary guidance
- ✓ Supporting clinical resources
- ✓ Service line engagement
- ✓ Technology
- ✓ Financial
- ✓ Operations



Division (15)

- ✓ Mapping formulary guidance & distributing resources
- ✓ Engaging facility C-suite & service lines
- ✓ Supporting technology & operations



Facilities (190)

- ✓ Implementing formulary guidance
- ✓ Pharmacy & Therapeutics Committees' approvals
- ✓ Communicating with C-suite and service line
- ✓ Managing technology
- ✓ Procuring & storing

Source: Karel LI et al. Implementation of a formulary management process. Am J Health-Syst Pharm. 2017;74:1245-52.

Mapping Out Success



Communication & Education

- Formulary status / initiative
- Expectations
- Resources
- Financial impact

Administration

- Medication identification
- Billing
- Technology

Policy & Procedure

- Committee approvals
- Medication management policies

Procurement

- Contracts
- Wholesaler
- Inventory



Sources: 1. Martino J et al. Formulary reconciliation: implementation of a comprehensive approach to formulary maintenance and standardization. TOHSPJ. 2024;61:1-6; 2. Johnson ST et al. Formulary management challenges and opportunities: 2020 and beyond – an opinion paper of the drug information practice and research network of the American College of Clinical Pharmacy. J Am Coll Clin Pharm. 2021;4:81-91.

Assessment Question #1



Which of the following are key collaborative team members and decision-makers who should be involved in driving formulary initiatives?

- A. Nursing and pharmacy information technology team
- B. Pharmacy operations team members
- C. Interdisciplinary service line leads – nursing, providers at minimum
- D. All of the above

Answer: Assessment Question #1



Which of the following are key collaborative team members and decision-makers who should be involved in driving formulary initiatives?

- A. Nursing and pharmacy information technology team
- B. Pharmacy operations team members
- C. Interdisciplinary service line leads – nursing, providers at minimum
- D. **All of the above**



MEDICATION
FORMULARY & INVENTORY

CONSOLIDATED SERVICE CENTER & FACILITY ALIGNMENT



Erin Graden, Pharm D, MBA





HCA/HealthTrust Supply Chain Warehouses

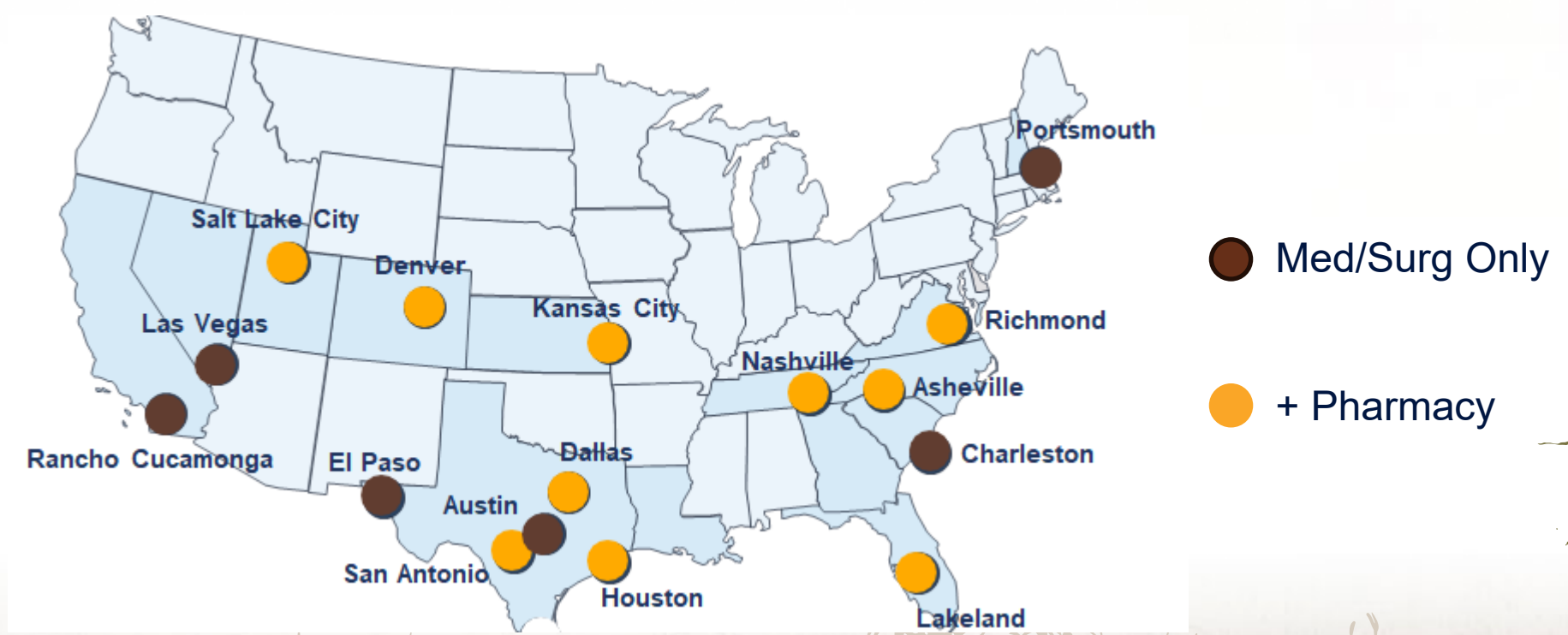
Medical supplies & devices

- National Product Formulary alignment

Pharmaceuticals

- Corporate Formulary & Approved Inventory List (AIL)

Consolidated Distribution Center (CDC) or Consolidated Service Center (CSC): Internal distribution centers for common products & services needed by facilities within their designated service area.



What is the AIL?

Approved Item List (AIL)

- List of the preferred medications a CSC should carry if they decide to provide that product to facilities

Preferred products – Align with:

- Corporate formulary
- Contract or preferential pricing
- Dosage form
- Warehouse logistics
- Special handling
- Med safety
- Waste reduction
- Safety stock strategy

AIL Information			
Name & Description	Strength	Dose Form & Route	NDC & Manufacturer
Formulary Status	UOM/Factor	AHFS	Contract & Rebate Status
Bulk/UD	Billing Info	Storage	Never Out & Safety Stock
Vendor	SIN & Reorder #	Price	NIOSH
Controlled Status	FDA Status	Date of Update	DSCSA Status*
<ul style="list-style-type: none">• AHFS = American Hospital Formulary System• DSCSA = Drug Supply Chain and Security Act• FDA = Food and Drug Administration• NDC = National Drug Code• NIOSH = National Institute for Occupational Safety and Health• SIN = Standard Item Number• UD = Unit Dose• UOM = Unit of Measure			



Approved Inventory List Request Process

Announce & Post

- Monthly Formulary Update Call
- Monthly Formulary Update



Potential
Formulary
Change

- Corporate Formulary Update
- Local Formulary Request

Local
Approval/
Adoption

- Division Clinical Pharmacy Review
- Division Demand Analysis

Stocking &
Procurement

- Approved Item List
- Nonstock approval



Implement & Track

- 4 Months
- Complete Dashboard

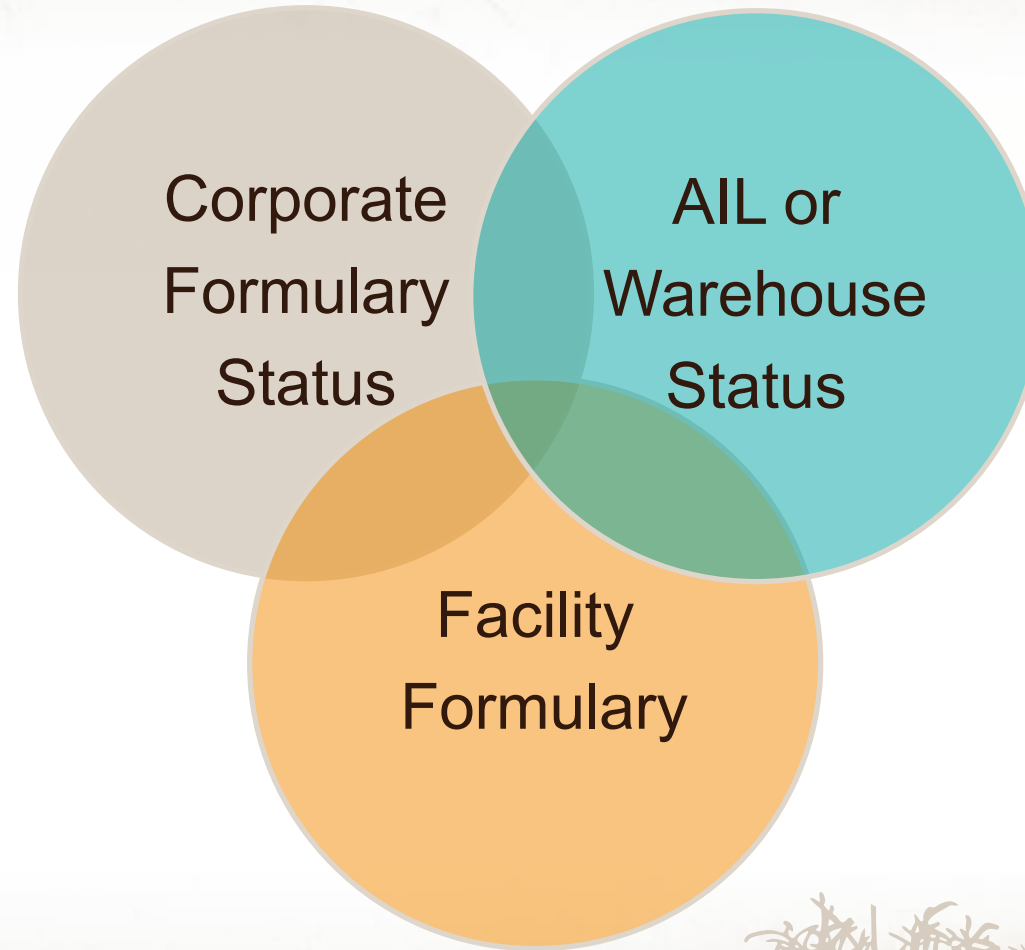


Stocking & Procurement

Considerations & Communications

- ADC = Automated Dispensing Cabinet
 - EHR = Electronic Health Record
 - CDS = Clinical Decision Support
 - POU = Point-of-Use
- External
 - Manufacturer, Vendor, Wholesaler
 - Increased or Decreased Demand Projections
 - Timeline
 - Internal
 - Systems integration
 - Ordering & Inventory (warehouse & facility inventory software, ADC)
 - Clinical (EHR, ADC, compounding software, CDS)
 - Stocking Location
 - Pharmacy, ADC, POU/Medsurg
 - Go-live &/or burndown

Inventory & Formulary Status



Assessment Question #2



Which of the following are upfront priority considerations which may prevent downstream delays to implementation?

- A. Communicating product demand shift to vendors
- B. Assessing physical product properties – look alike, sound alike, barcode, storage
- C. Class of trade
- D. All of the above

Answer: Assessment Question #2



Which of the following are upfront priority considerations which may prevent downstream delays to implementation?

- A. Communicating product demand shift to vendors
- B. Assessing physical product properties – look alike, sound alike, barcode, storage
- C. Class of trade
- D. All of the above**

MEDICATION
FORMULARY & INVENTORY

DIVISION ALIGNMENT



Athena Markos, RPh, CPh



Image Source: HCA Healthcare. Not for reuse without permission of HCA Healthcare

Formulary Implementation at the CSCs



Lakeland Regional Distribution Center



Square Footage: 713,000

Employees: 250

Facilities Serviced: 173

- 1) Hospitals: 53**
- 2) Freestanding
Emergency
Departments: 71**
- 3) Ambulatory Surgical
Centers: 49**

Image: HCA Healthcare. Not for reuse without permission of HCA Healthcare.

Lakeland Overview



The Lakeland Warehouse is unique because we are the only warehouse in the company which performs picking by three different avenues

1. OPEX

- 8 stations with over 16,000 bins & 75,000 cells. Currently we are utilizing 21,000 cells (only 30% of available cells)
- Three-minute transit time from OPEX to shipping (1.17 miles of conveyor belts)

2. Locus Co-bots (80 Co-bots)

- Material handlers are assigned a small area while the Co-bots do the traveling (Med-Surg)

3. Manual picking

- Bulk area, case pick & by the each

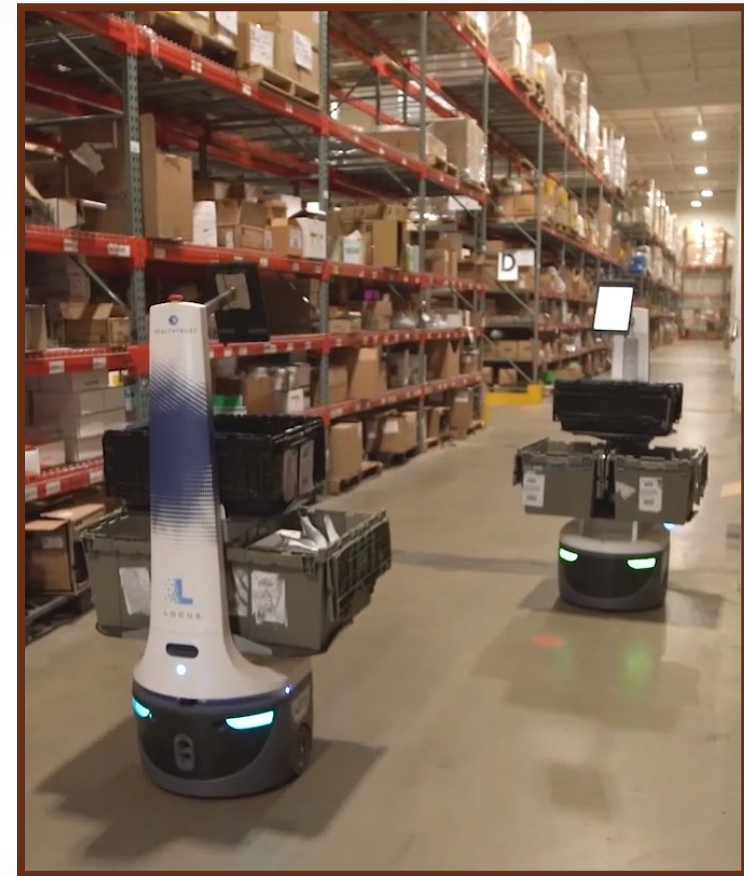


Image: Locus Robotics. Used with permission of Locus Robotics..

Lakeland Overview, *continued*



Lakeland Volume

30% of HCA's total volume

January to May 2025	
Lines – YTD [†]	2,895,000
Lines – Per Month	600,000
Lines – Average Per Day	28,000
Lines – Historic Highest Per Day	40,000
OLPNs* Pharmacy	168,650
OLPNs* Med-Surg	1,957,159
YTD [†] OLPNs*	2,125,809
[†] Year to date * Outbound license plane number (# assigned to each tote released from Lakeland)	

Source: HCA Healthcare data. Not for reuse without permission of HCA Healthcare.

Criteria for Local AIL Inventory



Demand

- ✓ Dispenses versus administrations (volume of use)
- ✓ Number of locations with need
- ✓ Waste mitigation
- ✓ Targeted days on hand/ safety stock
- ✓ Storage criteria/shelf life



Monitor

- ✓ Facility purchases versus warehouse eligible
- ✓ Facility purchases versus stocked in warehouse
- ✓ Non-moving inventory



Stock or Remove

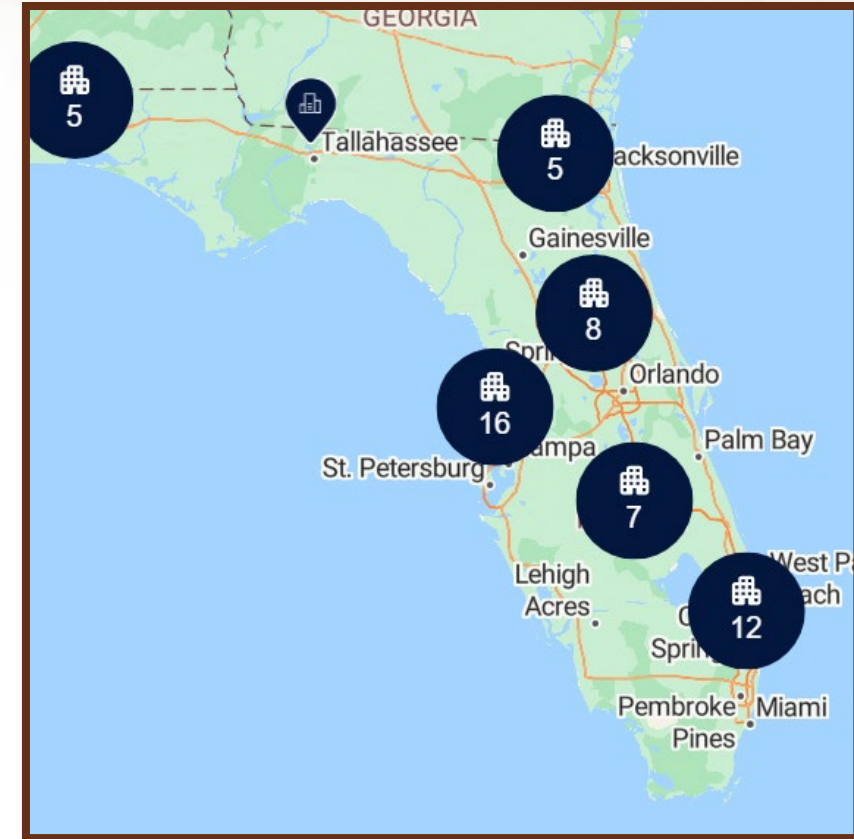
- ✓ Partnership with divisions & facility
- ✓ Communicate with all stakeholders
- ✓ Avoid supply & patient care disruptions
- ✓ Avoid waste of legacy product / burn down plan

Florida Divisions



Lakeland Regional Distribution Center services four Divisions:

- East Florida Division (14 Hospitals)
- North Florida Division (15 Hospitals)
- West Florida Division (19 Hospitals)
- South Atlantic Division (4 Hospitals)



HCA Healthcare image. Not for reuse without permission of HCA Healthcare.

Lakeland Formulary Committee & Agendas



Committee Members

Division Rx	Lakeland Distribution Center Rx	Corporate
Vice President Rx	Director Rx Inventory Control	Director Rx Clinical Operations
Director Clinical Rx	Director Rx Operations	
Director Rx Operations		
Rx Inventory & Automation Specialist		

Lakeland Formulary Committee Agenda

- 1) Out of Stock / Backorder
- 2) Operational Updates
- 3) Formulary Updates
- 4) Facility Requests

Source: HCA Healthcare. Not for reuse without permission of HCA Healthcare.

Criteria for Local Inventory Additions



- 1) Formulary (F) / Formulary Restricted (FR) / Non-Formulary Restricted (NFR)
- 2) Administrations / Dispenses per Division (Vigilanz administration / Direct Purchases)
- 3) Cost
- 4) Volume of Use
 - Slow movers
 - Fast movers
- 5) Safety (e.g., insulin drips, anticoagulants & other high-risk medications)
- 6) Nursing time of administration
 - Splitting of tablets vs. multiple tablets being administered (Goal is to minimize amount of administrations for nursing. Ensuring patient receives accurate dose (under dose vs. overdose) & reduces the frequency of scanning for nursing)

Source: HCA Healthcare. Not for reuse without permission of HCA Healthcare.

Criteria for Local Inventory Additions, *continued*



7) Pharmacy workflow

- Compounding vs. non-compounding (premix bags, vial adapter)
- Storage location (automated dispensing machine, core pharmacy, other)

8) Warehouse workflow

- Addition of barcodes to non-barcoded items
- Unit dose packaging requirements for Safecor (Do not Package List: example: cephalosporins)
- Storage criteria (freezer items)

9) Target days on hand (30/60/90 due to shortages/back orders)

Corporate Formulary Packet Review



Formulary packet distributed monthly by the Corporate Formulary Management team to:

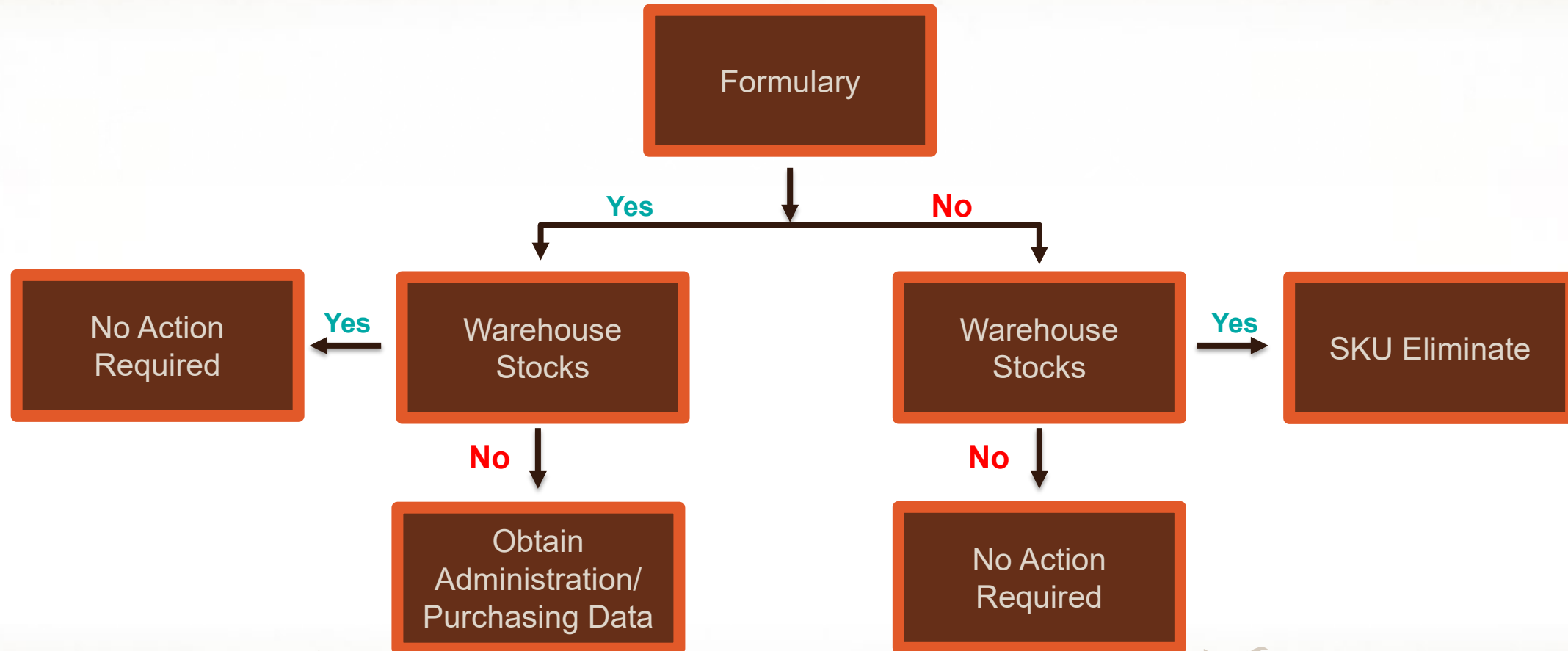
- 1) Division Clinical Coordinators
- 2) Hospital Clinical Coordinators
- 3) Warehouse Directors/Mangers

Formulary packet
consists of
these sections:

FORMULARY UPDATE		05/31/2025
Class Review Revisions		Page 2
Macrolide Class Review		Page 2
Topical Antipruritics & Anesthetics Class Review		Page 2
Summary Table Final Documents Posted to RX Corner		Page 2 to 3
Medication Guidance/Position Statement		Page 3 to 4
Detailed Summary Shortage Documents		Page 4 to 6
Detailed Summary Monographs		Page 6 to 7
Detailed Summary Class Reviews		Page 8 to 15
Formulary Resources		Page 16

Source: HCA Healthcare. Not for reuse without permission of HCA Healthcare.

Formulary Class Review at Warehouse Level



Formulary Class Review Example



Medication	Formulary Category (F, FR, NF, NFR)	Restriction / Notes
Levothyroxine (Synthroid) Tablets 25, 50, 75, 88, 100, 112, 125, 137, 150, 175, 200, 300 mcg	F	
Levothyroxine Capsules all strengths	NF	
Levothyroxine Injection 100 mcg vial	FR	Formulary restricted to patients who are unable to swallow or receive via enteral route (NG, OG, other feeding tube), myxedema coma, or deceased organ donor management.
Levothyroxine Injection 200 mcg, 500 mcg vials	NF	
Levothyroxine Powder for Injection 100 mcg, 200 mcg, 500 mcg	NF	

Formulary Update Communication



FORMULARY UPDATE

02/28/2025

Posted as Final February 28, 2025

Document	Document Type	Subcommittee
RAAS Inhibitors Formulary Class Review AHFS 24.32.92	Class Review	CC/CV/ED
Potassium IV Shortage Guidance 2025	Shortage	CC/CV/ED
Thyroid Agents Formulary Class Review AHFS 68.36.04 <ul style="list-style-type: none">Thyroid Agents TI – To Be Posted	Class Review	CC/CV/ED

Formulary Class Review Data Collection



SIN	ON AIL	RO #	Medication	NDC	Cost	Formulary Status
764496	Y	2420099	Levothyroxine 25 mcg		\$0.035	F
7461591	Y	1525823	Levothyroxine 137 mcg	60687-0563-01	\$0.079	F
	N	3792660	Levothyroxine 300 mcg	68180-0976	\$0.25	F

Stocked at CSC	WFD Utilization	EFD Utilization	NFD Utilization	SATL Utilization	Total Utilization	Decision
Y						
N	188	140	350	44	WFD 63, EFD 47, NFD 116, SATL 44, Total=270	Add
N	110	50	0	11	WFD 37, EFD 17, NFD 0, SATL 11, Total=65	Do not add

Implementation of Formulary Changes



- 1) Email communication of formulary changes (additions/subtractions) sent to:
 - A. Division VP of Pharmacy
 - B. Division Director of Clinical Pharmacy
 - C. Division Director of Operations
 - D. Division Pharmacy of Inventory and Automated Specialist
 - E. Facility Director of Pharmacy
 - F. Director of Clinical Pharmacy
 - G. Director of Operations
 - H. Inventory Pharmacy Coordinator (Buyer)
- 2) SKU Elimination emails: Communication of depleting stock from warehouse prior to conversion to new formulary item
- 3) Vendor notification of formulary changes with anticipated volume. (Vendors need two to three weeks to ramp up volume prior to us ordering)

Communication of Formulary Eliminations/ Conversions



Good morning Team,

Items listed are either non-formulary due to Formulary Updates, low usage items or items to be removed from warehouse by the State Formulary Committee, or Corporate SIN Updates.

DO NOT CONVERT until items show as yellow & days on hand is zero.

Once converted to new sin please:

1. Activate new SIN
2. Move quantity on hand from old SIN to new SIN
3. Inactivate old SIN
4. Print new label

Old SIN	New SIN	New Description	Comments	Days on Hand	New NDC
495548	N/A	Acebutolol 200 mg	NF as of 12-31-2025	26	N/A
260757	8997421	Atomoxetine 25 mg	Converting to UD	67	50268-0057-13

Product Internal System Build



1) Vendor Item Request Addition (VIRA)

Activates product in ordering system (SMART) for warehouse & facilities

2) Demand Forecasting & Inventory Optimization (DFIO)

Ordering parameters for minimum & maximum requirements for new product needs to be built in ordering platform

3) Manhattan Receiving Platform

Build required to include location, lot & expiration date tracking

4) PAR Scripting Template

Sent to corporate to add new products to facility Pyxis PARS for ordering

Final Steps to Implementing New Additions



- Order Product from vendor
- Receive Product
- Follow-up emails sent to facilities once product is received into the warehouse so item may be activated at the facility level & then ordered direct from warehouse

Assessment Question #3



When aligning formulary recommendations & warehouse inventory, which of the following regarding communication is important?

- A. Initial verbal & email communications with expectations & target dates
- B. Regular verbal & email communications for status updates
- C. Final implementation and completion verbal & email communications indicating successful legacy product elimination & adequate inventory of new product
- D. All of the above

Answer: Assessment Question #3



When aligning formulary recommendations & warehouse inventory, which of the following regarding communication is important?

- A. Initial verbal & email communications with expectations & target dates
- B. Regular verbal & email communications for status updates
- C. Final implementation and completion verbal & email communications indicating successful legacy product elimination & adequate inventory of new product
- D. All of the above**

References



- Principles of a sound drug formulary system. American Society of Health-System Pharmacists. Updated 2025. Accessed May 23, 2025. <https://www.ashp.org/-/media/assets/policy-guidelines/docs/endorsed-documents/endorsed-documents-principles-sound-drug-formulary-system.pdf>.
- Karel, LI et al. Implementation of a formulary management process. Am J Health-Syst Pharm. 2017;74(16):1245-1252.
- Urbanski C et al. Formulary management guiding principles for automated systems. Am J Health-Syst Pharm. 2022;79(18):1599-1606.
- Martino J et al. Formulary reconciliation: implementation of a comprehensive approach to formulary maintenance and standardization. TOHSPJ. 2024;61:1-
- Johnson ST et al. Formulary management challenges and opportunities: 2020 and beyond – an opinion paper of the drug information practice and research network of the American College of Clinical Pharmacy. J Am Coll Clin Pharm. 2021;4:81-91.



HEALTHTRUST®
UNIVERSITY CONFERENCE

Thanks y'all!



- Erin Graden | Erin.Graden@healthtrustpg.com
- Athena Markos | Athena.Markos@healthtrustpg.com
- Laurie Perkins | Laurie.Perkins@healthtrustpg.com