

# Revolutionizing the Pharmacy Supply Chain

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The speaker has no conflicts of interest to disclose.

## Learning Objectives – Pharmacist and Technician

- State services provided by an Integrated Service Center (ISC)
- Explain how technology can be leveraged to manage inventory
- Describe potential cost savings from streamlining inventory

**What is the greatest challenge facing your pharmacy operations today?**

## THIS IS transformation Advocate Aurora Health

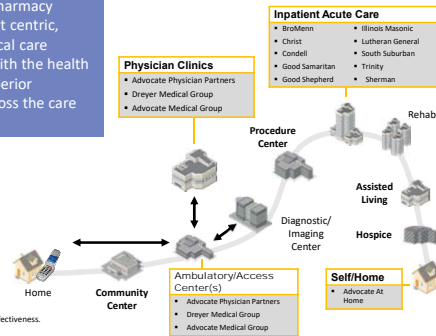
By the numbers



## THE NEW WORLD

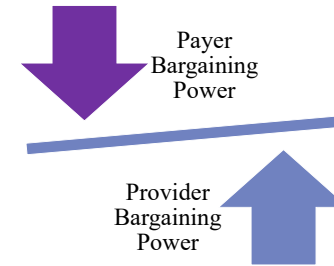
### Mergers, Consolidation & Centralization

Advocate Health Care Pharmacy Services provides patient centric, innovative pharmaceutical care through collaboration with the health care team to deliver superior outcomes and value across the care continuum.



## “WINNING VS. LOSING”

### Leverage



## REASONS FOR ACTION

Issues	Description	Initial Est. System Impact	YTD June 2018 Savings Results
Inefficiency	Lack of pharmacy inventory backbone / automation leading to: <ul style="list-style-type: none"> <li>Incomplete understanding of inventory <ul style="list-style-type: none"> <li>Asset value</li> <li>Utilization / Days on hand</li> <li>Reorder Points &amp; Reorder Quantities</li> </ul> </li> </ul>	\$900K – additional cost	\$1.6M
	Lack of a system automated repackaging process		\$3.2M
Redundancy & Lack of Standards	Ten separate pharmacy buyers performing the same duplicative functions across the systems	\$300K – additional cost	\$770K; plus central procurement for 4 sites
	Lack of production standardization which leads to increased risk for errors and higher costs.		
Economies of Scale	Pharmacy did not fully leverage our size as an organization for strategic purchasing (high cost- low use, forward buys/spee buys, bulk buys, etc.)	\$900K – incremental cost	\$4.1M
	Buying Power – leveraging Advocate's intel and buying power for better pricing	\$555???	

## SOLUTION: A Centralized Integrated Approach

Centralized pharmacy integrated supply center with pharmacy automation and software for enterprise inventory management.

Standardized	Implemented	Centralized	Partnered
<ul style="list-style-type: none"> <li>Placed all inpatient pharmacies on a standard inventory technology platform (Enterprise Medication Manager)</li> </ul>	<ul style="list-style-type: none"> <li>Installed automation at all inpatient pharmacies to provide a true closed perpetual inventory management system (MedCarousels / MedShelves).</li> </ul>	<ul style="list-style-type: none"> <li>Centralized the ordering of key medications.</li> <li>Centralized the pre-packaging of medications (PacMeds).</li> <li>Centralized and in-sourced key IV medications (Repeater Pumps).</li> </ul>	<ul style="list-style-type: none"> <li>Established regional partnerships to optimize existing technologies and processes.</li> </ul>

## Which has enabled specific ISC Programs...

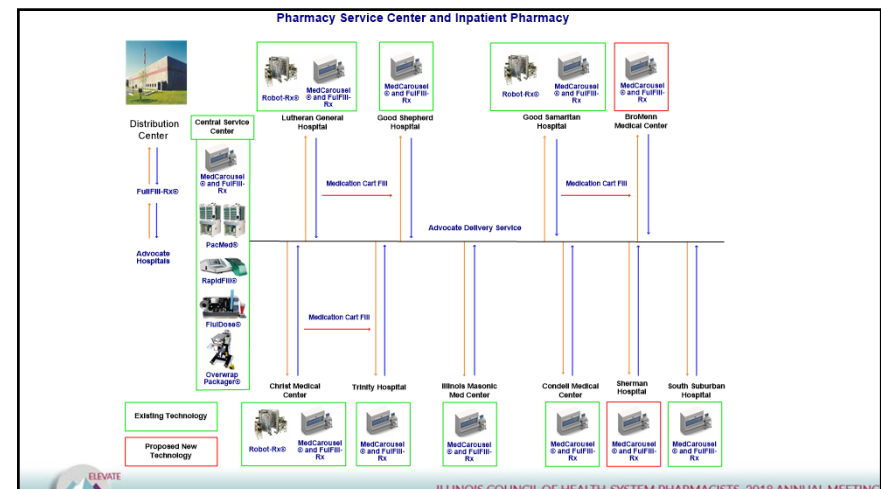
- Inventory Optimization / Reduction
- Low Unit-of-Measure (LUM) Distribution
- Central Unit-Dose Packaging
  - Oral solids (Central-fill Robots and ADCs )
  - Oral Liquids
  - IVs
  - Kits (Epi & HIV PEP)
- Strategic Buying
  - Forward buys
  - Opportunity buys
  - Speculative buys
- Drug Shortage Mitigation
- 340B Penny Buys
- Central Procurement (4 sites)

## SOLUTION: Innovative Technology Key to Innovative Success

Account Number	Status	Action
340 Medication Tracking Account Number 3403	Items Needed	Pending
AMG Pharmacy Account Number 23107	Items Needed	Pending
Bromm Medical Center Account Number 23044	Items Needed	Pending
Central Service Center Pharmacy Account Number 25006	Items Needed	Pending
Christ Hospital and Medical Center Account Number 25001	Items Needed	Pending
Condell Medical Center Account Number 24024	Items Needed	Pending

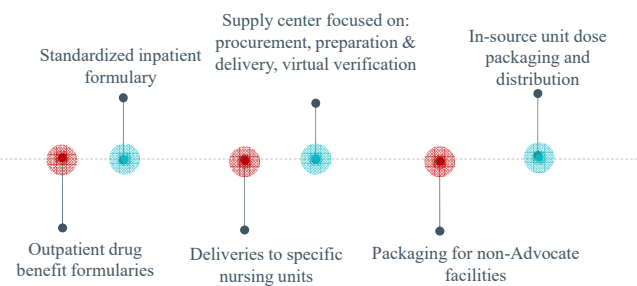
## SOLUTION: Innovative Technology Key to Sustainable Success

Facility	Days on Hand	Average Daily Usage	City in Pharmacy	QTY in Pharmacy	Transfer From
Lutheran General Hospital	46 days	1.82 per day	City in Pharmacy	83 doses	Transfer From
Good Shepherd Hospital	61 days	1.27 per day	City in Pharmacy	6 doses	Transfer From
Good Samaritan Hospital	986 days	0.07 per day	City in Pharmacy	69 doses	Transfer From
Illinois Masonic Medical Center	188 days	0.20 per day	City in Pharmacy	37 doses	Transfer From
Christ Hospital and Medical Center	27 days	0.33 per day	City in Pharmacy	9 doses	Transfer From
Trinity Hospital			City in Pharmacy	3 doses on hand	Transfer From



## Roadmap to Growth and Success

Standardization, Consolidation & Full Inventory Visibility



## BEFORE

Site Inpatient Pharmacy



## AFTER

Site Inpatient Pharmacy



## INTEGRATED SERVICE CENTER



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## INTEGRATED SERVICE CENTER



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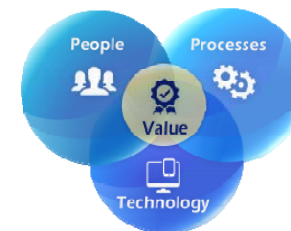
## INTEGRATED SERVICE CENTER



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## SUSTAINABLE AND SCALABLE



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## 360° COLLABORATIVE PARTNERSHIPS

Key to Sustainable Success

### Internal Partners

- Senior Leaders
- Front-line Staff
- Supply Chain Management
- Operations Management
- Nursing

### External Partners

- Omnicell (software, hardware, & consultation)
- Owens & Minor
- McKesson Distribution
- MedSpeed

## RESULTS – YTD June 2018

Improved Turns & Days on Hand

Exceeded inventory turn goal in a little over a year

The higher the turns – the smaller the on-hand inventory investment. Affords ability to free up funds for other investments.

Potential added benefit – decrease expired meds.

### 7| Inventory Turns



Average Inventory Turns  
**19.05**

### 8| Days on Hand

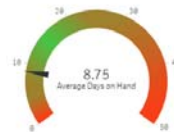


## RESULTS

### ABC Inventory Optimization

Medications contributing to the top **80%** of the overall drug spend maintain inventory levels of **<9** days on-hand and **>41** Turns/year.

Average Inventory Turns  
**41.70**



On average around 200 medications contribute to approximately 80% of the total drug spend. Managing those items more closely leads to less money tied up in inventory at any given time.

## RESULTS

### Total Savings / Cost Avoidance

Over **\$26M** savings/cost avoidance in just over 3 years

System Savings attributed to strategic purchases, repacking business, low unit of measure distribution, 340B "penny" purchases, and inventory reduction.

### Savings

Total Savings  
**\$26,205,726**

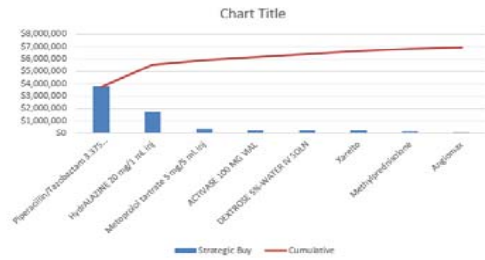




## RESULTS

### Strategic Buy Savings

Over **\$10.9M** in bulk buy savings since inception!

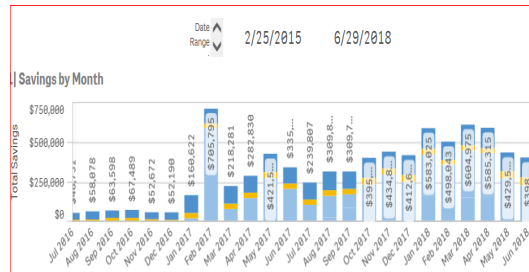


Strategically purchasing product in bulk to access additional manufacturer discounts, delay impact of price increases, and better manage shortages.

## RESULTS

### Central Packaging Savings

Over **\$8.1M** in central packaging savings in just over 3 years



Centralized oral solid, oral liquid, and some IV compounded medications along with preparing specific kits to gain efficiency and save dollars across the organization.

## RESULTS

### Inventory Reduction Savings

Over **\$1.6M** in inventory reduction savings in just over 1 year



Optimize on-hand inventory across the health system; improve cash flow.

## RESULTS

### Net Savings

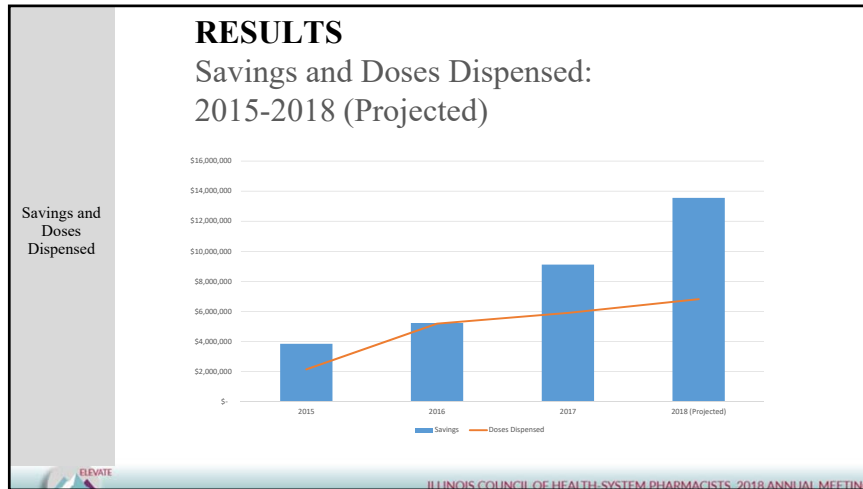
Over **\$10.2M** net savings in 2016-2017



Factoring in the expenses of the ISC, we still see a tremendous amount of net savings from the operation which translates into a significant savings on every single dose we distribute.

**\$0.92 net savings on every dose shipped!**

Savings per Dose Shipped:	\$1.29	Expense per Dose Shipped:	\$0.36	Net Savings per Dose Shipped:	\$0.92
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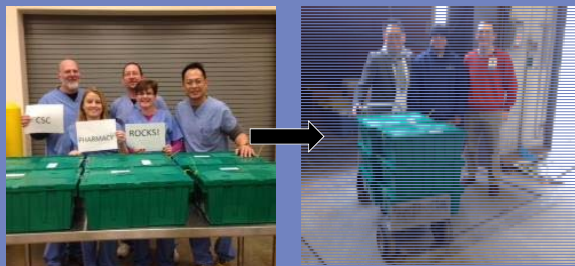
# \$26,205,726

Cost Savings/Avoidance in just over 3 years

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- ## Recap Learning Objectives
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**“If you build it...they will come.”**



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**Have fun!**

**Questions?**

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