

Show Me the Money! Approaches to Cost Savings and Revenue Generating Initiatives

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The speakers have no actual or potential conflict of interest in relation to this activity.

Learning Objectives for Pharmacists

- List methods to identify variation in drug utilization and potential opportunities through internal and external resources.
- Describe specific cost savings/revenue generating initiatives that were implemented and key lessons learned through the process.
- Review examples of how electronic drug cost awareness tools that may guide providers to cost effective medication selections at the point of order entry.

Learning Objectives for Pharmacy Technicians

- List methods to identify differences in drug usage and potential opportunities.
- Describe specific cost savings/revenue generating initiatives and key lessons learned during the implementation process.
- Review examples of how electronic order entry can be used to guide providers to cost effective medication sections.

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Director of Pharmacy, Comer Children's Hospital
The University of Chicago Medicine

University of Chicago Medicine Patient Care Facilities

- Bernard A. Mitchell Hospital
- Duchossois Center for Advanced Medicine



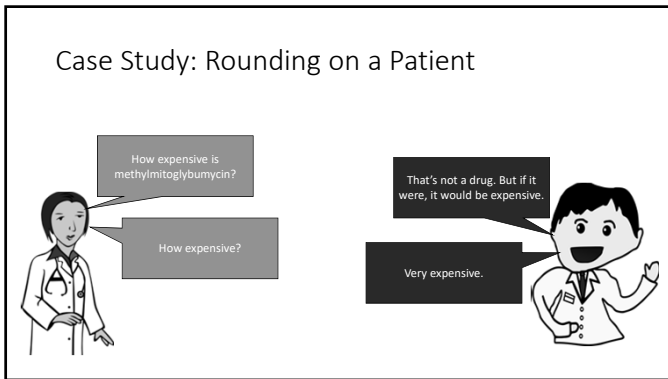
- Comer Children's Hospital
- Center for Care & Discovery



Hospital System Stats:
 • Licensed Beds: 811
 • Admissions: 29,000/yr
 • Patient Days: 180,000/yr
 • ED Visits: 78,000/year
 • OR Cases: 21,000/year

UCM Department of Pharmacy Facts

| | | |
|--------------------------------------|------------------------|--------------------------|
| Total FTE = 250 | Inpatient FTE = 154 | Residents = 21 |
| Board Certified Pharmacists = 52 | Labor Expense = \$20M | Drug Expense = \$126M |
| Investigational Drug Protocols = 470 | Inpatient Doses = 4.5M | Outpatient Rx's = 95,000 |



For those of you who work in an inpatient setting, what is the primary resource at your institution for frontline providers to obtain drug cost information?

- At the point of order entry in CPOE prior to submitting the order
- By viewing patient charges in CPOE after placing the order
- Through drug cost charts prepared for the hospital
- By calling Pharmacy
- Looking up AWP in a drug resource
- Other



Drug Class Cost Comparison Chart

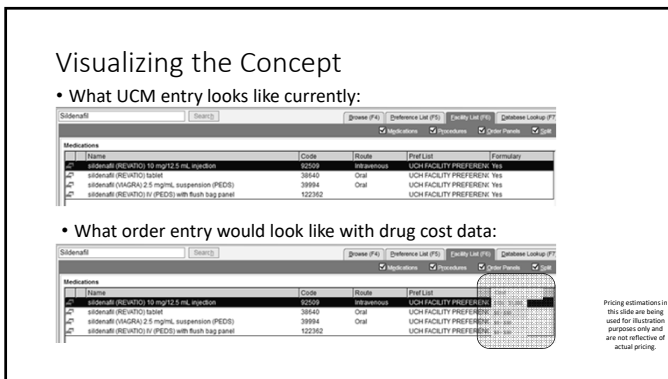
| Continuous Infusion | Drug Acquisition Cost |
|---------------------|-----------------------|
| Dobutamine | \$\$ |
| Dopamine | \$ |
| EPINEPHrine | \$ |
| Esmolol | \$\$\$\$\$ |
| Isoproterenol | \$\$\$\$\$\$\$\$ |
| Milrinone | \$\$\$ |
| Nicardipine | \$\$\$ |
| Nitroglycerin | \$\$ |
| Nitroprusidide | \$\$ |
| Norepinephrine | \$ |
| Phenylephrine | \$ |
| Vasopressin | \$\$\$ |

| Legend | |
|----------------|-------------|
| \$ | <\$X |
| \$\$ | \$X-X |
| \$\$\$ | \$XX-XX |
| \$\$\$\$ | \$XX-XX |
| \$\$\$\$\$ | \$XXX-XXXX |
| \$\$\$\$\$\$ | \$XXXX-XXXX |
| \$\$\$\$\$\$\$ | >\$XXXX |

Lessons Learned:

- Likely saved as PDF's which require a weblink.
- Medical staff locating the weblink.
- When a link was placed in CPOE the staff rarely clicked to open it.
- Updates needed frequently (i.e. annually).
- Decision needed if you are basing cost comparison on a drip vs drip comparison or daily average use in a patient.
- How do you use these to apply to an infant compared to an adult.

Pricing estimations in this slide are being used for illustration purposes only and are not reflective of actual pricing.

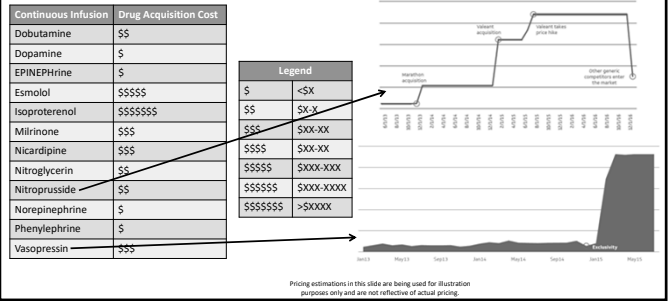


Challenges?

Challenges – CPOE Build

- With our CPOE, entering drug costs requires manual data entry

Challenges – Ever Changing Environment



Challenges – What Cost Do You Use?

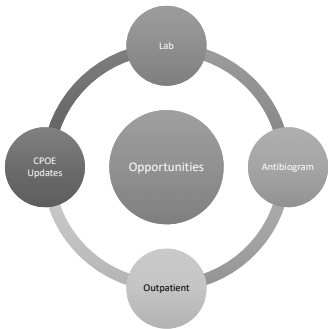
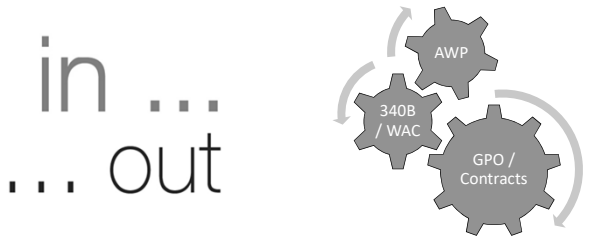
1 = \$251 each vial

| Patient 1 | Patient 2 | Patient 3 | Patient 4 | Patient 5 |
|----------------------------|--------------------------|---------------------------|----------------------------|----------------------------|
| Sildenafil 2.5mg IV = \$63 | Sildenafil 3mg IV = \$75 | Sildenafil 5mg IV = \$125 | Sildenafil 10mg IV = \$251 | Sildenafil 10mg IV = \$251 |

Average Cost = \$153/dose

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Challenges – Inpatient vs Outpatient



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Initiative Goals

- Reduce variation in care
- Reduce costs
- Maintain or improve patient outcomes
- Maximize value

$\text{Value} = \frac{\text{Outcomes}}{\text{Cost}}$

Outcome and Cost Considerations

| Outcomes | Costs |
|----------------------------|---|
| Meaningful to stakeholders | Perspective (i.e., patient, institution) |
| Obtainable and measurable | Variation |
| Able to be visualized | Related considerations (i.e., contracting, reimbursement, payment models) |

Data Sources

- Electronic health records
- Accounting databases
- Benchmarking databases
- Purchasing reports
- Stakeholders

Benchmarking Report Example

| Hospital | Denominator Cases (n) | Numerator Cases (n) | Percentage of Cases (%) | Mean Days Resource Used (n) | Case Mix Index | Mean Length of Stay |
|--------------------|-----------------------|---------------------|-------------------------|-----------------------------|----------------|---------------------|
| Focus Hospital | 81 | 13 | 16.05 | 4.0 | 0.8947 | 3.83 |
| Comparator Group 1 | 6974 | 419 | 6.01 | 3.6 | 0.8961 | 4.35 |
| Comparator Group 2 | 1589 | 125 | 7.87 | 3.4 | 0.8966 | 4.59 |

Common Themes

Transition to outpatient setting

Protocol revisions

Alternative products

Broadening the scope

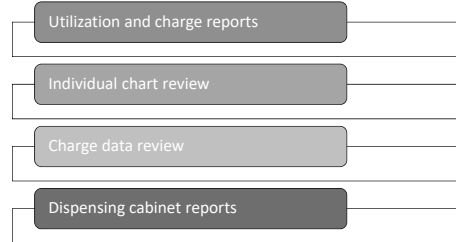
Which data source do you currently utilize most frequently when evaluating drug utilization and cost opportunities?

- Electronic health records
- Accounting databases
- Benchmarking databases
- Purchasing reports
- Stakeholder feedback

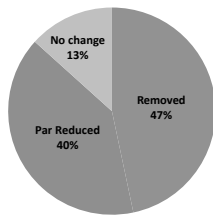
Isoproterenol Utilization

- Over \$700,000 purchased per year
- Greater than 50% of purchases at wholesale acquisition cost (WAC)
- Objectives:
 - Determine inpatient and outpatient usage of isoproterenol
 - Determine root cause of high percentage of WAC purchases

Isoproterenol Utilization Assessment



Isoproterenol Dispensing Cabinet Changes



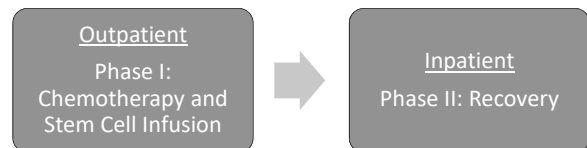
Outcomes and Lessons Learned

- Things are not always what they seem
- Look for (quick) wins
- Assess impact of charging mechanisms and impact to purchasing
- Evaluate impact of expiring medications and waste

Bone Marrow Transplant (BMT)

- Variation identified through benchmarking
 - Mean cost per case
 - Medication utilization
- Objectives:
 - Evaluate ability to transition chemotherapy regimens to outpatient setting
 - Reduce length of stay and overall costs while maintaining or improving patient satisfaction

Proposed BMT Process



Proposed BMT Calendar

• Allogeneic BMT

| Outpatient | | | | | | Inpatient | | |
|------------|-------|-------|-------|-------|-------|-----------|-------|---------|
| Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 12+ |

• Autologous BMT

| Outpatient | | | | | | Inpatient | | |
|------------|-------|-------|-------|-------|-------|-----------|-------|---------|
| Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 12+ |

Length of Stay and Financial Impact

| Length of Stay Evaluation | Savings and Reimbursement |
|---|---|
| <ul style="list-style-type: none"> • Six regimens evaluated • Assumption of 60% transition to outpatient • Anticipated LOS reduction annually: 296 | <ul style="list-style-type: none"> • Four regimens evaluated • Inpatient cost savings: > \$1,000,000 • Outpatient reimbursement: > \$750,000 |

Outcomes and Lessons Learned

- Established criteria for outpatient BMT
- Involve all stakeholders in process and considerations
- Organization and communication are key
- Develop formalized metrics to measure progress

What is the most important aspect to consider when evaluating and implementing a cost savings/revenue generating initiative?

- Finding quick wins
- Obtaining and presenting useful data
- Identifying and involving key stakeholders
- Organization and communication
- Developing metrics and measuring outcomes

Any Questions?