Disclosures

The program chair and presenters for this continuing education activity have reported no relevant financial relationships.

A LEAN Approach to Formulary Management

Lauren Karel, PharmD, BCPS
Ellena Anagnostis, PharmD, BCPS
Cindy Wordell, PharmD, BCPS, FASHP
Thomas Jefferson University Hospital
Philadelphia, PA

Objectives

- Recognize necessary steps when coordinating the addition or removal of a formulary drug
- Identify examples of Lean initiatives that can be applied to processes within health care
- Recommend Lean strategies for optimizing the formulary management process

What is Lean?¹,²

- Performance improvement methodology
- Popularized by the Toyota Motor Corporation
- Optimized value within each step of a process → Increased efficiency
- Improved quality
- Waste reduction
- Decreased turnaround times
- Customer satisfaction

Announcements

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1 of 22
Can lean methodology be used to improve efficiency with formulary management?

Thomas Jefferson University Hospital

- 900-bed tertiary academic medical center
- Three campuses
  - Main campus in Center City Philadelphia
  - Jefferson Hospital for Neuroscience
  - Methodist Hospital in South Philadelphia
- Drug Information Center provides support for P&T Committee activities

Tools/Terms used in Lean methodology

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Going to the Gemba</td>
<td>Going to the location where a specific process occurs to perform a walk-through with individuals who are directly involved in the process.</td>
</tr>
<tr>
<td>Kaizen event</td>
<td>Implementation of a rapid improvement project to achieve a desired future state.</td>
</tr>
<tr>
<td>Value-stream mapping</td>
<td>A structured diagram to document the flow of activities within a specific process. Within the diagram, steps are differentiated between value adding and non-value adding.</td>
</tr>
<tr>
<td>Visual management</td>
<td>Use of visual signals, such as color or tracking boards, to facilitate identification of problems within a specific process.</td>
</tr>
<tr>
<td>5S</td>
<td>A lean tool used to optimize organization and reduce waste in a given area or process.</td>
</tr>
<tr>
<td>- Sort – Remove unnecessary items</td>
<td></td>
</tr>
<tr>
<td>- Store – Organize the area</td>
<td></td>
</tr>
<tr>
<td>- Shine – Maintain a clean environment</td>
<td></td>
</tr>
<tr>
<td>- Standardize – Maintain consistency</td>
<td></td>
</tr>
<tr>
<td>- Sustain – Ensure continued use of the first four steps</td>
<td></td>
</tr>
</tbody>
</table>
**Value-stream mapping**

<table>
<thead>
<tr>
<th>Value-adding</th>
<th>Non-value adding by necessary</th>
<th>Non-value adding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes the product or service</td>
<td>Does not satisfy the 'value-adding' criteria</td>
<td>Does not satisfy the 'value-adding' criteria</td>
</tr>
<tr>
<td>Performed correctly</td>
<td>Required for regulatory purposes</td>
<td>Targets for Kaizen events</td>
</tr>
</tbody>
</table>

**Formulary addition process**

- Formulary change requested
- Monograph developed
- Subcommittee reviews monograph
- P&T / MEC make final decision
- DIC emails updates to pharmacy staff

- Informatics creates CPOE changes and performs interface testing
- Medication purchased and quarantined for barcode scanning
- Prescriber orders medication

- Await additional information and billing codes

**Which steps in the formulary addition process could be considered non-value adding?**

- P&T / MEC approves a medication for formulary addition
- Informatics team builds the medication order in CPOE
- Applicable policies are not updated, increasing the risk of a medication error
- Medication is purchased and scanned to allow barcode recognition

**Standardized monograph: IV compounding information**

- Addition of an appendix with supplemental information to complete
- **Only to be completed if drug is recommended for addition at the subcommittee level**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertonic solution does for each proposed application</td>
<td></td>
</tr>
<tr>
<td>Maximum maximum infusion rates, if applicable</td>
<td></td>
</tr>
<tr>
<td>Additives</td>
<td></td>
</tr>
<tr>
<td>BIB (fill-storage requirements)</td>
<td></td>
</tr>
<tr>
<td>Additional requirements</td>
<td></td>
</tr>
</tbody>
</table>

**Standardized monograph: Procurement information**

- Budget
- Estimated number of patients per year that would potentially benefit from this medication
- Cost per patient per dose
- Cost per patient per treated course
- Cost per patient per treatment course: A, B, or C
- Cost per patient per treatment course: A, B, or C
- Additional lab tests, imaging, or other diagnostic testing required
- Subcontractor/contractor relationship
- Metaphase
- API access
- The information required
- Inpatient Only
- Specialty pharmacy
- Access from manufacturer
- Formulary
- Alternative therapies (double-blind impact analysis as above)
Standardized monograph: Considerations for CPOE

Parameter | Recommendation
--- | ---
Dose calculation request | Amount/day: ____________
Monograph and/or alert request | Amount/dose: ____________

Creating a checklist

- Use of SharePoint Online (Microsoft, Redmon, WA) to track completion of items on the checklist
  - Accessible by key stakeholders
- Visual management used to identify completed actions, actions requiring additional work needed, and pending actions

Creating a checklist

- Use of SharePoint Online (Microsoft, Redmon, WA) to track completion of items on the checklist
  - Accessible by key stakeholders
- Visual management used to identify completed actions, actions requiring additional work needed, and pending actions

Drug name | Examplemorphine | Exampleconazole | Exampletuzumab
--- | --- | --- | ---
DEA schedule | II | N/A | N/A
Subcommittee/P&T decision | Add | Add | Add with restriction
Procurement | Wholesaler | Wholesaler | Specialty
Safe handling instructions | N/A | Updated | Updated
Policy updates required | Completed | Completed | Completed
Alerts in CPOE | Completed | Pending | Pending
Automation interface testing | Pending | Pending | Pending
Memos drafted | Pending | Pending | Pending

Creation of a Formulary Maintenance Committee

- Composed of members from Drug Information, Informatics, Technology, Purchasing, and P&T Subcommittee Secretaries
- Monthly ‘huddle’ via conference phone line to track status of completing steps on the checklist
- Encourages direct communication with key individuals responsible for steps within the formulary management process

Practice reflection

- How does your organization track formulary decisions?
- Are there opportunities to reduce wasteful steps in formulary management?

Future directions

- Collect data to analyze efficiency within each step
- Identify a mechanism for establishing automatic prompts following completion of each step
- Improve communication to hospital staff
- Leverage concurrent department projects to ensure the success of Lean initiatives

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**Key takeaways**

- Lean methodology can be used in various aspects of pharmacy practice to improve efficiency with completing a process
  - Not just operational activities!
- Staff buy-in is crucial when enacting changes
- Application of Lean process improvement strategies must be an ongoing process

**References**


**Use of Flipped Classroom Approach for Teaching Drug Literature Evaluation**

Robert D. Beckett, PharmD, BCPS
Assistant Professor of Pharmacy Practice
Director of the Drug Information Center
Manchester University College of Pharmacy

**Objectives**

- At the end of the presentation, participants should be able to:
  1. Define flipped classroom in the context of other approaches to active learning
  2. Recall results from the assessment of student performance and perceptions using this approach, and
  3. Identify lessons learned using this approach.

**Discussion**

- With the participants sitting around you, identify and define one active learning approach you could use to teach drug literature evaluation.

**Active Learning Approaches**

- Lecture Incorporating Activities
- Team-Based Learning
- Problem-Based Learning
- Flipped Classroom
Drug Literature Evaluation at Manchester

- Curriculum
  - PHRM 322 (Drug Information)
  - PHRM 420 (Drug Literature Evaluation)
  - PHRM 530 and 531 (Pharmacy Practice Laboratory)
- PHRM 420
  - Clinical Trial Evaluation
  - Biostatistics
  - Additional Study Designs
  - In-Class Article Discussions

Bloom’s Taxonomy

- Create
- Evaluate
- Analyze
- Apply
- Understand
- Remember

Flipped Classroom at Manchester

- Explanation
- Demonstration
  - In-Class Activities
- Practice
- Feedback
- Evaluation

Example – Goals

- Course Outcome
  - Explain and assess the biostatistics used in a piece of primary literature.
- Learning Objectives
  - Classify an analysis as per protocol, intention to treat, modified intention to treat, or as treated.
  - Explain why an investigator might select each of the data analysis strategies above.

Example – Explanation

- Intention to treat: This type of analysis includes all patients who are randomized in the study. Using the above example, we would analyze all 250 patients regardless of completion. This is considered to be more conservative and “real world” (as so many patients are not compliant with treatment) and, as such, maximizes external validity. It is also super cool because it allows investigators to preserve power, even when patients disappear from the study. This approach is USUALLY but not ALWAYS preferred in clinical trials. We will surely talk about this all semester long because it’s a really fun topic (are you excited as I am?!).

Example – Demonstration, Practice, Feedback

In a study comparing two weight loss agents, I have selected an approach to data analysis. I decide only to analyze those patients who finish the clinical trial. I have taken a(n) ___ approach to data analysis.

- A. Per protocol
- B. Intention to treat
- C. Modified intention to treat
- D. As treated

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A clinical trial compares randomizes patients to six months of treatment with one of two anticoagulants. The group assessed for the primary endpoint includes all patients who received at least one dose of study medication regardless of attrition. This approach is best classified as:
- As treated
- Intention-to-treat
- Modified intention-to-treat
- Per protocol

In two to four sentences, explain TWO REASONS why use of intention to treat is preferred over per protocol in a superiority RCT comparing two antihypertensives for blood pressure reduction.
Based on your experiences, do you expect that student performance improved from Year 1 to Year 2?

- Yes, for Non-Inferiority Trials
- Yes, for Meta-Analysis
- Yes, for Both
- No, Neither Improved

**Assessment – Performance**

- **Multiple Choice, Non-Inferiority**
  - Non-Inferiority Appropriate?:
    - Year 1: $P < 0.001$
    - Year 2: $P = 0.35$
  - Hypothesis Testing:
    - Year 1: $P < 0.001$
    - Year 2: $P = 0.35$
  - Pick a Non-Inferiority Margin:
    - Year 1: $P < 0.001$
    - Year 2: $P = 0.098$
  - Interpret Non-Inferiority:
    - Year 1: $P = 0.014$
    - Year 2: $P < 0.001$

- **Multiple Choice, Meta-Analysis**
  - Heterogeneity:
    - Year 1: $P < 0.001$
    - Year 2: $P = 0.041$
  - Inter-Rater Reliability:
    - Year 1: $P = 0.35$
    - Year 2: $P = 0.008$
  - IQ:
    - Year 1: $P = 0.041$
    - Year 2: $P = 0.35$
  - Publication Bias:
    - Year 1: $P < 0.001$
    - Year 2: $P = 0.008$

- **Short Answer**
  - Biocreep:
    - Year 1: $P = 0.014$
    - Year 2: $P = 0.018$
  - Sources of Unpublished Data:
    - Year 1: $P < 0.001$
    - Year 2: $P < 0.001$
  - Interpret Funnel Plot:
    - Year 1: $P = 0.014$
    - Year 2: $P < 0.001$

**Discussion**

- With the participants sitting around you, identify 1) a lesson you have learned from using active learning to teach drug literature evaluation concepts and 2) how you have subsequently adjusted your approach.

**Lessons Learned**

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of participation in discussion</td>
<td>Pod-style seating</td>
</tr>
<tr>
<td>Inconsistent reading</td>
<td>Readiness assessment quizzes</td>
</tr>
<tr>
<td>Learning objective rigor</td>
<td>Peer review</td>
</tr>
<tr>
<td>Variable speed getting through class</td>
<td>Extend time and prepare extra examples</td>
</tr>
</tbody>
</table>
Key Takeaways

- **Key Takeaway #1**
  - Consider increasing the amount of active learning in your drug literature evaluation course (lecture → lecture with activities; lecture with activities → flipped classroom)

- **Key Takeaway #2**
  - Use of flipped classroom resulted in positive student perceptions and a switch from lecture with activities to flipped classroom resulted in improved performance.

- **Key Takeaway #3**
  - Be comfortable with spontaneity and incorporate strategies to encourage active participation.

Use of Flipped Classroom Approach for Teaching Drug Literature Evaluation

Robert D. Beckett, PharmD, BCPS  
Assistant Professor of Pharmacy Practice  
Director of the Drug Information Center  
Manchester University College of Pharmacy

Questions, Answers and Discussion

Development, Implementation, and Impact of a Mobile Application to Request Drug Information

Scott Perkins, PharmD  
Co-Director, Drug Information  
Clinical Assistant Professor  
Campbell University College of Pharmacy & Health Sciences

Objectives

- Describe aspects important to consider when developing a drug information mobile application (app)
- Discuss strategies for implementing a drug information mobile app
- Describe how a drug information mobile app may impact a drug information center

Campbell Drug Information Center

- Created in 1987 from a grant from GlaxoSmithKline
- Free service for faculty, alumni, students and other healthcare providers
- 2 Co-Directors, 4 fourth-year student pharmacists, 1 Program Manager
- Currently receive 180-250 requests on a monthly basis  
  - 40-50% are literature requests

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Mobile devices

- Increase in mobile device use
- May 2015: More Google searches on mobile devices than computers
- Mobile drug information resources
- Used frequently by medical professionals
  - Some reports indicate up to 75% of medical professionals access medical information through mobile devices several times a week or more

Mobile App for Drug Information

- Positives:
  - Speed
  - Instantly request information
  - Convenience
  - Request information from anywhere
  - Photographs
  - Easy to provide photographs of pills, medication list, etc.

Activity

- Please take out your mobile device and pull up your text messaging service
- Type the following message:
  - Is there any documentation to support a drug-drug interaction between quetiapine and tiotropium? Our electronic database, “Drug N-site Database,” indicates this is a category-X interaction.

Mobile App for Drug Information

- Negatives:
  - Potential for errors
  - Incorrectly spelled words
  - Autocorrect
  - Minimal information provided
  - May limit amount of circumstantial information
  - “Hey how u mix apap 4 iv thx”
  - Outdated software or limited space on device
Development

- Development began in Fall 2013
- Intent:
  1) Increase request volume
  2) Provide a more convenient method to request information

Development

- Trial testing: May to August 2014
  - Ensured all features worked properly
    - Photograph function
    - Buttons
    - Check boxes
  - Ensured requests input into the app were appropriately formatted in request form
  - Improved usability of user interface

Implementation

- Marketing Stage 1
  - Sep. 2014: Faculty, students, and alumni
- Marketing Stage 2
  - Nov. and Dec. 2014: Statement added to signature of our email responses
- Marketing Stage 3
  - Jun. 2015: Direct marketing to requesters on file

App Downloads by Month

- Total downloads: 291

Requests through Mobile App
(September 2014 through September 16th, 2015)

- Total requests: 39
- Individual users: 17
  - Repeat users: 7
**Impact (Request Volume)**

Requests from New App Users Before and After Marketing Stage 3

- New requests after marketing stage 3 (June)
- Data from 3 months prior and 3 months after

**Impact (Request Category Comparison)**

<table>
<thead>
<tr>
<th>Categories via Application</th>
<th>Categories via Traditional Methods (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature Requests</td>
<td>Literature Requests</td>
</tr>
<tr>
<td>General Product Information (GPI)</td>
<td>General Product Information (GPI)</td>
</tr>
<tr>
<td>Therapeutics</td>
<td>Therapeutics</td>
</tr>
<tr>
<td>Pharmacokinetics</td>
<td>Pharmacokinetics</td>
</tr>
<tr>
<td>Dosage Form</td>
<td>Dosage Form</td>
</tr>
<tr>
<td>Drug Stability</td>
<td>Drug Stability</td>
</tr>
</tbody>
</table>

**Impact (Request Complexity)**

- Complexity of request (excludes literature requests)
  - Time spent on requests:
    - Traditional methods: 107 minutes per request
    - Mobile application: 161 minutes per request
  - Background information given (excludes literature requests)
    - Words per request:
      - Online request form: 64 words per request
      - Mobile Application: 66 words per request

**Limitations**

- Limited number of requests to fully assess app
- Android vs iOS
- iOS 7 required
- Immediate drug information resource vs request tool

**Future Plans**

- Improvement:
  - Survey those who have used the app
- Marketing:
  - Marketing directed at preceptors of our students
  - Annual or bi-annual marketing to those who have used our service
- Expansion:
  - Future services through the app
  - Consider Android app

Data from 3 months prior and 3 months after. All requests prior to June. App requests after June.
Conclusion

- Minimal impact on total number of requests
- Appears to have improved convenience for some requesters
- Given time, the trend in initial data indicates this will likely have an impact on the volume of requests we receive in the future without sacrificing quality of requests we receive
- Still assessing the degree of this impact

Acknowledgements

- Connie Barnes, PharmD
  - Vice Chair of Pharmacy Practice
  - Co-Director of Drug Information
  - Professor of Pharmacy Practice
  - Campbell University College of Pharmacy & Health Sciences
- Ted Hancock, PharmD, CGP, BCACP, CPP, FASCP
  - Assistant Professor of Pharmacy Practice
  - Campbell University College of Pharmacy & Health Sciences

References


Everyone is a Winner: Leveraging your EMR to Optimize Formulary Restriction Compliance

Genevieve (Jeni) Hayes, PharmD, MSPPharm, BCPS
Clinical Specialist, Outcomes Management
MUSC Health
Charleston, South Carolina

Objectives

- Understand strategies for restricting medications on an institution formulary
- Compare approaches for presenting medication restriction information in the electronic medical record (EMR)
- Assess adherence to formulary restrictions in one’s organization

Our Charge

Ensure appropriate use of medications throughout the organization
Restriction Overview

- Many health systems place restrictions on certain formulary medications to improve the appropriateness of their use
  - Antimicrobial resistance
  - High-cost medications
  - Serious safety concerns

Phase 1: Standardize Language

- Consistency among types
  - Service
  - Location
  - Provider type (eg, Attending, Fellow)
  - Indication
  - Miscellaneous
- Word document → Online database

How many audience members have at least 1 formulary medication restricted in some manner?

- Yes
- No

Phase 1: Standardize Language

Consistency among types:
1. Service
2. Location
3. Provider type (eg, Attending, Fellow)
4. Indication
5. Miscellaneous

Word document → Online database
Phase 2: Ensure Objective Criteria

- Review of all medications restricted by indication
  - Streamline vague or unclear criteria
- Confirm intent of service and level of provider restrictions
  - Actually ordered by a service or just recommended?

Phase 3: Build EMR Functionality

- Multi-faceted approach to optimizing adherence to formulary restricted medications
  - Side bar information
  - Cascading questions
  - Order panel
  - Order set for complex restrictions
  - Alternative alerts
  - Dual prescriber signature requirements

Side Bar Information

- Before
  - Hyperlink above the ordering information that must be clicked to expand the entire restriction text

Side Bar Information

- After
  - Custom refreshable report that can be formatted and include hyperlinks
### Cascading Questions

- Additional follow-up questions appear depending on the answer that is selected.

![Cascading Questions Diagram](image1.png)

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### Order Panel

- Presents restriction text in full at the top of the panel.
- Allows multiple medications to be listed with different defaults for each option, but only one can be selected.

![Order Panel Diagram](image2.png)

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### Order Set

- Must be searched in a different field than individual medications.
- Allows multiple groups, both medications as well as other orders (e.g., lab, nursing instructions, diet).

![Order Set Diagram](image3.png)

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### Alternative Alert

- Prevents provider with alternate options and allows ordering of those medications from that window.

![Alternative Alert Diagram](image4.png)

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### Dual Prescriber Signature Requirements

- Medication orders not sent for pharmacist verification until eligible second prescriber has signed.
- Concern for delays in care for time-sensitive medications.
- Currently being developed for study protocols.

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Assessing Restriction Adherence

- Medication use evaluations (MUEs)
  - Individual agents (e.g., albumin, IV acetaminophen)
  - Classes of medications (e.g., antiretrovirals)
- Mechanisms
  - Manual chart abstraction
  - EMR documentation (interventions?)

Restricted medications should be built in the electronic medical record to make it easy to do the right thing and difficult to do the wrong thing.

- True
- False

Key Takeaways

- Key Takeaway #1
  - Having objective criteria facilitates evaluation of adherence to formulary restrictions.
- Key Takeaway #2
  - Multiple strategies in the electronic medical record can be used to inform clinicians and enforce formulary restrictions.
- Key Takeaway #3
  - Continuous assessment of your formulary can help ensure medication stewardship throughout one’s organization.

Questions, Answers and Discussion

Objectives

- Evaluate tools available in Microsoft SharePoint and Microsoft InfoPath forms to aid in formulary management.
- Identify opportunities for use of SharePoint and InfoPath for formulary management and documentation.

Formulary Management Through SharePoint and InfoPath Tracking and Communication

Jamie M. Gomes, PharmD, BCPS
Clinical Specialist, Drug Information
The Children’s Hospital of Philadelphia
The Children’s Hospital of Philadelphia (CHOP)

- CHOP Care Network
  - Main Campus
    - 535 inpatient beds
    - Outpatient services
    - Rehabilitation services
  - Primary Care, Specialty Care, Ambulatory Surgery, CHOP Care Network Newborn and Pediatric Inpatient Care, Home Care
- Therapeutic Standards Committee (TSC)
  - Number of Drugs on Formulary: 693

Hospital Wide Drug Information

- Electronic Formulary
- CPOE medication orders/order sets
- Clinical Pathways
- Smart Pumps
- Intranet
- Policies/Procedures/Job Aids
  - Hazardous Medications List
  - High Alert Medications List
  - Look-alike sound-alike List
- Ketogenic Diet Database

Department of Pharmacy Services

- 5 production/dispensing pharmacies
  - 24 hour pharmacy
  - Oral Preparation
  - Anesthesia/TPN
  - Emergency Department
  - Oncology Clinic
- Pyxis MedStations

- Sterile Products
  - Robotic IV Automation (RIVA)
  - DoseEdge Pharmacy Workflow Manager
- Non-Sterile Products
  - Swisslog Automated Tablet Packaging System
  - Pentapack Unit Dosing Machine
  - Extemporaneous Compounding

Formulary Change Involvement

- Therapeutic Standards Committee
- Lexicomp Formulary
- Epic Willow/Core Clinical
- Pyxis
- Drug Information Pharmacists
- (5) Pharmacy Supervisors
- (5) Distribution Pharmacies and Technology

Question: How do you currently track formulary changes?

- Paper Files
- Shared Drive
- Excel Spreadsheet
- E-mail

Microsoft SharePoint

- Web platform for Microsoft Office Suite
- @CHOP – Intranet Sites
- Capabilities:
  - Store, organize, share, and access information
  - Calendars
  - Social Feeds – Newsfeed/Blogs
  - Document Folders
  - Libraries/Lists
Microsoft InfoPath

- Customize forms in SharePoint Libraries and Lists
- Browser enabled form templates
- Creating forms:
  - Editable layouts
  - Fields and controls
  - Basic calculations
  - Conditional formatting

@CHOP Pharmacy Administration SharePoint Site

CHOP Databases

- Residency Applications
- Formulary Addendum Database
- Formulary-Informatics Tracking
- Crush and Mix/IV for PO
- Hazardous Medication Documents

Formulary Addendum Database (FAD)

- Pulls information from InfoPath form
- Used as a task list

FAD Form – Attaching Documents

- The form does NOT replace documents summarizing efficacy and safety.
- Focus: operational implementation and documentation
### FAD Form Questions
- Storage, preparation, dispensing
- Purchasing Information
- Hospital Policies/Procedures
  - Dietary Supplements
  - Hazardous Drugs
  - Vesicant/Irritant
  - Look a-like sound a-like
- Other formulary information
  - Restrictions
  - Consent
  - G6PD deficiency
  - QT Prolongation
  - REMS program
  - Medication Absorption Site

### FAD Form – Manage Rules
- Conditional formatting
  - If “yes” then...
  - If “pending” then...
- Targeted questions
  - Limits length
  - Limits skipping questions
- Requires reconstitution
  - Reconstitute with:
  - Reconstituted concentration:
  - Storage requirements:
  - Stable for:

### Administrative Checklist
**What do you need me to do?**
- Checklist for each type of technology or pharmacy area
  - Status: Pending/Complete/Not Applicable
    - Conditional formatting
    - Feeds to different views in SharePoint Library
- Creates a task list specific to each supervisor
- Track completion from all supervisors for Go-Live Date

### Formulary Addendum Database

![Formulary Addendum Database](image)

### Workflow
- Formulary Committee
- Notify Supervisors to Check the FAD
- Therapeutic Standards Committee
- Follow-up on Administrative Checklist
- Go-Live
Question: How do you think users at your institution would react to the introduction of InfoPath forms?

- This is too much work.
- How am I ever going to figure this out?
- Thank goodness!

CHOP Databases

- Formulary Addendum Database
- Residency Applications
- Formulary-Informatics Tracking
- Crush and Mix/IV for PO
- Hazardous Medication Documents

Formulary/Informatics Tracking

- Drug Shortage View/Task list
- Filtered based on
  - Follow up needed? (Yes/No)
  - Status
    - On Shortage – Unavailable
    - On Shortage – Restricted
    - Resolved

Crush and Mix/IV form PO

- Columns in “View” can be exported
- Example: Crush and Mix/IV form PO
  - Drug Name
  - Formulary Recommendation
  - Concentration
  - Prepared by Location
  - Dispensed from Location
- Helpful for lists prone to updates
  - Print
  - Save
  - Distribute

Export to Excel

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True or False: SharePoint is only useful if you design forms in InfoPath.

- True
- False

Discussion

Ideas for Use of SharePoint/InfoPath

- Class Reviews
- Drug information question documentation
- Formulary addition requests
- Removal from Formulary

Key Takeaways

- Microsoft InfoPath is a program used to create browser enabled forms in Microsoft SharePoint.
- Utilize fields and controls in Microsoft InfoPath to optimize questions and length of forms as well as to control “views” in Microsoft SharePoint.
- Microsoft SharePoint can be a useful program to create checklists for items requiring follow up and to aid in communication and documentation of formulary changes.

Formulary Management Through SharePoint and InfoPath Tracking and Communication

Jamie M. Gomes, PharmD, BCPS
Clinical Specialist, Drug Information
The Children's Hospital of Philadelphia

Questions, Answers and Discussion