Gaining Insights into the Medication Governance and Utilization Landscape within IDNs

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Director, Center for Medication Utilization and Finance
Disclosure

• The following content represents my perspective and do not necessarily reflect the views of Froedtert & the Medical College of Wisconsin
Objectives

• Explore trends impacting IDNs
• Examine the implications of these trends on medication governance and formulary decision-making
• Describe how IDNs are working to optimize medication utilization
Trends Impacting IDNs
Froedtert & Medical College of Wisconsin

Froedtert Hospital
- 1850 Providers
- Every major specialty
- Academic Medical Center
- 655 Beds
- 27,000 discharges
- 800,000 outpatient visits

Community Hospitals
- Community Memorial
  - 235 beds
  - 9,000 discharges
  - 96,000 visits
- St. Joseph’s
  - 70 beds
  - 3,500 discharges
  - 77,000 visits

F&M CW Community Physicians
- 500+ Providers
- Primary Care focus
- Partnership with MCW
- 700,000 visits

Medical College of Wisconsin
Consolidation
Consolidation

Chart 2.4: Number of Hospitals in Health Systems,\(^{(1)}\) 2003 – 2013

Source: Avalere Health analysis of American Hospital Association Annual Survey data, 2013, for community hospitals.

\(^{(1)}\) Hospitals that are part of a corporate body that may own and/or manage health provider facilities or health-related subsidiaries as well as non-health-related facilities including freestanding and/or subsidiary corporations.
Consolidation at F&MCW

- Community physicians
- Medical school
- Lab
- Home health
- Health insurance plan
- Clinically integrated health network
What are the implications of consolidation on medication governance and formulary decision-making?
Back to Basics

CMS Conditions of Participation – 42 CFR 482.25
“A formulary system must be established by the medical staff to assure quality pharmaceuticals at reasonable costs”

Formulary Authority
• Resides with the Medical Executive Committee (MEC)
• MECs typically delegate formulary management to P&T Committees
The Challenge

- Medical staff structure is often site based
- Many barriers to physician integration
  - Credentialing and peer review processes
  - Process for selection of medical staff leaders
  - Payment models
  - Academic vs community-based providers
- Results in integrated health systems with disparate medical staff structures

=> Disparate formulary management decision-making entities
F&MCW Example

- In 2012, each hospital had a P&T committee functioning in similar, parallel roles

- The issues
  - The F&MCW P&T structure was complex
  - Decision-making occurred in 14 disparate P&T venues
  - At best, the only waste was time from repetitive conversations
  - At worst, divergent decision-making
P&T Restructure

Goal
Restructure the F&MCW PNT Committees to streamline and clarify authority for decision-making and formulary management.
Details of New P&T Model

- Site MECs delegate authority for formulary management to System P&T Committee
- P&T subcommittee structure updated to:
  - Be service-line focused
  - Function at the system-level
  - Include system-wide representation
- Populated System P&T with chairs of each P&T subcommittee and site P&Ts
- Shift site P&T foci to implementation and monitoring medication utilization
P&T Structure in 2015

Key Changes
• System P&T became formulary gatekeeper
• Site P&T honed in on implementation and managing utilization
• Reshaped subcommittees to be service line focused for operational accountability
Related Integration and Infrastructure

- Formulary
- Policies
- Guidelines
- Order sets
- Safety
- Budgets
- DUEs/MUEs

What Meds

How medications are used
Center for Medication Utilization

CMU Team

- Guidelines, Protocols and Pathways
- Safety
- Contracting
- Literature Evaluation
- Stewardship
- Decision Support
- Lead Formulary Decision-making
- Budgeting
- Shortages
- Policy
Value
What is Value in Healthcare?

“What the health outcomes achieved that matter to patients relative to the cost of achieving those outcomes.”

- Porter
Value-Based Care Initiative

Principles

- More integrated, patient-centered, care
- Increase patient affordability while sustaining our Mission(s)
- Develop and track performance metrics to demonstrate unparalleled patient experience, outcomes and value
Mapping the Strategy at F&MCW

$350 Million Over Five Years

Projected Operating Margin, 2017

After Revenue Improvements

After Cost Growth Reductions

After Capacity Improvement

After Case Mix Improvement

2017 Goal

4.0%

(26.0%)

(22.4%)

(9.4%)

(3.5%)

3.9%
Slowing Cost Growth

Medication Utilization falls primarily within “Cost Growth”

Projected Operating Margin 2017: (26.0%)

Projected Margin After Cost Growth Reductions: (9.4%)

Target: 4.0%

$136.1M
Identifying Utilization Opportunities

Benchmarking

- Examples: by drug, by MD, by DRG
- Example tools: UHC, Sg2, Huron group, Advisory Board, etc
Ribavirin Example

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Route</th>
<th>Cases</th>
<th>% Use</th>
<th>Avg Duration (days)</th>
<th>Spend per Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>F&amp;MCW</td>
<td>inhaled</td>
<td>11</td>
<td>0.04</td>
<td>5.1</td>
<td>23,756</td>
</tr>
<tr>
<td>F&amp;MCW</td>
<td>oral</td>
<td>2</td>
<td>0.01</td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>All UHC Members</td>
<td>inhaled</td>
<td>566</td>
<td>0.02</td>
<td>4.7</td>
<td>20,822</td>
</tr>
<tr>
<td>All UHC Members</td>
<td>oral</td>
<td>1,118</td>
<td>0.04</td>
<td>4.3</td>
<td>10</td>
</tr>
</tbody>
</table>

- **Annual spend** - $350,000
- **Price**
  - Oral - $1.00 / dose
  - Inhaled - $2,000 / dose
- **Being used for adults with potential RSV**
- **External benchmark** - similar amount of use, but ratio of inhaled to oral substantially different

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Ribavirin Example

Figure is for illustration only

- Literature review indicated inhaled product is not any better than oral for adult RSV
- Developed new treatment pathway
- Drive use of oral therapy
- Cost savings of $310,000
Kidney Transplant Example

Goals

• Understand current medication spend within the kidney transplant program at F&MCW
• Benchmark this spend relative to top performing peer organizations
• Identify and recommend opportunities for improvement
## External Benchmarking
### Medication Cost by MS-DRG

**Time Period:** Q4 2011, Q1 2012, Q2 2012, Q3 2012

<table>
<thead>
<tr>
<th>MSDRG Code</th>
<th>MSDRG Description</th>
<th>Cases</th>
<th>Mean Days</th>
<th>Total Cost</th>
<th>Mean Cost / Case</th>
<th>Rank</th>
<th>HCOs</th>
<th>Mean Cost / Case</th>
<th>Std Dev</th>
<th>Variance (25%ile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>847</td>
<td>Chemotherapy w/o acute leukemia as secondary diagnosis w CC</td>
<td>231</td>
<td>3.6</td>
<td>$861,352</td>
<td>$3,729</td>
<td>86</td>
<td>95</td>
<td>$2,208</td>
<td>$1,072</td>
<td>$539,152</td>
</tr>
<tr>
<td>652</td>
<td>Kidney transplant</td>
<td>85</td>
<td>9.2</td>
<td>$741,119</td>
<td><strong>$8,719</strong></td>
<td>55</td>
<td>71</td>
<td><strong>$7,395</strong></td>
<td>$4,058</td>
<td>$325,420</td>
</tr>
<tr>
<td>699</td>
<td>Other kidney &amp; urinary tract diagnoses w CC</td>
<td>163</td>
<td>3.9</td>
<td>$324,523</td>
<td>$1,991</td>
<td>81</td>
<td>95</td>
<td>$1,064</td>
<td>$1,025</td>
<td>$273,507</td>
</tr>
<tr>
<td>945</td>
<td>Rehabilitation w CC/MCC</td>
<td>448</td>
<td>15.5</td>
<td>$387,974</td>
<td>$866</td>
<td>37</td>
<td>41</td>
<td>$527</td>
<td>$459</td>
<td>$245,070</td>
</tr>
<tr>
<td>3</td>
<td>ECMO or trach w MV 96+ hrs or PDX exc face, mouth &amp; neck w maj O.R.</td>
<td>107</td>
<td>31.8</td>
<td>$615,460</td>
<td>$5,752</td>
<td>61</td>
<td>95</td>
<td>$6,096</td>
<td>$4,224</td>
<td>$231,575</td>
</tr>
</tbody>
</table>

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## 2011 CRM Analysis

### Kidney Transplant (MS-DRG 652)

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Cases</th>
<th>Mean LOS Obs (Days)</th>
<th>Mean LOS Exp (Days)</th>
<th>LOS Index</th>
<th>% Deaths Obs</th>
<th>% Deaths Exp</th>
<th>Mortality Index</th>
<th>Estimated Medication Cost/Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>F&amp;MCW</td>
<td>95</td>
<td>10.6</td>
<td>6.8</td>
<td>1.6</td>
<td>0%</td>
<td>0.6%</td>
<td>0.0</td>
<td>$7,179</td>
</tr>
<tr>
<td>UHC Top Performers</td>
<td>1,251</td>
<td>7.4</td>
<td>6.9</td>
<td>1.1</td>
<td>0%</td>
<td>0.9%</td>
<td>0.0</td>
<td>$4,785</td>
</tr>
<tr>
<td>All UHC-CRM Participants</td>
<td>6,798</td>
<td>6.9</td>
<td>6.5</td>
<td>1.1</td>
<td>0.3%</td>
<td>0.6%</td>
<td>0.6</td>
<td>$5,793</td>
</tr>
</tbody>
</table>

Top Performers: Arizona, Brigham, Cedar-Sinai, E Carolina, Maryland, Oregon, St Luke’s Houston, Stonybrook, Toledo, UKChandler, Wake Baptist, Washington

Top Performer organizations were identified as having a high case volume (> 50), expected mortality > F&MCW, and mortality index < F&MCW.

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## 2011 CRM Analysis – Induction Agents

### Kidney Transplant (MS-DRG 652)

<table>
<thead>
<tr>
<th>Induction Agent</th>
<th>Hospital</th>
<th>Annual Cost (DDD)</th>
<th>% Use</th>
<th>Duration (Days)</th>
<th>LOS Index</th>
<th>Mortality Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anti-thymocyte Globulin (ATG)</strong></td>
<td>F&amp;MCW</td>
<td>$359,000</td>
<td>73%</td>
<td>3.6</td>
<td>1.7</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>UHC Top Performing Peers</td>
<td></td>
<td></td>
<td>3.9</td>
<td>1.2</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>All UHC-CRM Participants</td>
<td></td>
<td></td>
<td>3.6</td>
<td>1.1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Basiliximab</strong></td>
<td>F&amp;MCW</td>
<td>$63,700</td>
<td>27%</td>
<td>1.9</td>
<td>1.2</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>UHC Top Performing Peers</td>
<td></td>
<td></td>
<td>1.8</td>
<td>1.2</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>All UHC-CRM Participants</td>
<td></td>
<td></td>
<td>1.7</td>
<td>1.1</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Alemtuzumab</strong></td>
<td>F&amp;MCW</td>
<td>$0</td>
<td>0%</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>UHC Top Performing Peers</td>
<td></td>
<td></td>
<td>1.0</td>
<td>0.9</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>All UHC-CRM Participants</td>
<td></td>
<td></td>
<td>1.0</td>
<td>0.9</td>
<td>0.5</td>
</tr>
</tbody>
</table>

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“Top Performers”

- CRM quality data – short-term outcomes
  - In hospital mortality
  - Length of stay

- Providers requested analysis based on SRTR
  - Familiar with SRTR data
  - Focused on longer term outcomes (graft failure and mortality at 1 year and 3 years)
Supporting the transplant community with statistical analyses to improve patient outcomes.

Organ Procurement Organization (OPO) Reports

Transplant Program Reports

Source: Scientific Registry of Transplant Recipients
Identifying Benchmark Group

Model: Kidney, Deceased Donor, Adult, First-Year Graft Survival

Cold Ischemia Time

Source: Scientific Registry of Transplant Recipients
SRTR Top 10 Performers

Selected from the 2012 SRTR report based on:

- **Best graft failure index at 3 years**
- **Other inclusion criteria:**
  - Graft failure index at 1 year \( \leq 1.0 \)
  - Mortality indices at 1 year and 3 years \( \leq 1.0 \)
  - UHC participation

\[
\text{Index} = \frac{\text{Observed Rate}}{\text{Expected Rate}}
\]
## SRTR Top 10 Performers

<table>
<thead>
<tr>
<th>Kidney Transplant Center</th>
<th>Graft Failure Index at 1 Year</th>
<th>Graft Failure Index at 3 Years</th>
<th>Mortality Index at 1 Year</th>
<th>Mortality Index at 3 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanford University Medical Center</td>
<td>0.45</td>
<td>0.51</td>
<td>0.37</td>
<td>0.37</td>
</tr>
<tr>
<td>F&amp;MCW</td>
<td>0.91</td>
<td>0.61</td>
<td>0.41</td>
<td>0.72</td>
</tr>
<tr>
<td>Hospital of the University of Pennsylvania</td>
<td>0.71</td>
<td>0.62</td>
<td>0.67</td>
<td>0.55</td>
</tr>
<tr>
<td>University of Washington Medical Center</td>
<td>0.6</td>
<td>0.65</td>
<td>0.38</td>
<td>0.53</td>
</tr>
<tr>
<td>University of Iowa Hospitals and Clinics</td>
<td>0.54</td>
<td>0.66</td>
<td>0.41</td>
<td>0.78</td>
</tr>
<tr>
<td>University of Minnesota, Fairview</td>
<td>0.64</td>
<td>0.68</td>
<td>0.56</td>
<td>0.56</td>
</tr>
<tr>
<td>Oregon Health &amp; Sciences University</td>
<td>0.92</td>
<td>0.69</td>
<td>0.77</td>
<td>0.54</td>
</tr>
<tr>
<td>UCLA Medical Center</td>
<td>0.78</td>
<td>0.7</td>
<td>0.5</td>
<td>0.73</td>
</tr>
<tr>
<td>University of Alabama Hospital</td>
<td>0.82</td>
<td>0.71</td>
<td>0.88</td>
<td>0.87</td>
</tr>
<tr>
<td>UC Davis Medical Center</td>
<td>0.99</td>
<td>0.74</td>
<td>1</td>
<td>0.62</td>
</tr>
<tr>
<td>Rochester Methodist Hospital (Mayo)</td>
<td>0.6</td>
<td>0.81</td>
<td>0.97</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Source: Scientific Registry of Transplant Recipients
### UHC Top 10 and SRTR Top 10

<table>
<thead>
<tr>
<th>UHC Top 10*</th>
<th>SRTR Top 10**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stonybrook</td>
<td>Stanford University Medical Center</td>
</tr>
<tr>
<td>Kansas</td>
<td>F&amp;M CW</td>
</tr>
<tr>
<td>Washington</td>
<td>Hospital of the University of Pennsylvania</td>
</tr>
<tr>
<td>Maryland</td>
<td>University of Washington Medical Center</td>
</tr>
<tr>
<td>Mass General</td>
<td>University of Iowa Hospitals and Clinics</td>
</tr>
<tr>
<td>Colorado</td>
<td>University of Minnesota Medical Center, Fairview</td>
</tr>
<tr>
<td>NY Presbyterian Columbia</td>
<td>Oregon Health &amp; Sciences University</td>
</tr>
<tr>
<td>Beaumont – Royal Oak</td>
<td>UCLA Medical Center</td>
</tr>
<tr>
<td>UC Davis</td>
<td>University of Alabama Hospital</td>
</tr>
<tr>
<td>Barnes Jewish</td>
<td>UC Davis Medical Center</td>
</tr>
</tbody>
</table>

*Selected based on case volume (> 50), expected mortality > F&M CW, and mortality index ≤ F&M CW. **Selected based on lowest graft mortality and mortality indices, and UHC participation.

Sources: Scientific Registry of Transplant Recipients and UHC. These data are based in part on data in the UHC Clinical Database maintained by UHC. Copyright 2015. All rights reserved.
Benchmarking with New Comparator Group

Kidney Transplant (MS-DRG 652)

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Cases (obs)</th>
<th>Mean LOS (obs)</th>
<th>Mean LOS (exp)</th>
<th>LOS Index</th>
<th>% Deaths (obs)</th>
<th>% Deaths (exp)</th>
<th>Mortality Index</th>
<th>Estimated Pharmacy Cost/Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>F&amp;MCW</td>
<td>80</td>
<td>9.62</td>
<td>7.16</td>
<td>1.34</td>
<td>0.00%</td>
<td>0.59%</td>
<td>0.00</td>
<td>$7,436</td>
</tr>
<tr>
<td>UHC Top Performers</td>
<td>1,129</td>
<td>5.12</td>
<td>7.01</td>
<td>0.73</td>
<td>0.25%</td>
<td>0.58%</td>
<td>0.42</td>
<td>$4,432</td>
</tr>
<tr>
<td>All UHC-CRM Participants</td>
<td>6,232</td>
<td>6.60</td>
<td>7.00</td>
<td>0.94</td>
<td>0.37%</td>
<td>0.60%</td>
<td>0.61</td>
<td>$6,203</td>
</tr>
</tbody>
</table>

- New comparator group
- Same story
- Different outcome

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### F&MCW Savings Opportunities – Kidney Transplant

**Timeframe**

Q4’11 – Q3’12

<table>
<thead>
<tr>
<th>Individual Resource</th>
<th>F&amp;MCW (85 cases)</th>
<th>SRTR Top 10 (1,129 cases)</th>
<th>F&amp;MCW Savings Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Use</td>
<td>Avg Duration</td>
<td>Spend per Case</td>
</tr>
<tr>
<td>Albumin, human</td>
<td>14.7</td>
<td>2.1</td>
<td>$299</td>
</tr>
<tr>
<td>Alemtuzumab</td>
<td>0.0</td>
<td>0.0</td>
<td>$0</td>
</tr>
<tr>
<td>ATG</td>
<td>61.7</td>
<td>3.4</td>
<td>$7,711</td>
</tr>
<tr>
<td>Basiliximab</td>
<td>42.6</td>
<td>1.9</td>
<td>$3,137</td>
</tr>
<tr>
<td>Belatacept</td>
<td>2.9</td>
<td>2.0</td>
<td>$5,541</td>
</tr>
<tr>
<td>CMV IVIG</td>
<td>2.9</td>
<td>4.5</td>
<td>$18,123</td>
</tr>
<tr>
<td>Epoetin alfa</td>
<td>19.1</td>
<td>1.3</td>
<td>$130</td>
</tr>
<tr>
<td>Ganciclovir</td>
<td>7.3</td>
<td>5.8</td>
<td>$377</td>
</tr>
<tr>
<td>Immune globulin (igiv)</td>
<td>5.8</td>
<td>2.5</td>
<td>$6,116</td>
</tr>
<tr>
<td>Mycophenolate mofetil</td>
<td>98.5</td>
<td>9.6</td>
<td>$244</td>
</tr>
<tr>
<td>Rituximab</td>
<td>0.0</td>
<td>0.0</td>
<td>$0</td>
</tr>
<tr>
<td>Tacrolimus</td>
<td>88.2</td>
<td>5.9</td>
<td>$203</td>
</tr>
<tr>
<td>Thrombin</td>
<td>0.0</td>
<td>0.0</td>
<td>$0</td>
</tr>
<tr>
<td>Valganciclovir</td>
<td>95.5</td>
<td>6.4</td>
<td>$568</td>
</tr>
</tbody>
</table>

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ATG Example

Approximate Charge per Unit

Utilization Variance

ATG

UHC tool that shows specific resources compared to cohort mean

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Cost Management –
More than Just Medications

Pharmacy | Lab | Imaging | Blood | Labor | Supplies

Septicemia DRG

DRG X

DRG Y
High Cost and LOS vs. external benchmarks

Spend more on these resources than compare group
Rapid Identification of Bugs

Traditional Blood Culture Workflow

- Bottle culture
- Gram stain
- Samples plated for sub-culturing
- Resistance testing

- Blood drawn in ED, ICU, hospital floors
- Culture positive
- Pathogen group
- Pathogen ID
- Pathogen resistance

- t=0
- t=8h
- t=24-36h
- t=48-72h

Workflow with Verigene BC-GP

- Bottle culture
- Gram stain
- Culture positive
- Pathogen group
- Pathogen ID and resistance
- Gram + Test
- Gram - Test
- Yeast Test
- Yeast

- Blood drawn in ED, ICU, hospital floors
- 2.5 hrs

- t=0
- t=8h
- t=10h
Septicemia Example

Low Cost and LOS vs. external benchmarks

Now, only spend more on lab resources than compare group
Learning Objectives Recap

- Explore trends impacting IDNs
- Examine the implications of these trends on medication governance and formulary decision-making
- Describe how IDNs are working to optimize medication utilization
Results of Trends

Objective: Explore trends impacting IDNs
Consolidation Recap

Objective: Examine the implications of these trends on medication governance and formulary decision-making

We’re seeing

• Evolution of P&T structures
• Enhanced integration of the formulary itself and formulary decision-makers throughout IDNs
• Pooled resources, enabling enhanced focus and improved utilization sophistication
• Heightened focus on comparative effectiveness and optimal value of medication therapy
Value Recap

Objective: Describe how IDNs are working to optimize medication utilization

Benchmarking

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Route</th>
<th>Cases</th>
<th>% Use</th>
<th>Avg Duration (days)</th>
<th>Spend per Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>F&amp;MCW</td>
<td>inhaled</td>
<td>11</td>
<td>0.04</td>
<td>5.1</td>
<td>23,756</td>
</tr>
<tr>
<td>F&amp;MCW</td>
<td>oral</td>
<td>2</td>
<td>0.01</td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>All UHC Members</td>
<td>inhaled</td>
<td>566</td>
<td>0.02</td>
<td>4.7</td>
<td>20,822</td>
</tr>
<tr>
<td>All UHC Members</td>
<td>oral</td>
<td>1,118</td>
<td>0.04</td>
<td>4.3</td>
<td>10</td>
</tr>
</tbody>
</table>

Beyond Medications

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Contact Information

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