Innovative Pharmacy Practice Models

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Sutter Health
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Innovative Pharmacy Roles

Focus
Pharmacist roles in all settings
What can you do to prepare for these roles

Outline
1. Sutter Health
2. Innovative Pharmacy Models – 4 Quads
   1. Background - Current Trends
   2. Emergency Department Models
   3. Discharge Transitional Care Model
   4. Ambulatory Care Models
3. Pharmacy Optimization
4. Medical Group Pharmacy Service
5. Health Plan Pharmacy Services
Sutter Health System

• Not-for-profit Integrated Health System
• Provides care for 3 million patients annually
• Integrated Network
  – 24 Acute Care Hospitals
  – 33 Surgical Centers
  – 5 Medical Foundations
• Physicians: 5000
• Non-physician employees: 48,000
  – 340 Pharmacists
• SutterSelect Employee Health Plan
• Sutter Health Plus Commercial Health Plan
Innovated Pharmacy Practice Models

Continuum of Care

- Admission Med Rec
- Assess Inpatient Meds
- Assess Home Meds
- Discharge Med Rec
- Prior to Admission
- Hospital Admission
- Post-Discharge
- Hospital Discharge
Background

Medication Reconciliation

- Complicated
- Many workflow processes
- Problems when not properly managed.
Innovative Pharmacy Practice Models

• **Problem:** Medication Reconciliation is often a broken process which contribute to increase admission, readmission and LOS
  – Seniors (65-69 yrs) take 14 Rxs/day, 80-85 yrs 18 Rxs/day

• Up to 80% of patients experienced at least 1 medication discrepancy or error post-discharge

• 9% of patients experienced an adverse event within 3 weeks of hospital discharge, 67% were attributed to medications and 12% of the adverse drug events were preventable

• Resolution of Post-Discharge Drug-Related Problems (DRPs)
  Post-discharge Medication Reconciliation
  – DRPs Resolved: 601 (207 patients)
  – **Average: 2.9 DRPs/patient**
    – 58% of patients had discrepancies between their discharge medication list and what they were taking
    – Estimated 16% of patients would have been readmitted base on physician evaluation**
    – 33% of patients were taking more medications than were prescribed
Pharmacist Based Programs Across the Continuum - External

<table>
<thead>
<tr>
<th>Pharmacist’s Impact on Readmissions</th>
<th>Einstein Healthcare Network</th>
<th>Froedtert Hospital</th>
<th>Hennepin County Medical Center</th>
<th>Johns Hopkins</th>
<th>University of Pittsburgh Medical Center</th>
<th>University of Utah Hospital and Clinics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-admissions Reduction</td>
<td>50% (21.4% vs. 10.6%)</td>
<td>34% (30.37% vs. 20.13%)</td>
<td>65% (23% vs. 8%)</td>
<td>15%</td>
<td>56%</td>
<td>28-38% (20.5–22.1% vs 16.0%)</td>
</tr>
</tbody>
</table>

Source: ASHP-APhA Medication Management in Care Transitions Best Practices. 2013
Innovative Pharmacy Practice Models

• Hospital practice and primary care is being redesigned.
• There is increasing demand for pharmacists to participate in the multi-disciplinary patient care teams across the continuum.
• Within Sutter, care models are being designed with varying patient selection, pharmacist roles, accountabilities, performance metrics, documentation methods, and evaluation methodologies.
• There is strong need to identify best and common pharmacy practice in team based care in all setting to meet the needs of our patients and providers.
Innovative Pharmacy Practice Models

- Inventory of models across the system
- Identify best practices related to patient selection, pharmacist role and integration into team-based care, documentation, measurement and metrics of pharmacists work
- Provide appropriate pharmacist practice models recommendation and drive to a common practice across all sites
- Integrate work with evolving Care Coordination and Primary Care Redesign strategies
Innovated Pharmacy Practice Models

Continuum of Care

- Admission Med Rec
- Assess Inpatient Meds
- Assess Home Meds
- Discharge Med Rec

Prior to Admission
Hospital Admission
Post-Discharge
Hospital Discharge
Emergency Department

RN’s & MD’s
- Nurses and Physicians find it difficult to find time to have in depth patient interviews about current medications
- Medication Reconciliation is a Joint Commission requirement

Literature
- American Society of Health System Pharmacists (ASHP) Survey
  - 2006: 3.4% of hospitals had pharmacists in the ED
  - 2008: 6.8%
  - 2013: 16.4%

Literature
- MEDMARX data (9/04-7/05)
  - 2,022 med reconciliation errors
  - 66% occurred when the patient transferred to another level of care
  - Primary cause: performance deficit
Emergency Department

Literature

• In 2014 Shane et al at Cedar’s Sinai found:
  • 54-86% of patients had discrepancies in medications on admission (3.3/patient)
  • Reported rate of inpatient medication errors range from 45-76% due to inaccuracies
  • Adding a pharmacist to the care team reduced med history errors by 81%

Literature

• Aldridge et al estimated a cost avoidance of $845,592 from 668 interventions made by ED pharmacists over a 6 month period.

Pharmacists

• Pharmacists in the Emergency Department:
  • Improve medication safety
  • Improve patient outcomes
  • Reduce costs
  • Improve patient satisfaction
Rothschild et al found 7.8 med errors/100 patients and 84% were significant or serious

Severity of ED Medication Errors Recovered by ED Pharmacists (n=505)
Begin an Emergency Department pharmacy consultative service primarily focused on reducing medication errors
• Cost: 2.8 Productive FTE’s

Provide med reconciliation on all admitted patients from 7am – 11pm, seven days/week

Provide pharmacist consultative services

Benefits:
• Increased availability of pharmacist consultation to clinicians and patients
• Decreased med errors
• Increased patient satisfaction
• Decrease in adverse events
• Increased patient safety
## Sutter System Emergency Department Pharmacy Programs

<table>
<thead>
<tr>
<th>Sutter Affiliate</th>
<th>Comments</th>
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</table>
| **California Pacific Medical Center** | • In 2012, CPMC had 64,993 (adult) and 16,020 (pediatric) ED visits.  
• The primary focus of the pharmacist is on the EHR verification queue and throughput of the ED.  
• The pharmacist also attends codes and trouble shoots, including periodic medication reconciliation, though that is not their primary responsibility.  
• Hours of coverage is 1200-2230 seven days a week in one of CPMC’s busiest EDs. |
| **Sutter Medical Center, Sacramento** | • 721 bed hospital  
• The funding of the position was based on medication reconciliation data indicating substantial cost savings when a pharmacist did med reconciliation as opposed to someone else.  
• Once the program started, it was validated that with pharmacist-based medication reconciliation, patients cost an average of $1000 per stay less than when someone else (most often the MD) did the med reconciliation.  
• Hours of coverage when fully staffed are 0900-0230 Monday to Friday and 1600- 0230 on weekends. |
| **Sutter Tracy Community Hospital** | • 82 bed hospital  
• The pharmacist is in the ED areas for about 6-8 hours to focus on admission & discharge medication reconciliation, code blue/sepsis support, drug information.  
• The pharmacist also assists/ liaises with the Surgery and Diagnostic Imaging departments.  
• The 10-hour Transitional Care Pharmacist shift is from 1100-2130. |
Innovated Pharmacy Practice Models

Continuum of Care

- Admission Med Rec
- Assess Inpatient Meds
- Assess Home Meds
- Discharge Med Rec

Prior to Admission
Hospital Admission
Post-Discharge
Hospital Discharge
East Bay
Criteria Med Rec - Admission

Complete med recon within **12 hours** of admission for high risk patients:

- Has a Admitting Diagnosis of Pneumonia, CHF, COPD
- Physician request or patient on 7-plus medications

<table>
<thead>
<tr>
<th>High Risk Medications</th>
<th>Examples</th>
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<tbody>
<tr>
<td><strong>Anticoagulants</strong></td>
<td>Warfarin (Coumadin), rivaroxaban (Xarelto), dabigatran (Pradaxa), etc</td>
</tr>
<tr>
<td><strong>Antiepileptics</strong></td>
<td>Phenytoin, lamotrigine, levetiracetam, carbamazepine, valproic acid, oxcarbazepine, phenobarbital, topiramate, etc</td>
</tr>
<tr>
<td><strong>Antineoplastics</strong></td>
<td>Imatinib (Gleevec), erlotinib (Tarceva), methotrexate, etc</td>
</tr>
<tr>
<td><strong>Transplant medications</strong></td>
<td>Mycophenolate (Cellcept, Myfortic), cyclosporine (Sandimmune), sirolimus (Rapamune), azathioprine (Imuran), tacrolimus (Protopic), etc</td>
</tr>
<tr>
<td><strong>Antidiabetics</strong></td>
<td>Insulin, metformin, glyburide, glipizide, gliclazide, pioglitazone, acarbose, etc.</td>
</tr>
<tr>
<td><strong>Antimicrobials</strong></td>
<td>Cephalexin, clindamycin, Septra, HIV-medications, etc.</td>
</tr>
</tbody>
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**Opportunities**

- 100 charts reviewed including:
  - DRGs with potential pharmacy intervention
  - LOS >1 and <5 day above GMLOS
- 10 potential LOS related Rx interventions Identified (10%)

<table>
<thead>
<tr>
<th>DRG Type</th>
<th># of Cases</th>
<th>Problem</th>
<th>Potential Rx Intervention</th>
<th>Potential LOS Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIABETES</td>
<td>4</td>
<td>1. Discharge delayed due to insulin management</td>
<td>• Post discharge dz mgmt &amp; monitoring by Rx</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Discharge delayed due to pain management</td>
<td>• Rx collaboration with RN and MD for inhouse med management</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Discharge delayed due to insulin med error</td>
<td>• IV to PO switch</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Discharge delayed due to abx and MD f/u</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PULM EMB</td>
<td>3</td>
<td>Discharge held due to high cost med</td>
<td>Rx early start on prior auth process</td>
<td>4</td>
</tr>
<tr>
<td>CELLULITIS</td>
<td>1</td>
<td>Post I&amp;D patient continued on IV abx</td>
<td>IV to PO switch</td>
<td>1</td>
</tr>
<tr>
<td>RESP INF</td>
<td>1</td>
<td>Discharge delayed due to monitoring</td>
<td>Post-discharge monitoring by Rx</td>
<td>1</td>
</tr>
<tr>
<td>UTI</td>
<td>1</td>
<td>Discharge delayed due to IV antibiotic therapy</td>
<td>Change to PO</td>
<td>3</td>
</tr>
</tbody>
</table>
Pharmacy will provide following services for high-risk patients:

- Discharge counseling
- 48 hour post discharge phone call and enroll in Disease Management Clinic if appropriate

<table>
<thead>
<tr>
<th></th>
<th>Low risk</th>
<th>Medium risk</th>
<th>High risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 day readmissions</td>
<td>0</td>
<td>1</td>
<td>2 or more</td>
</tr>
<tr>
<td>Medications</td>
<td>0-4</td>
<td>5-14 15 or more w/ good compliance</td>
<td>15 or more New high cost or difficult to obtain meds</td>
</tr>
<tr>
<td>Comorbidities</td>
<td>0-2 (stable, chronic)</td>
<td>3-4 (stable, chronic)</td>
<td>New diagnosis, exacerbation, or uncontrolled CHF, DM, COPD, PNA, anticoag</td>
</tr>
<tr>
<td>Disposition</td>
<td>Self or 24 hr help</td>
<td>With assistance</td>
<td>Alone without help SNF</td>
</tr>
<tr>
<td>Insurance</td>
<td>3rd party insurance</td>
<td>Medicare/ MediCal/ County insurance</td>
<td>No insurance</td>
</tr>
<tr>
<td>Time Spent on Intervention</td>
<td>10 min</td>
<td>15-20 min</td>
<td>45-60 min</td>
</tr>
</tbody>
</table>
# Projected Return on Investment

<table>
<thead>
<tr>
<th></th>
<th>HF</th>
<th>PNA</th>
<th>COPD</th>
</tr>
</thead>
<tbody>
<tr>
<td># pts</td>
<td>230</td>
<td>143</td>
<td>168</td>
</tr>
<tr>
<td># readmission</td>
<td>30</td>
<td>19</td>
<td>27</td>
</tr>
<tr>
<td>Cost per readmission</td>
<td>$6,600</td>
<td>$6,600</td>
<td>$6,600</td>
</tr>
<tr>
<td>Calc for # of preventable readmission</td>
<td>8 preventable X 4d X $1650/ d=</td>
<td>3 preventable X 4d X $1650/ d=</td>
<td>7 preventable X 4d X $1650/ d=</td>
</tr>
<tr>
<td>Total Cost Savings Opportunity by DRG</td>
<td>$52,800</td>
<td>$19,800</td>
<td>$46,200</td>
</tr>
</tbody>
</table>
### Outcomes Impact

<table>
<thead>
<tr>
<th>Study Primary End Points Length of Stay</th>
<th>Control</th>
<th>Intervention</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean LOS (95%CI)</td>
<td>3.63 (3.45,3.81)</td>
<td>3.84(3.59,4.08)</td>
<td>-</td>
</tr>
<tr>
<td>Adj LOS (95%CI)</td>
<td>3.89 (3.73,4.05)</td>
<td>2.72(2.37, 3.06)</td>
<td>-</td>
</tr>
<tr>
<td>Adj Mean Diff (95% CI)</td>
<td>-1.19 (-1.59, -0.80)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>
Reduction in Med Error Rate

TOC Pharmacist conduct admission med rec for HF patients
Innovated Pharmacy Practice Models

Continuum of Care

- Admission Med Rec
- Assess Inpatient Meds
- Assess Home Meds
- Discharge Med Rec
Population Health Management
Pharmacy - Ambulatory

Several models have been developed and continue to transition and grow

Trend

– increasing the use of pharmacist in direct patient care
– primary areas of engagement are transition of care and high risk patients working in team based care
– PCMH models moving to TOC and higher number of physicians

Documentation and measurement of pharmacist work is lacking making recommendations of model to new sites difficult

Identify best practices related to patient selection, pharmacist role and integration into team-based care, documentation, measurement and metrics of pharmacists work
PCMH - SMF

A published abstract performed in the Sac Sierra Region demonstrated that patients in the clinical pharmacist-led Medication management Program (MMP) program within a Patient Centered Medical Home (PCMH) showed decreased rates of hospitalizations relative to patients in the PCMH alone (IRR 0.48) or those receiving usual care (IRR 0.40) (P= 0.0003).<sup>(3)</sup>

- MD referral and consults – majority >3 chronic conditions, >8 medications, complex medication regimens

- Our Pharmacy Outcomes team utilized a grant from ASHP to evaluate the impact of a clinical pharmacist-led medication management program (MMP) within a patient-centered medical home (PCMH) at Sutter Davis. We retrospectively identified patients in Sutter Health’s electronic health records (EHR) between November 2011 and June 2013, receiving (1) usual-care at a non-PCMH site (Usual-care cohort); (2) care at the PCMH site but not the MMP (PCMH cohort); and (3) care at the PCMH site and the MMP (MMP cohort).

**RESULTS:** Medication Management Patients under the care of a pharmacist had a significantly higher incidence of ambulatory-care visits relative to PMCH patients but a lower incidence of hospitalizations. When compared to usual-care patients, MMP patients had similar rates of ambulatory-care visits but significantly lower rates of both hospitalizations and emergency department visits. No differences in health-resource utilization were observed between the PCMH and Usual-care cohorts.

**CONCLUSIONS:** Despite an increase in ambulatory-care visits, patients in the MPP program within a PCMH showed improved rates of hospitalizations relative to patients in the PCMH alone or those receiving usual-care. A clinical pharmacist embedded within a PCMH may facilitate the management of complex, high-risk patients in an ambulatory

- Pharmacist ratio to primary care panel size: 1 to 16,000 to 24,000
SCCP - SSR

- Pharmacist embedded in Care Management Team
- Patient Population – TOC, MD referral, High Risk Patients
- Pharmacist are referred TOC patients that meet certain “high risk” pharmacy criteria by CM
  - Medicare (high risk) – UHC MA, HN Seniority Plus
  - ≥ 2 admissions/year
  - ≥ 3 Chronic Conditions (examples)
    - Dementia, Heart Failure, COPD, Diabetes, Cancer
  - Polypharmacy ≥ 7 medications
- High risk patients are identified and pharmacists consult for Med Rec, complex medication review and advanced medication management
- Physicians can also refer patients at their discretion for pharmacy consultation
- Pharmacist ratio to high risk patient 1:250
- No outcome measurement to date - high percentage of identified high risk patient receive med rec and MTM by pharmacist
PCMH - SEBMF

Pharmacist Activities

• Primary MD referral – no strict criteria

• Chronic DM – DM, HTN, HLD, CHF, Asthma, COPD, Mental Health, Pain Management

• Anticoag (bridging, new starts) – 600 patients

• TOC – ER, hospital discharge
  – CM reviews hospital d/c send to Rx
  – LVN review ER d/c – Rx reviews chart

• Provider Consults

• Outcomes – not studied to date
PAMF – Primary Care

Pharmacist Activities

• Anticoagulation

• Physician Referral
  – Post discharge med rec
  – Complex Med Rec
  – Medication Therapy Management
  – Chronic Pain Management
  – Miscellaneous Clinical Disease Management

• Cardiology – CHF program clinic support (San Carlos)

• Drug information /medication dosing

• Limited metrics or outcomes reported (organically developed)
Additional Programs Within Sutter Health

• PAMF – Champions Program

• SGMF/CVR – Compass Program
  – Modeled after STCH program

• SPMF – PCMH pharmacist
  – > 70% with > 4 Chronic conditions, most common are HTN, DM, Anticoag, MH, HLD, Asthma/COPD
  – 60-65% > 9 meds; 80-90% > 5 meds
  – Majority telephonic; 30-35% office visit

• PAMF - anticoagulation
Disease Management
Clinical Outcomes

• **Hospitalization avoidance**
  - May – August 2014: 61 days avoided
  - Average >15 days/ month
  - Avoid >180 days/ year

• **Overall 30-day readmission Rate (Aug 2014 YTD)**
• Pharmacy Clinic
• 7% (5* of 71)

• **CHF 30-day readmission Rate (Aug 2014 YTD)**
• STCH Overall 18% (14 of 78)
• Pharmacy Clinic 3% (1 of 32)
Innovative Pharmacy Practice Models

Recommendations

1. Pharmacy engaged at each intervention point – 4 Quads

2. Pharmacy Extenders (pharmacy residents, students and technicians)

3. Multi-disciplinary team

4. Focus on population and activities
   a) Patient population for pharmacy work must be defined through strict criteria, but also allow for limited provider or patient referral
   b) Pharmacy activities should be clearly defined, focusing on med rec, complex medication management, access to medications and education

5. Documentation and measurement system need to be defined and implemented

6. Metrics: TCC - must include readmission and utilization of health care resources. Additional metrics should be outcome based and related to specific pharmacist/pharmacy activities

7. Pharmacist ratio to high risk patients 1/250 to 1/500
Enterprise Approach for Managing Medication Use and Implementing Standard Pharmacy Processes and Systems

*Sutter Health Pharmacy Optimization Team (SPOT)*

1. Mechanisms for screening and surveillance of medication use across the system

2. Identify opportunities that improve quality and cost of medication use

3. Design and deploy system-wide strategies

4. Measure and report performance
### 2015 SPOT

#### Strategic Priorities

<table>
<thead>
<tr>
<th>Safety &amp; Quality</th>
<th>Affordability</th>
<th>Initiative &amp; System Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INNOVATION</strong></td>
<td><strong>VALUE</strong></td>
<td></td>
</tr>
<tr>
<td>Antibiotic stewardship program</td>
<td>Implement standard strategies to improve use of antibiotics at all Sutter hospitals.</td>
<td></td>
</tr>
<tr>
<td>Foundation Formulary</td>
<td>Implement standard formulary and formulary management process across all Medical Foundation</td>
<td></td>
</tr>
<tr>
<td>Rheumatoid Arthritis Management</td>
<td>Evaluation of current practice, establish goals of use of non-biologic treatment prior to use of biologics</td>
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<tr>
<td>ESA Guidelines</td>
<td>Establish standard of care for dosing and monitoring of Aranesp, Epogen® and Procrit®.</td>
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<tr>
<td>Transitions of Care</td>
<td>Complete survey of pharmacy and pharmacist services related to transition of care to identify and share best practices</td>
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</table>
## INNOVATION

<table>
<thead>
<tr>
<th></th>
<th>VALUE</th>
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</thead>
<tbody>
<tr>
<td><strong>Anti-emetics</strong></td>
<td>Implement system-wide protocol that utilizes equivalent, lower cost therapy.</td>
</tr>
<tr>
<td><strong>Viscosupplements</strong></td>
<td>Establish clinical criteria for use and define preferred products</td>
</tr>
<tr>
<td><strong>IV Acetaminophen</strong></td>
<td>Establish clinical use criteria, implement “systems” to support appropriate clinical use, measure and monitor</td>
</tr>
<tr>
<td><strong>IVIG</strong></td>
<td>Maximize the use of preferred products at infusion centers</td>
</tr>
<tr>
<td><strong>Colony stimulating factors</strong></td>
<td>Optimize the price and utilization mix of Granix®, Neulasta®, and Neupogen® across the system</td>
</tr>
<tr>
<td><strong>Generic prescribing</strong></td>
<td>Create process for identifying and maximizing generic equivalents for prescribers and purchasers.</td>
</tr>
</tbody>
</table>
### 2015 SPOT

#### Safety & Quality

#### Affordability

#### Initiative & System Compliance

<table>
<thead>
<tr>
<th>INNOVATION</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>340B program</td>
<td>Advance 340B program into retail pharmacies and evaluate regional 340B opportunities</td>
</tr>
<tr>
<td>Price benchmarking</td>
<td>Improve contract performance and leverage economics of scale.</td>
</tr>
<tr>
<td>Vendor Consolidation - Specialty</td>
<td>Consolidate purchasing of Specialty pharmaceuticals to maximize price discounts and increase service levels</td>
</tr>
<tr>
<td>Vendor Consolidation – Oncology</td>
<td>Complete RFP or vendor renegotiation for Foundation based oncology products</td>
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Opportunities

Phase I – Evaluation

- IVIG - Utilization
- Medication Safety
- Medication Reconciliation
- Oncology – High Cost
- Retail pharmacy strategy
- Centralized pharmacy services

Phase II – Development

- CSF Neulasta, biosimilars
- Maximize hospital use of new generic products
- Prolia
- 340B Regional Opportunities
- Price Auditing
- Vendor Consolidation - Oncology
- Oncology – Xgeva, Yervoy
- Transitions of Care
- Hepatitis C

Phase III - Implementation

- Antimicrobial stewardship program
- Aloxi to ondansetron
- Viscosupplements
- IV Acetaminophen
- IVIG - product
- Erythropoietin stimulating agents
- Preferred biologics for rheumatoid arthritis
- Foundation Formulary
- 340B retail pharmacy contracts
- Generic Prescribing - OP
- Vendor Consolidation Specialty

SAFETY & QUALITY
AFFORDABILITY
INITIATIVE & SYSTEM COMPLIANCE
## Pharmacy Savings Achieved

<table>
<thead>
<tr>
<th></th>
<th>2014 Savings</th>
<th>2015 Est. Savings</th>
</tr>
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<tbody>
<tr>
<td>Central Valley</td>
<td>$551,799</td>
<td>$807,778</td>
</tr>
<tr>
<td>East Bay</td>
<td>$1,272,184</td>
<td>$929,850</td>
</tr>
<tr>
<td>Freestanding</td>
<td>$29,224</td>
<td>$313,077</td>
</tr>
<tr>
<td>Peninsula Coastal</td>
<td>$641,961</td>
<td>$551,425</td>
</tr>
<tr>
<td>Sacramento Sierra</td>
<td>$3,158,082</td>
<td>$2,354,694</td>
</tr>
<tr>
<td>West Bay</td>
<td>$571,756</td>
<td>$777,590</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$6.2M</strong></td>
<td><strong>$5.734M</strong></td>
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</tbody>
</table>

Source: Sutter Health Supply Chain Pharmacy Dashboard, 2012 to 2013 and Sutter Health SPOT plan, 2014
Critical Success Factors

- Executive sponsorship and support of system strategies
- Physician engagement
- Standardized reporting capabilities
- Redesigned pharmacy structure and coordination

Our goal is value driven transformation of the patient care experience across Sutter Health with a relentless focus on quality, safety, and patient-centeredness.
Implementation

1. Maximize coordination of development within pharmacy and physician communities

2. Create structure and accountability for implementation across all affiliates

3. Publicize and market strategy across system

4. Establish metrics and routine monitoring of each program
Medication Management Programs

Vaccine Management

- Establishment and maintenance of system-wide vaccine formulary
  - Savings on vaccine costs of $4-5 million annually
  - 98% plus compliance
- Review new clinical information
- Monitor recommendations from Advisory Committee on Immunization Practices (ACIP)
- Assist with recommendations to maintain contract compliance with preferred vaccine manufacturers and vendors.
- Partner with clinicians to provide system recommendations for adoption
- Vaccine shortage management
- Chair the System Vaccine Advisory Team
- Coordinate and communicate system changes.
Background - Antiemetics

- Cost-of-care pressure:
  - Rising costs of cancer care
  - Sutter accused of being “too expensive”
- Search for therapy optimization
- Focus on 5-HT$_3$A drugs used for CINV
  - High cost & high volume of Aloxi
  - NCCN preferred status
  - Created a hybrid-dose model for ondansetron (HDO)
- Dilemma: TCC vs. revenue
  - Aloxi profit vs. ondansetron profit
  - ROI
PDSA

• Plan: Discussed 5-HT$_3$ RA pharmacokinetics & dosing models with PAMF
• Do: Switch to HDO across PAMF
• Study:
  – Retrospective Analysis (882 patients; 1,184 regimens)
  – Outcomes
  – Poster presentation
• Adjust:
  – Modify PO dose to minimize constipation
  – Maximize the use of dexamethasone
System-Wide Adoption

• Sutter Pharmacy Optimization Team (SPOT)
  – Addition of project to dashboard
  – Presentation to Oncology SME Committee
  – Presentation to each affiliate oncology group
  – Measurement and reporting (monthly)

• Build into Beacon

• Savings in first year ~$1M (not including PAMF)
• PAMF savings to date $2.4M (as of Oct, 2014)
PAMF originally implemented HDO September, 2010 and has set the benchmark for the other regions.
SGMF Performance

Central Valley

Cost of Monthly Purchases

Baseline (April 2013 through September 2013): $5,883

Goal: 25% of Baseline: $1,471

Linear (Cost of Monthly Purchases)
Rheumatoid Arthritis -Target

• Maximize the quality of treatment for RA patients and improve patient outcomes.

• Reduce variation across the system utilizing a treatment guideline that begins with maximizing oral non-biologic DMARD (double or triple) therapy and encourages a step wise treatment approach with use of preferred biologic DMARD (bDMARD) 2nd or 3rd line agents.

2012 Update of the 2008 American College of Rheumatology Recommendations for the Use of Disease-Modifying Antirheumatic Drugs and Biologic Agents for the Treatment of Rheumatoid Arthritis. Arthritis Care and Research, 2012;64:625-639
System - New Biologic Treatment
Prior Non-Biologic Trends

7/1/12-6/30/14 (N=1079)

7/1/14-12/31/14 (N=94)

- 0 Prior Non-Biologic Baseline
- 0 Prior Non-Biologic Goal
- 0 Prior Non-Biologic Actual
- 0 Prior Non-Biologic Trend
- 2+ Prior Non-Biologic Baseline
- 2+ Prior Non-Biologic Goal
- 2+ Prior Non-Biologic Actual
- 2+ Prior Non-Biologic Trend

12.14%  50.05%  59.58%

6.38%
Medical Group Pharmacy Team

Foundation Pharmaceutical Management
• Foundation Pharmacy Spend and Analysis

• Foundation Formulary Management
  – P&T or equivalent clinical committee
  – Development and ongoing management of formulary
  – Clinical evaluation of medications and med use

• Medication Use and Management Programs (examples include: vaccines, anti-emetics, oncology, RA)

• Medication Utilization Management
  – Development and utilization of best practice
  – Integrated process with existing systems
CID Ambulatory Team

Pharmacy PMPM management

- Pharmacy PMPM reporting and analysis
- Medication Use and Management Programs
- Pharmacy Claims Database Management
- Generic Prescribing Program
- Variation Reduction Programs and clinical pharmacy support for SMN VR team
CID Ambulatory Team

Generic Prescribing Program

- Promote cost-effective prescribing and increased quality of care through affordability and improved medication adherence.

- Increase Generic Prescribing Rates (GPR) system-wide in the focus therapeutic classes and Overall (based on IHA P4P metrics).
  - Antihyperlipidemics, nasal steroids, PPIs, antidepressants, Cardiovascular & HTN (ARB focus), anxiety/sleep aids (non-benzodiazepine focus) and diabetes.
  - Antimigraines will be a new testing measure for 2014
CID Ambulatory Team

Generic Reports (quarterly)
- System Analysis/Reports
  - SMN Report
  - Cost by GPI Report
  - PMPM/RxPMPY reports

- Medical Group Analysis
  - Rolling-12; 3-Month Reports
  - Sutter Health Top 50 Drugs by Volume; Top 50 Drugs by Cost
  - PMPM/RxPMPY reports

- Individual Provider reports
  - Generic Prescribing Reports; High Copay Reports
  - Internal benchmarking reports (distribution based on Medical Director request)

Health plan savings (annualized):
- ~$62 million since inception (2008)
Sutter Medical Network Dashboard Results

2Q14 SMN Generic Prescribing Rates - Overall Measurement ±

Source: Sutter Health Commercial HMO Rx Claims Database (P4P Measure)
‡ Rolling 12-Month measurement
* Not adjusted for BTMG
Innovative Pharmacy Roles – Health Plan

Sutter Health

- Sutter Select
  - Self Insured Plan
  - 100,000 lives

- Sutter Health Plan – Sutter Health Plus
  - Commercial Plan
  - Expanding
    - All regions
    - All types of plans
    - Medicare Advantage
Innovative Pharmacy Roles – Health Plan

Sutter Select

- ERISA Self-funded Health plan
- 100,000 lives – Sutter employees and dependents
- $500M budget
- $82M pharmacy budget (16%)
Innovative Pharmacy Roles – Health Plan

Sutter Health Plan – Sutter Health Plus

• New Commercial Plan – started January 2014
• Expanding
  • All regions
  • All types of plans – PPO, Small Group Exchange
  • Medicare Advantage
Innovative Pharmacy Roles – Health Plan

Pharmacist Role

- PBM Oversight
- Pharmacy Benefit Management Implementation
- Pharmacy Spend Analysis
- Quality Programs
- Retail Pharmacy Network
- Mail Order Pharmacy
- Specialty Pharmacy
- Member Services
- Provider Services
- Data analysis and reporting