Transitions of Care: Defining Pharmacy's Role, Responsibilities, and Return on Investment

Activity Overview

More than ever, pharmacy leaders today must investigate different models and business plans to support opportunities for pharmacists to improve transition of care for patients. Be prepared to take transition of care in your health system to a higher level by focusing on best practices in different business models, including key components of the business plan, means to measure outcomes, and new roles and responsibilities for pharmacists.

Learning Objectives

After participating in this application-based educational activity, participants should be able to

- Describe health system pharmacy's imperative to collaborate in improving care transitions in new care delivery systems.
- Identify core elements, outcome metrics, and financial drivers for developing pharmacy transition of care services.
- Compare best practices in pharmacy transitions models.
- Apply knowledge of current pharmacy transition models in developing one appropriate for your health system.
Transitions of Care: Defining Pharmacy’s Role, Responsibilities, and Return on Investment

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Health Care Imperatives: Bending the Cost Curve

- 10% of patients account for 64% of health care costs
- Chronic conditions requiring coordinated care to avoid complications
- Redesign of care delivery systems
  - Shared-savings: accountable care organizations
  - Independence at home: medical homes
  - Bundled payment, reduced or no payments for readmissions, hospital-acquired conditions
Medicare Policy Changes

- 2004 – Centers for Medicare and Medicaid Services (CMS) Voluntary Reporting Initiative
- 2005 – Deficit Reduction Act
- 2007 – Penalty for not reporting quality measures
- 2008 – Penalties for hospital-acquired conditions
- 2009 – Penalties for not publicly reporting
  – 30-day readmission rates for AMI, HF, PN
- 2010 – Affordable Care Act
  – Hospital Readmissions Reduction Program (HRRP)
  – Community-Based Care Transitions Program (CCTP)

Why Focus on Readmissions?

- 18-20% of Medicare patients are readmitted within 30 days of hospital discharge accounting for between $15-17 billion
- 50% of these readmitted patients were never seen by a subsequent provider in the time between hospital discharge and readmission
- Average Medicare reimbursement for unplanned readmission is $7200
- Potentially preventable hospital readmission rates:

<table>
<thead>
<tr>
<th></th>
<th>7 days</th>
<th>15 days</th>
<th>30 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of potentially preventable readmissions</td>
<td>5.2%</td>
<td>8.8%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Readmission spend (in billions)</td>
<td>$5</td>
<td>$8</td>
<td>$12</td>
</tr>
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Fee for Service Conundrum

“Medicare’s fee for service system incentivizes hospitals to increase volume of care. Hospitals are paid for each discharge...hospitals could lose income by reducing admissions, as fewer rehospitalizations would result in fewer billable discharges.”

Readmission Challenge – Policy Changes Needed

• Need to provide incentive for hospital change to reduce readmissions
  – Public disclosure of hospital specific, risk-adjusted readmission rates
  – Change in payment rates for hospitals with higher risk-adjusted readmission rates

• Pay for performance – include both process and outcome measures


Hospital Readmissions Reduction Program (HRRP)

• Framework for the ACA Medicare hospital inpatient readmissions payment policy
• Designed to reduce Medicare inpatient payments for acute care hospitals with higher than expected risk-adjusted readmission rates for AMI, HF, and PN
  – For FY2015, 4 more conditions will be added: chronic obstructive lung disease, CABG, PTCA, other vascular procedures
• Effective for all discharges beginning on or after October 1, 2012
• Penalties of up to 1% will be imposed in 2013; increases up to 2% in 2014 and 3% in 2015

CMS. Readmissions Reduction Program (URL in ref list).

Readmission Methodology

• Uses HF, AMI, PN publicly reported readmission measures to calculate hospitals’ excess readmissions
  – Readmission: admission due to any cause to a hospital within 30 days of a discharge from the same or another hospital
• Some exclusions: transfers between acute care hospitals; does not apply to critical access or cancer hospitals
• Hospital base operating DRG payments for all discharges are decreased by an adjustment factor based on excess readmission ratios and claims data from performance period

CMS. Readmissions Reduction Program (URL in ref list).
Readmission Penalties

- Penalty calculation: \[(\text{Hospital base operating Medicare reimbursement}) \times (\text{Adjustment factor})\]
  - Adjustment factor is the greater of
    - Ratio of aggregate payments for excess readmission for targeted conditions to the aggregate payments for all discharges for all conditions
    - Capped adjustment factor
      - FY2013: 1%
      - FY2014: 2%
      - FY2015: 3%

CMS. Readmissions Reduction Program (URL in ref list).

2211 Hospitals Penalized for Excess Readmissions (August 2012)


Community-Based Care Transitions Program (CCTP)

- Medicare demonstration project mandated by the ACA
- $500 million funding to improve care transitions over 5 years
  - Partnerships between hospitals and community-based organizations through hospital engagement networks (HENs)
- Goal: reduce hospital readmissions by 20% compared to 2010 baseline

CMS Center for Medicare & Medicaid Innovations. Community-based Care Transitions Program. (URL in ref list).
CMS Partnership for Patients - Goals

• **Keep patients from getting injured or sicker.** By the end of 2013, preventable hospital-acquired conditions would decrease by 40% compared to 2010.

• **Help patients heal without complication.** By the end of 2013, preventable complications during a transition from one care setting to another would be decreased so that all hospital readmissions would be reduced by 20% compared to 2010.

State of Minnesota Example:

RARE Campaign

www.rarereadmissions.org

RARE Campaign

• A campaign across the continuum of care to reduce avoidable hospital readmissions across Minnesota and surrounding areas

• Regional approach
  – Supported by hospitals, providers, health plans, other key stakeholders

• Campaign is engaging other care providers, acknowledging that readmissions are the result of a fragmented health care system
RARE Campaign Goals

- Population health
  - Prevent 4000 avoidable readmissions within 30 days of discharge OR in other words,
  - Reduce overall readmissions rate by 20% from 2009 base by 12/31/12
- Care experience
  - Recapture 16,000 nights of patients’ sleep in their own beds instead of in the hospital
  - Improve by 5% on HCAHPS survey questions on discharge
- Affordability of care
  - Save an estimated $30 million for commercially insured patients; additional savings for Medicare patients

Broad Community Support

- Operating Partners
  - Institute for Clinical Systems Improvement (ICSI)
  - Minnesota Hospital Association (MHA)
  - Stratis Health

Hospitals Participating In RARE Campaign
5 Focus Areas

• Patient/family engagement and activation

• **Medication management**
  • Comprehensive transition planning
  • Care transition support
  • Transition communication

RARE - Progress to Date

How Can Hospitals Reduce Readmissions?

• Better, safer care during inpatient stay
• Attend to medication needs at discharge
• Improve communication with patients before and after discharge
• Improve communication with other providers
• Review practice patterns

Care Transitions – Four Pillars

- Medication self-management
  - Patient is knowledgeable about medication and has a medication management system
  - Hospital, home, follow-up calls
- Use of a dynamic patient-centered record
  - Personal health record
- Primary care and specialist follow up
- Knowledge of red flags

Systematic Review of Interventions to Reduce 30-Day Readmission

- 43 studies evaluated – identified 12 intervention categories that contribute to reducing readmission
  - Pre-discharge: education, medication reconciliation, discharge planning, arrange follow-up appointments
  - Post-discharge: phone calls, patient-activated hotlines, home visits, timely communication, and follow up with ambulatory provider
  - Bridging: transition coaches, physician continuity across settings, patient-centered discharge instructions
- No single intervention associated with reduced risk for 30-day re-hospitalization


Systematic Review of Interventions to Reduce 30-Day Readmission

- 5 randomized trials with statistically significant improvements in 30-day readmission outcome
  - (1) Early discharge planning vs. usual care
  - (4) Multicomponent discharge bundles – included post-discharge phone call and patient-centered discharge instruction (PDCI)
- 10 randomized trials did not show a significant effect or isolated or bundled intervention
- 2 randomized trials found no effect from post discharge calls in isolation

Contemporary Evidence about Hospital Strategies for Reducing 30-Day Readmissions

- 500 US hospital survey to determine use of 10 practices associated with lower readmission rates
  - Enrolled in ACC and IHI Hospital to Home Campaign
- Medication management practices
  - 62.4% involved pharmacists in AMI readmission QI teams
  - 14% reported responsibility for medication reconciliation was at least sometimes not formally assigned
  - 46.4% never involved pharmacist or pharmacy technicians to obtain medication history
  - 3.2% and 13.9% made contact with outside Rx or primary care provider as part of medication reconciliation process


Medicare Care Coordination Demonstration Project – what works?

- Face-to-face patient contact
- Physician engagement and cooperation
- Communication hub
- Patient education – behavioral change
- Transition management – care coordinator
- Medication management
  - Med info from source other than patients
  - Consult with pharmacist or physician when medication problems arise


Emergency Hospitalizations for ADEs

- Four medications implicated in two thirds of emergency hospitalizations for ADEs
  - Warfarin (33.3%)
  - Insulin (13.9%)
  - Oral antiplatelet (13.3%)
  - Oral hypoglycemic (10.7%)
- Few involve high risk or potentially inappropriate medications (PIMs)
- Implication – “focus transitions of care and medication management programs on anticoagulants and diabetes drugs for greatest, measurable safety impact”

Selected Pharmacy Interventions

• Project RED – RPh post-discharge phone call
  – Fewer readmissions and ED visits in intervention group at 30 days post-discharge (p = 0.009)
• Pharmacist-facilitated hospital discharge program
  – Medication therapy assessment, med rec, screening for adherence, counseling and education, post discharge phone call
  – Medication discrepancies at discharge reduced (33.5% vs. 59.6%, p < 0.001)
  – No impact on readmission or ED visits at 14 days or 30 days
  

Selected Pharmacy Interventions

• Home-based pharmacist-led care management program
  – Pharmacist care manager; 30% reduction in readmission rates
• Effect of a pharmacist medication review in elderly patients discharged from the hospital
  – RCT, patients 60 or older with at least 5 drugs
  – Significant reduction in DRP reduction after discharge from baseline in intervention group


Opportunities for Pharmacy: Admission

• Medication history
• Medication reconciliation
• Errors of omission
• Adverse drug events
• Medication adherence
• Medication access
• Optimize the medication regimen
Opportunities for Pharmacy: Inpatient

- Optimize the medication regimen
  - Initiate indicated medications
  - Discontinue unnecessary or unsafe medications
  - Simplify the medication regimen
- Provide effective teaching and enhanced learning
  - Identify barriers to learning
  - Medication management
  - Disease self-management
  - Medication adherence
  - Provide tools (e.g., blister packs)

Opportunities for Pharmacy: Discharge

- Medication reconciliation
- Provide medication list and related information to patient/caregiver, next provider(s) of care, pharmacy/pharmacist
- Match discharge follow up to need
  - Readmission risk stratification
    - Follow up phone call? MTM visit? SNF?
- Ensure proper information is provided
  - Action plan for care
  - Adverse event management

Opportunities for Pharmacy: Post Discharge

- Follow up visit or phone call
  - Medication reconciliation
  - Medication adherence
  - ADE surveillance
  - Medication access
- Medication therapy management
- Communicate pertinent medical information or findings to next level provider(s)
Our Story:
Abbott Northwestern Hospital, part of Allina Health

Abbott Northwestern Hospital

- Tertiary referral, teaching hospital
- Largest of the 11 Allina hospitals
- 626 staffed beds, 40,000 admissions annually
- Epic EMR with CPOE

Inpatient Pharmacy Department

- 100 FTE (53 FTE pharmacist)
- Integrated patient-centered practice model
  - Decentralized pharmacist coverage 16 hr/day
  - 4 clinical specialists (kidney and heart transplant, oncology, infectious diseases, cardiology/critical care)
  - 5 PGY-1 and 2 PGY-2 residency positions
- Transitions in care and readmission focus
  - Aligns health-system, hospital, pharmacy department goals
  - PPMI: ensure medication-related continuity of care for discharged patients
Current Pharmacy Roles in Transitions of Care

- Transplant/ventricular assist device (VAD)
  - Inpatient service also manages patients in advanced HF/transplant clinic (MTM)
- Orthopedics warfarin clinic
  - Inpatient through 30 days postop period
- ED RPh
  - Admission medication reconciliation, post discharge culture review
- Hospital Readmission Committee
  - Pilot project(s)

Abbott Northwestern Hospital Readmission Committee

- Goal: improve transitions to reduce readmissions
- Expanded focus from AMI, HF, and pneumonia to all conditions in late 2011
- Interdisciplinary – medication management key focus
- Tactics
  - Develop a structured pilot approach to transition
  - Start with one high risk patient population (defined by hospital data)
  - Design, apply, and refine model
  - Expand to other populations
- Align pilots with system transitions work

How Quickly Do Patients Return to Allina Health Hospitals?

39% of readmissions occurred within 7 days of discharge

<table>
<thead>
<tr>
<th>Days to Readmit</th>
<th>PPRs Count</th>
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<tbody>
<tr>
<td>April 1, 2011 through March 31, 2012</td>
<td>39%</td>
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Most Common Potentially Preventable Readmission (PPR) Returning to Abbott Northwestern Hospital

<table>
<thead>
<tr>
<th>APR-DRG Description</th>
<th>PPR</th>
<th>Eligible Discharges</th>
<th>PPR Rate</th>
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<tbody>
<tr>
<td>175 PERCUTANEOUS CARDIOVASCULAR PROCEDURES W/AMI</td>
<td>7</td>
<td>1471</td>
<td>0.5%</td>
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<tr>
<td>731 MAJOR DEPRESSIVE DISORDERS &amp; OTHER/UNSPECIFIED PSYCHOSES</td>
<td>3</td>
<td>496</td>
<td>0.6%</td>
</tr>
<tr>
<td>775 OTHER VASCULAR PROCEDURES</td>
<td>1</td>
<td>567</td>
<td>1.9%</td>
</tr>
<tr>
<td>765 SEPTICEMIA &amp; DISSEMINATED INFECTIONS</td>
<td>36</td>
<td>368</td>
<td>9.8%</td>
</tr>
<tr>
<td>310 INTERVERTEBRAL DISC EXCISION &amp; DECOMPRESSION</td>
<td>2</td>
<td>61</td>
<td>3.3%</td>
</tr>
<tr>
<td>304 DORSAL &amp; LUMBAR FUSION PROC EXCEPT FOR CURVATURE OF BACK</td>
<td>43</td>
<td>1242</td>
<td>3.5%</td>
</tr>
<tr>
<td>616 AORTIC &amp; SUBAORTIC PROCEDURES</td>
<td>4</td>
<td>53</td>
<td>7.6%</td>
</tr>
<tr>
<td>651 MAJOR SMALL &amp; LARGE BOWEL PROCEDURES</td>
<td>48</td>
<td>361</td>
<td>13.3%</td>
</tr>
<tr>
<td>647 INTERVentricular &amp; INTERAtrial DEFIBRILLATION</td>
<td>43</td>
<td>103</td>
<td>4.2%</td>
</tr>
<tr>
<td>620 EPIDERMAL &amp; DISSEMINATED INFECTIONS</td>
<td>4</td>
<td>48</td>
<td>7.8%</td>
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Not Just One Way to Measure Readmissions!

**Allina Health**
- Based on ICD-9 discharge diagnoses
- Historically includes 3 conditions:
  - acute myocardial infarction (AMI)
  - heart failure (HF)
  - pneumonia (PN)
- Data provided on the Allina readmissions dashboard via intranet
  - Readmission to an Allina hospital
  - All non-elective readmissions

**Centers for Medicare and Medicaid Services (CMS)**
- Based on ICD-9 discharge diagnoses
- Includes 3 conditions:
  - acute myocardial infarction (AMI)
  - heart failure (HF)
  - pneumonia (PN)
- Includes all conditions
- Data provided by CMS @ Medicare.gov
  - Readmission to any hospital in the US
  - All-cause readmissions excluding PTCA or CABG after AMI

**3M Potentially Preventable Readmissions (PPR)**
- Based on APR-DRG
- Proprietary, used by commercial payers
- Includes all conditions
- Data provided by CMS @ Medicare.gov
  - Readmission to any hospital in the US
  - All-cause readmissions excluding PTCA or CABG after AMI

Enlarged on page 33
Allina Health Readmissions Metric: Potentially Preventable Readmissions

- Includes “all condition” admissions (medical, surgical, procedural) with few exclusions (e.g., multiple trauma, major metastatic malignancies)
- Uses 3M proprietary determination of clinically related potentially preventable readmissions (PPRs)
- PPR is used by third-party payers to measure quality
- PPR and CMS readmission methodology follow the same trend
- PPR methodology is used for the Minnesota state-wide RARE campaign

Allina Health Goal

- Develop streamlined clinical processes to optimize the patient’s health after hospitalization
- Common themes
  - Identify high risk patients for readmission
  - Comprehensive discharge planning
  - Medication management
  - Patient engagement
  - Transition communication

Abbott Northwestern Transitions Pilots

- High risk care transitions team
  - Inpatient pharmacist assessment, patient interview, transition conference, handoff
- Heart failure transition pilot
  - Same pharmacist provider inpatient and clinic
- Hospital to TCU transition pilot
  - Inpatient pharmacist review at discharge
  - Standard communication to TCU care team (includes pharmacist)
The Transition Team Package

• Transitions care team
  – Pharmacists in hospital and ambulatory care clinics
  – Community pharmacy technician liaisons
• High risk patient identification
• Needs assessment, including meds
• Transition conference
• Handoff to next level provider
• Chronic disease follow up

High Risk Patient Identification

• Patients are identified based on their risk for readmission – risk “score” flags patient for review
• Factors that increase a patient’s risk for readmission
  – Hospital and emergency department use
  – Demographics
  – Past medical history
  – Current clinical data
  – Medications
• Internal analysis showed that these high risk patients are 5x more likely to readmit
  – Approximately 9% of inpatients are “high risk”

High Risk Definition for Pilot

• High risk
  – 2 or more inpatient visits last month
  – 3 or more inpatient visits last year
  – 3 or more ED visits last year
  – 1 or more inpatient visits last year and 2 or more ED visits last year
• Transitions team
  – Hospitalist, social worker, nurse care manager, pharmacist, pharmacy tech liaison
Inpatient Medication Review

- Complete medication history with patient and/or family, identify discrepancies and problems
  - ED pharmacists and pharmacy student interns
- Assess regimen for appropriateness and identify drug-related problems
- Patient interview to assess patient’s ability to manage and comply with medication regimen
- Community pharmacy technician liaison completes daily rounds with high risk patient priority
  - Proactively problem-solve insurance, high co-pay issues; ensure discharge Rx in hand at discharge
Inpatient Medication Review

• Communicate acute and immediate recommendations via progress note and/or directly with care team provider(s)
  – Referral to ambulatory pharmacist when indicated
• Standard process and tools for clinical hand-off to next provider
  – Recommendation for outpatient provider (ROP) order
  – Routing to provider in-basket
• Considering: discharge med reconciliation; post-discharge phone calls

Transition Conference

• Meeting with the patient, patient’s family and/or pre-hospital caregiver, and health care team
  – Pharmacy attends ad hoc
• Transition conference goals
  – Identify goals of the patient and caregiver(s) after leaving the hospital
  – Identify risks for returning to the hospital
  – Identify barriers to reaching the goals (resources, care options, caregivers)
  – Recommend discharge and follow-up plan
  – Next steps are identified

Example Transition Care Team Metrics

• Outcome
  – Potentially preventable readmissions (PPR)
  – Patient satisfaction (HCAHPS)
• Process
  – Number of patients assessed and time spent
  – Number of medication discrepancies and potential ADEs found via medication reconciliation
  – Number and type of pharmacy interventions
  – Number of completed / resolved drug-related problems
  – Discharge prescription capture rate
  – MTM metrics – drug therapy problem resolution
### High Risk Transitions Team Pilot

- Inpatient pharmacist role
  - Admission – med history, assessment
  - Prep for transition – transition conference
  - Discharge – standardize communication and handoff to next level of care
- Metrics
<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Drug therapy recommendations per patient</td>
<td>3</td>
</tr>
<tr>
<td>Average time per patient</td>
<td>50 min</td>
</tr>
<tr>
<td>Acceptance rate by provider</td>
<td>68%</td>
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### Heart Failure Transitions Pilot

- Cardiology PGY-2 major project comparing
  - Arm A: pharmacist review and education at discharge plus follow-up phone call and clinic visit
  - Arm B: pharmacist review at clinic visit only
- Metrics (small n = 23 patients)
  - 13.6 interventions per patient in transitions arm vs. 6.9 in clinic only arm
  - 69% of interventions made in clinic only arm could have been addressed earlier with inpatient RPh involvement
- Most common types of recommendations
  - Change or modify medications (16%)
  - Lab follow-up recommendations (16%)
  - Discontinue unnecessary medications (14%)
Inpatient to SNF Pilot

- Most patients from pilot SNF readmit within 14 days
- Goal: Reduce readmissions by 50%
- Tactics
  - Assess med regimen for medication reconciliation discrepancies and appropriateness
  - Dose, indications, range orders, DDIs, monitoring plans (esp high risk meds), BEERS/STOPP criteria meds
  - Standard handoff communication to SNF provider
- Pharmacist note entered – viewed by inpatient and SNF providers and staff

Inpatient to SNF Pilot

- As of 8/22/12
  - 32 patients assessed
    - 41 inpatient interventions (70% acceptance)
    - 116 interventions to be addressed at SNF
  - Time spent: mean 46 min (25-90 min)
- Barriers
  - Resources
  - Timing - communication of intent to discharge
  - Handoff - not knowing if care team at SNF received information
- Pilot slated to continue through October 15
  - Data assessment and recommendations pending

Barriers and Challenges

- Hospital financials and competing goals
  - Hospital-wide goal: achieve 100% productivity to achieve same number of FTE by Dec 31 as started budget with in January (adjusted for new growth/volumes) vs. readmissions/TOC goals
- Pharmacy resources – ANW
  - Admission med history = ED staffing of additional 1 FTE RPh and 0.8 FTE Rx intern
  - High risk – 60 pt/week @ 60 min/pt = 1.5 FTE
  - SNF discharges – 71/week @ 45 min/pt = 1 FTE
  - Align with system MTM expansion plans
Next Steps

- Approval to expand ED staffing – to include med history priority on high risk patients
  - Will this decrease time needed for high risk consult (60 min to 45 min or less?)
- 11 hospital health-system proposal for high risk and SNF staffing, ambulatory pharmacist expansion for ACO model
- We need outcomes data to prove value of transitions team work
  - Pharmacy important component of this team
  - Will data support resource required to do it well?

Acknowledgements

- Brenda Nelson – Coordinator, Transitions of Care, Allina Health
- Matt Kresl – Clinical Manager, ANW
- Paul Glynn – Clinical Manager, ANW
- Staff pharmacists completing high risk and SNF pilots at ANW
- Karen Tomes – Director, Care Management, Allina Health

Breakout Session #1

- Small group breakout
  - 30 minutes: Agenda in packet
  - 15 minutes: 1 or 2 groups to report breakout session pearls or findings with audience
Transitions of Care:
Defining Pharmacy’s Role,
Responsibilities, and ROI
Part 2: Survey of Models

Lindsey R. Kelley, Pharm.D., M.S.
University of Michigan Hospitals and Health Centers
Ann Arbor, Michigan

Accountable Care Organizations


Role of Pharmacists in ACOs

- Drug therapy management clinics
- Comprehensive medication reviews and medication reconciliation
- Drug utilization review and identification of gaps in care
- Prescription drug adherence clinics
- Implementation

Academy of Managed Care Pharmacy. Pharmacists as vital members. 2011 Apr. (URL in ref list).
Geisinger Health System

- 100+ pharmacists
- Follow-up phone calls and face-to-face visits
  - Monitor patient labs
  - Educate on medications
  - Assess adverse events and adherence to therapy
  - Recommend dosing adjustments
- MTM services

Academy of Managed Care Pharmacy. Pharmacists as vital members. 2011 Apr. (URL in ref list).

HealthCare Partners

- Care delivery model based on coordination of care, quality metrics, and reporting system
- Pilot programs in two areas
  - CAD/DM: identify patients with gaps in therapy to initiate and titrate therapy
  - Telephonic medication reconciliation for high-risk patients (Afib, HF, COPD, CKD, dementia, pneumonia, anticoagulation therapy) post discharge to minimize readmissions due to inappropriate medication use

Academy of Managed Care Pharmacy. Pharmacists as vital members. 2011 Apr. (URL in ref list).

Fairview Health System

in Academic Partnership with University of Minnesota

ACO Model: “Opportunistic Approach”

- Services provided by pharmacists
  - MTM (since 1997)
  - Medication reconciliation
  - Acting as medication resource for patients
  - Improving patient compliance with medication regimens

- Metrics
  - Patient experiences
  - Care coordination
  - Patient safety and preventive health care
  - Care for patients at high risk for serious outcomes

- Results
  - Reduced overall health care costs
  - Improved clinical outcomes in patients with diabetes or asthma
  - Earned high marks for patient satisfaction

Pharmacists can initiate, adjust, and discontinue medications, as well as counsel:

- Improve medication reconciliation and discharge planning
- Reduce hospital readmissions
- Improve clinical outcomes in patients with targeted, chronic conditions
- Optimal diabetes care, vascular care, controlling HTN
- Improve preventative and wellness care through immunization and screening activities
- Breast and colorectal cancer screening, BMI, tobacco cessation
- Screen patients for fall risks
  - Reduction of elective C-sections, potentially preventable admissions/complications/readmissions

**Pharmacist Involvement: MTM, Med Rec Services**

Universities and institutions are implementing pharmacist programs to improve patient care. For example:

**Fairview Health System**

- In Academic Partnership with University of Minnesota

**Pharmacist Involvement: MTM, Med Rec Services**

- Pharmacists can initiate, adjust, and discontinue medications, as well as counsel
- Improve medication reconciliation and discharge planning
- Reduce hospital readmissions
- Improve clinical outcomes in patients with targeted, chronic conditions
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- Screen patients for fall risks
  - Reduction of elective C-sections, potentially preventable admissions/complications/readmissions

- TOC: Primary care pharmacist program, launched January 2012
  - Medication reconciliation is performed by an inpatient pharmacist on all patients before discharge, then another comprehensive medication review 2-3 days after hospital discharge
  - Goal: Ensure no break in therapy after patients arrive home
  - Outcomes: improving patient care, quality and outcome measures, patient satisfaction
  - Present and future
    - Looking to expand discharge specialist program
    - Goal: have a discharge specialist dedicated to all patients discharged from hospital

- University of Wisconsin

- “Particulate medications, avoid future costs, find cost savings, and provide a continuity of care”

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    - Looking to expand discharge specialist program
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- Johns Hopkins Hospital

- Pharmacist-nurse collaboration
  - Nurse
    - Interview patient
    - Medication list comparison
    - Consult with pharmacist
  - Discrepancies reconciled prior to harm
  - Cost effective and potential to increase safety
    - $113.64 to find 1 potentially harmful discrepancy
    - Cost of an ADE = $9344.12 (2008 adj)

Physician Group Practice Demonstration

• Medicare (5-year project)
• Key components
  – Attribution
  – Growth model
  – Shared savings
• Prototype for ACO

• After 4 years → Savings of more than $15 million
  – Scored 98% on quality during the last year
  – Led to ACO

<table>
<thead>
<tr>
<th>DM</th>
<th>CHF</th>
<th>CAD</th>
<th>Preventive</th>
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<tr>
<td>HbA1c Test</td>
<td>lVA</td>
<td>Antipl. Therapy BP</td>
<td></td>
</tr>
<tr>
<td>HbA1c &lt;9%</td>
<td>UVEF Test</td>
<td>Anti-HL Therapy BP &lt;140/90</td>
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<tr>
<td>BP &lt;140/90</td>
<td>Weight</td>
<td>BP Breast Cancer Screening</td>
<td></td>
</tr>
<tr>
<td>LDL Test</td>
<td>BP</td>
<td>Lipid Profile Colorectal Screening</td>
<td></td>
</tr>
<tr>
<td>LDL &lt;130</td>
<td>Patient Education</td>
<td>LDL &lt;130</td>
<td></td>
</tr>
<tr>
<td>Urine Protein Testing</td>
<td>BB Therapy</td>
<td>ACE I if DM or LV sys dysfunction</td>
<td></td>
</tr>
<tr>
<td>Eye Exam</td>
<td>ACE I Therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foot Exam</td>
<td>Warfarin-AFib</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flu Vaccine</td>
<td>Flu Vaccine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumonia Vaccine</td>
<td>Pneumonia Vaccine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Points</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Patient-centered Medical Home (PCMH)

• 14 general medicine health centers
• Patients scheduled for visits with pharmacists that are either face-to-face (30 min) or telephone consultations (15-30 min)
• Portion of funding is through Blue Cross Blue Shield of Michigan (BCBSM)

PPMI Case Study used with permission from Dr. Hae Mi Choe
Patient-centered Medical Home

- Nine members of the clinical faculty
- 3.7 FTEs are dedicated to clinical practice within the PCMH
- Remaining FTE is devoted to research, teaching, and administration

PPMI Case Study used with permission from Dr. Hae Mi Choe

Patient-centered Medical Home

- 949 patients
- Patients per half-day clinic: range of 2.2 to 6
- Preliminary data in the first year
  - Patients with a baseline A1c > 7.0% (n = 270) experienced a mean decrease in A1c of 0.8% (95% CI 0.6 to 1.0, p < 0.001)
  - Higher risk patients with a baseline A1c > 9.0% (n = 118) experienced a mean decrease of 1.4% (95% CI 1.1 to 1.8, p < 0.001)

PPMI Case Study used with permission from Dr. Hae Mi Choe

Patient-centered Medical Home

- YR1 = $150,000 in revenue
  - Billing via T-codes
    - Face-to-face
    - Phone visits
    - Available to non-physician providers for chronic care management (BCBS & BCN)

PPMI Case Study used with permission from Dr. Hae Mi Choe
University of Michigan Health System Partnership with IHA Health Services Corporation, Ann Arbor, MI

- Transitional care interventions
  - Medication reconciliation programs focused on accurate medication histories, appropriate refill authorizations, and access issues
- Care coordination and medical home interventions for patients with chronic diseases and psychosocial problems
  - Reduce unnecessary treatments, readmissions, wait times
  - Frail elderly, chronic diseases, disabled, mental illness
  - ESRD, transplant, palliative care

Medication Problems Following Hospital Discharge

- 19.6% of Medicare patients are rehospitalized within 30 days of discharge
- Up to 19% of patients experience adverse events within 5 weeks of discharge
  - Approximately 66% are adverse drug events (ADEs) ranging in severity from laboratory abnormalities that need correcting to permanent disability
  - 25-30% of these ADEs are preventable
  - 30-35% can be ameliorated with appropriate monitoring and intervention


Medication Reconciliation in the Outpatient Geriatric Setting

- "Usual care"
  - Taken in the hallway at check-in
  - Providers are responsible for updating the EMR
- Enhanced MA
  - Additional training, additional time
  - Taken in the exam room at check-in
  - Providers are responsible for updating the EMR
- Provider
  - Providers take med history as part of the visit
  - Providers are responsible for updating the EMR
- Tech
  - Taken over the phone before the clinic visit
  - Techs are responsible for updating the EMR
  - Changes and discrepancies are communicated via EMR

Enlarged on page 35
Medication Reconciliation in the Outpatient Geriatric Setting

• Intervention
  – Pharmacy technicians responsible for taking and documenting medication histories
  • Phone call 1-3 days before the clinic appointment
  • Update the EMR with all medication discrepancies
  • Provide a note to the provider detailing changes made

• Primary outcomes
  – Accuracy rate
  – Errors/history
Cancer Center Medication Management

- Pharmacist-provided symptom management
  - Collaborative practice agreement
  - Erythropoietin stimulating agents
  - Pain management

- Oral oncology medication support
  - Patient seen by pharmacist within 10 days of prescription

Oral Oncology Medication Support

Oral Chemo Education

Patient prescribed a new oral chemotherapy

- Clinic
  - Provide oral cancer therapy folder to patient and drug info from Micromedex
  - Schedule f/u appt with oral chemo pharmacist for education within 10 days
  - Encourage patient fill at UMCCC pharmacy

- UMCCC Pharmacy
  - Assure that the patient received oral cancer therapy folder & if not, will give
  - Perform standard medication review
  - Refer patient to patient assistance program if needed.

- Oral Chemo Clinic
  - Review patient's medication & ensure correct fill, instructions, etc.
  - Document education and recommendations in chart
  - F/U with patient as needed, min. 1 phone call

TOC Medication Access Problems

- During the pilot, pharmacy technicians provided prior authorization (PA) management while anticipating access problems

  - Tech runs report
  - Access problem identified
  - Tech action
  - Communication
  - Resolution
TOC Anticipating Access Problems

<table>
<thead>
<tr>
<th>Access Issues</th>
<th>Issue Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA needed</td>
<td>PA approved</td>
</tr>
<tr>
<td>Not covered by plan</td>
<td>PA denied</td>
</tr>
<tr>
<td>High copay</td>
<td>MD resolved (∆ or DC)</td>
</tr>
<tr>
<td>No method to pay now</td>
<td>RPh resolved (∆ or DC)</td>
</tr>
<tr>
<td>No Rx benefit</td>
<td>Social work resolved (GAP, PAP, etc.)</td>
</tr>
<tr>
<td>Travel or transport issue</td>
<td>Patient will pay copay</td>
</tr>
</tbody>
</table>

### Tech Action
- Paged doctor
- Paged pharmacist
- Refer to social work
- Refer to generic program
- Address at DC rounds
- Spoke with patient

TOC Access Issue Anticipation (May and June 2012)

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Paged Doctor</th>
<th>Address at DC Rounds</th>
<th>Paged Pharmacist</th>
<th>Refer to Social Work</th>
<th>Spoke with Patient</th>
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</thead>
<tbody>
<tr>
<td>PA needed</td>
<td>34</td>
<td>26</td>
<td>8</td>
<td>0</td>
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<tr>
<td>High copay</td>
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<td>7</td>
<td>2</td>
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<td>0</td>
<td>1</td>
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<tr>
<td>No Rx benefit</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Not covered by plan</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>38</td>
<td>11</td>
<td>5</td>
<td>6</td>
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</tr>
</tbody>
</table>

FUTURE: Medicare Patients Cost Report: Number of Admissions per Patient
FUTURE: Medicare Patients Cost Report:
Number of Medications per Admission

Breakout Session #2
• Small group breakout
  – 30 minutes: Agenda in packet
  – 15 minutes: 1 or 2 groups to report breakout session pearls or findings with audience
Not Just One Way to Measure Readmissions!

Allina Health
- Based on ICD-9 discharge diagnosis
- Historically includes 3 conditions
  - acute myocardial infarction (AMI)
  - heart failure (HF)
  - pneumonia (PN)
- Data provided on the Allina readmissions dashboard via intranet
  - Readmission to an Allina hospital
  - All non-elective readmissions

Centers for Medicare and Medicaid Services (CMS)
- Based on ICD-9 discharge diagnosis
- Includes 3 conditions:
  - acute myocardial infarction (AMI)
  - heart failure (HF)
  - pneumonia (PN)
  - Includes electives for HF and PN
- Data provided by CMS @ medicare.gov
  - Readmission to any hospital in the US
  - All-cause readmissions excluding PTCA or CABG after AMI

3M Potentially Preventable Readmissions (PPR)
- Based on APR-DRG
- Proprietary - used by commercial payers
- Includes all conditions
- Data provided to Allina by
  - MN RARE (Reducing Avoidable Readmissions Effectively) Campaign
  - Based on Minnesota norms
  - Readmission to the same hospital
  - All clinically related readmissions
Fairview Health System
in Academic Partnership with University of Minnesota

ACO Model: “Opportunistic Approach”

Services provided by pharmacists

- MTM (since 1997)
- Medication reconciliation
- Acting as medication resource for patients
- Improving patient compliance with medication regimen

Metrics

- Patient experiences
- Care coordination
- Patient safety and preventive health care
- Care for patients at high risk for serious outcomes

Results

- Reduced overall health care costs
- Improved clinical outcomes in patients with diabetes or asthma
- Earned high marks for patient satisfaction

Medication Reconciliation in the Outpatient Geriatric Setting

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- Provider
  - Providers take med history as part of the visit
  - Providers are responsible for updating the EMR

- Med history technician
  - Taken over the phone before the clinic visit
  - Techs are responsible for updating the EMR
  - Changes and discrepancies are communicated via EMR

Compare the medication refill request with current medication list (reviewing PSL medication list and/or recent encounter notes). Does the request reconcile with the active medication list?

Telephone request for medication refill is received by call center staff. A refill request is generated using Dr. First if possible. If the requested medication is not among medications for that patient, a CareWeb Notification is generated and forwarded to GER-RN box.

Medication refill technician receives medication refill requests from ePrescribe or CareWeb Notifications (forwarded by the nurses) in-boxes, or faxed requests from pharmacies.

If no Turner visit in >1 year, then refer to physician. If Schedule 2-5 request, then refer to nurses.

Compare the medication refill request with current medication list (reviewing PSL medication list and/or recent encounter notes). Does the request reconcile with the active medication list?
Oral Oncology Medication Support

Oral Chemo Education

Patient prescribed a new oral chemotherapy

Clinic:
* Provide oral cancer therapy folder to patient and drug info from Micromedex
* Schedule f/u appt with oral chemo pharmacist for education (within 10 days)
* Encourage patient fill at UMCCC pharmacy

Oral Chemo Clinic:
* Review patient's medication & ensure correct fill, instructions, etc.
* Record patient's start date
* Review med profile, update PSL as indicated, review for potential drug interactions, poly-pharmacy, & other areas requiring medication optimization & communicate with provider
* Provide written and verbal drug specific medication information & discuss adherence tools & provide as needed
* Refer to primary oncology clinic provider if any medical evaluation is needed &/or if any concerns identified
* Document education and recommendations in chart
* F/U with patient as needed, min. 1 phone call

UMCCC Pharmacy:
* Assure that the patient received oral cancer therapy folder & if not, will give
* Perform standard medication review
* Refer patient to patient assistance program if needed.
Assignment: In your small groups, review the discussion questions below. Discuss within your groups varying models, roles, and drivers that incorporate inpatient, discharge, and post-discharge (ambulatory) areas. We will be looking for 1 or 2 groups to report a summary of your discussion and responses to the larger group.

Discussion Questions
1. Discuss the core elements and financial drivers to incorporate pharmacy roles in health system transitions of care services.
2. Summarize any tools or processes you have developed to improve the handoff between hospital and post-hospital setting.
3. List resources needed to implement these new roles. Have you been successful in obtaining new resources for this work? If yes, describe your return on investment. If not, describe how you have changed your current practice model to incorporate this work into your existing staffing.
4. Describe any best practices around transitions of care models incorporating innovative pharmacy roles in your organization. What is working well? What barriers are you facing?

CORE ELEMENTS AND FINANCIAL DRIVERS

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Comments

TOOLS AND NEW PROCESSES TO IMPROVE HANDOFFS

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Comments
RESOURCES

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Comments

BEST PRACTICES THAT ARE WORKING WELL

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Comments

BARRIERS TO EXPANDING ROLES IN TOC WORK

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Comments
Small Group Breakout #2

Assignment: In your small groups, review the discussion questions below and explore roles and metrics presented for each pharmacy transitions of care (TOC) model. We will be looking for at least 2 groups to report a summary of your discussion to the larger group.

Discussion Questions
1. Discuss applications of the presented practice models to your organization (include all roles).
2. Identify metrics in each presented pharmacy transitions of care model.
3. Explore how roles of pharmacy personnel can be further integrated.
4. Prepare an ROI/ short proposal appropriate to pitch this idea to the next level of leadership.

METRICS

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Comments

INTEGRATION OF PHARMACY ROLES

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Comments
17th Annual ASHP Conference
for Leaders in Health-System Pharmacy

APPLICATIONS TO YOUR MODEL (ALL ROLES)

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Comments

ROI/BRIEF PROPOSAL
SELECTED REFERENCES


**Additional Resources**


