Demonstrating the Value of Ambulatory Care Pharmacist Services in an Era of Healthcare Reform:

"If you build it...They will come"

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Objectives

1. Describe the rationale for implementing ambulatory care pharmacist services in today's healthcare environment

2. Identify current models of ambulatory care service provision

3. Propose potential metrics which demonstrate the value of ambulatory care pharmacist services
Rationale:
Why is the integration of pharmacists/pharmacy services so imperative?

• What we know:
  – More than 3.5 billion prescriptions are written annually in the US
  – Medications are involved in 80 percent of all treatments and impact every aspect of a patient’s life
  – Adherence to therapy for chronic diseases in developed countries averages 50 percent, and the consequences of poor adherence to therapies are poor health outcomes and increased health care costs
Rationale: Why is the integration of pharmacists/pharmacy services so imperative?

• Drug-related morbidity and mortality cost this country almost $200 billion annually, exceeding the amount spent on the medications themselves

• Medicare beneficiaries with multiple chronic illnesses:
  – See an average of 13 different physicians
  – Fill 50 different prescriptions per year
  – Account for 76% of all hospital admissions
  – Are 100 times more likely to have a preventable hospitalization than those with no chronic conditions

• “While only 10 percent of total health care costs are spent on medications, their ability to control disease and impact overall cost, morbidity, and productivity—when appropriately used—is enormous.”
Universal Challenges...

• What is the BEST way to integrate pharmacists to maximize efficiency and ultimately optimize medication-related outcomes?
Universal Challenges...

• Which medication-related outcomes will BEST represent the value pharmacists bring to the table?
State of the Union: Ambulatory Care Pharmacist Services

• **Health-system clinics:** CDTM
  – Antithrombotic Centers
  – Diabetes Management Clinics
  – Pharmacotherapy Clinics
  – Respiratory Clinics: COPD/Asthma Management
  – Behavioral Health
  – Heart Failure
  – Etc.

• **Federally Qualified Health Centers:** DSMT, MTM

• **Community Pharmacy:** MTM, POC, Immunizations

• **Accountable Care Organizations/Patient-Centered Medical Home**
My personal challenge...establishing the role of pharmacists within a physician ACO

• 117 physician offices
  – Northern Kentucky, Southwest Ohio, and Southeast Indiana
• Over 346 physicians
• 98 mid-level providers
• More than 1000 associates
• ...only 0.4FTE Pharmacist!!!
How am I supposed to make a difference?

...And how am I supposed to demonstrate that difference?
## Pharmacist Integration: ACO Models

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinated care</td>
<td></td>
</tr>
<tr>
<td>1. Minimal collaboration</td>
<td>Pharmacists work in the pharmacy and have limited communication with the primary care office; communication is usually with office staff about prescription orders</td>
</tr>
<tr>
<td>2. Basic collaboration</td>
<td>Primary care providers use pharmacists as a drug information resource; communication is periodic and usually by phone, fax, or e-mail</td>
</tr>
<tr>
<td>Co-Located Care</td>
<td></td>
</tr>
<tr>
<td>3. Basic on-site collaboration</td>
<td>Pharmacists work with the primary care office to access patients’ electronic health records to review diagnoses, medication lists, lab results, notes; arrangement is typically part time; pharmacists may provide e-consultations to physicians without seeing or talking to patients</td>
</tr>
<tr>
<td>4. Close on-site collaboration</td>
<td>Pharmacists with direct patient care experience work as team members in the primary care practice; arrangement may be part time or full time; patients with complex medication needs are referred to pharmacists for medication management services; pharmacists have face-to-face appointments with patients</td>
</tr>
</tbody>
</table>

Pharmacist Integration: ACO Models

<table>
<thead>
<tr>
<th>Integrated Care</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Partial collaboration</td>
<td>Pharmacists are embedded in primary care practices and meet with patients to manage medications between physician visits; pharmacists participate in daily huddles to review patients’ needs and make medication management recommendations; pharmacists document patient encounters in patients’ electronic health records</td>
</tr>
<tr>
<td>6. Full collaboration</td>
<td>The pharmacist’s role is well defined for medication activities within the primary care practice work flow (reconciliation, medication management, and coordination or follow-up across multiple prescribers and pharmacies); practitioners routinely refer patients to pharmacists and do “warm handoffs” to pharmacists in the office; pharmacists and primary care physicians have established collaborative drug therapy management agreements</td>
</tr>
</tbody>
</table>

Question of the day: What outcomes should we measure?

- Depends on your setting!
- No ONE-SIZE-FITS-ALL!
- You must determine the needs/priorities of your organization and align your initiatives with those priorities
Outcome Measurement

...what specific metrics should we use to establish value?

Clinical

Economic

Humanistic
Outcome Measurement
...what specific metrics should we use to establish value?

- Clinical
- Economic
- Humanistic
“SHOW ME THE MONEY”
Economic Outcomes

• Does your organization still focus on fee-for-service opportunities?
  – Can you create a revenue stream from your services?
• Can you participate in Value-Based Purchasing opportunities?
  – Are you preventing readmissions?
• Is your practice setting in a physician ACO? PCMH?
  – What quality measures can you impact which will directly result in financial benefit to the organization?

• Your practice setting will prioritize the metrics you use to demonstrate the value of your services!
Economic Outcomes

- Cost-Savings & Cost Avoidance
- CMS Readmission Reduction Program
- ACO (accountable care organizations)
- PCMH (patient-centered medical home)
- Local P4P initiatives
- 5-Star Ratings
- Value-Based Purchasing

BUSINESS PLAN

Revenue
- Billing for services

American Journal of Health-System Pharmacy August 15, 2014. vol. 71 no. 16 1366-1374
The Promise of Value-Based Purchasing and Quality Measures

Star Measures
HEDIS Measures
ACO Measures
CAHPS

PQRS Measures
Meaningful Use
NCQA PCMH Recognition
Hospital Readmission Program

Permission to use granted by Mary Ann Kliethermes. Adapted from: “Can We Measure the Best of What We Do?” ASHP Midyear Clinical Meeting 2015.
The Quality Conundrum...

Permission to use granted by Mary Ann Kliethermes. Adapted from: “Can We Measure the Best of What We Do?” ASHP Midyear Clinical Meeting 2015.
Burden of Measurement

**Cost**
- 190 billion/year administrative and associated costs
- 50-100 FTE, $3.5-$12 million/year

**Time**
- Time away from patients
- Focus on compliance versus quality

**Efficiency**
- Erosion of measurement activities important at local level

**Benefit**
- Improving quality of health care provided reduce mortality about 15%

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McGinnis J, et.al The Case For More Active Policy Attention To Health Promotion Health Affairs, 21, no.2 (2002):78-93
On the horizon…
New trends in reimbursement focusing on quality

• MACRA (“Doc-Fix Bill”): Medicare Access and CHIP Re-authorization Act of 2015
  – Passed April 15, 2015
  – pay-for-performance program

• Starting CY2017, Merit-based Incentive Payment System (MIPS) will annually measure Medicare Part B providers in four performance categories to derive a "MIPS score" (0 to 100), which can significantly change a provider's Medicare reimbursement in each payment year.
New Trends in Reimbursement

### MIPS Base Payment Adjustment Schedule

Excludes the Exceptional Performance Bonus

<table>
<thead>
<tr>
<th>MIPS Score</th>
<th>Payment Year (2 years after Performance Year)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Max%</td>
<td>+4x%</td>
<td>+5x%</td>
<td>+7x%</td>
<td>+9x%</td>
</tr>
<tr>
<td>PT to 100</td>
<td>Linear: 0% to Max%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(“Performance Threshold”)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25%*PT to PT</td>
<td>Linear: 0.75*Min% to 0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 25%*PT</td>
<td>Min%</td>
<td>-4%</td>
<td>-5%</td>
<td>-7%</td>
<td>-9%</td>
</tr>
</tbody>
</table>

"x" is a budget-neutrality factor to make the national incentive $ pool equal to the national penalty $ assessed, where x is capped at 3.0 (or 27% max base adjustment).
Who is eligible for MIPS?

• Eligible Providers (EPs) in 2017 and 2018 performance years
  – Physicians, physicians assistants, nurse practitioners, clinical nurse specialists, and nurse anesthetists

• More EPs added in 2019
  – Physical or occupational therapists, speech-language pathologists, audiologists, nurse midwives, clinical social workers, clinical psychologists, and dietitians or nutrition professionals

• Major implications for provider status!!!
Alternative Payment Models (APM)

• Starting with CY2017, Part B providers will fall under MIPS, an APM or, for some, under both MIPS and an APM

• **Goal**: To encourage Medicare Part B providers to make greater portions of their Medicare reimbursements subject to value-based contracts
  – Providers participating in APMs are rewarded with an additional financial incentive of 5% of their Medicare reimbursements
With all of the different quality measures in existence...where should we place our focus?

IOM Vital Signs Core Measures:
Better Health at Lower Cost...sound familiar?

Am I healthier? Do I feel better to the level where I can function as I desire?

Did your care make me sicker?

Can I reach you when I need you?

Can I afford this care?
IOM: Core Measures

• "Core measures present an opportunity to improve the nation’s ability to measure and improve performance on health, health care, affordability, and engagement by providing common points around which activities can be oriented and outcomes compared.”

Core Measure Set: Domains and Key Elements

Healthy People:
- Length of Life
- Quality of Life
- Healthy Behaviors
- Healthy Social Circumstances

Care Quality:
- Prevention
- Access to Care
- Self Care
- Appropriate Treatment
- Person Centered Care

Care Cost:
- Affordability
- Sustainability

Engaged People:
- Individual Engagement
- Community Engagement
Core Measures: Healthy People

Length of Life
- Life Expectancy
- Life expectancy at birth
- Infant mortality
- Maternal mortality
- Violence and injury mortality

Quality of Life
- Well-being
  - Self-reported health: ex. HRA, employee wellness
  - Multiple chronic conditions: ex. Complex Case Reviews
  - Depression: ex. Depression screening, AWV

Healthy Behaviors
- Overweight / Obesity: BMI, activity levels, healthy eating patterns
- Addictive behavior: tobacco use; opioid prescribing
- Unintended pregnancy: contraceptives

Healthy Social Circumstances
- Healthy communities
Core Measures: Care Quality

- **Prevention**
  - Preventive services

- **Access to Care**
  - Care access

- **Safe Care**
  - Patient Safety Initiatives

- **Appropriate Treatment**
  - Evidence-based care

- **Person-Centered Care**
  - Care match with patient goals
Core Measures: Care Cost

Affordability
• Personal spending burden

Sustainability
• Population spending burden
Core Measures: Engaged People

- **Individual Engagement**
  - Getting the patient on-board with initiatives

- **Community Engagement**
  - Promoting services to the community and getting buy-in
Show and Tell Time:
Example Initiatives Using IOM Core Measures

• **Care Quality**: Evidence-Based Care
  – Osteoporosis
  – COPD
  – Complex Case Reviews

• **Care Quality**: Safe Care
  – High Risk Medications

• **Care Cost**: Affordability/Sustainability
  – Smart Sets / Standardized Order Sets
    • Osteoporosis
    • DM
    • COPD
    • HF
    • Topical Steroids
Osteoporosis

• “Evaluating and Improving HEDIS Measure Performance for Osteoporosis in the Primary Care Setting”

• Baseline HEDIS performance:
  – 64/513 eligible patients (12.47%) received DXA or pharmacotherapy for osteoporosis

• Interventions:
  – Automatic DXA for patients presenting to the system with fragility fracture
  – Standardized order set created in EPIC® for Osteoporosis created
  – Treatment algorithm created based upon evidence-based guidelines

• Metrics: re-measure HEDIS performance 3 months after launch
Osteoporosis: Continued

• **Payer-specific bonus/incentives:**
  – Ex. Identified eligible patients who failed the measure (n=13)
  – 5 Stars: need 12 to pass
  – 4 Stars: need 8 to pass
  – 3 Stars: need 5 to pass
• Smart phrase created to notify provider
• Payer data provided monthly
• **SIGNIFICANT financial incentives available!!**
Current Initiatives: COPD

• “Improving adherence to HEDIS performance measures for the pharmacotherapeutic management of COPD exacerbation”
  – percentage of adults > 40 years old with an acute hospitalization or emergency department (ED) encounter with a primary diagnosis of COPD who received both a systemic corticosteroid within 14 days and a bronchodilator within 30 days of discharge

• Inclusion Criteria
  – Patients > 40 years old
  – Patients with > 12 all-cause ED visits between June 1, 2014 and June 1, 2015
  – Patients who had at least one acute inpatient discharge or ED encounter with a primary diagnosis of COPD during the study period
COPD

- N=54
  - 185 acute inpatient discharges or ED encounters
    - 86 (46.5%) <30-day readmissions
    - 20 visits (10.8%) that met HEDIS measure
  - Mean number of ED visits (COPD as primary diagnosis)/patient: 3.43
  - Average cost for COPD exacerbation:
    - ED: $541.31
    - Inpatient: $12,312.89
  - 18 patients (33.3%) had spirometry completed
COPD: Pharmacist Interventions

- Synthesized standardized algorithm using G.O.L.D. guidelines

- 46 notes sent to physicians using EPIC® template:
  - 44 included HEDIS measure recommendation
  - 39 included spirometry recommendation
  - 5 included medication change recommendation

- Metrics:
  - # of documented orders for spirometry pre/post intervention
  - # of guideline-recommended medication changes per algorithm
  - HEDIS performance pre/post intervention
High Risk Medications (HRM) in the Elderly

- “Quality improvement project to decrease digoxin, amitriptyline, cyclobenzaprine, promethazine, and glyburide prescribed to the elderly”

- Patients > 65 years of age identified by pharmacy claims and electronic medical records (EMR) with an active prescription for:
  - promethazine
  - cyclobenzaprine
  - glyburide
  - amitriptyline
  - digoxin

- Identified as a high risk level 2 or 3 based on ACO's risk stratified care management criteria
## Risk Stratification

<table>
<thead>
<tr>
<th>Person Responsible</th>
<th>Patient Risk Level</th>
<th>Role Criteria</th>
<th>Patient Contacts</th>
<th>HCC Risk Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Medical Personnel</td>
<td>1</td>
<td>Is patient healthy, with no chronic disease, or significant risk factors?</td>
<td>Quarterly, yearly or as needed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Problems - none</td>
<td>OR 1 - 3 Chronic stable problems not including Diabetic patients</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Pre disease, elevated BP, BORDER-LINE LIPID, ETC.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medication - none or 5 or less</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Functional - normal.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Utilization - none.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Controlled - yes</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Health Advocate</td>
<td>2</td>
<td>Does patient have one or more chronic diseases, with significant risk factors and/or is unstable or not at treatment goals?</td>
<td>Monthly, or Quarterly</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Problems - 1 - 3 chronic diseases., all patients with Diabetes and COPD Controlled, post 30 day admission received from Cental Care Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medications- Long term or chronic medication by prescribing physicians.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Functional - normal to mild impairment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Utilization - none or low concerning present chronic or new problem</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Controlled - could be yes or no</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care Coordinator</td>
<td>3</td>
<td>Does the patient have multiple chronic disease, significant risk factors, complications, and/or patient have a catastrophic or complex condition in which his or her health may or may not be able to be restored?</td>
<td>At least Weekly and more often</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Problems - (End Organ Damage, 3 or more chronic diseases) with poor prognosis / medically fragile patients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medication - greater than 5 systemic, greater than 2 prescribing physicians, high risk medication</td>
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</tr>
<tr>
<td></td>
<td>Functional - (Moderate) single fall, if the functional status level is 60-70.</td>
<td>OR</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>(Severe) multiple falls, if the functional status level is less than or equal to 50, frailty, physiologic advanced age.</td>
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</tr>
<tr>
<td></td>
<td>Utilization - Single hospitalization, ED, urgent care.</td>
<td>OR</td>
<td>Frequent hospitalization, ED, urgent care, readmit within 30 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Controlled - could be yes or no</td>
<td></td>
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</tbody>
</table>
HRM: Interventions

• **Identification of High Risk Patients**:
  - Used pharmacy claims and EMR data to generate a report of patients who were on promethazine, cyclobenzaprine, glyburide, amitriptyline, and digoxin and who are high risk patients (level 2 or 3 according to risk stratified care management criteria).

  - Demographics of physicians were also acquired based on physician list serve.
**HRM: Interventions**

**Quality Improvement:**

**Part 1:**
- If a patient had a prescription that was filled or renewed recently (within the last 3 months):
  - Physician was notified via email stating that their patient was on a high risk medication.
  - Provided specific alternatives to the HRM.
  - Provided dosing considerations for the elderly for the chosen alternative.

**Part 2:**
- Identified physicians who most frequently prescribed high risk medications.
  - Sent notification via EPIC to heighten awareness of # of patients for which they had prescribed an HRM.
  - Included alternatives to HRMs.
  - Any inquiring physician was provided with a list of his or her patients receiving a HRM.
HRM: Outcomes

• 4,073 patients ≥65 yo were taking one of the five high risk medications between June 2014 to September 2015

• Targeted patients for intervention between October-December 2015
  – 18 physicians were contacted due to high prescribing frequency
  – 45 patient prescriptions for HRM were discontinued and/or changed to suggested alternatives
## HRM: Outcomes

<table>
<thead>
<tr>
<th>Drug</th>
<th>Total Number(%) of Patients on HRM per prescriber</th>
<th>Number (%) of patients changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amitriptyline</td>
<td>223 (24%)</td>
<td>5 (2%)</td>
</tr>
<tr>
<td>Cyclobenzaprine</td>
<td>317 (34%)</td>
<td>30 (10%)</td>
</tr>
<tr>
<td>Digoxin</td>
<td>16 (2%)</td>
<td>1 (6%)</td>
</tr>
<tr>
<td>Promethazine</td>
<td>284 (30%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Glyburide</td>
<td>92 (10%)</td>
<td>9 (10%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>932</strong></td>
<td><strong>45</strong></td>
</tr>
</tbody>
</table>
HRM: Metrics

• Adherence to HRM Measure:
  – 2015: Star Rating of 3
  – 2016: Star Rating of 4

  – Directly the result of efforts by Team Pharmacy!
Complex Case Reviews (CCR)

- Inter-professional effort to improve the care of high-risk patients
  - Physician
  - Healthcare Advocate
  - Social Worker
  - Pharmacist

- Patient selection criteria:
  - Polypharmacy (>12 medications)
  - 4 or More ER visits and/or Non-elective inpatient admissions (rolling 12 months)
  - At least 3 of the following conditions:
    - Heart Failure (HF)
    - Diabetes
    - Respiratory Disease (such as asthma, COPD, or other chronic lung disorders)
    - Mental Health Diagnosis (such as Depression, Alzheimer's, schizophrenia, Bipolar Disorder)
    - ESRD
Complex Case Reviews (CCR)

- N=84
  - Average number of meds/patient: 20.5
  - Average number of pharmacist interventions per patient (to date): 5
- Evidence-based guideline recommendations
- Medication discontinuation
- Medication addition
- Dose titration
Complex Case Reviews (CCR)

• Current Status:
  – "Coordinated Care for Complex Patients: The impact of inter-professional team collaboration on high-risk patient outcomes“
  – Face-to-Face encounters with care team
  – Electronic form created in EPIC® to document interventions made by each member of the care team

• Metrics:
  • Performance on disease-specific quality measures pre/post CCR
  • Resource utilization (ED/Inpatient) pre/post CCR
  • Provider/Care Team satisfaction
In Summary

• There is significant need for ambulatory care pharmacist services in today’s healthcare environment
• Identifying the **ideal** outcome measures/metrics which **best** demonstrate the value of ambulatory pharmacist services is a universal challenge
• There is no “one-size-fits-all” answer!
• Align your efforts with organizational priorities: this may vary by practice setting
• Use the IOM’s Vital Signs: Core Metrics as a guide
• “If you build it, they will come!”
Questions?