REDUCING HOSPITAL READMISSIONS BY TRANSFORMING CHRONIC CARE

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Center for Healthcare Quality and Payment Reform
and
Strategic Initiatives Consultant,
Pittsburgh Regional Health Initiative
Some Background

• About the Center for Healthcare Quality and Payment Reform
  – Founded in 2008 to encourage comprehensive, outcome-driven, regionally-grounded approaches to achieving higher-value healthcare
  – Works at the national level and with regions around the country to develop and implement payment reforms and delivery system reforms

• About the Pittsburgh Regional Health Initiative
  – A non-profit Regional Health Improvement Collaborative founded in 1997 to improve the safety and quality of health care in the Pittsburgh Region and nationally
  – Board members include CEOs and senior staff from regional hospitals, physician groups, health insurers, employers, and consumers
  – Funded by local corporations, foundations, health plans, and government contracts and grants
  – Organizes and supports demonstration projects in hospital infection reduction, chronic care improvement, etc.
  – Trains health care staff in Perfecting Patient Care℠, a quality improvement method based on the Toyota Production System
It Started in 2007 With Data: PA’s All-Payer Readmission Data

<table>
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<th>Year</th>
<th>Condition</th>
<th>Cases</th>
<th>Mortality Rating</th>
<th>Length of Stay (LOS)</th>
<th>% Rating</th>
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Chronic Diseases Are Largest Categories of Readmissions

Readmissions in Western PA, 2005-06

Diagnosis at Initial Admission

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Initial Focus: COPD is 4th Highest Volume & 25% Readmission Rate

**Readmissions in Western PA, 2005-06**

Diagnosis at Initial Admission:
- CHF
- Pneumonia
- Depression
- COPD
- Kidney Failure
- Abnormal Heartbeat
- Diabetes
- Asthma

# Readmitted

0.0%
5.0%
10.0%
15.0%
20.0%
25.0%
30.0%
35.0%

% Readmitted

# Readmits

0
500
1,000
1,500
2,000
2,500
3,000
3,500
4,000

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Diagnosis Chains: Pneumonia as Initial Admit

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<thead>
<tr>
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<th>2nd Adm PDx</th>
<th>3rd Adm PDx</th>
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<td>435</td>
<td>51</td>
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<td>71</td>
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<td>All Diagnoses</td>
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<tr>
<td>19</td>
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</tbody>
</table>

Pneumonia as PDx on first admission, COPD on PDx or SDx on some admission
40% of Pneumonia Readmits Are COPD Patients

Readmissions in Western PA, 2005-06

Diagnosis at Initial Admission

CHF
Pneumonia
Depression
COPD
Kidney Failure
Abnormal Heartbeat
Diabetes
Asthma

# Readmitted

0
500
1,000
1,500
2,000
2,500
3,000
3,500
4,000

% Readmitted

0.0%
5.0%
10.0%
15.0%
20.0%
25.0%
30.0%
35.0%

40% of Pneumonia Readmits Are COPD Patients.
So COPD Patients are 2\textsuperscript{nd} Highest Volume of Readmits

Readmissions in Western PA, 2005-06 (Adjusted)

- CHF
- Pneumonia w/o COPD
- Depression
- COPD + Pneum.
- Kidney Failure
- Abnormal Heartbeat
- Diabetes
- Asthma

So COPD Patients are 2\textsuperscript{nd} Highest Volume of Readmits
33% of Admissions Under Age 65, With Similar Readmission Rates

COPD Admissions/Readmissions by Age

Readmission Rate Similar for All Ages

Age Group
20-49 50-59 60-69 70-79 80+

# Admits

% Readmitted
60% of COPD Readmissions Are for COPD or Lung Problems

Reasons for Readmission of COPD Patient Discharges

- **COPD** (37%)
- **Other Lung Condition** (21%)
- **Non-Pulmonary Diagnosis** (42%)

30 Day Readmission Rate
Clinical Practice Guidelines Exist

*Long-Term Treatment for Stable COPD
  Avoidance of Risk Factors; Influenza Vaccination
  Add Rapid-Acting Bronchodilator when indicated
  Add Short or Long-acting Bronchodilators and Pulmonary Rehabilitation
  Add medium to high-dose inhaled or oral glucocorticosteroids or antibiotics when indicated
  Add long-term oxygen; consider surgical referral

*Adapted from Global Initiative for COPD www.goldcopd.org

At Risk
Normal lung function with or without Chronic symptoms

Mild COPD
Abnormal lung function with or without Chronic symptoms

Moderate COPD
Chronic symptoms Shortness of breath on exertion

Severe COPD
Shortness of breath worsens Exacerbations common

Very Severe COPD
Quality of life impaired Exacerbations may be Life threatening

Increasing Severity
Treatment Primarily Relies on Use of One or More Inhalers

*Long-Term Treatment for Stable COPD

Avoidance of Risk Factors; Influenza Vaccination

*Add* Rapid-Acting Bronchodilator *when indicated*

*Add* Short or Long-acting Bronchodilators and Pulmonary Rehabilitation

*Add* medium to high-dose inhaled or oral glucocorticosteroids or antibiotics *when indicated*

*Add* long-term oxygen; consider surgical referral

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*Adapted from Global Initiative for COPD [www.goldcopd.org](http://www.goldcopd.org)
Medication Access & Education is Critical for Chronic Diseases

FOR COPD PATIENTS:

• 79% do not know how to use their inhalers properly

• Some have 3 different inhalers, all of which work differently

Inhale slowly  Inhale quickly  Inhale quickly
It’s Even Hard for MDs and RNs to Remember All the Steps

- Shake canister vigorously
- Remove mouthpiece cap & place into flat round rubber end of spacer.
- Remove blue cap from spacer mouthpiece and sit fully upright.
- Exhale completely
- Grasp device in palm of hand with canister in upright position.
- Make a tight seal with lips at mouthpiece.
- Using index finger or thumb, depress canister completely until you hear medicine release.
- Take in a deep steady full breath.
- Remove spacer from lips.
- Hold base of grey chamber and open grey cover cap
- Flip open white mouth piece
- Place inhaler on flat surface
- Open blister pack
- Place pill in pill well in up/down position
- Place white mouthpiece cap over pill well
- Hold base of grey chamber firmly and puncture pill with green plunger
- Keep head in upright position
- Exhale away from the mouthpiece
- Close lips tightly around tip of mouth piece
- Breathe in deeply
- Hold breath for 10 seconds
- Remove inhaler from mouth and breathe normally
- Exhale slowly through pursed lips.

- Open diskus and hold it level
- Push down lever
- Exhale completely
- Place lips over mouthpiece
- Breathe in deeply and quickly
- Hold breath for 10 seconds
- Exhale slowly
- Rinse mouth
Results of Interviews with Readmitted Patients

Has Anyone Shown You How to Use Inhalers/Nebulizers?

- Yes, All: 40%
- Yes, Some: 30%
- No, None: 0%

Has Anyone Watched You Use Inhalers/Nebulizers?

- Yes: 80%
- No: 20%
The Vicious Cycle of Chronic Disease Admission/Readmissions

Patient is discharged without training in use of inhaler

MD gives patient prescription for inhaler, but no training

Patient gets inhaler from pharmacy, but no training

Patient is treated with nebulizer during hospital stay

Patient fails to use inhaler properly, leading to hospitalization
Solution Requires Change Both In Hospital and Community

HOSPITAL

Patient Education to Address Causes of Admission

Patient is treated with nebulizer during hospital stay

Patient fails to use inhaler properly, leading to hospitalization

MD gives patient prescription for inhaler, but no training

COMMUNITY

Improved Patient Education and Support in the Community

Patient gets inhaler from pharmacy, but no training

Patient is discharged without training in use of inhaler
How is a Patient’s Chronic Disease Managed Today?

HOSPITAL

Treat Exacerbation

Limited Patient Education

COMMUNITY CARE

ER Used As Solution to Problems

MD Treatment When/If Office Visit Occurs

Readmission

Admission
Most Readmission Initiatives Focus on the Transition Process

HOSPITAL

- Treat Exacerbation

COMMUNITY CARE

- ER Used As Solution to Problems
- MD Treatment When/If Office Visit Occurs

Improving Transition

Limited Patient Education

Discharge
Not Just a Discharge Issue: 60% of Readmits Occur After 30 Days

Days to Readmission

- 0-7 Days
- 8-30 Days
- 31-90 Days
- 91-180 Days
- 181-365 Days

30-Day Readmits
What We Tried to Fix:
Better Discharge Planning, PLUS...

**HOSPITAL**

- Treat Exacerbation
- Improved Patient Education

**COMMUNITY CARE**

- ER Used As Solution to Problems
- MD Treatment When/If Office Visit Occurs

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What We Tried to Fix: Improved Care in Hospital

- Identify as COPD Patient
- Treat Exacerbation
- Address Root Causes: medication skills, smoking cessation, other
- Improved Patient Education

HOSPITAL

COMMUNITY CARE

- ER Used As Solution to Problems
- MD Treatment When/If Office Visit Occurs
What We Tried to Fix: Expanded PCP/Care Mgr Support

**HOSPITAL**
- Identify as COPD Patient
- Treat Exacerbation
- Address Root Causes:
  - medication skills
  - smoking cessation
  - other
- Improved Patient Education

**COMMUNITY CARE**
- ER Used As Solution to Problems
- MD Treatment
  - RN Care Manager
  - Medication Access
- Prompt Follow-up:
  - Home Visit
  - PCP Visit

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What We Tried to Fix:
Non-Hospital Solution to Problems

**HOSPITAL**

- Identify as COPD Patient
- Treat Exacerbation
- Address Root Causes:
  - medication skills
  - smoking cessation
  - other
- Improved Patient Education

**COMMUNITY CARE**

- Prompt Response to Exacerbations:
  - Action Plan
  - 24/7 Phone Support
- MD Treatment
  - RN Care Manager
  - Medication Access
- Prompt Follow-up:
  - Home Visit
  - PCP Visit

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Goal: To Prevent Readmissions, But Also...

**HOSPITAL**

- Identify as COPD Patient
- Treat Exacerbation
- Address Root Causes:
  - medication skills
  - smoking cessation
  - other

**COMMUNITY CARE**

- Prompt Response to Exacerbations:
  - Action Plan
  - 24/7 Phone Support
- MD Treatment
  - RN Care Manager
  - Medication Access
- Prompt Follow-up:
  - Home Visit
  - PCP Visit

**CARE PROTOCOL**

- Improved Patient Education

**Admission**

**Discharge**
... Ultimately to Prevent Initial Admissions

COMMUNITY CARE

CARE PROTOCOL

- MD Treatment
- RN Care Manager
- Medication Access

Prompt Response to Exacerbations:
- Action Plan
- 24/7 Phone Support

HOSPITAL

CARE PROTOCOL

- Treat Exacerbation
- Address Root Causes:
  - medication skills
  - smoking cessation
  - other

Patient with Chronic Disease

Discharge

Admission/Readmission
Barrier: One Hospital, But Many MD Practices
Example: COPD Pts at One Hospital From Over 60 Practices

% of COPD/Pneumonia Admits 2006-2007

- RENAISSANCE FAM PRAC
- CMI-RUSSELLTON
- 16 Other UPMC Practices
- DALJIT SINGH MD ASSC
- DEER LAKES
- UPMC ST MARGARET FHC
- UPMC ST MARG HSPLSTS
- IYER, VISH, MD PC
- THSUR
- GEN SURG-ST
- WILFONG & STEINER
- GOLANI MED ASSOC, PC
- MICHAEL J VOGINI, INC
- EMI
- UIMS
- LANDAU, ZERNICH ASSC
- KANN & HARRIS
- EAST LIB FAM HLTH
- CLASSIC CARE GER
- VASCUL
- HOOVER MEDICAL ASSOC
- 27 Practices <20 Admits
- NONE

Largest Practice

- 18 MD Practices to get 60% of patients
- 36 MD Practices to get 90% of patients
- 63 MD Practices to get 96% of patients
Solution: Start with Larger MD Practices and Expand to Others
Initial Demonstration Sites

DEMONSTRATION SITE 1

- UPMC St. Margaret Hospital
- Renaissance Family Practice
- Other MD Practices

DEMONSTRATION SITE 2

- Premier Medical Associates
- Forbes Regional Hospital
- Other MD Practices
Above-Average But Typical COPD Readmit Rate at Both Hospitals
Part 1: Redesigning Inpatient Care to Reduce Readmissions

**CARE PROTOCOL**

- **HOSPITAL**
  - Identify as COPD Patient
  - Treat Exacerbation
  - Address Root Causes:
    - medication skills
    - smoking cessation
    - other

- **COMMUNITY CARE**
  - Prompt Response to Exacerbations:
    - Action Plan
    - 24/7 Phone Support
  - MD Treatment
    - RN Care Manager
    - Medication Access
  - Prompt Follow-up:
    - Home Visit
    - PCP Visit

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COPD Patient Has Exacerbation or Pneumonia → Diagnosis & Initial Treatment in Emerg. Dept. → Treatment on Hospital Med/Surg Unit → Patient Returns Home or to LTC Facility → MD/Care Mgt/Home Care

**PHASE I**
Arrival & Assessment in Hospital

**PHASE II**
Stabilization & Initial Treatment of Exacerbation or Pneumonia

**PHASE III**
Transition to Post-Discharge Meds/Care

**PHASE IV**
Discharge to Outpatient Care

**PHASE V**
Continuing Outpatient Care

3 Hours+ → 1-7 Days+ → 1-6 Weeks+
Example: Thinking About Discharge Before Discharge Day

**PHASE I**
Arrival & Assessment in Hospital

**PHASE II**
Stabilization & Initial Treatment of Exacerbation or Pneumonia

**PHASE III**
Transition to Post-Discharge Meds/Care

**PHASE IV**
Discharge to Outpatient Care

**PHASE V**
Continuing Outpatient Care

- **COPD Patient Has Exacerbation or Pneumonia**
  - Diagnosis & Initial Treatment in Emerg. Dept.
  - Treatment on Hospital Med/Surg Unit
  - Patient Returns Home or to LTC Facility
  - MD/ Care Mgt/ Home Care

- **3 Hours+**
- **1-7 Days+**
- **1-6 Weeks+**
PHASE III
Transition to Post-Discharge Meds/Care
Treatment on Hospital Med/Surg Unit

CURRENT STATE
MD Orders
- Respiratory Therapy Administers Nebulizer
- RN Administers MDI Inhalers
- RN Administers All Other Medications

No Transition to Inhaler Before Discharge
Little or No Patient Training on Inhaler
PHASE III
Transition to Post-Discharge Meds/Care
Treatment on Hospital Med/Surg Unit

CURRENT STATE

MD Orders
- Respiratory Therapy Administers Nebulizer
- RN Administers MDI Inhalers
- RN Administers All Other Medications

RECOMMENDATION

MD Orders
- Resp. Therapy Recommends When Transition to Inhaler Occurs
- Respiratory Therapy Administers Nebulizer
- Resp. Therapy Trains Patient on Placebo MDI As Early As Possible
- Resp. Therapy Administers MDI Inhaler until Discharge
- RN Administers All Other Medications

No Transition to Inhaler Before Discharge
Little or No Patient Training on Inhaler
How Do Staff Find Time to Do New Things? By Reducing Waste

Respiratory Therapist 6th Floor
08/19/2008, 1st Shift

Direct/Value Add 31%
Indirect 11%
Regulatory 11%
Waste 47%

Respiratory Therapist 6th Floor
08/18/2008, 2nd Shift

Direct/Value Add 54%
Indirect 8%
Regulatory 7%
Waste 31%

Analysis Done Using PRHI Perfecting Patient CareSM Techniques Showed 1/3 – 1/2 of Respiratory Therapists’ Time Was “Wasted” on Inefficient Processes; 1 FTE “Created” by Redesigning Processes
Other Inpatient Changes Made

• Process Improvements
  – EHR Order Set for COPD Patients
  – Improved Patient Education Materials; Same Materials Now Used by All Department (RT, PT, OT, RNs)
  – Better Smoking Cessation Process
  – Comprehensive Discharge Preparation Checklist (Paper, But Still Not in EHR…)

• Monitoring/Analyzing Performance
  – Monthly Reports on Readmission Rates
  – Questionnaire Administered to Readmitted Patients
  – Chart Reviews to Ensure Processes Are Being Followed
  – Monthly Meetings to Review Performance
Part 2: Creating a Community Care (RN) Manager

HOSPITAL

COPD PROTOCOL

- Identify as COPD Patient
- Treat Exacerbation
- Address Root Causes:
  - medication skills
  - smoking cessation
  - other

Improved Discharge Planning

COMMUNITY CARE

CARE PROTOCOL

- Prompt Response to Exacerbations:
  - Action Plan
  - 24/7 Phone Support
- MD Treatment
  - RN Care Manager
  - Medication Access
- Prompt Follow-up:
  - Home Visit
  - PCP Visit

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Research: Dramatic Impact From Community Care Managers

• 40% reduction in hospital admissions, 41% reduction in ER visits for exacerbations of COPD using in-home & phone patient education by nurses or respiratory therapists (2003)

• 27% reduction in hospital admissions, 21% reduction in ER visits for COPD patients through self-management education (2005)
Challenge: Payers Don’t Reimburse for Care Managers

- Medicare, Medicaid, and commercial health plans do not reimburse primary care practices for calls/visits by nurses
- Major health plans already employ their own care managers, at considerable expense
  - not integrated with physician practices
  - little or no face-to-face contact w/patients (primary mode of contact is by telephone)
  - paying for care managers in MD practices seems like (and is) duplication
- Different solutions from different health plans means providers can’t treat all patients alike
  - e.g., “practice-based care manager” employed by a particular health plan could span multiple small providers, but would only improve care for the patients of that particular health plan
Our (Short-Run) Solution

• Grant from a large private foundation in the community to pay for the costs of the care managers (as well as coaching and other support to hospitals and physician practices)
• Solution would end when the grant runs out unless payment reforms are implemented
Goal: Establishing the Business Case for Nurse Care Managers

Reduction in Hospital Payments from Reduced Readmissions

Costs of Interventions (Community Care Mgrs, etc.)

>>$0
Readmissions Are Costly for Medicare & Other Payers

**CURRENT**

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<thead>
<tr>
<th># Admissions/Year:</th>
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Goal: Reduce Readmissions By More Than Cost of Care Mgt

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<tr>
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</tr>
<tr>
<td>% Readmitted:</td>
<td>25%</td>
<td>20%</td>
</tr>
<tr>
<td>(&lt;30 Days)</td>
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Hiring the Community Care Manager

• **Goals:**
  - Integral member of primary care team
  - Focus on patients with COPD (initially) with ability to expand to other patients with high rates of readmission in the future
  - Sufficient number of cases at risk of hospitalization to justify expense of a new position
  - Willingness/ability to make home visits (not just phone calls)
Challenge: Where Does the Community Care Manager Work?

• **Goals:**
  - Integral member of primary care team
  - Focus on patients with COPD (initially) with ability to expand to other patients with high rates of readmission in the future
  - Sufficient number of cases at risk of hospitalization to justify expense of a new position
  - Willingness/ability to make home visits (not just phone calls)

• **Options:**
  - Employee in physician practice
    - works only for large practices
2/3 of MDs in Practices of 5 or Smaller
Solution: Sharing the Community Care Manager

• **Goals:**
  – Integral member of primary care team
  – Focus on patients with COPD (initially) with ability to expand to other patients with high rates of readmission in the future
  – Sufficient number of cases at risk of hospitalization to justify expense of a new position
  – Willingness/ability to make home visits (not just phone calls)

• **Options:**
  – Employee in physician practice
    • works only for large practices
  – Shared employee among physician practices
  – Hospital-based employee (covering multiple small practices)
  – Contract for services with home health agency
Part 3: Ensuring Prompt Response to Exacerbations

HOSPITAL

COPD PROTOCOL
- Identify as COPD Patient
- Treat Exacerbation
- Address Root Causes:
  - medication skills
  - smoking cessation
  - other

Improved Discharge Planning

COMMUNITY CARE

CARE PROTOCOL

- Prompt Response to Exacerbations:
  - Action Plan
  - 24/7 Phone Support
- MD Treatment
  - RN Care Manager
  - Medication Access
- Prompt Follow-up:
  - Home Visit
  - PCP Visit

Admission → Readmission → Discharge
Intervening Before Readmits Occur

Patient with COPD

- No Exacerbation → Home
- Cold, Failure to Take Meds, Etc. → Serious Exacerbation
- Serious Exacerbation → Hospital

OPPORTUNITY FOR IMPACT
Creating a COPD Action Plan

BEFORE

Patient with COPD

No Exacerbation

Cold, Failure to Take Meds, Etc.

Serious Exacerbation

Serious Exacerbation

Home

Hospital

AFTER

Patient with COPD

No Exacerbation

Cold, Failure to Take Meds, Etc.

Serious Exacerbation

ACTION PLAN: Call MD/RN, Add Meds, Etc.

Hospital

Home
Making an Action Plan Work

Patient

Primary Care Practice

Must Be Willing to **Call** Right Away For Help Resolving an Exacerbation

Must Be Able to **Respond** Right Away When a Patient Calls (And *Not* By Sending Them to the ER)
How We Hope A Primary Care Practice Answers Patient Calls

During Office Hours:

Patient with Action Plan Has Problem
- Calls PCP Office
- Speaks to Scheduler
- Seen by PCP
- Patient treated and remains out of hospital

After Office Hours:
- Calls Answ. Svc.
- Speaks to PCP
- Seen by PCP
What Actually Happens, All Too Often

During Office Hours:
- Patient with Action Plan Has Problem
  - Calls PCP Office
  - Can’t Get Through
    - Speaks to Scheduler
      - No Appts Available
        - Seen by PCP
          - Goes to ER
    - Patient admitted to Hospital
  - Speaks to PCP
  - Seen by PCP
    - Goes to ER
  - Patient treated and remains out of hospital
  - Patient admitted to Hospital

After Office Hours:
- Calls Answ. Svc.
  - Speaks to PCP
    - Speaks to On-Call MD
      - Goes to ER
Results of Interviews with Readmitted Patients

Did Patient Call Doctor's Office?

- Called Early/Several Times: 30%
- Only Called When Really Sick: 20%
- Just Went to ER: 50%

Time Came to ER or Hospital

- M-F Day: 30%
- M-F After 5pm: 50%
- Sat-Sun: 10%
Redesigning How a Primary Care Practice Answers Patient Calls

**Process for Office Phone Screening, Assessment, and Scheduling**

**During Office Hours:**
- **COPD?**
  - Yes → Nurse Phone Assessment
  - No → Receptionist

**After Office Hours:**
- **MD Calls & Assesses**
  - COPD?
    - Yes → Nurse Phone Assessment
    - No → Receptionist

**Protocol for On-Call Physicians to Use**
- **Nurse Phone Assessment**
  - Schedule Visit Today If Possible
  - Patient Can’t Come Today
  - Needs Home Visit or Call Now

**Communication Between Office & Care Manager**
- **Physician Sees Patient**
  - Treatment Changed If Needed
  - Nurse Notifies Care Mgr

**Home Visits for At-Risk Patients**
- **Call Care Mgr or Home Care**
  - Home Visit to Patient
  - Contact RN/MD w/ Findings

**Protocol for ER/Admits**
- **ER Visit Needed**
  - Requires Admission
  - Requires Home Visit to Not Admit

**Short-Term Treatment in ER**
- Requires Home Visit to Not Admit

**Requires Admission**
- Patient Can Return Home

**Care Mgr Notified**
- Patient Can’t Come Today

**Call from Patient with COPD Action Plan**
- **Receptionist**
  - Answering Service
  - MD Calls & Assesses
  - Patient Stable, Can Wait
  - Needs Home Visit or Call Now

**Send to ER If Necessary**
- Assessed as OK to Come Tomorrow

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Chain of Factors Affects Successful Medication Usage

Barriers to Successful Use of Chronic Disease Medication

- Diagnosis of Disease
- Education ?
  - Yes
  - No
- Affordability ?
  - Yes
  - No
- Adherence ?
  - Yes
  - No
- Stable Disease Management
- Hospitalization
Challenge: Copays & Doughnut Hole Deter Use of Medications

Barriers to Successful Use of Chronic Disease Medication

- Diagnosis of Disease
- Education?
  - Yes
  - No
- Affordability?
  - Yes
  - No
- Adherence?
  - Yes
  - No
- Requires Change in Benefit Design
- Stable Disease Management
- Hospitalization

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Solutions to Medication Access and Affordability

• Aggressive efforts to help patients obtain financial assistance from pharmaceutical companies
• Allowing patients to take unused medications home from the hospital
• Purchasing medication to serve as free “samples” in practices prohibited from using drug co. samples
Creating a Continuous Improvement Process

• **Outcome Measurement:**
  – Monthly reports generated by the hospital on readmission rates
    • PHC4 data indicate that for these hospitals, 80-90% of readmissions return to the same hospital
  – Tracking of individual patients in registry by Care Manager

• **Causal Analysis:**
  – Special questionnaire in hospital to all readmitted patients
  – Care manager recorded reasons for hospitalization and identified any weaknesses in community support

• **Prioritization of Patient Support:**
  – Help for care managers to identify the subset of patients where more time/help would likely have the biggest impact
How Did We Do?
Dramatic Results in One Year

% of Patients Admitted for COPD Exacerbation and Readmitted within 30 Days for COPD or Pneumonia
UPMC St. Margaret, 2008-2009

44% Reduction

- 30 Readmissions Prevented
- $160,000+ Saved
- Net Savings of $80,000+ After Cost of Care Mgr
COPD Readmissions Is Just A Starting Point
Similar Approach Applicable to Initial Admissions
Similar Approach Likely Applicable to Asthma
Similar Approach Likely Applicable to Other Chronic Diseases

- COPD Admission Reduction
- COPD Readmission Reduction
- Asthma Admission Reduction

Other Chronic Disease Readmission/Admission Reduction
Some Lessons Learned

• Focusing on outcomes is more motivating for MDs, RNs, etc. than simply focusing on processes; evidence-based guidelines can unintentionally deter outcome-driven experimentation
• Getting accurate data rapidly enough to allow continuous improvement is difficult; just identifying COPD patients is hard
• EHRs don’t help much – they aren’t flexible enough to adapt to new care processes, and it’s hard to use them to measure progress
• Healthcare providers need conveners/facilitators/coaches to help them develop innovative, comprehensive, coordinated solutions to problems, particularly across department/organizational boundaries
• Patients need personalized education and encouragement to use treatment properly and act on symptoms early
• Home visits are an essential piece of the solution, but finding nurses willing to make home visits is difficult
• Pharmaceutical benefit design needs to be more closely linked to patient care management
• Payment reform is critical: everybody loses under today’s payment
  – Primary care practices lose money if they hire nurses
  – Hospitals lose money if readmissions are reduced
Too Many Payment Reforms Are Proceeding in Silos

SILO #1

Implementing Medical Home/Chronic Care Model

Pay More to Physicians For Being Certified As a “Medical Home” And Hope That Outcomes Improve

SILO #2

Reducing Hospital Readmissions

Penalize Hospitals for Readmissions Even If the Cause is Poor Primary Care
Marrying the Medical Home and Hospital Readmissions

Reducing Hospital Readmissions
- Requires Improved Community Care

Implementing Medical Home/Chronic Care Model

Reforming Payment for Primary/Chronic Care
- Requires Higher/Different Payment

Lower Hospital Readmissions
- Provides ROI for Chronic Care Investment

Reducing Hospital Readmissions Requires Improved Community Care

Chronic Care Requires Higher/Different Payment

Marrying the Medical Home and Hospital Readmissions
How to Analyze/Redesign Delivery Systems to Reduce Readmissions

PRHI Readmission Briefs

INTRODUCTION

As healthcare costs continue to rise and many of America’s resources, driven by growing threats of chronic disease, both policy proposals and demonstration projects are exploring ways to improve care and reduce costs. In many of these efforts, hospital readmission rates have become an important measure of both quality and cost. For many, readmission rates are among the most significant drivers in accountability, a part of the recently-passed legislation. 17.6% of Medicare beneficiaries were readmitted within 30 days of discharge, resulting in $18 billion in spending annually, but between 19% and 30% of readmissions are considered to be potentially avoidable. Lastly, 180-day readmission rates have become important long-term financial measures, as patients’ need more Medicare — an increasingly daunting coverage without federal medical justification for the readmissions.

Using a readmission rate as a quality or cost measure, however, is not without shortcomings. There are numerous questions, for example, about the positive and negative impact on provider behavior of rewarding, punishing, and/or publishing readmission rates. The need for more information about the nature and characteristics of hospital readmissions is clear. The PRHI Readmissions Brief aims to add clarity to the debate by developing a series of reports that focus on the following questions:

1. What is the “right” time frame for defining a potentially avoidable readmission? How many days post-discharge is a readmission potentially preventable, and how does this vary by condition?
2. To what extent are readmissions likely to be related to an initial admission and to what extent does that vary across diagnoses?
3. To what extent are readmissions within the domain of hospital control?
4. Do these patterns of admissions and readmissions that can help clinicians flag, and then prevent, unnecessary hospitalizations?

Readmissions Brief (1 of 3 with a comparative overview of admissions and readmissions to acute care hospitals in southwestern Pennsylvania (SWPA) of patients with ten key chronic conditions, between October 2007 and September 2009. Subsequent Briefs will focus on greater depth on specific chronic conditions, adding more detailed analyses of characteristics of both admissions and patients, including number of days between discharge and readmission, length of stay and hospital charges, as well as detailed analysis of diagnoses, patient demographics, severity of condition, presence and number of specific co-morbidities (including behavioral health co-morbidities), and patterns of prior admissions, discharges and readmission over multiple hospitalizations.

METHODS

The report surveys hospital admissions data collected by the Pennsylvania Health Care Cost Containment Council (PHC4), an independent agency created by the Pennsylvania Legislature in 1996 with the mandate to collect a wide range of hospital data, irrespective of pay or claim. PHC4 is one of the nation’s most comprehensive sources of all-payer, aggregate data. This data for this study was drawn from all admissions of 44 acute care facilities in the 11-county area of southwestern Pennsylvania (SWPA).

Admissions for patients with six target chronic conditions were identified using Medicare Severity Diagnostic Related Groups (MS-DRGs), which replaced DRGs on October 1, 2007. Like DRGs, MS-DRGs classify the reasons for a hospitalization based on a series of pre-defined and secondary – diagnoses as well as procedure codes. In addition, unlike DRGs, MS-DRGs incorporate severity of the patient condition with code, that mark the presence of complications and comorbidities. This advantage allows for enhanced precision in identifying those who have similar problems with the same MS-DRGs. Non-hospitalizations for patients with the following chronic conditions will be the focus of this inquiry.

http://www.prhi.org/documents/PRHIReadmissionBriefOverviewREVISED06-08-10.pdf
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