Reducing Readmissions in Practice
Oregon Association of Hospitals and Health Systems
Tualatin, Oregon
Feb. 24, 2017

Matt Schreiber: Disclosures

• I am supported by Oregon State Hospital Association for my time

• I have no financial relationships with industry or research partners
Agenda

- Review the stakes for hospitals
- Build the case for improvement
- Experiential results
- Evidence based tactics
  - Multi-disciplinary team building
  - Medication Reconciliation
  - Patient-Friendly discharge form/Teachback
  - Follow-up appointments
  - Follow-up check in calls
  - Palliative Care
  - Diagnostic Error
- Summary Statements

Hospital Readmissions Reduction Program

- [https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html)

- Included diagnoses:
  - AMI
  - PN—CAP, Aspiration PN, Sepsis pts with PNA POA [severe excl]
  - HF
  - COPD
  - THA/TKR
  - CABG [FY’17]
- Pure penalty program with up to 3% payment risk

- 10/1/15 – 9/30/16 in Oregon 21 hosps [34% of elig] penalized ave of 0.32%
### A Deceptively Simple Formula

**Hospital Staff, Patient, and Family/Friend Must:**

- Know the diagnosis
- Know key tests and treatments performed
- Know what the treatment plan [meds, appts]
- Know red flag symptoms, common side effects/failure points.
- Know who/how to contact if something is not going well

### Increasing Public Awareness of Need for Hospital Improvement

- Preventable readmissions are seen as medical mistakes by the government and by the public.

- An average of 195,000 people in the USA died due to potentially preventable, in-hospital medical errors in each of the years 2000, 2001 and 2002, according to a new study of 37 million patient records by HealthGrades. [http://www.healthgrades.com](http://www.healthgrades.com).

- If the CDC’s annual list of leading causes of death included medical errors, it would show up as number six, ahead of diabetes, pneumonia, Alzheimer's disease and renal disease.
Not My Father’s Medicine

• Patients need to be sicker than ever to get into the hospital
• Hospital lengths of stay are getting shorter
• Patients are not well when they are discharged—they are “well enough. . .”
• Patient understanding and participation is key to successful health maintenance
• As a general rule, “case management” and education are not recognized by the reimbursement system
• Increasing sub-specialization of care and fewer “general practitioners” available—especially for the Medicare population
• Dichotomy between inpatient and outpatient care provision

Barriers to Safe Discharges

• Health (Il)Literacy: Nearly half of adults have trouble understanding simple health information (procedure consent, prescriptions, oral instructions)
  Vastag, B. Low health literacy called a major problem. JAMA. May 12 2004;291(18):2181-82
• Less than half of patients discharged from academic general medicine know their diagnoses, treatment plan or side effects of prescribed medications
• Post-hospitalization patients typically identified multiple concerns including understanding their progress, activity, insurance, medications, and pain control
Typical Discharge Process

- Complex process involving multiple disciplines
- Discharges can be urgent & unplanned with pressure to cut length of stay
- Time constraints on clinicians who educate, prepare patients for transition
- Poor Communication with PCPs:
  - Direct communication between hospital physicians and primary care physicians occurred infrequently (3%-20%).
  - Availability of a discharge summary at the first post-discharge visit was low (12%-34%).
  - Discharge summaries often lacked important information such as diagnostic test results (missing from 33%-63%), treatment or hospital course (7%-22%), discharge medications (2%-40%), test results pending at discharge (65%), patient or family counseling (90%-92%), and follow-up plans (2%-43%).

  *Unsafe discharges are an under-recognized significant issue that has heretofore received almost no attention from health care providers*

Lost in Transition: Challenges and Opportunities for Improving the Quality of Transitional Care. Coleman EA. Ann Intern Med. 2004;140:533

The Space Between Hospital Care the Next Provider

Pending test results:

- Many patients (41%) are discharged with test results still pending.
- Many of these results (10%) can change management
- Physicians are often (61%) unaware of test results returning after discharge that may change management
- Poor communication between hospital and ambulatory providers
A Syllogism to Remember

• If You Don’t Meet Someone’s Needs or Expectations, There Is No Chance They Will Be Satisfied
• Providing What People Need Is Often Different From What We Naturally Want To Do
• Process Improvement Is About Bridging The Gap Between What We Do and What We Need By Demonstrating the Value of the Proposed Change

What I Believe

• People in healthcare are superior people
• People come to health care to make a difference in the lives of others
• Contracts and job descriptions are necessary, but not sufficient for greatness
• Spectacular, industry defining things happen when you tap mission motivation
What I Know

• Your Front-Line Staff isn’t the barrier to reducing readmissions—This is a leadership issue and you are the leadership
• You aren’t the ones that are going to come up with the ideas that change the world—that’s going to come from the people that do the work.
• Genius tends to be elegant
• Don’t succumb to analysis paralysis
• Innovation is successful implementation

Results: Two Years of Readmission Work Across 40 Beds at Piedmont Hospital

<table>
<thead>
<tr>
<th></th>
<th>Volume</th>
<th>CMI</th>
<th>LOS</th>
<th>Readmit Rate</th>
<th>Mortality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before &lt;70</td>
<td>1088</td>
<td>1.26</td>
<td>5.34</td>
<td>13%</td>
<td>0.46 %</td>
</tr>
<tr>
<td>After &lt;70</td>
<td>3103</td>
<td>1.48</td>
<td>5.58</td>
<td>7%</td>
<td>0.64%</td>
</tr>
<tr>
<td>Before &gt;/=70</td>
<td>434</td>
<td>1.30</td>
<td>5.93</td>
<td>15.9%</td>
<td>1.84%</td>
</tr>
<tr>
<td>After &gt;/=70</td>
<td>1526</td>
<td>1.49</td>
<td>6.13</td>
<td>8.7%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>
Flipsides of the Same Coin

- Length of Stay [LOS] and Readmissions are intimately related
- You can’t have great success with one without also focusing on the other
- LOS represents an accepted metric associated with substantial financial value
- Readmissions is the quality/safety counterbalance
- Quality/Safety is the product made by the process of operations

$50 White Board with the $1 Million Impact

- Main Whiteboard in RN Station

<table>
<thead>
<tr>
<th>Rm#</th>
<th>Name</th>
<th>Transitions</th>
<th>DOA</th>
<th>LOS*</th>
<th>Age</th>
<th>Dx</th>
<th>PCP</th>
<th>Symbols</th>
</tr>
</thead>
</table>

- Pt Room Whiteboard

<table>
<thead>
<tr>
<th>Day/Date</th>
<th>RN for shift and station #</th>
<th>Charge RN Name</th>
<th>How to Call into RM</th>
<th>Key Fam Contact and #</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS MD/#</td>
<td>Consulting MDs</td>
<td>How to Call Dietary</td>
<td>Plans for Day: Dx, tests, results</td>
<td>Dispo info PCP name &amp; f/u</td>
</tr>
</tbody>
</table>

American Hospital Association
Top 10 Evidence-based Interventions

See www.HRET-HEN.org

1. Begin enhanced assessment of discharge needs and discharge planning on admission
2. Assess risk of readmission—align interventions to patient needs and risk
3. Accurate medication reconciliation at admission, at any change in level of care, and at discharge
4. Patient education with Teach-back—sensitive to patient’s culture and literacy—include diagnosis and symptom management, medication and post-discharge care needs
5. Identify primary caregiver (e.g., family member) and include in education and discharge planning
6. Use teach-back to validate patient and caregiver’s understanding
7. Send discharge summary & after-hospital care plan to primary care provider (PCP) by 48 hrs post-discharge
8. Collaborate with community based providers: nursing homes, rehabilitation facilities, long-term acute care hospitals, home care agencies, palliative care teams, hospice, medical homes, pharmacists
9. Before discharge, schedule follow-up appointments and tests/labs. For patients without a PCP, work with hospital-related clinics, health plans, Medicaid and safety-net programs to link patient to a PCP
10. Conduct post-discharge follow-up calls 48-72 hours of discharge; reinforce after-hospital care plan using teach-back, identify unmet needs, e.g., access to meds, transportation to follow-up appointments

Evidence-based Change Packages

- Five change packages (bundles of interventions) have been shown to work in controlled trials—
  1) Coleman’s Care Transitions Intervention
  2) Jack’s Reengineered Hospital Discharge (Project RED)
  3) Evans’ early, systematic discharge planning
  4) Koehler’s pharmacist patient education, medication reconciliation, phone follow-up
  5) Naylor’s Transitional Care Model
- Individual parts of these change packages have not yet been proven to work by themselves—to increase likelihood of a beneficial effect, implement the whole bundle

On-line Care Transitions

Resources

• Project RED

• BOOST

• Eric Coleman
  - http://www.caretransitions.org/

• STAAR

• Mary Naylor

• INTERACT
  - http://www.interact2.net/

Engaging the Team

• Have you ever thought the world would be a better place if only everyone would let you call the shots?
• Have you ever thought why am I doing job x when person y is really expert in that? Or why is person y doing what I could really do best?
• Have you ever had the experience that no one completed the task that was everyone’s job?
• Have you ever found out the hard way that no one was responsible for something important?
• Have you ever felt that the patient was getting in the way of our care process?
• Have you ever felt the rhetorical questions would never end?
Setting the Tone

- We’re not making incremental change, we’re redesigning the care experience from the patient’s perspective
- You have to try something 7 times before you decide you don’t like it
- Acknowledge that new process = more work for abt 6 weeks
- Roles not Ranks in group discussions
- Can only say what you can contribute to the solution, no matter how small that might be
- Weekly mtgs to ask what’s going well, who should be recognized, what are the barriers, homework follow up
- Accountability belongs to all of us
- Homework should flow uphill
- No IT requests

It’s All About the Meds

- One in five general medicine patients experiences an adverse event (resulting from medical management) within two weeks of hospital discharge (The Incidence and Severity of Adverse Events Affecting Patients after Discharge from the Hospital. Forster AJ. Ann Intern Med. 2003;138:161-167)
  - 66% of these events are adverse drug events, 17% are related to procedures
  - **33%** of these events lead to disability
  - Two-thirds of these events are preventable or ameliorable

• There are certain points of care where medication errors occur more frequently

• Approximately 60% of errors occur when patients are admitted, transferred to another unit or discharged.

NAS Institute of Medicine (IOM): *Preventing Medication Errors*, July 2006

- “Medication errors and preventable adverse drug events (ADEs) [are] a very serious cause for concern....defined as any injury due to medication, [ADEs] are common...at least 1.5 million preventable ADEs occur each year”
- **Hospital:** 380,000-450,000 preventable ADEs/year
  - “These are likely underestimates”
- **Ambulatory Care:** 530,000 preventable ADEs per year among Medicare enrollees
  - Over 180,000 life-threatening or fatal ADEs per year, of which more than 50% may be preventable
- **Long Term Care:** 800,000 preventable ADEs/year.
  - This is “likely an underestimate”
- **Long Term Care:** 800,000 preventable ADEs/year.
  - This is “likely an underestimate”

The Admission Med Rec

- 22% of Discrepancies could have resulted in patient harm during their hospitalization.
- 59% of Discrepancies could have resulted in patient harm if the discrepancy had continued as ordered after discharge.
- 27% of ALL prescribing errors that occur in the hospital result from incomplete medication histories at the time of admission.

Summary of the Literature: Hospital Medication Reconciliation

- Errors in inpatient prescription medication histories occurred in up to 67% of all cases [on admission]
- Up to 60% had at least one omission error, about 20% had an error of commission (addition of a drug not used pre-admit)
- When non-prescription drugs were included in reconciliations, the error rate was as high as 83%
- When info regarding drug allergies or prior adverse drug reactions were added, the frequency of errors reached as high as 95%

Reinventing the Wheel

- 160 patients admitted to 6N were reviewed by a pharmacist within 24 hrs of admission
- 95% of the patient med lists had been entered by an RN, MD, or PA
- 60% of these lists were completed in the ER
- Average of 26 min per patient by pharmacist [17 min if pharmacist was first person to touch the MRR]
- Total of 1153 Meds were reviewed
- 478 of these were entered correctly [41% accurate]
My Own Backyard

- 678/1153 [59%] were either omitted or incorrect
- 306 Meds were Omitted [45% of errors]
- 92 incorrect doses [14% of errors]
- 83 incorrect frequencies [12%]
- 43 Incorrect Drugs [6%]
- 154 Other Errors [23%]—incomplete, wrong dosage form, etc.

My Own Backyard

- 89% of Medication Reconciliations At Piedmont Hospital had at least one Error
- 100% of patients with more than 5 Meds had an error
- Average # of discrepancies between pharmacist and MD MRR was 5.21
- The Error rate did not change significantly if the MRR was reviewed either before OR after the MD had reconciled and ordered the patient’s medications
- Approx 20% of discovered errors had already reached the patient by time of pharmacist’s review (done within 24hrs)
### Real Patient Example

**Patient Actually Taking**
- Dilantin 300 mg po qhs
- Dilantin 125 mg suspension po BID
- Acyclovir/Viroptic Eye drops
- Warfarin
- Lovenox

**Entered on Med Rec Form**
- Omitted
- Omitted
- Omitted
- Omitted
- Omitted

---

**Patient Actually Taking**
- Coreg 25 mg po BID
- Primidone 100 mg po TID
- Metformin 500 mg po daily
- Verapamil ER 360 mg po daily

**Entered on Med Rec Form**
- Coreg 6.25 mg po BID
- Primidone 50 mg po TID
- Metformin 500 mg po BID
- Verapamil 80 mg po BID
The Discharge Med Rec

Forster et al found that antibiotics were the most common drugs causing adverse events defined as injury resulting from medical management rather than the underlying disease.

Antibiotics accounted for 38% of adverse events, while corticosteroids accounted for 16%, cardiovascular drugs 14%, analgesics including opiates 10%, and anticoagulants 8%.


The Importance of Discharge Medication Reconciliation

Coleman et al found that hospital readmission rates for patients with identified medication discrepancies were 14.3% among the 375 study patients. This contrasted with a 6.1% readmission rate among patients with no identified medication discrepancy.

A Little Help Please?

Schnipper et al showed in a randomized trial of 178 patients being discharged home from the general medicine service that pharmacist counseling reduced the number of preventable adverse drug events from 11% in the control group to 1% in the intervention group.


An Excellent Place to Begin

- Studies Show That Pharmacist-Recorded Medication Histories Result in Higher Accuracy and Fewer Medical Errors.

- Yet, pharmacists conduct the medication history only 5% of the time in most US hospitals.
Benefits of Bedside Delivery of Medications Before Discharge

• Ensures patients are actually able to receive their medications.
  • Prior authorization
  • Exorbitant co-pays
  • Unusual drug not routinely on shelf-stock

• Provides opportunities to reduce cost to patient
  • Can ensure most preferred tier in class of drug selected
  • Can access prescription savings/co-pay assistance from vendor/partners
    – $6,389 prescription savings with co-pay assistance and coupons. For 369 pts that received a total of 921 prescriptions through Walgreen’s bedside delivery in July 2011

• Patient Satisfier/High Touch Experience

Med Rec Expert Tips

• Take care in the way you ask your questions. Ask patient about typical day and what meds they take in a.m., p.m., evening, bedtime
• Link Meds to medical conditions. Probe for other commonly prescribed meds, e.g., diuretics in patient with heart failure on a typical “cocktail,” short-acting insulin in patients on Lantus, etc
• Pay attention to Med Suffixes, especially ER, XR, CD etc.
• Clarify all Dosages. Don’t assume that the instructions on the bottle reflect the dose or frequency the patient is actually taking them.
• Even if you have all the correct meds, doses, and frequency, the patient may ACTUALLY be taking them differently either due to confusion, memory impairment, dependence. They may actually take PRN meds in a scheduled fashion and vice-versa. Home health records and description of meds found in the home can be invaluable.
Med Rec Expert Tips, continued

- Ask specifically about OTCs, Herbals, Vitamins, and Supplements
- Record the name, number, and location of the pt’s pharmacy and use their info to help ensure accurate reconciliation
- Focus on particular “problem meds” like digoxin, coumadin, insulin, theophylline, antihistamines to guide important follow-up questions about diet, drug interactions.
- Ask the patient which physician prescribes which Meds
- Stress the importance of maintaining an accurate list of medications AND request they bring that list to every interaction they may have with ANY and EVERY physician.
- Ask about medications that were recently stopped and the reason why.
- Never ever trust someone else’s history always do a primary verification

Perfect Partners in an Imperfect World

- 90% of health care is delivered in the ambulatory environment, but the accountability moment is in the hospital
- Maximize the value of the captive audience when you have it
- It’s not about where you are today, it’s about the rate of change.
The Real Deal

- Home Health is both over and under-utilized at the same time
- Find the landmines by developing relationships whose continuation is predicated upon transparency, MUTUAL benefit, understanding, communication and commitment.
- Be aggressive about inviting post-acute care providers into your team

Pearls of Wisdom

- Likely that < 1/3 of pts admitted 4 or more times to your hospital in the last 12 mos left the hospital with home health
- Medicare is the best payer for home health and hospice
- Probably only 25% of your patients are getting what was ordered exactly as ordered at d/c
- High rate of bounce back to hospital after inpatient rehab/SNF stays
Teach Back Process

Step 1: Using simple language, explain the concept/process to the pt/caregiver.

Step 2: Ask the pt/caregiver to repeat in his or her own words how s/he understands the concept.

Step 3: Identify and correct misunderstandings

Step 4: Ask the pt/caregiver to demonstrate understanding again to ensure the misunderstandings are corrected.

Step 5: Repeat Steps 4 and 5 until the clinician is convinced of Comprehension.

Dean Schillinger, MD
Associate Professor of Clinical Medicine
University of California, San Francisco
MEDICATIONS LIST on “After Hospital Care Plan”

<table>
<thead>
<tr>
<th>Time</th>
<th>Category</th>
<th>Medication</th>
<th>Dose</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
<td>Heart</td>
<td>ASPIRIN EC 325 mg</td>
<td>1 pill</td>
<td>By mouth</td>
</tr>
<tr>
<td></td>
<td>To stop smoking</td>
<td>NICOTINE 14 mg/24 hr</td>
<td>1 patch (for 4 weeks)</td>
<td>On skin</td>
</tr>
<tr>
<td></td>
<td>Then, after 4 weeks use →</td>
<td>NICOTINE 7 mg/24 hr</td>
<td>1 patch</td>
<td>On skin</td>
</tr>
<tr>
<td></td>
<td>Blood pressure</td>
<td>COZAAR LOSARTAN POTASSIUM 50 mg</td>
<td>1 pill</td>
<td>By mouth</td>
</tr>
<tr>
<td></td>
<td>Infection in eye</td>
<td>VIGAMOX MOXIFLOXACIN HCl 9.5 % soln</td>
<td>1 drop</td>
<td>In your left eye</td>
</tr>
</tbody>
</table>

Pearls of Wisdom About Discharge Appts

- Must have confirmed date and time before discharge
- Clearly established single person responsible with a back up if primary is out/at lunch
- Get direct access to MD office schedule with your aligned docs/key practices
- Train the [midlevels working for] specialists to leave appt times for the discharging hospitalist
- Within 1 week is ideal, sooner for patients with key pending tests, later ok for sophisticated, stable patients
Pearls of Wisdom on Follow-Up Calls

- 48 – 72 hrs is the sweetspot
- Must be a clinical call by a fairly sophisticated person
- Caller should have access to PASS/Discharge form and key info when making the call
- Use Teachback when making the call
- Document the results of the call in the PCP’s electronic medical record and copy for hospital record
- Track connect rates to figure out best times to call and high risk patients you are unable to reach
- Track main issues that arise and interventions used to fix them
- Establish a clear escalation procedure for the caller to use when he/she cannot immediately solve the issue

Palliative and Hospice Care

- What Patients Want:
  - Majority of Americans prefer to die at home
    (Hays et al., 2001; Gallup, 2000)
  - Pain-Free Passing
- What Patients Get:
  - 33.5% die at home
    (2009; Teno et al., 2013)
  - Patients continue to die in pain
    (Meier, 2006)
  - 46% of Do Not Resuscitate orders written within 2 days of death
Palliative Care and Hospice Pearls

• The difference between standard acute care and palliative and hospice care is the difference between asking “what’s the matter” and asking “what matters most.”
• Palliative and hospice care is a matter for the entire care continuum to address.
• Palliative care often translates to providing skilled service cost at hospice pay rates.
• Do not attempt to change the entire culture—compartmentalize into something practical for slow, steady change.
• Deciding how someone will spend the time they have left is not our decision to make.

The Right Thing To Do

• Meeting Patients’ needs with a side-effect of improved quality of life at a lower cost which improves satisfaction.
• Maximizes quality of life vs quantity of life
• Aggressive symptom management vs curative management
• Multi-disciplinary team with adaptable plan vs physician dependent treatment protocol
The Value Proposition: The Piedmont Experience

- Reduced total hospital LOS
- Reduced ICU LOS
- Reduced ICU Cost per Case [CRRT, Vent, drips]
- Reduced Readmission Rates


- Reduced daily cost per case on palliative care status in hospital

Ciemin, Blum, Nunley, Lasher, Newman, 2007

- Improved satisfaction—palliative care and hospice patients more likely to die at home


Palliative and Hospice Care Resources

- Center to Advance Palliative Care [www.capc.org](http://www.capc.org)
- “Hospice Let’s Me Be” campaign website [http://hospiceletsmebe.org/](http://hospiceletsmebe.org/) videos starting the conversation about goals of care and about potential value of referral to hospice or palliative care.
- “EPEC” program for non-health professionals about these ideas: [http://www.epec.net/](http://www.epec.net/)
- National Healthcare Decision Day 2013—an opportunity for community events led by hospitals or others [http://www.nhdd.org/](http://www.nhdd.org/)
  [www.eperc.mcw.edu/EPERC/FastFactsandConcepts](http://www.eperc.mcw.edu/EPERC/FastFactsandConcepts)
Improving Diagnosis in Health Care


Where Failures in the Diagnostic Process Occur

- Failure of Engagement
  - Failure in Information Gathering
  - Failure in Information Integration
- Failure to Establish an Exploration for the Health Problem
- Failure to Communicate the Explanation

The Diagnostic Process

The work system includes:
- Diagnostic Team Members
- Technologies and Tools
- Organization
- Physical Environment
- External Environment

Information Integration & Interpretation

Communication of the Diagnosis

Treatment

Outcomes

The planned path of care from the diagnosis

Patient and System Outcomes: Learning from Adverse Events, Near Misses, and Accidents, Frequent Diagnoses


http://news.harvard.edu/gazette/story/2015/10/medication‐errors‐found‐in‐1‐out‐of‐2‐surgeries

Medication errors found in 1 out of 2 surgeries

Adverse drug events included in the study of 277 operations at MGH

By Sue McGreevey, MGH Public Affairs
Parting Thoughts

• Assume anything that can go wrong will go wrong and act accordingly
• If it isn’t written down, the plan didn’t happen
• If teach-back wasn’t used, the plan wasn’t effective
• If you don’t assess the physical, mental, social, and financial status of the patient, the plan can’t get executed
• If you don’t improve medication reconciliation/education, have follow-up appointments, and do a follow-up call at 48-72 hours, then the plan will get derailed.
• Shared care protocols with post-acute providers ensure consistent, quality outcomes and common expectations
Final Comments

• No Margin, No Mission; but without staying true to your mission, you’ll never have sustainable margin
• Don’t Collect Data you don’t use, Use the Data You Collect
• Whatever your current performance is, you can do better
• Always Do the Right Thing No Matter How Difficult
• Never accept of yourself an effort dependent failure
• We have all the help we need—it’s sitting in this room

Questions

Contact:
Matthew Schreiber
VP Operations Acute Care Health, Spectrum Health
(616) 214-8860
Matt.Schreiber@stanfordalumni.org