



Medication-Related Problems and Transitions of Care

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The speaker has no conflict to disclose.



Question?

- Among older adults, medication-related problems are estimated to be directly related to ____% of hospital admissions?
- a. 2-5%
- b. 5-10%
- c. 10-30%
- d. 30-50%



Transitions of Care (TOC)

- Movement of a patient from one care setting to another:
 - Examples: Hospital to SNF; SNF to Home; Hospital to Home
- Well executed TOC require communication, coordination, accurate information, and follow-up



Transitions of Care

- Quality and Safety often compromised during TOC
 - Inaccurate information transfer
 - Medication discrepancies
 - Lack of appropriate follow-up care

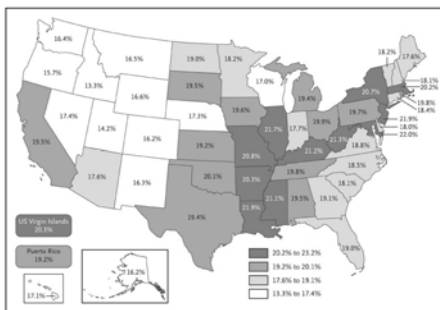


Question?

- Nationally, 30-day readmission rates among older Medicare recipients range from _____.
- 2-5%
 - 5-10%
 - 10-15%
 - 15-25%



Rates of Rehospitalization within 30 Days after Hospital Discharge



N Engl J Med 2009;360:1418-1428



TOC Outcomes

- When patient needs not met during TOC
 - Medication-related problems
 - ER visits
 - Readmissions
 - Greater health care costs



Readmissions

- 20% of hospitalized pts readmitted within 30 days
 - 13% Idaho
 - 23% Washington DC
- 50% had no ambulatory visit between hospitalizations

NEJM 2009;360:1418-1428



Medication Discrepancies (MD)

- Lack of agreement between medication lists
 - Home list
 - Discharge list
- Incomplete Medication Reconciliation



Question?

- Studies involving pharmacist in-home visits have reported medication discrepancy rates as high as ____.
- a. 25%
- b. 50%
- c. 75%
- d. 100%



Medication Issues at Transitions

- 1 in 5 experience ADE during transitions
 - *Ann Int Med* 2003;138:161-7
 - *Ann Pharmacother* 1999;33:1147-53
- Pharmacists in home assessments
 - *AJHP* 2002;59:2407-9
 - *Pharmacotherapy* 2002;22:1239-48
- Limited recall, errors, med problems
 - *Ann Pharmacother* 2001;35:539-45
 - *Am J Med* 2001;111:26S-30S
- 80/80 with at least 1 drug-related problem
 - *AJHP* 2003;60:905-10



Medication Discrepancy Tool (MDT)

- A tool to facilitate reconciliation of medication regimen across settings and prescribers
- Identification
- Causes and contributing factors
 - Patient level
 - System level
- Resolution

Am J Geriatr Pharmacother 2004;2:141-8



Coleman EA, et al

Posthospital Medication Discrepancies (MD): Prevalence and Contributing Factors

- 375 seniors admitted to hospital
 - Intact cognition or caregiver
- GNP home visit within 72 hrs of discharge
- 14.1% experienced 1 or more MD
 - half patient; half system-associated
- 30 day readmissions
 - 14.3% in those with MD
 - 6.1% in those without MD ($P=0.04$)

Arch Intern Med 2005;165:1842-47



Walker PC, et al

• Impact of a Pharmacist-Facilitated Hospital Discharge Program

- 358 intervention patients compared to 366 controls (non-randomized)
- Pts included at high risk of med-related problems
 - ≥ 5 meds
 - digoxin, opioid, anticoagulation, sedative, asthma/COPD
 - drug requiring therapeutic monitoring
 - ≥ 2 meds started, stopped, or changed
 - dementia or confusion
 - unable to manage meds

Arch Int Med 2009;169:2003-10



Walker PC, et al (cont.)

- Pharmacist Intervention
 - interview, med rec, pt education, communicated reconciled list to PCP, post discharge phone f/u at 72 hrs and 30d
- Main outcomes
 - 14 and 30 day readmission rates
 - ED visits within 72 hours



Walker PC, et al (cont.)

- Results
 - Medication discrepancies (prior to d/c)
 - Intervention: 33.5%
 - Control: 59.6% ($P<0.001$)
 - Readmissions 14d
 - Intervention: 12.6%
 - Control: 11.5% ($P=0.65$)
 - Readmissions 30d
 - Intervention: 22.1%
 - Control: 18.0% ($P=0.17$)
 - ER visits 72hrs
 - Intervention: 2.8%
 - Control: 2.2% ($P=0.60$)



Gillespie U, et al

- **A Comprehensive Pharmacist Intervention to Reduce Morbidity in Patients 80 Years or Older (Sweden)**
 - 400 pts randomized to intervention or control
 - Intervention:
 - Admission med list, med review, patient education, discharge counseling, discharge communication with PCP, 2 month phone f/u
 - Outcomes:
 - All hospital visits (readmissions and ER visits) during at 12 months
 - Drug-related hospital visits at 12 months
 - Cost of care

Arch Int Med 2009;169:894-900



Gillespie U, et al (cont.)

- Results:
 - All hospital visits at 12 months
 - Intervention: 1.88 vs Control: 2.24
 - 16% reduction (OR 0.84; 95% CI 0.72–0.99)
 - ER visits at 12 months
 - Intervention: 0.35 vs Control: 0.66
 - 47% reduction (OR 0.53; 95% CI 0.37–0.75)
 - Drug-related readmissions
 - Intervention: 0.06 vs Control: 0.32
 - 80% reduction (OR 0.20; 95% CI 0.10–0.41)
 - Costs \$230/pt lower in intervention group



Setter SM, et al

- **Effectiveness of a Pharmacist-Nurse Intervention on Resolving Medication Discrepancies for Patients Transitioning from Hospital to Home Health Care**

- 220 patients (mean age 74 years)
 - Discharged to home
 - Required skilled nursing (VNA)
 - Not cognitively impaired
 - Diagnosed with:
 - CHF, MI, CAD, arrhythmia, DM, stroke, COPD, fracture/orthopedic surgery

- Outcomes:
 - discrepancy resolution; healthcare utilization

Am J Health-Syst Pharm 2009;66:2027-31



Setter SM, et al (cont.)

- Outcomes:
 - 448 total discrepancies
 - 46% patient associated
 - 54% system associated
 - Resolution greater in intervention group ($P<0.001$)
 - Fewer planned and unplanned physician visits, and rehospitalization days ($P=ns$)



Our Experience

- **Medication Discrepancies among Elderly Patients Discharged from an Acute Care Setting**

- Internal Medicine patients discharged from MMC
 - ≥ 65 years of age
 - 5 or more medications
 - discharged to home
 - followed in SIU-SOM IM clinic
- Identify and describe med discrepancies
- Estimate costs/benefit



Our Experience

- Offered home visit at time of discharge
- Those agreeing were visited within 72 hrs of discharge
- Compared
 - Discharge list (given at discharge)
 - Patient list (what taking at home)
- Discrepancies described with MDT
- Communication with PCP following visit
- Attend f/u clinic visit, if necessary



Our Experience

- 16 home visits
- 72% female; most between 70-74 years
 - (65 to 84 years)
- 56% with caregiver
- 12 meds at discharge
 - 14 meds being used at home
- Ave time spent: 1.5 hours



Our Experience

- Results:
 - 94% with at least 1 med discrepancy
 - Range: 1 to 7; Mean: 4
 - Most common:
 - Inaccurate/incomplete discharge instructions
 - Conflicting information from different sources
 - Patient perceptions
 - Pharmacy change
 - Interfering with physician



Our Experience

- Results:
 - Cost of service
 - 1 pharmacist (0.6 FTE)
 - 3 home visits/day
 - travel/expenses
 - \$107,108
 - Estimated savings
 - 10-30% of hospital admissions drug-related
 - Reduce readmissions by 7.3% saves \$107,108
 - Reduce readmissions by 10% saves \$146,334
 - Reduce readmissions by 25% saves \$365,836



Rehospitalizations

Incentives/Policies

- Medicare now requires public reporting of readmission rates
 - website
- Some health plans provide incentives to reduce admissions
- Greater integration of delivery systems
- Likely to be financial incentives through CMS/Medicare within next 5 years (with or without HC reform)



Resources

- The Care Transitions Program SM
 - www.caretransitions.org
- Care transitions:
 - United Hospital Fund. [Next Step in Care: Family Caregivers & Health Care Professionals Working Together](#)
 - ABIM Foundation. [Stepping Up to the Plate: Alliance to Improve Care Transitions](#)
 - American College of Physicians. [Patient Centered Medical Home](#)
 - Centers for Medicare and Medicaid Services. [Medicare QIO Care Transitions Project](#)
 - The Commonwealth Fund. [Quality Matters: Care Coordination](#)
 - The Joint Commission. [Speak Up: Planning Your Follow-up Care](#)
 - Medicare Payment Advisory Commission (MedPAC). [Report to the Congress: Reforming the Delivery System](#)
 - National Alliance for Caregiving and United Hospital Fund of New York. [A Family Caregiver's Guide to Hospital Discharge Planning](#)
 - Society of Hospital Medicine. [Better Outcomes for Older Adults through Safe Transitions \(BOOST\)](#)



Questions?



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Post-test Questions

1. Complications that may be related to care transitions include:
 - a. ER visits/rehospitalizations
 - b. Medication-related problems
 - c. Greater health care costs
 - d. All the above
2. Medication discrepancies can occur at transitions of care, but they have not been associated with increased rates of readmission.

True False
3. The Medication Discrepancy Tool is used to:
 - a. Identify Medication Discrepancies
 - b. Find causes and contributing factors
 - c. Assist with discrepancy resolution
 - d. All the above
4. Studies of pharmacist interventions during hospitalization and at time of discharge have consistently shown reductions in 30 day readmission rates.

True False
5. The most common types of medication discrepancies found during home visits following hospitalization are:
 - a. medication intolerance/financial barriers
 - b. not filling prescriptions/duplication
 - c. incomplete or inaccurate instructions/conflicting information
 - d. confusion between brand and generic names/nonadherence