20th Congress of EAHP

The Hospital Pharmacist's Agenda- Patient Safety First

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Medication Safety in Transitions of Care

The US Experience

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Conflict of Interest

- I, Marilyn Stebbins, have nothing to disclose.

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Teaching Goals

- To introduce the medication safety risks present at transitions of care;
- To present and appraise examples of tools to facilitate medication safety at care transitions;
- To discuss the pharmacist's role in supporting patient safety at transitions of care.

Learning Objectives

- To recognize the risk factors for drug related error or harm occurring at care transitions;
- To describe evidence-based strategies to promote patient safety at care transitions;
- To critique the suitability of a given strategy to their individual hospital setting.

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Self Assessment Questions

1. The single greatest predictor of adverse drug events in a patient is the number of medications used?
2. Medication reconciliation as a sole intervention has been shown to decrease readmissions and mortality in transitions of care?
3. TOC initiatives are easily transferable among organizations, settings, jurisdictions and countries?

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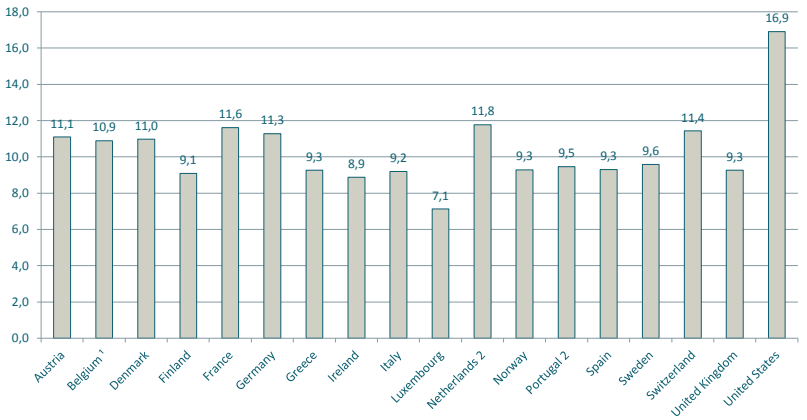
Total Expenditures on Health, 2012
% GDP (EU vs US)
OECD, 2014



EU 10% GDP

US 16.9% GDP

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If the US is Spending So Much, We Must be Doing a Great Job, Right?

- **27% of discharged CHF patients are readmitted within 30 days** [Jencks et al. NEJM 2009;360:1418]
- **35% of eligible atrial fibrillation patients failed to receive warfarin** [Piccini et al. Am J Coll Cardiol 2009;54:1280]
- **Only 15% of smokers are offered assistance to quit** [Unrod et al. JGIM 2007;22:478]

The Patient Protection and Affordable Care Act (ACA)-HR 3590 "OBAMA CARE"

- Provides for a payment adjustment (lower payment) for inpatient hospital services to encourage the reduction of certain readmission rates (CHF, AMI, Pneumonia)
- Provides financial incentives for certain hospitals partnering with community-based organizations to improve transitional care processes.
- Per the Affordable Care Act, the readmission rate information for all patients in each hospital participating in the program will be publicly available online.
- The Centers for Medicare and Medicaid Services view 30-day readmissions as a key quality indicator with potential adverse consequences to hospital reimbursement

The Tipping Point

Why Target Readmissions/Transitions?

- One in every five Medicare beneficiaries discharged from the hospital will be re-admitted within 30 days of discharge.
- 76% of readmissions are thought to be preventable
- Medicare data shows that over half of patients readmitted received no follow up care
- 19% of patients have AE within 30 days
  - 2/3 are drug events most often judged as "preventable"
- Recent studies show interventions targeted at post-acute care transition can reduce readmissions by one third (Coleman and Naylor)

Technologies for Improving Post-acute Care Transitions, Center for Technology and Aging, Sept 2010

Transitions of Care

Definition:

The movement of patients from one health care practitioner or setting to another as their condition and care needs change[1]

- Within Settings
  - Primary Care → Specialty Care
  - ICU → Ward
- ***Between Settings***
  - **Hospital → Sub-acute facility**
  - **Ambulatory clinic → Adult Day Health**
  - **Hospital → Skilled Nursing → Home → Hospital**
- Across Health States
  - Curative care → Palliative care/Hospice
  - Personal residence → Assisted living

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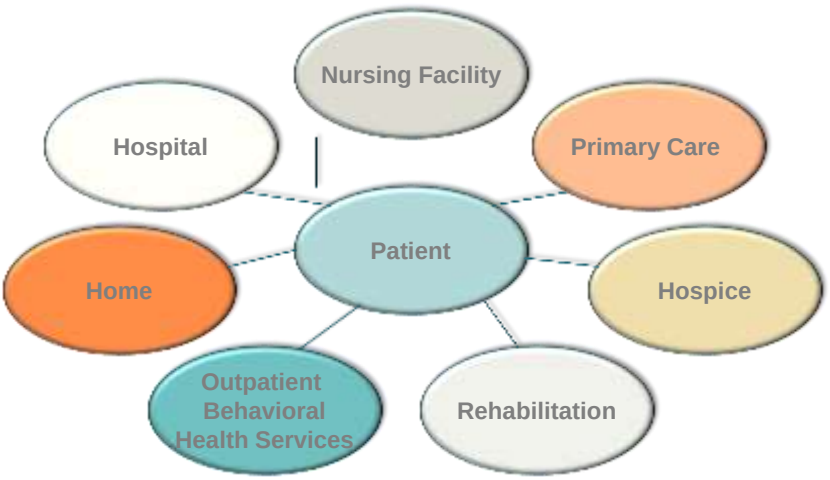
Ineffective Transitions Lead to Poor Outcomes

- Wrong treatment
- Delay in diagnosis
- Severe adverse events
- Patient complaints
- Increased healthcare costs
- Increased length of stay

Australian Council for Safety and Quality in Health Care. Clinical hand-over and Patient Safety literature Review Report. March 2005. Available www.safetyandquality.org/internet/safety/publishing.nsf/Content/AA1369AD4AC5FC2ACA2571BF0081CD95/$File/clinhovrlitrev.pdf

Fundamental Disconnect…



Risk Factors for Rehospitalization[1-3]

- Older age
- Recent hospitalization
- Longer lengths of stay
- Functional dependence
- Specific medical and surgical discharge diagnoses
- Lack of physician follow-up
- Lack of documented patient/family education

Use The Drug "Iceberg Theory"

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The 6 Elements of Successful Transitions of Care[4-6]

1. A multidisciplinary approach
2. Early identification of patients considered at risk for readmission
3. A nurse-advocate to educate and empower the patient and family about the illness
4. Care coordination to ensure timely post-discharge follow-up
5. Pharmacist counseling and medication teaching
6. Post-discharge telephone follow-up

Is Safety Improving in Transitions of Care?

- **Systematic review of 48 studies of hospital-initiated transitional care interventions as a patient safety strategy**
  - limited number of bridging interventions involving a dedicated transition provider seems to reduce readmissions and ED visits after hospital discharge to home
    - only the CTI has been implemented in multiple settings and patient populations.
  - Few studies specifically targeted AEs after discharge (only 3 reported statistically significant reductions in postdischarge AE rates- **All Pharmacist-led)**

Rennke et al, Ann Intern Med. 2013;158:433-440

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Evidence for Pharmacists Involvement in TOC

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Trials Involving Pharmacist in TOC

- **Many studies in the US, Western Europe, Australia**
  - Interventions variable
  - Outcomes measured variable
  - Levels of bias among studies variable
- **Difficult to draw conclusions on which interventions are effective**

Pharmacists Interventions

- **Admission reconciliation**
- **Patient counseling on admission**
- **Pharmacist is part of medical team**
- **Discharge reconciliation**
- **Patient counseling on discharge**
- **Discharge letter or summary**
- **Med List sent to next provider**
- **Post discharge follow-up**

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Outcomes

- Readmissions
- ED visits
- Mortality
- Adverse drug events

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What does the evidence suggest?

- Kwan et al.[7]
  - Systematic review
  - Med Rec alone insufficient in reducing post-discharge clinical outcomes
  - Must be combined with other interventions aiming at care transition improvement.
- Hansen et al.[8]
  - Pharmacist interventions in both hospital and primary healthcare settings improves continuity of care.

Individual Studies

- **Jack et al[5]**
  - Counseling and preparing patient for discharge
    - pharmacists and nurses
- **Stewart et al[9,10]**
  - Collaborating with other healthcare professionals post discharge is crucial to increase the effectiveness of pharmacist interventions.
    - Nurses and PCPs

Individual Studies

- **Schmader et al[11], Snipper et al[12,13], Scullin et al[14], Gillespie et al[15]**
  - Clinical medication review during hospital admission is effective
  - Presence of this multidisciplinary collaboration between pharmacists and physicians(PCPS and specialists) in the hospital is effective.

Individual Studies

- **Gillespie et al[15] and Lopez Cabezas et al[16]**
  - Used follow-up telephone calls for reinforcing in-hospital provided interventions, and
- **Schnipper et al.[12]**
  - Combined telephone reinforcement with active feedback to primary care providers.

Is Safety Improving in Transitions of Care?

- **Conclusion:**

  Although hospitals are now being penalized for excessive readmission rates, the **strategies** that an individual hospital can implement to improve transitional care **remain largely undefined**

Rennke et al, Ann Intern Med. 2013;158:433-440

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What Does the Future Hold?

- Affordable Care Act of 2010 creates expectations of pharmacists that will require practice transformation if we are to rise and accept the responsibilities associated with these expectations

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Health Information Technology

- Health Information Technology for Economic and Clinical Health Act (HITECH)
  - Part of the American Recovery and Reinvestment Act of 2009
- Electronic Health Record (EHR) and Meaningful Use Criteria
- Health Information Exchange (HIE)
- Continuity of Care Document (CCD)

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What Does the Future Hold?

- **Connected Health Care**
  - Via the use of health informatics, disease management and home telehealth technologies
  - Evidence to date suggests a positive impact of the use of connected health care model
- **The majority of studies have overlooked the involvement of the community pharmacist as a connectivity provider for the patient**

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