Effective Medication Reconciliation Reduces Readmissions

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Objectives

- Define medication reconciliation as a component of medication management
- Discuss the impact of discrepancies and adverse drug events
- Review proper medication reconciliation procedures

Medication Management Definitions

- Medication History
  - Up-to-date listing of all prescription and over-the-counter medications, herbal supplements, and vitamins

- Medication Reconciliation
  - Comparison of one or more medication lists to new one
    - Resolve discrepancies
    - Identify and resolve medication-related problems
  - Should occur whenever there is a care transition or change in medications or diagnosis

Medication Discrepancies

- Unintended or unexplained/undocumented differences among medication lists across different sites of care. Examples are:
  - Omissions
  - Duplications
  - Dose/frequency/route of administration errors
  - Drug name discrepant/incorrect
- Sometimes discrepancies are differentiated as “intended” or “unintended” – intended discrepancies would have the rationale documented

Medication Discrepancies & Adverse Drug Events (ADEs)

- ADE: “an injury resulting from medical intervention related to a drug”
- Estimated **70%** of patients experience an actual or potential unintended discrepancy at hospital discharge, which can then precipitate an ADE
- **Preventable ADEs** identified within hospitals, nursing homes, and ambulatory care range between **27% and 50%**
- **ADEs and issues with medication reconciliation** across care settings are **major drivers for hospital readmission**

Bates et al., 1995;

Classen et al., 1997; Gandhi, 2003; Gurwitz et al., 2003, 2005

Zhang et al., 2009

"Medication Discrepancies Upon Hospital to Skilled Nursing Facility Transitions"

- Description of the sources of those discrepancies
  - Both dose and route were frequently omitted or discrepant (42%)
  - Drug name discrepancy (29.3%)
  - Frequency of administration (30.5%)
- Description of the classes of medications with discrepancies on admission to SNF
  - GI (15.6%), Cardio (12.7%), Opioids (12.3%), Neuropsych (7.9%), Hypoglycemics (7.7%), Anticoagulants (6.9%)

Tija J, Bonner A, Briesacher B, et al. Medication discrepancies upon hospital to skilled nursing facility transitions. *J Gen Intern Med.* 2009;(24)5:630-5.

"Medication Discrepancies Upon Hospital to Skilled Nursing Facility Transitions" Continued

- Medication regimens did not match between hospital discharge summary and patient care referral form in over 50% of all SNF admissions.
  - Partially explained by dictation and transcription errors known to occur in discharge summaries
  - Incorrect medication information: hospital physicians should ensure that medication information in the discharge summary is correct at time of discharge
- Discharge summary may be completed up to 24 hours in advance and changes in therapy may not be updated →disconnect in timing
- Importance in documentation: e.g. document REASON for changes to previous medication regime to aid in managing the handoff to the PCP at the appropriate time

Tija J, Bonner A, Briesacher B, et al. Medication discrepancies upon hospital to skilled nursing facility transitions. *J Gen Intern Med.* 2009;(24)5:630-5.

The Discharge Medication Reconciliation Process

Obtaining The Best Possible Medication History

- Obtaining and comparing existing medication lists
  - Pre-hospital admission medication list
    - EHR medication list
    - Community pharmacy – *critical for understanding patterns of adherence*
    - Health Information Exchange list
  - Hospital discharge medications list
  - Inventory of medications in home
- Patient/family/care partner interview
  - Structured questions: MARQUIS Implementation Guide Form | Society of Hospital Medicine

The Patient is at the Center of the Process!

- Four Components
  - Verification
  - Clarification
  - Documentation
  - Transfer/transitions
- Performed by
  - Prescribers, nurses – most common
  - Pharmacists – less common

Appendix: The MATCH Work Plan | Agency for Healthcare Research and Quality (ahrq.gov)

Verification of Medications Upon Discharge

- Obtain the verified medication history list and medication reconciliation performed on admission. Multiple sources should be used which can include:
  - Patient
  - Family, caregivers
  - Primary care provider
  - Other healthcare providers – nursing home, assisted living facility, home healthcare agency
  - Community pharmacies
  - Past medical records
  - Electronic Health Information Exchange (HIE)

Appendix: The MATCH Work Plan | Agency for Healthcare Research and Quality (ahrq.gov)

Clarification

- Discharge orders are reconciled (compared) to medication history list, admission orders, admission medication reconciliation, transfer orders, and interim orders
- Confirm whether differences are intended or unintended
  - Intended: purposeful changes, omissions, additions based on patients' clinical status or formulary
  - Unintended: medication discrepancy requires communication with prescriber and resolution of problem

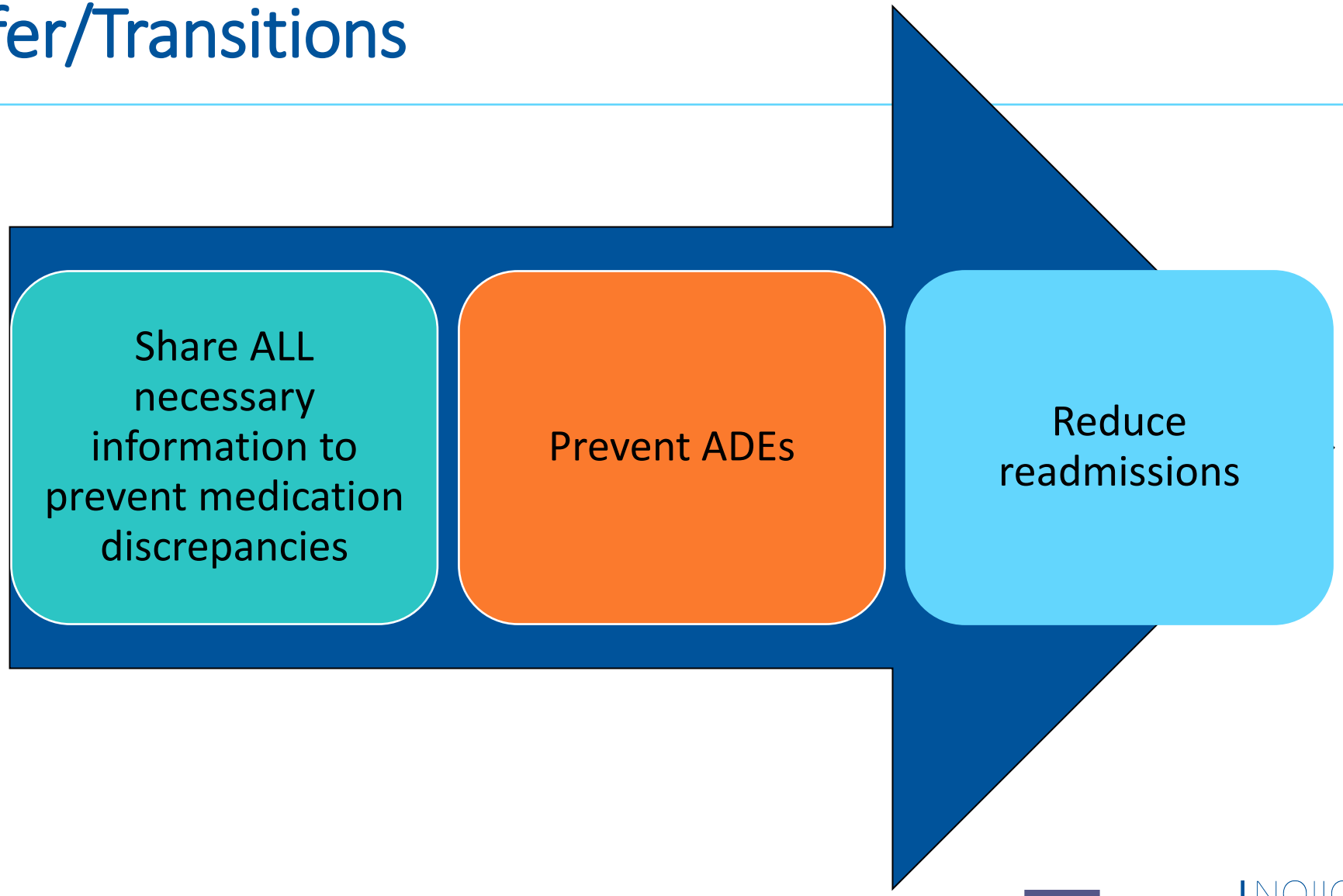
Appendix: The MATCH Work Plan | Agency for Healthcare Research and Quality (ahrq.gov)

Documentation

- Nature of the discrepancy and the resolution should be clearly documented
- Final “one source of truth” discharge medication list
  - Should be shared with the patient, caregivers, primary care provider, or receiving facility or agency

Appendix: The MATCH Work Plan | Agency for Healthcare Research and Quality (ahrq.gov)

Transfer/Transitions



Impact of Medication Reconciliation on Discharge

- Medication reconciliation, as part of a package of interventions, decreased the rate of medication errors by 70% and reduced adverse drug events by over 15% (Whittington, 2004)

- Medication reconciliation reduced discharge medication errors from 90% to 47% on a surgical unit and from 57% to 33% on a medical unit of a large academic medical center (Murphy, et al., 2009)

Whittington J, Cohen H. OSF Healthcare's journey in patient safety. Quality Management in Health Care 2004;13(1):53-59.
Murphy EM, Oxencis CJ, Klauck JA, et al. Medication reconciliation at an academic medical center: implementation of a comprehensive program from admission to discharge. *Am J Health Syst Pharm. 2009;66:2126-31*

Intensive Pharmacist Intervention

- Medication histories and reconciliation on admission and discharge
- Patient and provider medication counseling during hospitalization
- Communication with the primary care physician on discharge
- Communication with the patient 2 months after discharge
  - Results:
    - 16%⇩ the odds of all hospital visits (odds ratio, 0.84; 95% CI, 0.72-0.99)
    - 47% ⇩ in emergency department visits
    - 80% ⇩ in drug related readmissions in the 12 months after hospital discharge

Gillespie U, Alassaad A, Henrohn D, et al. A comprehensive pharmacist intervention to reduce morbidity in patients 80 years or older: a randomized controlled trial. *Arch Intern Med. 2009;169(9):*894-900.

Medication Reconciliation Challenges

- Lack of standardized process, clear ownership
- Communication failures
- Coordination gaps
- Non-formulary medications and therapeutic interchanges
- Lack of standardized medication list “source of truth”

Questions?