Adverse drug events (ADEs) are among the top five greatest and most preventable threats to health of elderly (after CHF, breast cancer, hypertension, and pneumonia)

Source: JAMA, Oct 1987
Medications and Risk Assessment

- Adverse Drug Events (ADEs)
  - “Injuries” resulting from use of a drug
- Preventable ADEs
  - Those resulting from a medication error in prescribing, dispensing, administering, or monitoring
- Non-preventable ADEs
  - Synonymous with adverse drug reactions in which no error is involved

Adverse Drug Event Types

- Preventable ADEs:
  - Neuropsych: 28.8%
  - Falls: 19.9%
  - Hemorrhage: 14.6%
  - GI: 11.1%
  - EPS/TD: 7.1%
  - Anorexia/wt ↓: 5.8%

- All ADEs:
  - Neuropsych: 28.0%
  - Falls: 12.7%
  - Allergic: 12.0%
  - GI: 11.2%
  - Hemorrhage: 10.7%
  - EPS/TD: 10.5%
  - Infection: 5.4%
Risk Factors for Adverse Drug Events

• Risk factors for preventable ADEs:
  – Receiving opioids
  – Antipsychotics
  – Anti-infectives
  – Antiepileptics
  – Antidepressants
  – Significant comorbidity
  – Number of regularly scheduled medications

• Risk factors for non-preventable ADEs:
  – New residents
  – Receiving anti-infectives
  – Antipsychotics
  – Antidepressants
  – Number of regularly scheduled medications
What are the Medications?

- Antipsychotics 25%
- Anti-infectives 20%
- Antidepressants 13%
- Sedative/hypnotics 13%
- Anticoagulants 9%
- Cardiovascular 6%
- Hypoglycemics 5%
- Non-opioid analgesics 4%
- Opioid analgesics 3%
- Anti-Parkinson’s 2%
Reducing Preventable ADEs

- A “New Mission” in the drug delivery system: Patient/Resident Safety
  - Implementation of Performance Improvement processes/system-based approaches:
    - Communicate the mission
    - Avoid individual punitive action
    - Cooperation among professionals within the system
    - Continuous monitoring
Reducing Preventable ADEs

• Successful use of a consultant pharmacist
  – Through retrospective reviews
  – At the point of prescribing - prospective reviews
  – As a source for drug information
  – Assisting with the identification of residents at greatest risk for ADEs
Identification of Residents at Greatest Risk for ADEs

• Assisting with the identification of residents at greatest risk for ADEs:
  – Identification and selection of risk factors
    • Utilization of varied resources
  – Utilization of resident medication data bases
    • Facility records
    • Pharmacy dispensing records
  – Software tools
    • Integration with resident data bases
THANK YOU!!!