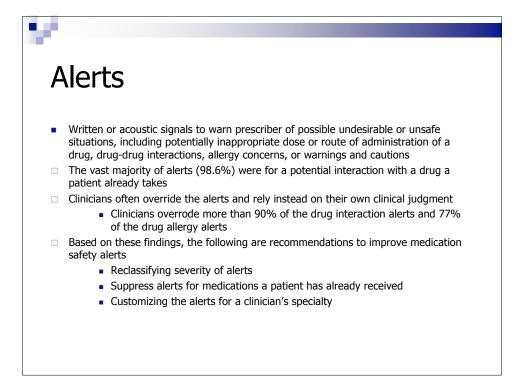


### E-prescribing

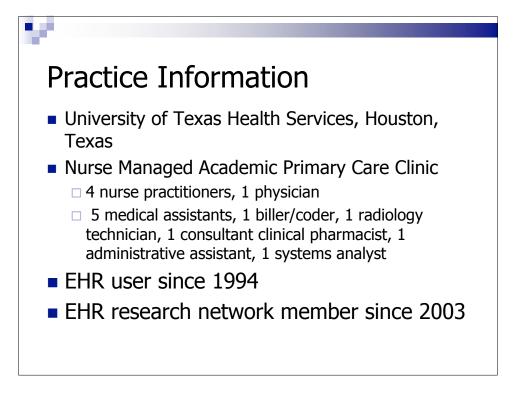
- The transmission, using electronic media, or prescription or prescription-related information between a prescriber, dispenser, pharmacy benefit manager, or health plan either directly or through an intermediary, including an e-prescribing network
  - Generates a complete active medication list
  - Allows eligible professionals to select medications, print prescriptions, transmit prescriptions electronically and conducts all alerts
  - Provides information on lower cost therapeutically appropriate alternatives, if any
  - Provides information on formulary or tiered formulary medications, patient eligibility and authorization requirements

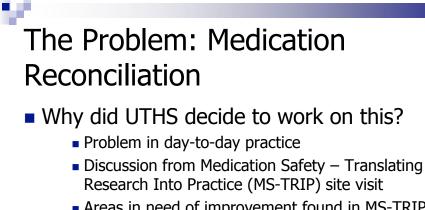


### Classifying Discrepancies Between the EMR and Actual Drug Use

- Discrepancies averaged 2.7 per medication list
- In the majority (70.4%) of the discrepancies between EMR entries and medication assessments, a medication ordered in the EMR was no longer being taken by the patient
- 79.8% of the discrepancies were system generated
  - □ Medication list not updated (51.6%)
  - □ End date not entered (48.4%)

- Whereas 20.2% were patient generated
  - The most common patient-generated discrepancy was omission of a multivitamin or OTC product (61.7%)
  - □ Prescribed by outside clinician (19.1%)
  - Intentional nonadherence (19.1%)





Areas in need of improvement found in MS-TRIP reports



- A complete medication history, including over-thecounter medications, vitamins and herbal products is obtained and documented on every patient during each office visit
  - Medication review, verification, and education increased medication compliance and medication knowledge (Lowe, 2000)
  - 45.6% of practices were fully compliant with this (Medical Group Management Association [MGMA], 2008)



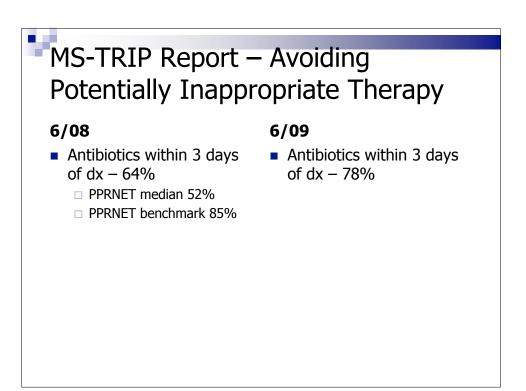
- Patients are provided with an up-to-date list of all medications they are receiving upon leaving the practice encounter
- Subjects with written medication card had both higher knowledge and increased compliance (Lourens, 1994)
- Groups that received reminder chart had higher medication compliance and knowledge than those who received counseling only (Raynor, 1993)
- □ 11.9% of practices were compliant (MGMA, 2008)



### **Improvement Plan**

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- Accuracy and transportability of the recorded outpatient medication list are important in the continuum of patient care
- Perform the appropriate medication reconciliation process following patient admission, changes in care or treatment, transfer from one service to another, or post-discharge return to care
- As part of its "5 Million Lives Campaign," the Institute for Healthcare Improvement recommends encouraging patients to play a major role in ensuring that the medication list is kept up to date as they visit multiple providers in the outpatient setting



## Avoiding Potential Drug-Disease State Interactions

#### 6/08

- NSAID or COX-2 inhibitor in patients with a dx of hypertension – 83%
  - □ PPRNET median 87%
  - PPRNET benchmark 93%

#### 6/09

 NSAID or COX-2 inhibitor in patients with a dx of hypertension – 87%

### Monitoring Potential Adverse Drug Effects

#### 6/08

- Hemoglobin in past year in patients w/ active RX for any anti-platelet or oral anticoagulant – 75%
  - PPRNET median 75%
  - □ PPRNET benchmark 89%
- Glucose in past year in patients with active RX for antipsychotic – 50%
  - PPRNET median 78%
  - □ PPRNET benchmark 93%

#### 6/09

- Hemoglobin in past year in patients w/ active RX for any anti-platelet or oral anticoagulant – 83%
- Glucose in past year in patients with active RX for antipsychotic – 71%

# Potential Adverse Drug Event Prophylaxis

#### 6/08

- Folic acid in patients w/ active RX for methotrexate – 60%
  - □ PPRNET median 60%
  - □ PPTNET benchmark 88%

#### 6/09

 Folic acid in patients w/ active RX for methotrexate – 100%

### Conclusions

- Establishing appropriate medication order end dates at the point of prescription order entry could eliminate 50% of the system-generated discrepancies
- A "stretch goal" for all outpatient office settings should be to supply every patient with an accurate list of active medications that would improve patient safety throughout the continuum of patient care

