

# HCS Medication Reconciliation



## Medication Reconciliation

Definition (USP): A process for

1) obtaining and documenting **a complete and accurate list of a patient's current medications upon admission**

AND

2) **comparing this list to the physician's admission, transfer and/or discharge orders** to identify and resolve discrepancies.

## Health Care Systems, Inc. Founded in 1983

- ❑ Medication Management Solutions
  - ❑ **HCS Medication Reconciliation**
    - ❑ *Prior Medication History & Software Application*
  - ❑ **HCS MEDICS**
    - ❑ *Pharmacy Information Management System*
  - ❑ **HCS e-MAR**
    - ❑ *Bedside Point of Care*
  - ❑ **HCS OrderImage**
    - ❑ *Physician Order Management*  
– *Remote Order Management*
- ❑ Experience
  - ❑ Developed Horizon Meds Manager (acquired by McKesson)
  - ❑ First bi-directional pharmacy orders interfaces with Eclipsys and McKesson
  - ❑ Automated Dispensing Devices (medDispense)
  - ❑ Integration and Interfaces with every major HIS system



## Medication Reconciliation Barriers

A primary breakdown in medication reconciliation process occurs right at the beginning;  
Trying to obtain an accurate medication history from the patient.

- Verbal Assessment Is Inconsistent
  - ❑ Family members are not always up to date
- Bag-O-Meds
- Communicating the Med History to Subsequent Caregivers
- Time Constraints
  - ❑ Calls to Outside Pharmacies
  - ❑ Calls to Outside Physicians
  - ❑ Busy Emergency Room

I'm taking a blue pill and one for my pressure

### Average Medicare Patient (HIMSS)

Physicians      6.4

Prescriptions    18



### Opportunity to Make a **BIG** Difference

Poor communication of medical information at transition points is responsible for:

- 50%** of all medication errors
  - according to the Institute for Healthcare Improvement
- 20%** of all adverse drug events
  - according to the Institute for Healthcare Improvement
- 66%** of all medication errors resulting in death or major injury
  - according to The Joint Commission

### Potentially Harmful Discrepancies

- 72% due to errors in taking patients' medication history**
- 26% due to reconciling medication history with discharge orders**
- Majority of discrepancies due to omission of medications**
  
- Omission of Medication accounts for more errors than incorrect reports of dosage, frequency, substitutions, and the addition of medications combined.**

*Brigham and Women's Press Release 8/14/08*

## HCS Medication Reconciliation?

- Service queries national databases upon admission
  - Automated aggregation of medication history
  - Interaction, duplicate therapy & compliance audit on admission
  - Formulary Interchange & Drug Specific Alerts audit on admission
- Leverages/enhances current workflow and systems
- Electronic Reconciliation
  - Admission – Transfer - Discharge

All within 60 seconds!

A Medical Center  
123 Street A  
Acity, SC 36520

**Reduces Transcription Errors**

07471  
DNES, SALLY P  
Place Patient Label Here)

Medication History Recorded by \_\_\_\_\_ Date \_\_\_\_\_  Patient takes no home medications

Medication list obtained from: Med Reconcile Summary\* From: 11/16/04 To: \_\_\_\_\_

**Reduces "Sound-a-like" discrepancies**

Home Medications - Name, Dose, Route, List all home prescriptions, OTC, Herbs, (Most herbs are non-formulary and are not stored in the system. Do not list these medications. WRITE LEGIBLY and DO NOT USE: MgSO4, MSO4, MS, QD, QOD, U, IU, Trailing zero (1.0 mg), Lack of leading zero (.5 ml).

**Prescriber Information**

Medication-Strength	Directions	Today	Fill	Comp*	Reason for Use Per Prescription Label	Physician order for admission	Physician order for discharge
ISOSORBIDE MONONITRATE ER 30 mg Prescribed by: Unknown		<input type="checkbox"/>	30 TAB 2/15/05 11/9/05	4	Non - Compliant	c or dc	nc or dc
METOPROLOL TARTRATE 50 mg Prescribed by: Unknown		<input type="checkbox"/>				c or dc	nc or dc
NORVASC 2.5 mg Prescribed by: Nelson, David		<input type="checkbox"/>			Compliant	c or dc	nc or dc
DIGOXIN 125 mcg Prescribed by: Nelson, David		<input type="checkbox"/>	30 TAB 2/16/05 10/11/05	8		c or dc	nc or dc
XALATAN 0.005 % Prescribed by: Mirrah, William		<input type="checkbox"/>	2 ML 12/13/04 10/11/05	6		c or dc	nc or dc
NITROLINGUAL PUMPSPRAY 0.4 mg Dose Prescribed by: Bingham, William		<input type="checkbox"/>	12 GM 10/4/05	1		c or dc	nc or dc
PROPOXYPHENE-N/ACETAMINOP 100-650 mg Prescribed by: Albertson, Carl		<input type="checkbox"/>	20 TAB 9/29/05	1		c or dc	nc or dc
SULFAMETHOXAZOLE/TRIMETHO 160-800 mg Prescribed by: Fellers, Paul		<input type="checkbox"/>	20 TAB 9/23/05	1		c or dc	nc or dc

**Strength**

**Original-Last Fill Date & # Refills**

MD Ad Discharge

Date/Time \_\_\_\_\_ Attending Physician Signature \_\_\_\_\_ MD ID# \_\_\_\_\_  
Keep at bottom section of Physician Orders. DO NOT REMOVE FROM CHART

Transfer At time of Transfer Send Photocopy along with a Copy of the Retrospective MAR

Original - Chart Copy - Attending Physician

1 of 2 04/24/2006 10:01 am

**HCS Medication Reconciliation**  
**External Data Sources**

- Pharmacy Benefits Managers
- Insurance Companies
- Medicaid
- Claims Processors
- Retail Pharmacy Systems

**HCS Medication Reconciliation**  
**Internal Data Sources**

- Prior Visit Information
- Inpatient Clinical Information Systems
- Hospital Pharmacy Information Systems
- Retail Pharmacy Information Systems

## **HCS Medication Reconciliation**

### **Configuration Engine**

#### EXAMPLES:

- Retrieval of Medication History Data
  - Configurable for 4 to 12 months
- Formulary Interchange Alerts
- Drug Specific Alerts – Metformin, Warfarin, etc.
- Patient Type Filter
  - Hospital selects which patient types should be queried
    - Inpatient
    - Outpatient
    - Emergency Room
  - Hospital can choose to query certain patient's "On Demand"

## **HCS Medication Reconciliation**

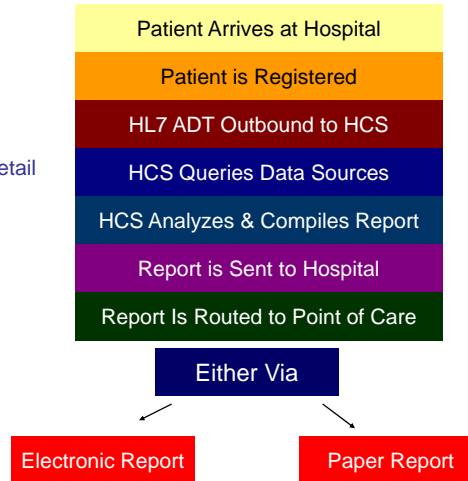
### **Data Sources**

- "There are many Data Sources - - - -  
what is needed is someone to pull all  
the information together."

- HIMSS 2008
- Pat Hale, PhD, MD, FACP  
Deputy Director, Office of Health Information Technology  
and Transformation, New York State Department of  
Health

## HCS Medication Reconciliation

- Acquire medication history
  - Admission transaction
  - Query insurance carriers, PBM's, data sources
  - Receive up to 12 months of retail medication history
- Analyze medication history
  - Interactions
  - Duplicate therapy
  - Compliance
- Hospital report
  - Print
  - Electronic



## Key Points

- Multiple external data sources
- Automated aggregation of medication history
- Interaction, duplicate therapy & compliance audit on admission
- Formulary interchange & drug specific alerts audit on admission

## DMH Bonifay experience

### Negatives

- Incomplete histories
- Results are dependent upon participation of patient's third party

## DMH Bonifay Experience

### Positives

- Decreased drug seekers in ER
- Confidence in the history
- Discrepancies are easier to resolve
- Pay per positive "hit"