



Value of the Pharmacist Obtained Medication History on a Behavioral Health Unit

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Background Information

- JCAHO requires a mechanism be in place to accurately and completely reconcile medications for each patient.
- Hospitals are expected to obtain a list of home medications from the patient and compare it to their list of medications in order to find omissions, discrepancies, etc.
- ★ ○ Ensuring accuracy of the patients' home medication regimen at time of admission is necessary since this list is often continued in the inpatient setting.
- Accuracy rates for admission reconciliation in a large health system measure ~ 50%.

Background Studies



- Pharmacists are **THE** ideal resource to utilize for obtaining medication histories.
 - Possess disease state and medication knowledge
- Gleason et al in 2004, obtained medication histories within 24-48 hr of admission. They showed that reconciliation by pharmacists decreased the potential for medication errors.
- Nester & Hale in 2002 compared nurse vs. pharmacist obtained medication histories and the number of clinical interventions. Pharmacists were more effective at finding interventions.

Am J Health-Syst Pharm. 2004;61:1689-95.

Am J Health-Syst Pharm. 2002;59:2221-5.



Study Objectives

○ Primary

- Compare the effectiveness of a pharmacy obtained medication history with the current behavioral health unit (BHU) standard
- Reconcile 75% of admissions to BHU within 18 hrs of admission

○ Secondary

- Asses physician, pharmacist and pharmacy technician feedback related to the process

Winchester Medical Center Behavioral Health Unit



Study Setting

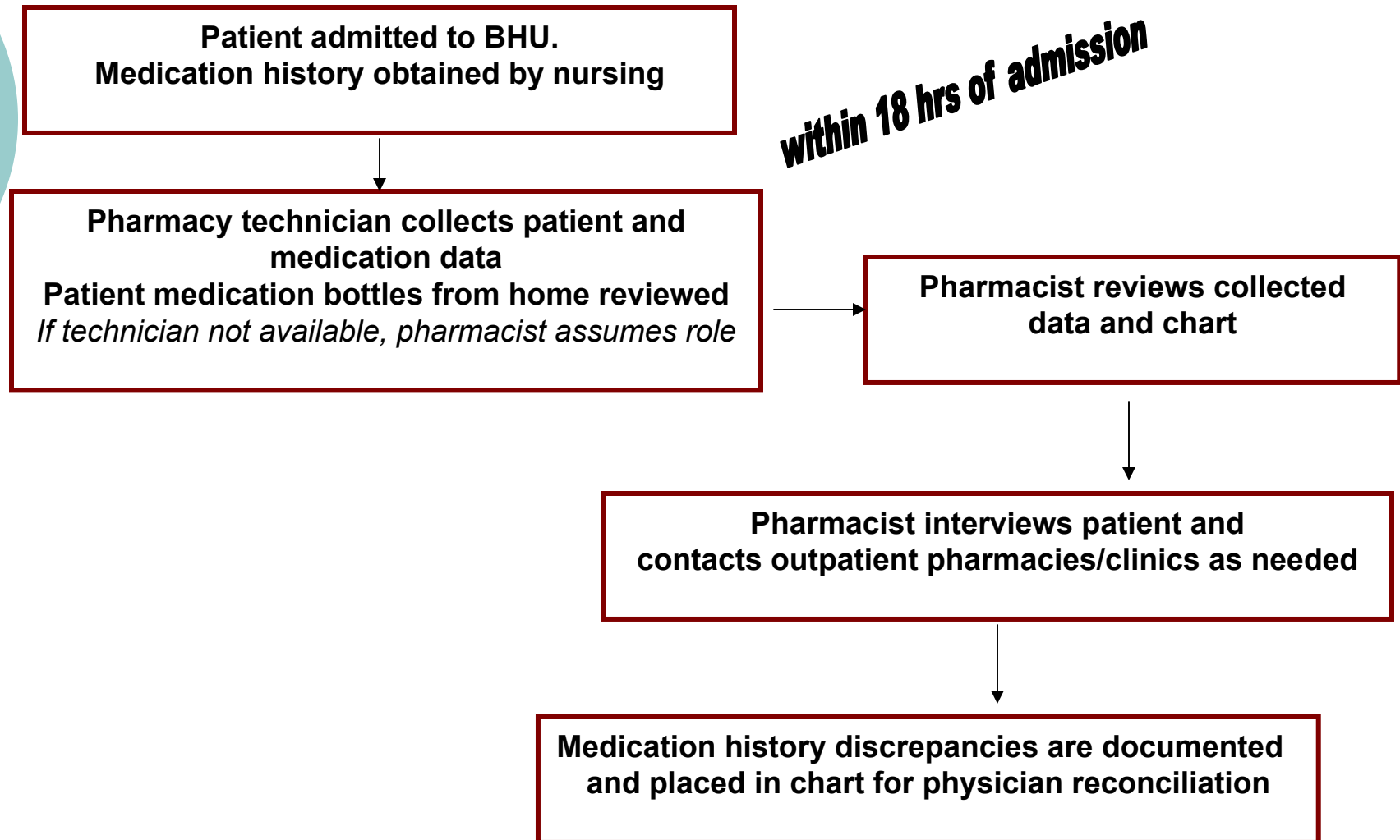
- **Winchester Medical Center (WMC)**
 - 411 bed not-for-profit institution
 - Behavioral Health Unit (BHU) – 20 adult beds
 - Closed environment in both nursing and physicians
- **Inclusion criteria**
 - 18 yrs of age
 - Taking at least 1 medication prior to admission
- **Time frame for study**
 - 6am Monday – Noon Friday; Sept– Oct 2005
- **Personnel Involved**
 - 4 Pharmacists
 - 3 Certified Pharmacy Technicians

Methods – Pharmacy

- **Within 18 hrs of admission** and after the medication history was obtained by the nurse, patient demographic and medication information was gathered from the chart and from patient bottles by a pharmacy technician or pharmacist.
- **Information collected**
 - Data sources utilized to obtain information
 - Chart, patient, Rx bottles, outpatient pharmacies/clinics, families
 - Time required for both technician and pharmacist to complete the process
 - **Documented discrepancies**
 - **Omission/incorrect medication**
 - **Omission/incorrect dose**
 - **Omission/incorrect frequency**
 - **Continuation of a previously discontinued medication**
- Pharmacist interviewed patient
- Contacted outside pharmacies/clinics as needed



Study Flow Summary



“Check-list” Interview Questions

- Where do you get your medications filled?
- Do you use samples from physicians?
- What vitamins are you taking?
- What herbal products are you taking?
- Do you use nutritional supplements, if so what?
- Do you use a pill box or other reminder aid?
- Do you keep a list of medications with you?
- Do you feel you are compliant with your medications?



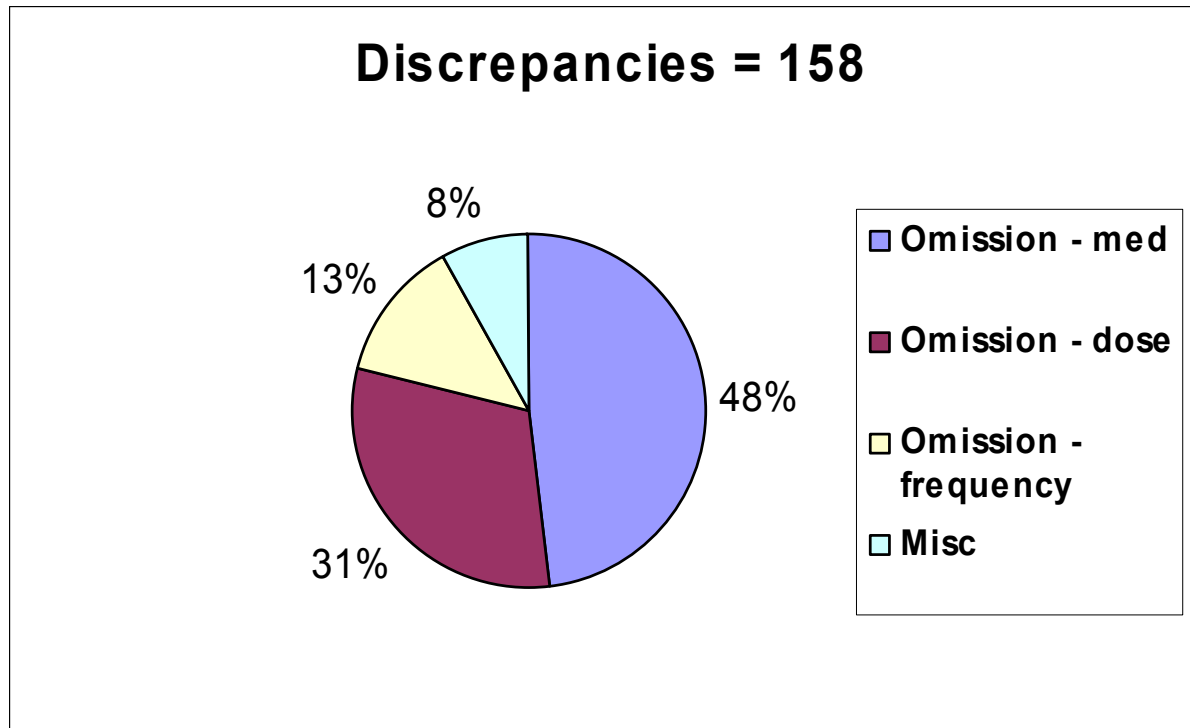
Results

- 68 pts admitted during the study period
- 83% interviewed
- 54 pts met criteria for study
- 90% were seen by pharmacy within 18 hr of admission
 - Mean time delay = 11.5 hrs
- 14 charts evaluated by technician
- Mean # of medications on admission
 - identified by nursing = 3.98
 - identified by pharmacy = 5.30

p < 0.05

Level of significance set at < 0.05.

Results - Discrepancies



Misc = > 50% were meds d/c prior to admission

Mean number of discrepancies identified = 2.91 per patient

Patient Demographics

Variable

Mean age (years)	33.9 ± 12.6
Female sex (%)	53.7
Mean number of chronic disease states	2.2 ± 1.3
Patient self-reports adherence problems	35% ^a
Patient utilizes reminder aid at home	15%
Patient receives Rx samples	31%
Patient keeps list of meds on person	9%
Patient uses herbals	18%

^a only 2 of these patients used reminder aids

Results – Sources of Information

Patient chart	100%
Patient interview	100%
Pt's Rx bottles	22.2%
Outpt. pharmacy/clinic	16.6%

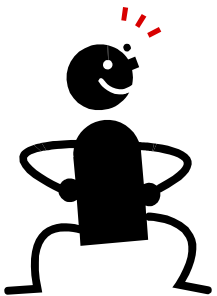
Results – Time Factor

Mean time delay for reconciliation	11.59 ± 5.10 hr
Mean technician time to review chart	8.0 min ^a
Mean pharmacist time to see pt and reconcile chart	13.94 ± 7.33 min

^a only 14/54 charts reviewed

Satisfaction Survey

- Conducted 2-3 weeks after the study
- Utilized a 5 point Likert scale
 - 1 = no impact; 5 = definite impact
- Surveyed physicians, pharmacists, pharmacy technicians
- Assessed
 - Timeliness of the reconciliation
 - Usefulness in the continuity of patient care
 - Impact on the current system
 - Methodology worth pursuing further
 - Improved job satisfaction (pharmacy technicians)

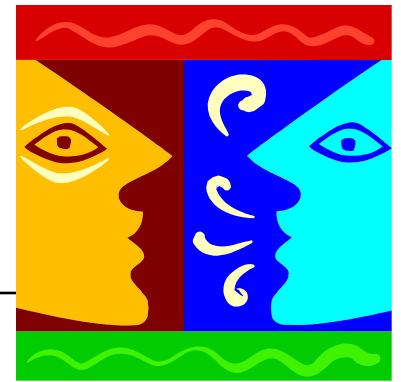


Survey Results

5 point Likert scale with 1 being no impact and 5 being definite impact

<u>Physician Results</u>	<u>Mean</u>
Timeliness of MHRF	4.0
Usefulness in continuity of care	4.0
Impact patient care	4.0
Positive addition to current system	5.0
Methodology worth pursuing at institution	5.0
<u>Pharmacist Results</u>	
Impact patient care	4.6
Positive addition to current system	4.8
Methodology worth pursuing at institution	5.0
<u>Pharmacy Technician Results</u>	
Improve job satisfaction	3.8

Conclusion



1. Mean number of admission medications identified by pharmacy was statistically more than by nursing
2. The majority of discrepancies were omission of medications
3. Of the 12 patients who brought in Rx bottles from home, 48 discrepancies were found
4. 9 patients had outpatient pharmacy/clinic calls averaging 3 discrepancies/patient
5. In this population with a low average # of meds, there were still 2.9 discrepancies/patient
6. RPh time averaged ~ 14 min/patient
7. Utilizing technician + RPh was not a time saver

References

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2. Whittington J, Cohen H. OSF healthcare's journey in patient safety. *Q Manage Health Care* 2004;13(1):53-59.
3. Gleason KM, Groszek JM, Sullivan C, Rooney D, Barnard C, Noskin GA. Reconciliation of discrepancies in medication histories and admission orders of newly hospitalized patients. *Am J Health-Syst Pharm.* 2004;61:1689-95.
4. Nester TM, Hale LS. Effectiveness of a pharmacists-acquired medication history in promoting patient safety. *Am J Health-Syst Pharm.* 2002;59:2221-5.