Medication Reconciliation Improvement Study
Baseline Report

Aggregate and Peer Group Report

Data Collection: March 2014
Number of cases: 447
Report date: April 2014

Abstract

The 1999 Institute of Medicine Report, *To Err is Human*, identified adverse medication events as a major cause of unintended harm to hospitalized patients nation-wide. The report recommended hospitals focus on implementing safe medication practices to reduce harm to patients. Since that time, medication reconciliation has become not only a best-practice, but a standard of care. CAHs face many barriers to implementing effective medication reconciliation processes. This clinical improvement study seeks to support MT CAHs in overcoming those barriers in order to achieve and maintain this national goal for patient safety.

Participants

17 CAHs representing all five PIN peer groups submitted 447 cases for the baseline data collection.

Limitations

Factors limiting baseline data analysis include:

- Only one facility each from peer group 4 and peer group 5 submitted baseline data. The number of cases submitted by these 2 facilities is not sufficient to ensure a sound basis for benchmarking peer groups 4, 5 or 4+5 performance.

Findings

Initial findings from the baseline data collection include:

- The majority (85%) of MT CAH patients receive medication reconciliation services upon admission to the hospital
- 20% of inpatients represented in this data collection transitioned from one inpatient service to another during their hospital stay. Of those, 78% had their medications reconciled at the time of transition.
- 84% of CAH inpatients discharged alive had their medications reconciled at the time of discharge.

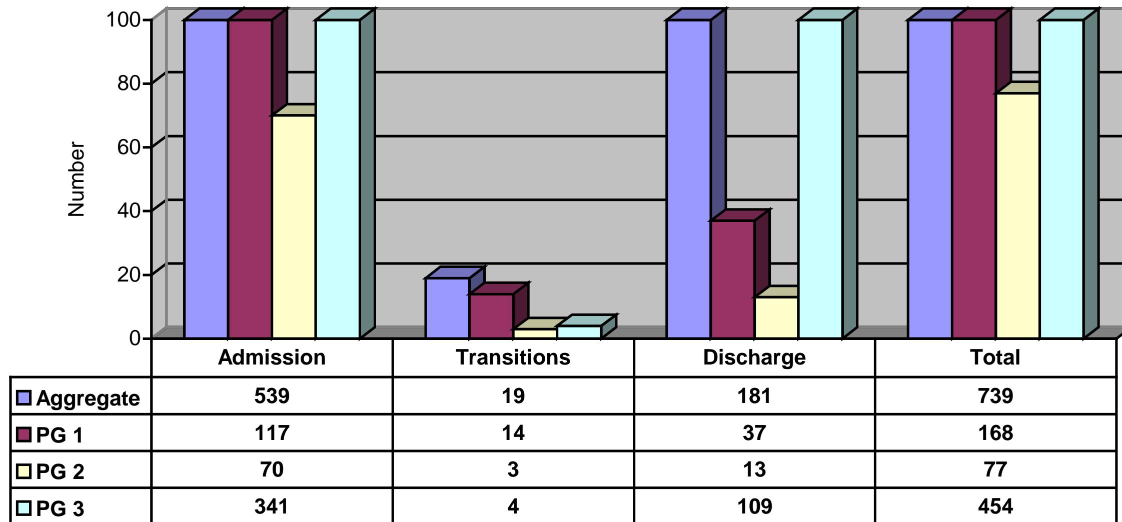
Opportunities

for MT CAH medication reconciliation improvement work include:

- The baseline data collection identified 739 opportunities for patient harm due to medication use to CAH inpatients during the fourth quarter of 2013
- Identify the source of information when collecting the patient's list of medications during admission
- Ensuring over the counter (OTC), PRN, vitamins and herbals are included in all medication reconciliations
- Improve the process and process consistency of providing the patient's next health care provider with the hospital discharge medication list within 24 hours of the patient's discharge

I. Identified Potential Patient Harm Events: Number Meds Not Reconciled, by Process Step

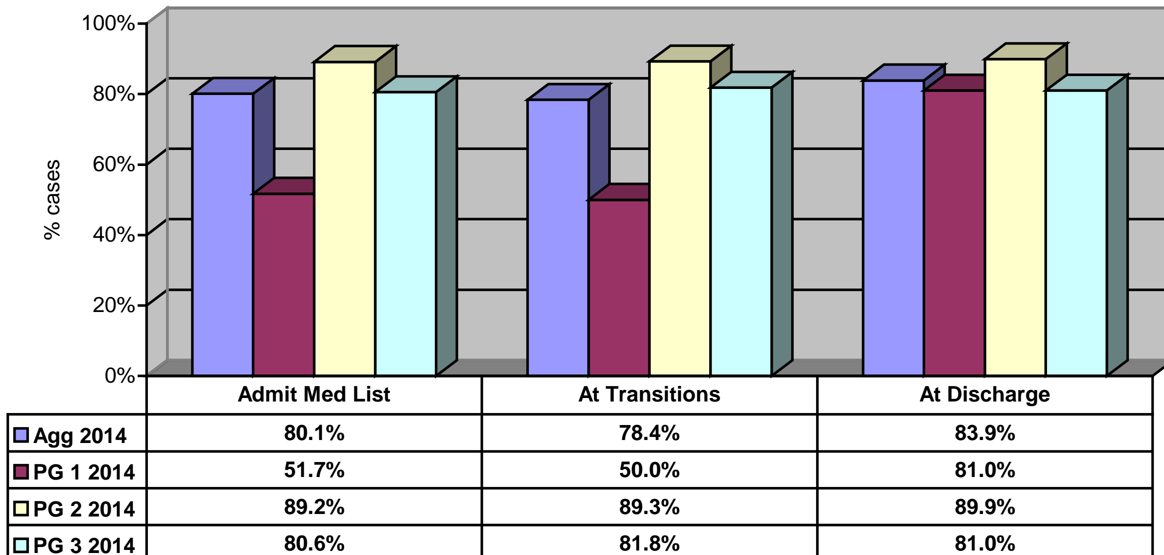
** potential patient harm events = # patients not receiving the reconciliation service + # meds not reconciled*



	Admission	Transitions	Discharge	Total
Aggregate	539	19	181	739
PG 1	117	14	37	168
PG 2	70	3	13	77
PG 3	341	4	109	454

- All PIN members submitting baseline data have the opportunity to reduce the number of potential MT CAH inpatient harm events related to medication use.

II. Inpatients Receiving Med Rec by Process Step: Aggregate Composite Score = 8.1



	Admit Med List	At Transitions	At Discharge
Agg 2014	80.1%	78.4%	83.9%
PG 1 2014	51.7%	50.0%	81.0%
PG 2 2014	89.2%	89.3%	89.9%
PG 3 2014	80.6%	81.8%	81.0%

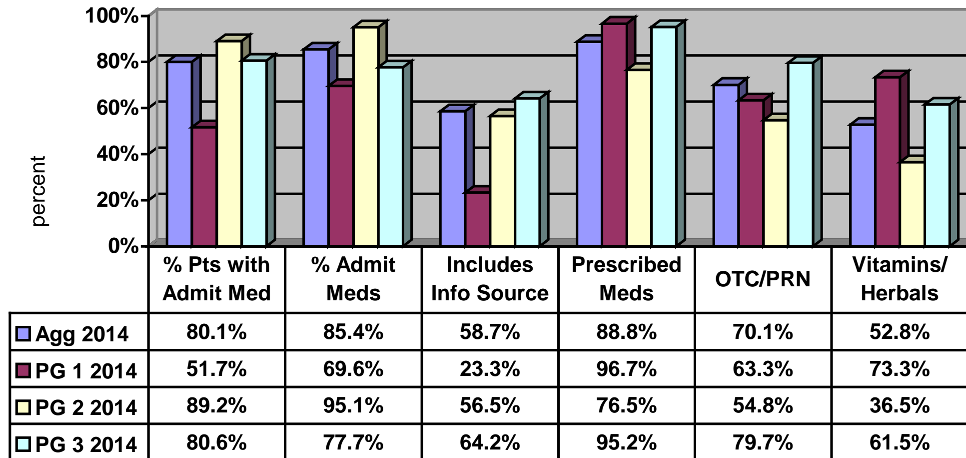
Doing Well

- The majority of CAH inpatients receive med rec services at admission, Service transitions and at discharge

Opportunities for Improvement

- Improve consistency in obtaining a complete, accurate admission medication list for all CAH inpatients
- Reconcile meds at all inpatient transitions
- Reconcile meds for 100% of patients discharged alive

II. Obtain and Reconcile an Accurate, Complete Medication List upon Admission



	% Pts with Admit Med	% Admit Meds	Includes Info Source	Prescribed Meds	OTC/PRN	Vitamins/ Herbals
Agg 2014	80.1%	85.4%	58.7%	88.8%	70.1%	52.8%
PG 1 2014	51.7%	69.6%	23.3%	96.7%	63.3%	73.3%
PG 2 2014	89.2%	95.1%	56.5%	76.5%	54.8%	36.5%
PG 3 2014	80.6%	77.7%	64.2%	95.2%	79.7%	61.5%

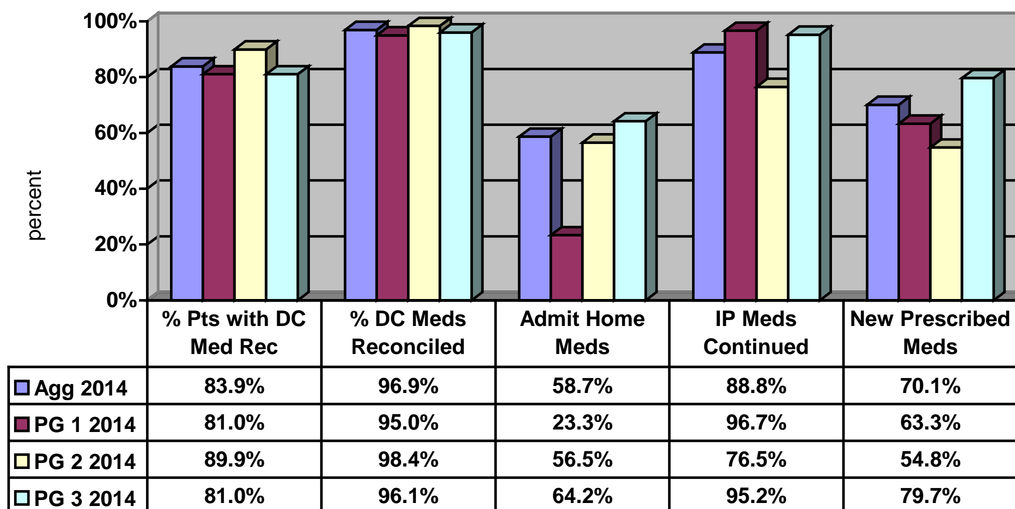
Doing Well

- A current medication list is obtained for the majority of admitted patients
- Admission med list includes prescribed medications

Opportunities for Improvement

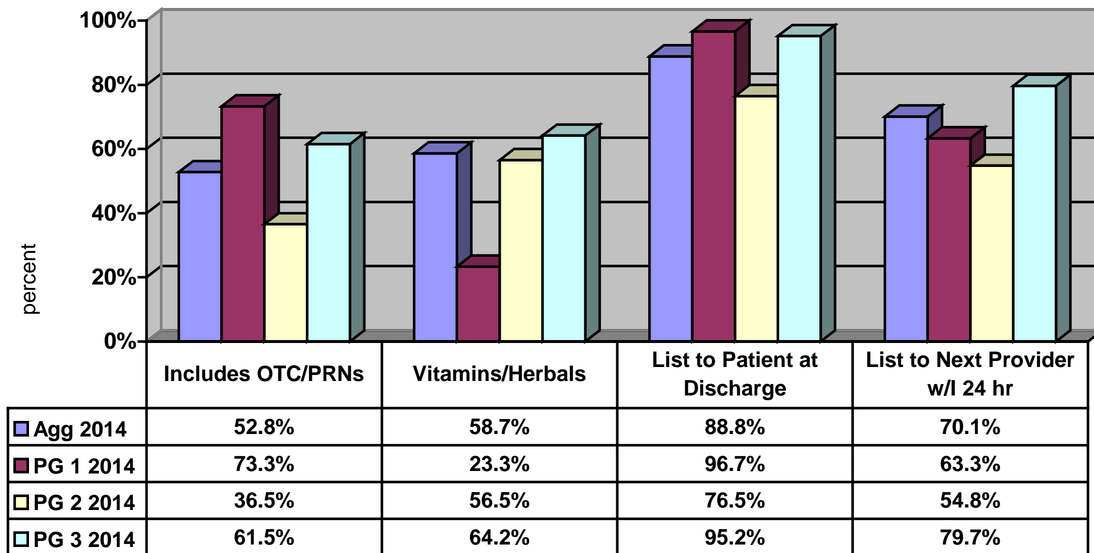
- Obtain admit med list for 100% admitted patients
- Improve consistency in reconciling all meds on the admission medication list
- Include the source of information for meds on the admission med list
- Include OTC and PRN meds on the admission med list
- Include vitamins and herbals on the admission med list

III. Reconcile Meds at Discharge and Provide an Accurate, Complete Discharge Medication List



	% Pts with DC Med Rec	% DC Meds Reconciled	Admit Home Meds	IP Meds Continued	New Prescribed Meds
Agg 2014	83.9%	96.9%	58.7%	88.8%	70.1%
PG 1 2014	81.0%	95.0%	23.3%	96.7%	63.3%
PG 2 2014	89.9%	98.4%	56.5%	76.5%	54.8%
PG 3 2014	81.0%	96.1%	64.2%	95.2%	79.7%

III. Medication Reconciliation at Discharge and the Discharge Medication List, cont



	Includes OTC/PRNs	Vitamins/Herbals	List to Patient at Discharge	List to Next Provider w/I 24 hr
Agg 2014	52.8%	58.7%	88.8%	70.1%
PG 1 2014	73.3%	23.3%	96.7%	63.3%
PG 2 2014	36.5%	56.5%	76.5%	54.8%
PG 3 2014	61.5%	64.2%	95.2%	79.7%

Doing Well

- The majority of inpatients discharged alive receive med rec at discharge
- The discharge med rec includes hospital meds the patient was still taking at discharge

Opportunities for Improvement

- Include all home meds listed on the admission med list
- Include all new prescribed meds
- Include OTC and PRN meds the patient may take
- Include vitamins and herbals the patient may take
- Provide a complete, accurate discharge med list to 100% of patients discharged alive
- Provide a complete, accurate discharge med list to the next expected provider within 24 hours of discharge

Medication Reconciliation Improvement Study

Re-Measurement Final Report

Aggregate and Peer Group Report

Data Collection: Q4- 2014
Number of cases: 328
Report date: March 2015

The 1999 Institute of Medicine Report, *To Err is Human*, identified adverse medication events as a major cause of unintended harm to hospitalized patients nation-wide. The report recommended hospitals focus on implementing safe medication practices to reduce harm to patients. Since that time, medication reconciliation has become not only a best-practice, but a standard of care. CAHs face many barriers to implementing effective medication reconciliation processes. This clinical improvement study seeks to support MT CAHs in overcoming those barriers in order to achieve and maintain this national goal for patient safety.

Participants

14 CAHs representing all 5 PIN peer groups submitted 328 cases for the re-measure data collection, 9 of which also participated in the baseline measure. (17 CAHs representing all five PIN peer groups submitted 447 cases for the baseline data collection.)

Limitations

Factors limiting ***re-measure*** data analysis include:

- Only one facility each from peer group 1 and peer group 4 submitted re-measure data. The number of cases submitted by these two facilities is not sufficient to ensure a sound basis for benchmarking peer groups 1, 4 alone, so to enable these facilities to be compared to their peers, they were grouped together as PG 1&2 and PG 4&5.
- There was no way to report patients who died prior to discharge on the report, a field for NA should have been added to include these cases
- The transition to Swing Bed was not clearly explained; this resulted in some confusion during reporting and in facilities not reporting cases involving an inpatient transfer. Therefore, transfers are not included in the re-measurement report

Findings

Baseline Reports:

- 80% of MT CAH patients receive medication reconciliation services upon admission to the hospital
- 20% of inpatients represented in this data collection transitioned from one inpatient service to another during their hospital stay. Of those, 78% had their medications reconciled at the time of transition.
- 84% of CAH inpatients discharged alive had their medications reconciled at the time of discharge.

Re-measure Reports:

- An increase to 85% of MT CAH patients receive medication reconciliation services upon admission to the hospital
- So few MT CAHs reported cases with transfers during the re-measure period that med rec occurring during transfers will not be reported for the re-measurement period
- An increase to 93% of CAH inpatients discharged alive had their medications reconciled at the time of discharge.
- For the 9 facilities reporting baseline and re-measurement data, performance improved for all measures except one (# of medications with initials, date & time indicating they were reconciled). This is most likely due to the increased use of EHRs which allow the time-stamp to confirm the reconciliation.
- ***New measure:*** of the 328 cases reported for the re-measurement only 56 cases had a complete reconciliation of their medications. (17.0%)

Opportunities for MT CAH medication reconciliation improvement work include:

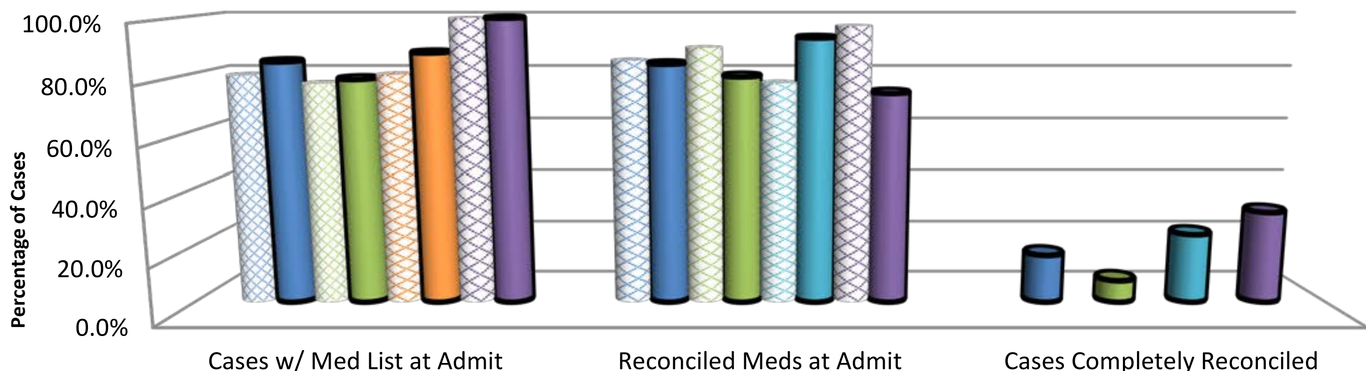
- Although most measures included in medication reconciliation were improved, the large majority of patients did not received med rec at every opportunity.
- Identify the source of information when collecting the patient's list of medications during admission still needs improvement
- Ensuring vitamins and herbals are included in all medication reconciliations is still the largest challenge

Largest Improvements:

- Evidence that the reconciled discharge med list was forwarded to the patient's next expected medical provider within 24 hrs. of discharge improved by over 30%!!
- Vitamins and Herbals being reported on medication lists increased by almost 20%
- Reporting Source Info on the med list increased by almost 19%

Medication Reconciliation at Admission

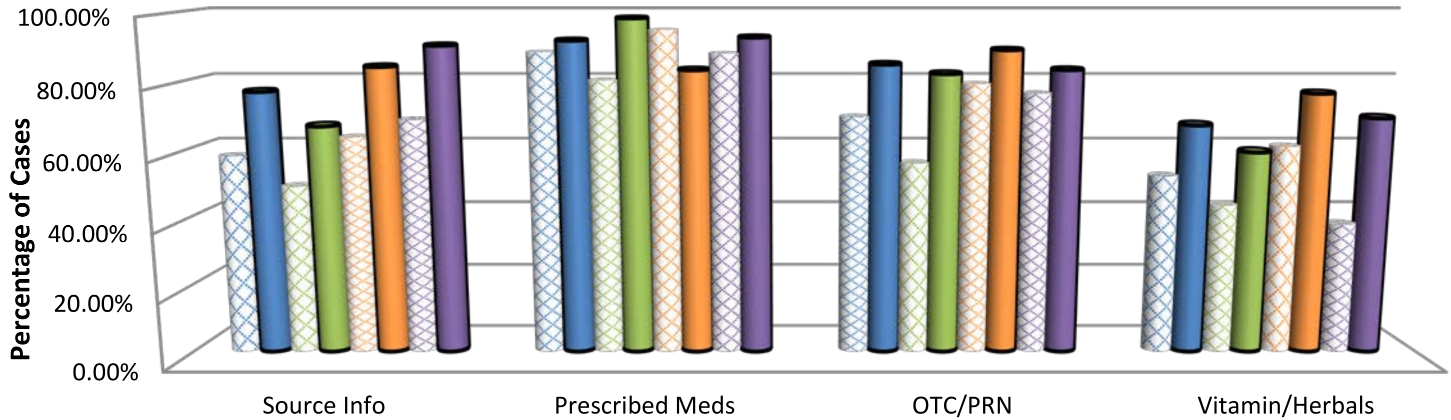
B= Baseline R= Re-measure



	Cases w/ Med List at Admit	Reconciled Meds at Admit	Cases Completely Reconciled
Aggregate- B	80.4%	85.4%	
Aggregate- R	85.1%	84.3%	17.1%
PG 1&2- B	77.5%	89.9%	
PG 1&2- R	79.0%	80.0%	7.8%
PG 3- B	80.6%	77.7%	
PG 3- R	88.1%	93.3%	24.6%
PG 4 &5- B	100.0%	97.3%	
PG 4&5- R	100.0%	74.2%	32.6%

Medication Reconciliation at Admission (cont.)

Of those cases where the medical record contains evidence that at the time of presentation or admission to the CAH, a current, accurate list of medications the patient has been taking was obtained; what percentage of cases had the following information documented?



	Source Info	Prescribed Meds	OTC/PRN	Vitamin/Herbals
Aggregate- B	58.66%	88.83%	70.11%	52.79%
Aggregate- R	77.42%	92.11%	85.30%	67.74%
PG 1&2- B	49.66%	80.69%	56.55%	44.14%
PG 1&2- R	67.42%	98.48%	82.58%	59.85%
PG 3- B	64.17%	95.19%	79.68%	61.50%
PG 3- R	84.62%	83.65%	89.42%	76.92%
PG 4 &5- B	69.23%	88.46%	76.92%	38.46%
PG 4&5- R	90.70%	93.02%	83.72%	69.77%

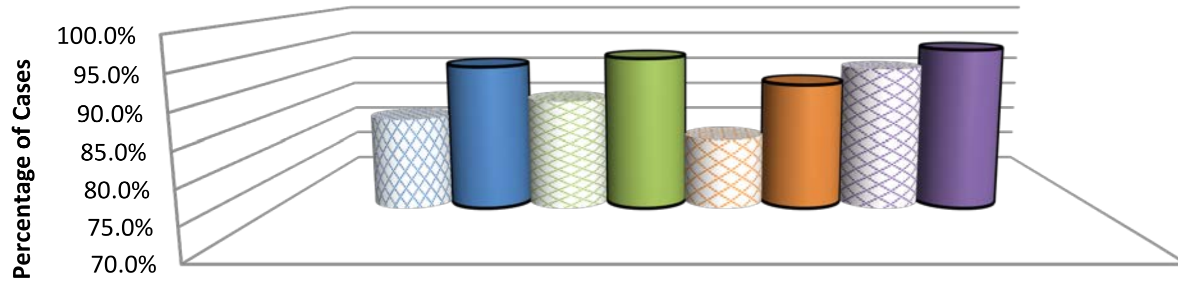
- All peer groups show improvement in reporting Source Information; however, reporting Source Information is only occurring in 77.42% of the total cases.
- Med lists are more frequently including prescribed meds, OTC/PRN meds and vitamins and herbals; improvement needed for including vitamins and herbals on med lists.

Medication Reconciliation at Inpatient Transfer

Only 7 facilities reported cases involving patient transition from the admission service to any other acute care service during the patient's admission and of those only 4 reported any actual data relating to medication reconciliation. With no comparison data available, it was determined that reporting anything about med rec during patient transfers would not be included in this re-measurement report.

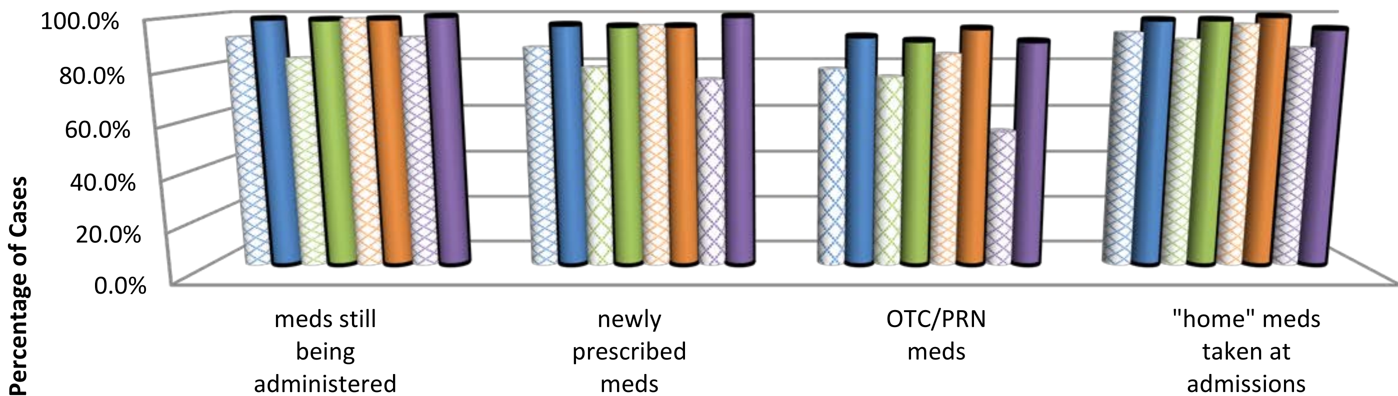
Medication Reconciliation at Discharge

When the patient was discharged alive from CAH acute care services, does the medical record contain a current, accurate list of medications the patient was receiving at the time of discharge?



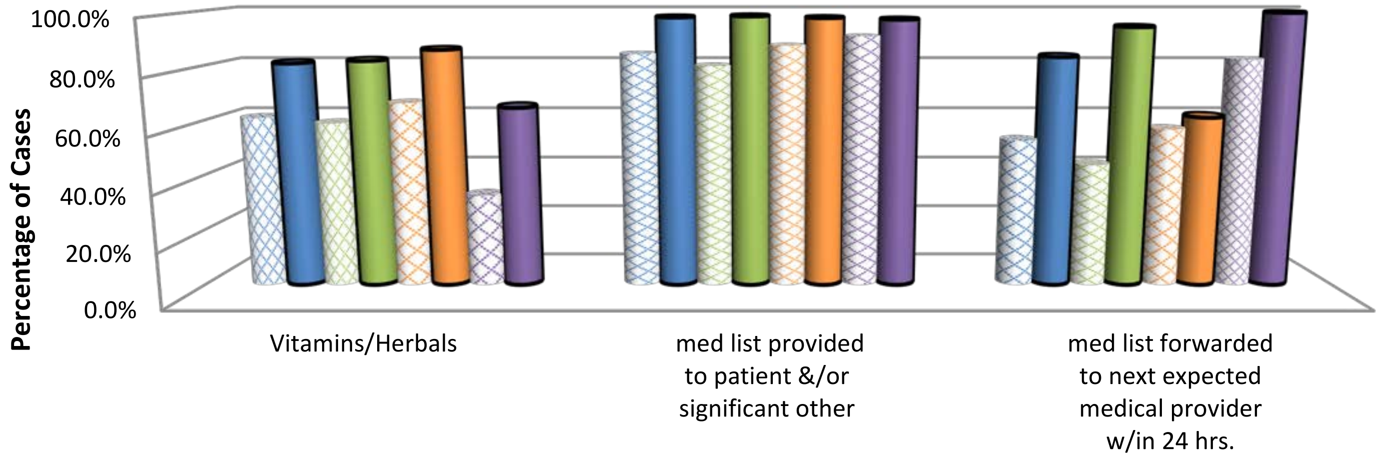
	Total
Aggregate- B	84.3%
Aggregate- R	92.7%
PG 1&2- B	87.2%
PG 1&2- R	94.0%
PG 3- B	81.0%
PG 3- R	89.8%
PG 4 &5- B	92.3%
PG 4&5- R	95.3%

Of those cases where the medical record contains evidence that at the time of a patient being discharge alive from the CAH, a current, accurate list of medications the patient was receiving was obtained; what percentage of cases had the following information documented?



	meds still being administered	newly prescribed meds	OTC/PRN meds	"home" meds taken at admissions
Aggregate- B	91.7%	87.7%	79.2%	93.6%
Aggregate- R	99.0%	96.7%	92.1%	98.7%
PG 1&2- B	83.4%	79.8%	76.1%	90.8%
PG 1&2- R	98.7%	96.2%	90.4%	98.7%
PG 3- B	98.9%	96.3%	85.1%	96.8%
PG 3- R	99.1%	96.2%	95.3%	100.0%
PG 4 &5- B	91.7%	75.0%	54.2%	87.5%
PG 4&5- R	100.0%	100.0%	90.2%	95.1%

Medication List at Discharge: (cont.)



	Vitamins/Herbals	med list provided to patient &/or significant other	med list forwarded to next expected medical provider w/in 24 hrs.
Aggregate- B	62.1%	85.3%	53.9%
Aggregate- R	81.9%	98.4%	84.2%
PG 1&2- B	60.1%	81.0%	44.8%
PG 1&2- R	82.8%	98.7%	94.9%
PG 3- B	67.6%	88.3%	58.0%
PG 3- R	86.8%	98.1%	62.3%
PG 4 &5- B	33.3%	91.7%	83.3%
PG 4&5- R	65.9%	97.6%	100.0%

- All peer groups showed improvement in medication reconciliation during the discharge process!
- Some facilities still struggle to add Vitamins/Herbal and OTC/PRN medications to the med list
- Some facilities fail to document if the med list is forwarded to the patient's next expected medical provider within 24 hours.

CAH Medication Reconciliation
Baseline Data Collection

Use this tool for abstracting medical records for the baseline data collection period, Oct – Dec 2013 cases.

Cases to Include: For facilities with less than or equal to 10 inpatient admissions a month: all inpatients admitted to the CAH, including obs greater than 24 hrs, intensive care, hospice and swing bed patient admissions. For patients admitted to acute care and then transferred to a swing bed, this is two admissions; abstract each admission separately.

For facilities with greater than 10 inpatient admissions a month: a random sample of 30 inpatients admitted to the CAH, including intensive care, hospice and swing bed patient admissions. For patients admitted to acute care and then transferred to a swing bed, this is two admissions; abstract each admission separately.

Cases to Exclude: All newborns, same day surgery, emergency department and other ambulatory care patients, all patients with a length of stay (LOS) less than 24 hours.

Facility Name: ______________________________ PIN Member Number: ________

Facility Contact: _____________________________ Case Number: ________________

1. Date of admission (mm/dd/yy): ______ - ______ - ______

2. Admitted to CAH inpatient service: _____ yes _____ no (STOP ABSTRACTION; not a qualifying case)

3. Does the medical record contain evidence that at the time of presentation or admission to the CAH, a current, accurate list of medications the patient has been taking was obtained?

   _______ No (skip to question 4)

   _______ Yes ______ Number of medications on the list

   _______ Number with initials, date & time note indicating they were reconciled

Complete the following table as it relates to the admission medication list:

	Yes	No
a. the source of info about meds on the admit med list is documented		
b. the list includes info about prescribed meds the patient has been taking at home, or a note indicating 'none' when the patient has not been taking a prescribed medication		
c. the list includes information about over the counter (OTC) and/or PRN meds, or a note indicating 'none' when the patient has not been taking OTC or PRN meds		
d. the list includes information about vitamins and/or herbals, or a note indicating 'none' when the patient has not been taking vitamins or herbals		

4. Did the patient transition from the admission service to any other acute care service at any time during this admission?

______ No (skip to question 6)

______ Yes ______ Number of transitions among acute care services during this admission

5. When the patient transitioned one or more times between acute care services, does the medical record contain evidence of medication reconciliation at the time of ***EACH*** transition?

Note: Reconciliation is indicated by documentation of initials/date/time of individual conducting the reconciliation. When an electronic MR is in place which requires physician reconciliation of meds, answer 'yes'.

_______ No ______ Yes

6. When the patient was discharged alive from CAH acute care services, does the medical record contain a current, accurate list of medications the patient was receiving at the time of discharge?

_______ No (STOP ABSTRACTION, submit this case)

______ Yes ______ Number of medications receiving at time of acute care discharge

______ Number with initials, date & time note indicating they were reconciled at the time of acute care discharge

Complete the following table:

	Yes	No
a. the list includes "home" meds patient was taking at time of admission or a note indicating 'none' when the patient has not been taking any "home" medication		
b. the list includes all inpatient meds still being administered at time of discharge, or a note indicating 'none' when the patient is not still being administered medication		
c. the list includes new prescribed medications the patient is to take after discharge, or a note indicating 'none' when the patient has not been prescribed medication		
d. the list includes OTC and/or PRN medications may take after discharge, or a note indicating 'none' when the patient has not been taking OTC or PRN meds		
e. the list includes vitamins and herbals the patient may continue after discharge, or a note indicating 'none' when the patient has not been taking vitamins or herbals		
f. there is evidence the reconciled list was provided to the patient at discharge		
g. there is evidence the reconciled med list was provided to the patient/SO at discharge		
h. there is evidence the reconciled discharge med list was forwarded to the patient's next expected medical provider within 24 hr of discharge		

****

Submit this case using the web page, by mail, or email no later than March 31, 2014.

Submit no more than 30 total cases for the 3 month data collection period (Oct – Dec 2013)

Contact for questions: **Kathy Wilcox** **Clint Taranik or**
kathy@mtha.org **clint@mtha.org**
1-406-461-6186 **1-800-351-3551**