



Clinical Safety & Effectiveness

Cohort 14 Team 1

Accurate Problem List facilitates:

Medication Reconciliation, Reimbursement and Error Reduction



Educating for Quality Improvement & Patient Safety

Background

- The active problem list is frequently out of date causing confusion for the primary care physician and among covering providers. This can effect the patient's care and can lead to medical errors.





ARTICLE REVIEWED

Standardizing the Problem List in the Electronic Health Record (EHR) to Improve Patient Care:

Prepared by Qualis Health Washington & Idaho Regional Extension Center, from the Office of the national Coordinator for Health Information Technology, Department of Health and Human Services.

Standardizing the Problem List in the Electronic Health Record (EHR)

- The problem-oriented medical record, which became the standard for clinical charting over 40 years ago, has become even more important with the computerization of health information.
- Organizations must implement system-wide standardized processes to assure that problem lists are kept up to date and accurate. This change requires careful attention to the principles and proficiency in the practice of disease management.

Meet the Team

- Division

- Fozia Ali, MD, Clinical Assistant Professor, Team Leader
- Marcela Riojas, MD, Clinical Assistant Professor, Co-leader
- Amy Michelle Singer, MD, Resident (PGY-1)
- Mary Anne De La Cruz Estacio, MD, Resident (PGY-1)
- Anna Tenorio, MD, Resident (PGY-1)
- Jennifer Smith, MD, Resident (PGY-2)
- Maria Montanez, MD, Resident (PGY-2)
- Yi Su, Information Services (IT)
- Edna Cruz, M. Sc., RN, CPHQ, Facilitator

Sponsor Department:

- Ramin Poursani, MD UT-Medicine
- Roxanne Rosa, UHS Clinic Manager

WHAT IS THE TEAM TRYING TO ACCOMPLISH ?



AIM STATEMENT: To increase the accuracy of the “active problem list” in the primary care clinic patient’s e-MR through review and update at the time of office visit from percentage accuracy of **40.6%** to **90%** by May 31, 2014.

Definition of "active problem list"

- Active list implies what is currently true in regards to the patient's significant medical history. Therefore, the clinician should update the chronic problem list, family history, surgical history, temporary problems, and past medical history.

Methodology & Design

- This is a quantitative study using multiple timed series of the measuring Pre-Intervention data used as the control and Post-Intervention data used as the study population to demonstrate percent accuracy rate within the “Active Problem List” in the primary care clinic patient’s e-MAR.
- The metric used for comparison and to determine improvement over course of time is:

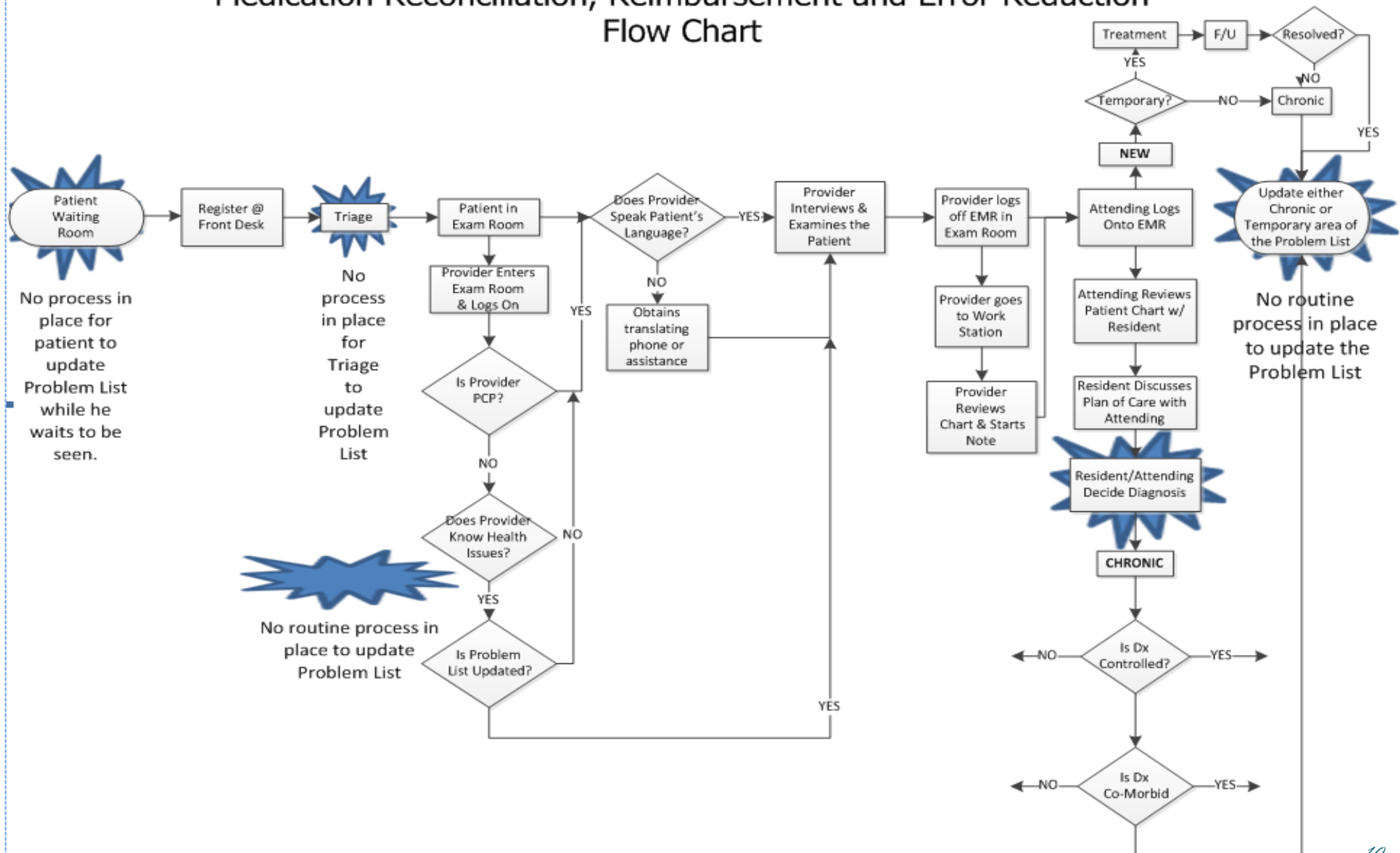
Total Number of Accurate Problems/Total Number of Problems

- Accurate billing and error reduction will be used to determine return on investment.

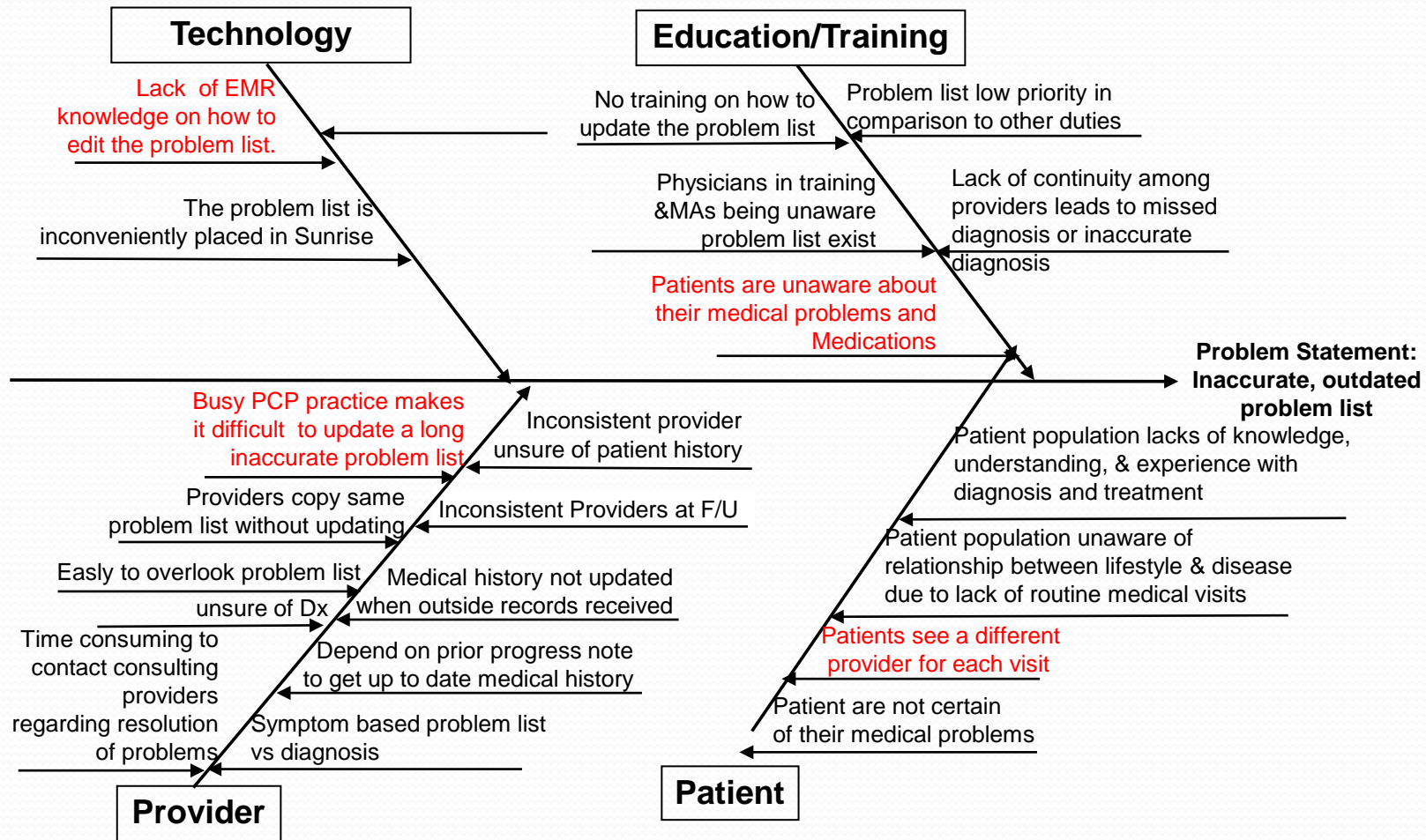
Project Milestones

- Team Created January, 2014
- AIM statement created January, 2014
- Team Meetings Feb2014, May2014
- Background Data Feb 18, 2014
- Brainstorm Sessions,
Workflow and Fishbone Analyses
- Interventions Implemented March 25, 2014
- Data Analysis April & May2014
- CS&E Presentation June 6, 2014

Improving the Accuracy of the Problem List facilitates Medication Reconciliation, Reimbursement and Error Reduction Flow Chart



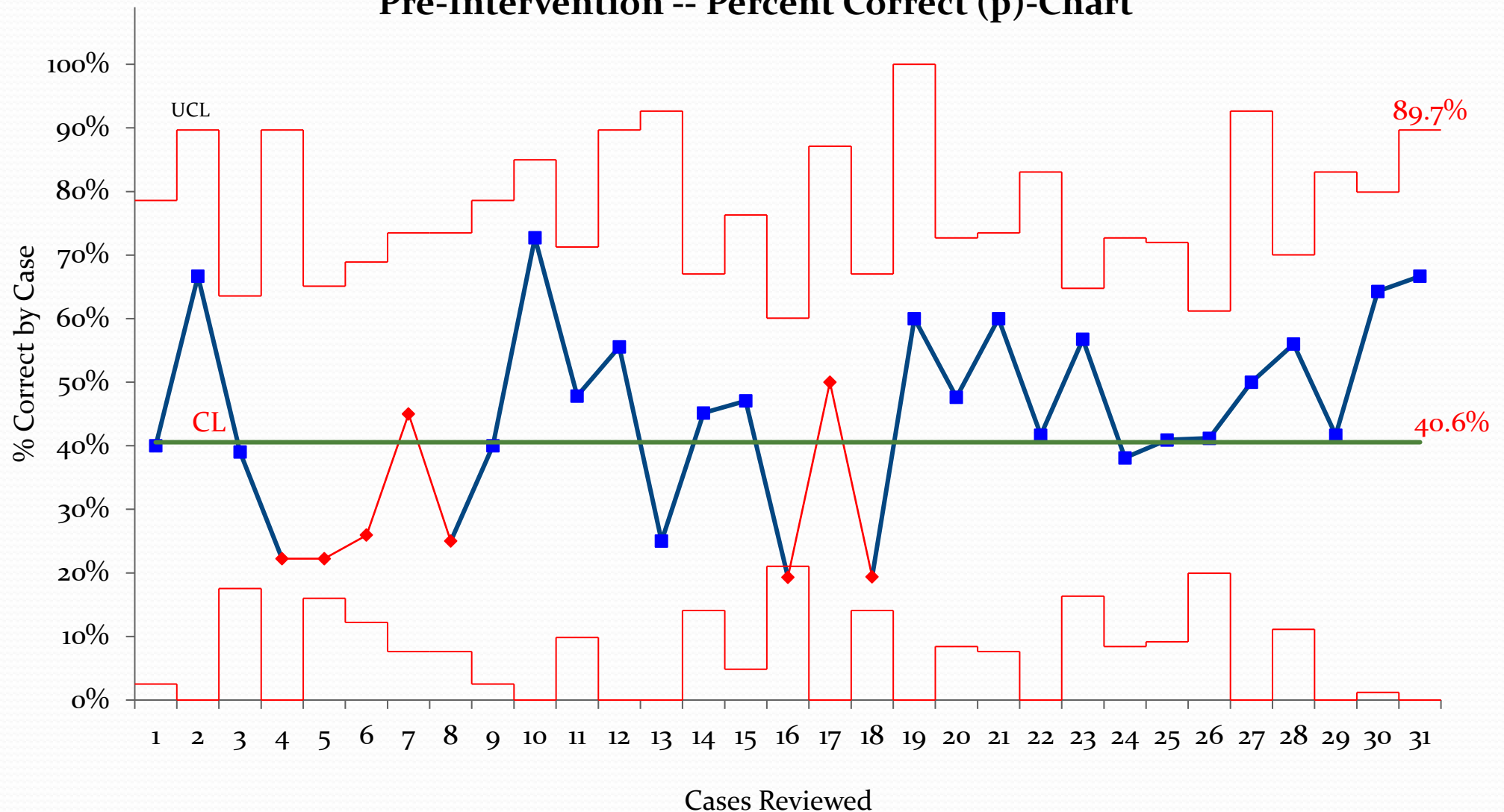
Improving the Accuracy of the Problem List facilitates Medication Reconciliation, Reimbursement and Error Reduction Cause & Effects Analysis



Baseline Data

Number	Active Problems	Total Listed problems	Percent Accurate
1	6	15	40%
2	6	9	66.6%
3	16	41	39%
4	2	9	22.2%
5	8	36	22.2%
6	7	27	25.9%
7	9	20	45%
8	5	20	25%
9	6	15	40%
10	8	11	72.7%
11	11	23	47.8%
12	5	9	55.6%
13	2	8	25%
14	14	31	45.2%
15	8	17	47.1%
16	11	57	19.3%
17	5	10	50%
18	6	31	19.4%
19	3	5	60%
20	10	21	47.6%
21	12	20	60%
22	5	12	41.7%
23	21	37	56.8%
24	8	21	38.1%
25	9	22	40.9%
26	21	51	41.2%
27	4	8	50%
28	14	25	56%
29	5	12	41.7%
30	9	14	64.3%
31	6	9	66.7%

**Accurate Problem List facilitates:
Medication Reconciliation, Reimbursement and Error Reduction**
Pre-Intervention -- Percent Correct (p)-Chart



Intervention Plans & Lessons Learned

Sunrise upgrade :

- 2/2014 : This intervention was planned prior to the start of CS&E and was implemented as scheduled.

Provider's education about how to update problem list

- We found that **lack of knowledge** about how to update problem was major barrier towards keeping problem list accurate.

Provider's reviewing problem list during patient's visit

- We anticipated difficulty implementing this **additional process** change as the primary care clinic is presently fully staffed and very busy.

Intervention Plans & Lessons Learned

MA's education about importance of verifying problem list with med reconciliation

- We discussed about MA's education as a **re-designed step** to encourage MA's involvement in medication reconciliation along with problem list reconciliation. However this can be done accurately only if provider has updated both medications and problem list in EMR at the time of visit.

Patient verifying problem list at each visit

- We anticipated difficulty implementing this **additional process** change as many of the patients cannot read or have a low level of understanding regarding medical terminology such as diagnosis and treatment.

Provider's education or training

We will continue to focus on providing training for all providers on how to document the problem list within Sunrise most efficiently

Next few slides are some examples from a training video for providers to learn how to update “problem list”.

<https://uhssa.acms.com/p2mn67ge86u/>

How to Move Problems to a Different Category

UHSTEST, CHER Health Issues: Currently showing - Health Issue Types (All); Status (Active Only); Entered By (All)

H	Health Issue	Code	Onset	POA	Relationship to	Copy To	Status	Entered
- Temp Problem (1)								
	Asthma	493.90					Active	Feb-03-2014 14:41
- Chief Complaint (3)								
	Type II diabetes mellitus with...	250.10	Jun-2...				Active	Jan-23-2014 01:58
H	Hemiplegia	342.90					Active	Jul-24-2013 14:05
H	Acute lower urinary tract infe...	599.0	Jun-1...				Active	Oct-16-2012 10:11
- Admit Diagnosis (1)								
H	Acute appendicitis	540.9					Active	Jun-19-2013 16:29
- Discharge Dx (3)								
	Family hx-asthma	V17.5					Active	Jan-17-2014 13:37
	Family history of asthma	V17.5					Active	Jan-17-2014 13:37
	Acid reflux disease	530.81					Active	Jul-01-2013 11:07

Select "Chronic Problem"

Add New Health Issue

Select a Type:

- Admitting
- Axis I
- Axis II
- Axis III
- Chief Complaint
- Chronic Problem
- Clinic F/U Prob
- Discharge Dx
- Etiologic Dx.
- Family History
- Impairment_Grp
- Past Med Hx

Favorites Browse Full Catalog Search

Select by Favorites:

- + Endocrinology
- + ENT
- + Eye
- + GI
- + GU system
- + neurology

How to Move Problems to a Different Category

The screenshot displays a medical software interface. At the top, a toolbar contains several icons. Two buttons, 'Quick Copy' and 'Copy with Details', are highlighted with a red box. Callout boxes point to these buttons: 'Copies the health issue and the code.' for 'Quick Copy' and 'Copies the issue and allows you to enter health details.' for 'Copy with Details'.

Below the toolbar is a table of health issues. The table has columns for POA, Relationship to, Copy To, Status, and Entered. The issues are categorized into sections: Temp Problem (1), Chief Complaint (3), Admit Diagnosis (1), and Discharge Dx (3).

POA	Relationship to	Copy To	Status	Entered	
- Temp Problem (1)					
			Chronic...	Active	Feb-03-2014 14:41
- Chief Complaint (3)					
			Active	Jan-23-2014 01:58	
			Active	Jul-24-2013 14:05	
			Active	Oct-16-2012 10:11	
- Admit Diagnosis (1)					
			Active	Jun-19-2013 16:29	
- Discharge Dx (3)					
			Active	Jan-17-2014 13:37	
			Active	Jan-17-2014 13:37	
			Active	Jul-01-2013 11:07	

At the bottom, there is a section titled 'Add New Health Issue'. It includes a 'Select a Type:' dropdown menu with options like 'Admitting', 'Axis I', 'Axis II', 'Axis III', 'Chief Complaint', 'Chronic Problem', 'Clinic F/U Prob', 'Discharge Dx', 'Etiologic Dx.', 'Family History', 'Impairment_Grp', and 'Past Med Hx'. To the right of this menu is a 'Select by Favorites:' list with categories: Endocrinology, ENT, Eye, GI, GU system, and neurology.

How to Delete or Discontinue Problems

Toolbar: Add New, Show/Modify, Discontinue, Delete, Quick Copy, Copy with Details, Add To Favorites, Manual Mapping, Preferred Mapping, Type Default Filter, Reset, Clear All Filters, Column Selection, Grid Options

UHSTEST, CHER Health Issues: Currently showing - Health Issue Types (All); Status (Active Only); Entered By (All)

	Health Issue	Code	Onset	POA	Relationship to	Copy To	Status	Entered
- Chronic Problem (1)								
	Asthma	493.90					Active	Feb-03-2014 14...
- Temp Problem (1)								
	Asthma	493.90					Active	Feb-03-2014 14:41
- Chief Complaint (3)								
	Type II diabetes mellitus with...	250.10	Jun-2...				Active	Jan-23-2014 01:58
H	Hemiplegia	342.90					Active	Jul-24-2013 14:05
H	Acute lower urinary tract infe...	599.0	Jun-1...				Active	Oct-16-2012 10:11
- Admit Diagnosis (1)								
H	Acute appendicitis	540.9					Active	Jun-19-2013 16:29
- Discharge Dx (3)								
	Family hx-asthma	V17.5					Active	Jan-17-2014 13:37

Add New Health Issue

Select a Type:

- Admitting
- Axis I
- Axis II
- Axis III
- Chief Complaint
- Chronic Problem
- Clinic F/U Prob
- Discharge Dx
- Etiologic Dx.
- Family History
- Impairment_Grp
- Post Med Hx

Favorites | Browse | Full Catalog Search

Select by Favorites:

- + Endocrinology
- + ENT
- + Eye
- + GI
- + GU system
- + neurology

How to Delete or Discontinue Problems

The screenshot displays a medical software interface with a toolbar at the top containing icons for 'Add New', 'Show/Modify', 'Discontinue', 'Delete', 'Quick Copy', 'Copy with Details', 'Add To Favorites', 'Manual Mapping', 'Preferred Mapping', 'Type Default Filter', 'Reset', 'Clear All Filters', 'Column Selection', and 'Grid Options'. Below the toolbar, a status bar reads: 'UHSTEST, CHER Health Issues: Currently showing - Health Issue Types (All); Status (Active Only); Entered By (All)'. The main area shows a table of health issues with columns for 'H', 'Code', 'ICD-9', 'Type', 'Onset', 'POA', 'Relationship to Patient', 'Copy', 'Status', and 'Entered'. The table is organized into sections: 'Chronic Problem (3)', 'Chief Complaint (3)', 'Admit Diagnosis (1)', and 'Discharge Dx (3)'. A 'Note' box is overlaid on the table, containing the following text:

Note:

Be sure to only delete issues that are no longer valid or that were entered by mistake.

If an issue is no longer active but is still valid, use the "Discontinue" feature instead of "Delete." "Delete" should only be used if the issue was entered by mistake.

At the bottom of the interface, there is a section titled 'Add New Health Issue' with tabs for 'Favorites', 'Browse', and 'Full Catalog Search'. The 'Favorites' tab is selected, showing a list of categories: 'Endocrinology', 'ENT', 'Eye', 'GI', and 'GU system'.

To Reactivate Discontinued Problems

Add New
 Show/Modify
 Discontinue
 Delete
 Quick Copy
 Copy with Details
 Add To Favorites
 Manual Mapping
 Preferred Mapping
 Type Default Filter
 Reset
 Clear All Filters
 Column Selection
 Grid Options

UHSTEST, CHER Health Issues: Currently showing - Health Issue Types (All); Status (Active Only); Entered By (All)

Click "Clear all Filters"

H	Health Issue	Code	ICD-9	Type	Onset	POA	Relationship to Patient	Status	Entered
- Chronic Problem (3)									
	Asthma	493.90	493.90	Chronic Probl...				Active	Feb-0...
	Type II diabetes m...	250.10	250.10	Chronic Problem	Jun-27-2013			Active	Jun-27...
	Diabetes mellitus...	250.02	250.02	Chronic Problem	Jun-27-2013			Active	Jun-27...
- Chief Complaint (3)									
	Type II diabetes m...	250.10	250.10	Chief Complaint	Jun-27-2013			Active	Jan-23-...
	Hemiplegia	342.90		Chief Complaint				Active	Jul-24-...
	Acute lower urinar...	599.0	599.0	Chief Complaint	Jun-17-2013			Active	Oct-16...
- Admit Diagnosis (1)									
	Acute appendicitis	540.9	540.9	Admit Diagnosis				Active	Jun-19...
- Discharge Dx (3)									
	Family hx-asthma	V17.5	V17.5	Discharge Dx				Active	Jan-17-...
	Family history of a...	V17.5	V17.5	Discharge Dx				Active	Jan-17-...

Add New Health Issue

Select a Type:

- Chief Complaint
- Chronic Problem
- Clinic F/U Prob
- Discharge Dx
- Etiologic Dx.
- Family History
- Impairment_Grp
- Past Med Hx
- Principle Dx
- Procedure(s)

Favorites Browse Full Catalog Search

Select by Favorites:

- + Endocrinology
- + ENT
- + Eye
- + GI
- + GI system

To Reactivate Discontinued Problems

UHSTEST, CHER Health

Types (All); Status (All); Entered By (All)

Click "Reactivate"

H	Health Issue	Code	ICD-9	Type	Onset	POA	Relationship to Patient	Copy T	Stat	Entered
Chief Complaint (9)										
	Type II diabetes m...	250.10	250.10	Chief Complaint	Jun-27-2013				Active	Jan-23-...
H	Hemiplegia	342.90		Chief Complaint					Active	Jul-24-...
H	Acute lower urin...	599.0	599.0	Chief Complaint	Jun-17-2013				Active	Oct-16-...
H	Nephrotic syndro...	581.9	581.9	Chief Complaint					Disco...	Oct-29-...
H	Bipolar disorder	296.80		Chief Complaint					Canc...	Nov-20-...
H	Back s...	847.0		Chief Complaint					Canc...	Nov-20-...
H	Asthm								Canc...	Feb-04-...
H	Pressure ulcer	707.00	707.00	Chief Complaint					Canc...	Jan-30-...
H	Congenital nephr...	581.9	581.9	Chief Complaint					Canc...	Oct-29-...
Admit Diagnosis (3)										
H	Acute appendicitis	540.9	540.9	Admit Diagnosis					Active	Jun-19-...
H	Abnormal metabo...	250.80	250.80	Admit Diagnosis					Canc...	Jun-27-...

Select item you want to reactivate

Add New Health Issue

Select a Type: **Admitting**

Favorites Browse Full Catalog Search

pressure ulcer

Search Code Only (2 of 485 Results)

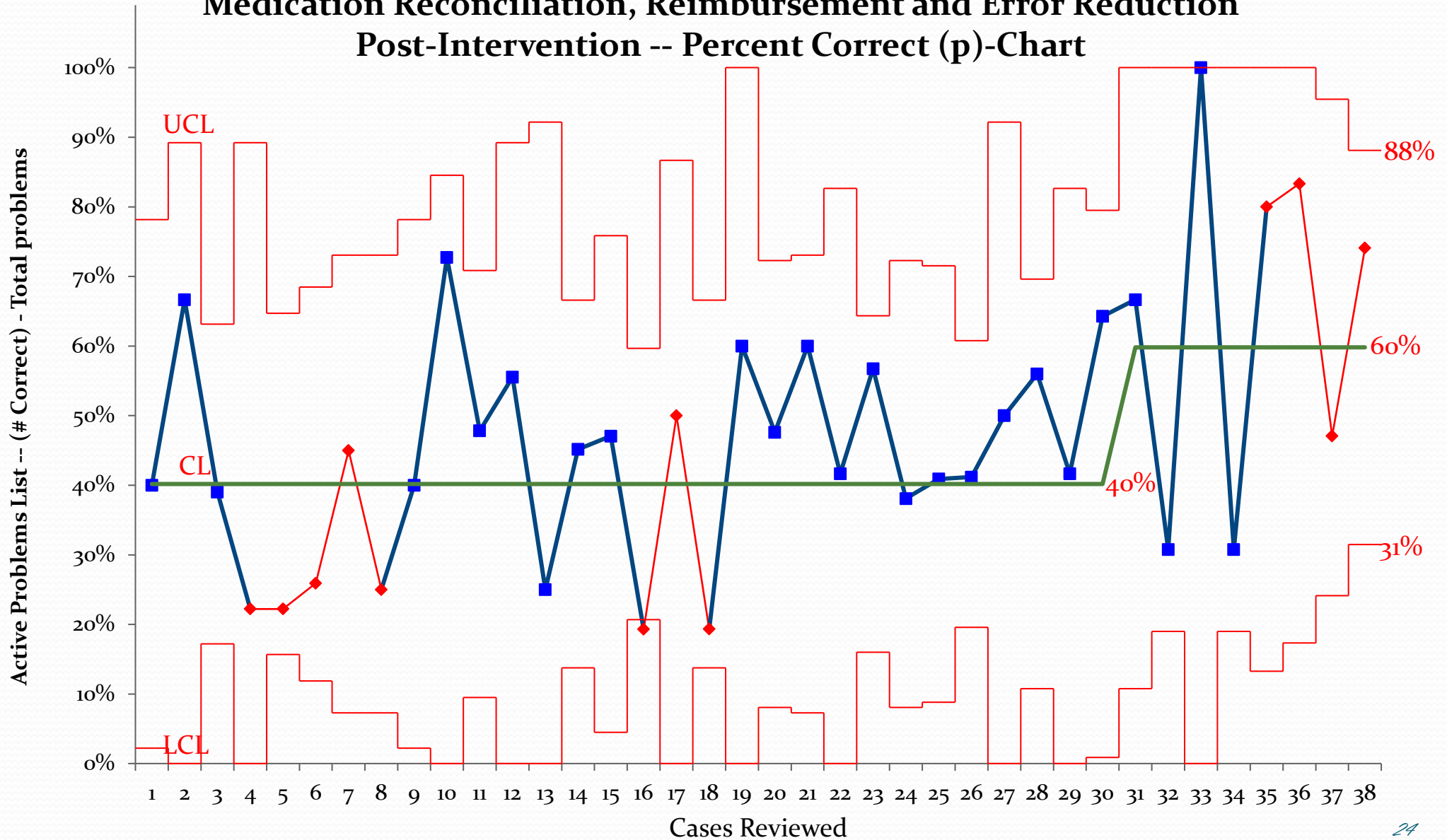
Health Issues	Code	ICD-9	ICD-10	SNOMED CT	Coding Scheme
Add Decubitus ulcer	707.00	707.00	L89.90	400192002	ICD-9-Billable
Add Pressure ulcer	707.00	707.00	L89.90	400192002	ICD-9-Billable
Add Decubitus ulcer of ankle	707.06	707.06	L89.509	301016007	ICD-9-Billable
Add Pressure ulcer, ankle	707.06	707.06	L89.509	301016007	ICD-9-Billable

Barriers to Implementing the Interventions

- Provider's reluctance to implement change
- Patient with multiple medical problems and provider not having enough time to update problem list
- Lack of continuity among providers
- Outside hospital records with new diagnosis or health issues not being reflected in active problem list
- Additional health issues being added while submitting super bill

**Accurate Problem List facilitates:
Medication Reconciliation, Reimbursement and Error Reduction**

Post-Intervention -- Percent Correct (p)-Chart



Sustaining the results

Our goal is to increase accuracy to 90 % for which we plan to:

- Continue encouraging providers to update problem list at each visit
- Have a printed copy of training slides available in all work rooms
- Orient, train and educate incoming residents during sunrise orientation session
- Report with subsequent updates at monthly team meetings. During meetings we should explain why it is important to update problem list.

Return on Investment

Anticipated results

- Reduced confusion among providers, improved efficiency and increase work flow once problem list is accurate
- Reduced medical errors and associated costs
- Improved accuracy of billing and reimbursement due to problem list error reduction and better coding (ICD-10)- for example there are several ICD codes for diabetes and having accurate diagnostic code will improve accuracy of billing.



LITERATURE REVIEWED

Improvement of workflow and processes to ease and enrich meaningful use of health information technology

- This article was published in 'Advances in Medical Education and Practice' Journal in Nov;2013
- Of the six competencies called for by the ACGME, the two that this tool particularly addresses are 'system-based practice' and 'practice-based learning and continuing improvement'.
- According to the US Centers for Disease Control and Prevention, patient harm is the third highest cause of health-related mortality, after heart disease and cancer.

Meaningful use of health information technology

- This toolkit is founded on a systems engineering approach. It includes a motivational and orientation presentation, 128 magnetic pictorial and write-erase icons of 40 designs, dry-erase magnetic board, and five visual aids for reducing cognitive and emotive biases in staff. Pilot tests were carried out in practices in Western New York and Colorado, USA. In addition, the toolkit was presented at the 2011 North American Primary Care Research Group (NAPCRG) meeting and an Agency for Health Research and Quality (AHRQ) meeting in 2013 to solicit responses from attendees.
- PowerPoint presentation for office team motivation and orientation; reviewing HIT issues and current esoteric methods and influence of workflow on safety followed by explanations of the who, what, where, when, why, and how of workflow, illustrated with example scenarios encouraging active input from participants

Future Benefits

- Improved Patient safety
- Improved insight to overall patient's medical conditions among various specialties
- Improvement in patient self awareness about their medical conditions and related medications
- Improvement in Population management
- Improved Reimbursement, problems list to be more specific and compatible with ICD-10



References

- <http://www.dovepress.com/improvement-of-workflow-and-processes-to-ease-and-enrich-meaningful-us-peer-reviewed-article-AMEP>
- J Am Med Inform Assoc 2012;19:591e596. doi:10.1136/amiajnl-2011-000375
- http://www.healthit.gov/sites/default/files/standardizing_the_problem_list_in_the_ambulatory_electronic_health_record_to_improve_patient_care.pdf

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- Edna Cruz, M. Sc., RN, CPHQ,
For continued guidance as Team Facilitator
- Lorri Savoie, Director, Computer Training Services
For providing training to providers

We enjoyed
participating
in this TEAM!

Educating for Quality Improvement & Patient Safety



Thank you!