MA Health Data Consortium
TJC and Hand-Off Communication

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Outline

- The Joint Commission and the Center for Transforming Healthcare
- Improving Hand-off Communication
  - Participants
  - Approaches
  - Lessons learned
- What PHS plans to do with this
- Intersections with MA and the Consortium
- Appendix

TJC Center for Transforming Health Care

- New foundation separate from TJC accreditation arm. www.centerfortransforminghealthcare.org.
- Objective: Develop a systematic approach to addressing high impact health care issues
- Plans to disseminate findings to TJC accredited institutions to improve quality
- Method: recruit quality leaders from major systems to pilot new approaches

Improving Hand-Off Communications

- The transfer of clinical responsibility from one clinical team to another with an effective transfer of the essential clinical information required to safely care for the patient

- Improving Hand Hygiene is the first project of the TJC Center for Transforming Heath Care

- Hand-off Communication is the second

"Could you tell us about the specials and how often the chef washes his hands?"

Background

- Collaborative with the following institutions:
  - Columbia Presbyterian
  - Exempla
  - Fairview Health Services
  - Mayo Clinic
  - Intermountain Healthcare
  - Johns Hopkins
  - Kaiser Permanente
  - North Shore LIJ Health System
  - Partners
  - Stanford Hospital
- Rigorous Lean Six Sigma methodology
- Launched in September 2009

Hand-off Communication Project: Participating Hospitals

System	Hospital	Location	Type	Teaching Hospital	Bed Size	Internal Hand-offs			External Hand-offs		
						ED to IP Floors	ICU to IP Floors	OR to IP Floors	Post Acute to	IP to Post	Community Hospital to Main
Exempla	Lutheran Medical Center	Colorado		No		X					
Fairview Health Services	Fairview Health Services	Minnesota		Yes		X				X	
Intermountain	LDS Hospital	Utah	Community	No		X (Med/Surg)		X (PACU or PACU-IP)			
Kaiser Permanente	Sunnyside Medical Center	Oregon		No		X (CVM, MSPCU, Med/Surg)				X	
Mayo Clinic	Mayo Clinic	Minnesota		Yes		X (MICU/IP)	X (MICU)				
NewYork-Presbyterian Hospital	NewYork-Presbyterian Hospital	New York		Yes		X				X	
North Shore-LIJ Health System	North Shore-LIJ Health System	New York		Yes		X (PICU)		X (PICU or PACU-PICU)			
Partners HealthCare	Partners HealthCare	Massachusetts		Yes					X		X
Stanford Hospital & Clinics	Stanford Hospital & Clinics	California		Yes			X (Medicine Intermediate ICU)				
The Johns Hopkins Hospital	The Johns Hopkins Hospital	Maryland		Yes						X (Pediatrics)	

Range of Hand-offs Considered

- Piloted
  - ED to ICU
  - ICU to Floor
  - Floor to OR
  - Floor to ICU
  - OR to PACU
  - PACU to Floor
  - Floor to SNF
  - Floor to Home Care
  - Hospital to Hospital
  - SNF to ED
  - ED unit to ED unit
- Not tested
  - Shift to Shift
  - Floor to floor
  - PCP to ED
  - Post Acute to Home Care
  - Home Care to PCP
  - To and from Hospice
  - To and from LTACs and IRFs
  - Post acute to hospital testing areas
  - Hospital to PCP
  - LTAC/IRF to ED

Metrics considered

- Satisfaction: Sender and Receiver
- Sentinel events
- Bounce backs
- Readmissions
- Rapid Response calls within 2 hrs of transfer
- Patient satisfaction
- Work-arounds

Lean Six Sigma

- Define
- Analyze
- Measure
- Improve
- Control/Sustain

- Statistically significant validation

Some Observations

- Senders always thought they were doing a better job than receivers did
- 25 different hand-offs but similar solutions:
  - Standard content, Standard process and a “standard process” to develop the process
- Complexity increases exponentially with number of parties involved

Some Conclusions

- It's not rocket science but it's more complicated than we initially thought
- Not just content, but also context, timing, format and culture
- Not just one person with a gel dispenser, it's at least two, and sometimes four parties interacting
- Rigorous attention to measurement permits rapid selection of most effective interventions

Validated Root Causes

	Participating Hospital									
Validated Root Causes	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**
Respect							X			
Method							X	X	X	
Content: Focus on Key Elements /Incorrect or Incomplete Information Given/Complete			X				X	X	X	
Timing: Contacting the Correct Person/Time necessary to Connect with Receiver			X				X	X		
Timing: Time between Handoff & Patient Transfer						X	X			
Concerns/Heads-Up						X				
Sufficient time was Allotted for the Hand-Off						X				
Interruptions during the Hand-Off Process			X			X				
Opportunity to Communicate						X				
Medication Lists						X				
Real (Current) Data not readily Available						X				
Documentation									X	
Timeliness									X	
Setting									X	
Conversation w/ Individual who knows Patient Best								X		

CTH Impact on PHS

- Embedded improvement of transitions and hand-offs in Care Redesign
- Moving to a standard hand-off process
- Making a new argument about transitions
  - Quality
  - Safety
  - Efficiency
- Measure, measure, measure

Drivers Behind Poor Transitions/Hand-Offs

1. Incomplete information
2. Poorly organized information
3. Information not available when needed

The current state:

- Low reliability, variable effectiveness
- Little consistency at any site for any transition
- No consistency across our network: variable content, process, and timing
- Care is less safe and less efficient than it could be!

Create Metrics for the Components of Transitions/Hand-Offs

- Content
- Timeliness
- Process
- Format

- How are these determined?
  - Senders and receivers reach consensus
  - Core set of elements common to all transitions/handoffs

Create Metrics for Content

- Content

See appendix

- The “What”
  - Essential elements applicable to all transitions
  - Disease specific elements
  - Transition specific elements
- The Metrics
  - Presence of each essential element
  - Presence of all essential elements

Example of Disease-Specific Discharge Core Content: CHF

- Most recent Ejection Fraction with date
- Target weight
- Discharge weight/volume status in relation to target
- Discharge BP, heart rhythm
- Most recent creatinine, BUN, and sodium with dates
- What patient should watch for (i.e., volume overload) and who should be contacted
- If EF < 40%, reason if patient is not on ACE I or ARB
- If EF < 40%, reason if patient is not on Beta Blocker
- If atrial fibrillation, reason if patient is not on warfarin

Create Metrics for Timeliness

- Timeliness

- The "When"
  - Relationship between arrival of the patient and arrival of the information
- The Metric
  - Information arrives within agreed upon interval

Create Metrics for the Process

- Process

- The "How"
  - Written
  - Verbal
  - Electronic
  - With patient participation
- The Metric
  - Hand-off performed in agreed upon manner

Create Metrics for the Format

- Format

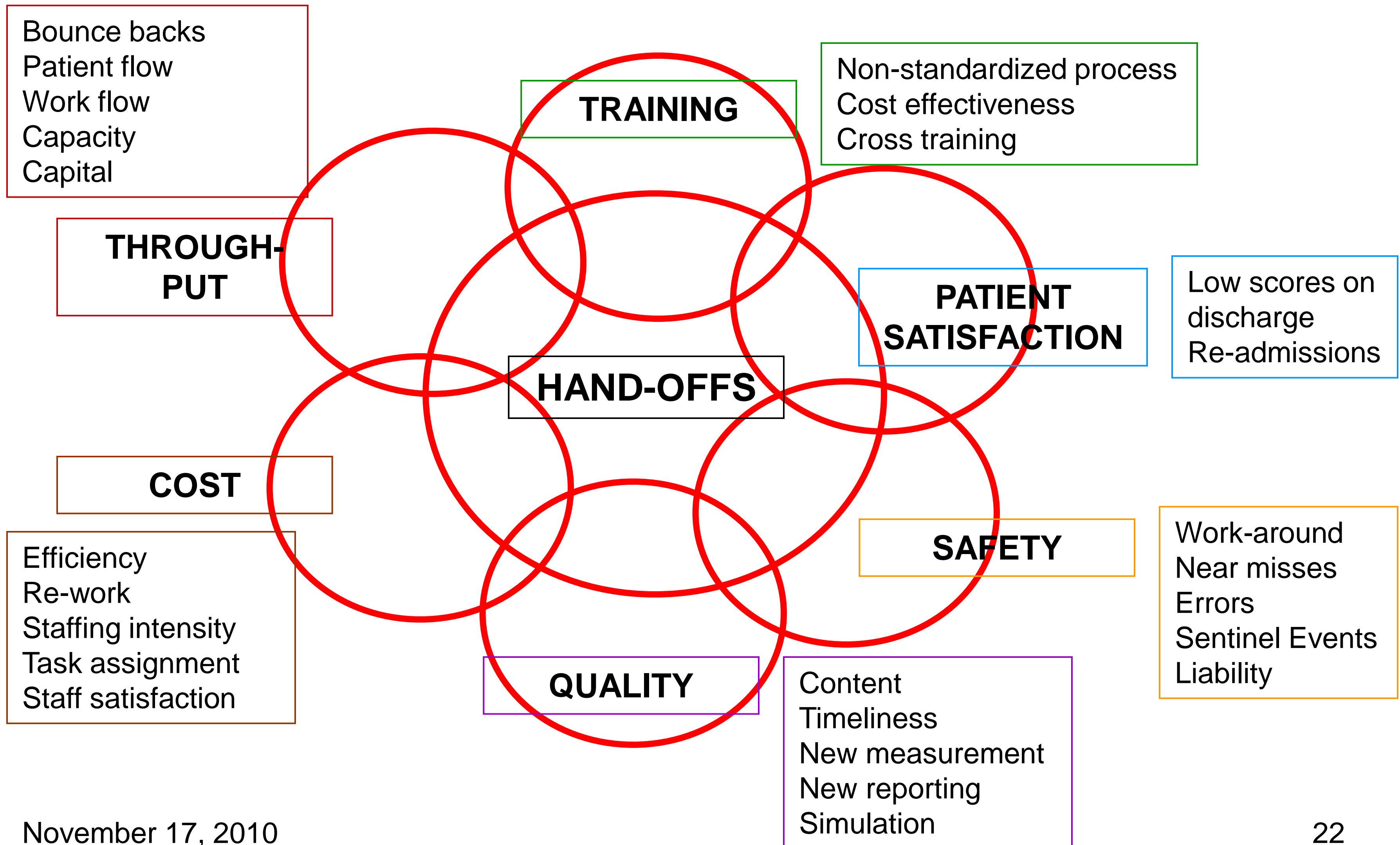
Start with verbal hand-offs

- The “organization”
  - Standard order of essential elements in all hand-offs (written and verbal)
- The metric
  - Hand-off content in standard format

Making a Broader Argument

- Not just quality
- Safety
- Efficiency
- Cost savings
- Cost avoidance

"HandOffs" Touch Everything



There is Safety Behind Good Transitions/Hand-Offs

- Increases reliability
  - Providers know what to expect
  - Systems can be designed around standard processes
  - Ensures adherence to best practices
  - Result is safer care

- Improves patient outcomes
  - Reduces errors
  - Reduces adverse events
  - Reduces bounce-backs and readmissions
  - Reduces liability claims

There is Efficiency Behind Good Transitions/Hand-Offs

- Sender needs less time to complete a transition
  - Less time to send an abbreviated set of essential data elements
  - Less time to send data using standard format
- Receiver needs less time to get information
  - Fewer call backs
  - Less time spend searching for additional information
  - Fewer work-arounds
- More time for sender and receiver to think critically, provide care, and add value for the patient
- Less of a learning curve as personnel move within Partners (if we achieve more standardization)

New Metric

- Work-arounds
  - Failures in process of care that are tolerated but never fixed
  - Pre “Near misses”
  - Far more common than near misses
  - Far more common than sentinel events
  - Far more common than lawsuits

Pilot: Measuring Workarounds

- Asks receiving clinician what they **had to do** to make up for omissions in the transfer process
- Grades these work-arounds by:
  - Significance
  - Threat to patient safety
  - Effect on efficiency

- Hand-out of Partners Continuing Care assessment form in appendix

Cost Savings/Cost Avoidance

- Cost savings
  - Non-value added work avoided
    - Bounce backs
    - Medication errors
    - Rapid response calls
  - Improved throughput
- Cost avoidance
  - CMS Readmission “Penalty” 2013-2015
  - Malpractice Claims

How Does this Tie to MA

- Revise Page 1-2-3
  - Focus on common content for common transfers (these are the same elements)
  - Agreement between senders and receivers on process (verbal, written, face to face)
  - Agree upon timeliness standards
  - Evolve to a common format
    - Start with verbal
    - Move to written
- Essential to have a system for performance measurement and improvement at State level

Appendix

Defining Our Universe

- Clinical Transition: The transfer of clinical responsibility between clinicians or teams of clinicians with the information necessary to insure safe and appropriate care. Often refers to patients moving from one institution to another.
- Hand-Off: Essentially the same as a transition, but often refers to an intra-institutional transition in care and the process of transferring responsibility and information.

Where to Start

- Improve the “high value” transitions first
  - Volume
  - Clinical Instability
  - Time-value of information
  - Severity of consequences if hand-off fails
- Using this calculus, most CTH participants selected either
  - ED to anywhere
  - ICU to Floor
  - OR to PACU/ICU

Prioritizing Transitions to Narrow Initial Scope

TO: \ FROM:	In-pt Hospital Unit	ED	Out-pt Hospital Unit	IRF LTAC SNF/ECF	VNA	Hospice	PCP	Specialist
In-pt Hospital Unit	V: H CI: H TV: H	V: H CI: H TV: H					V: M CI: M TV: M	V: M CI: M TV: M
ED			V: L CI: H TV: H	V: H CI: H TV: H	V: M CI: H TV: M		V: L CI: H TV: H	V: L CI: H TV: H
Out-pt Hospital Unit				V: M CI: M TV: M				
IRF LTAC SNF/ECF	V: M CI: H TV: H	V: M CI: M TV: M						
VNA	V: M CI: H TV: H	V: M CI: M TV: M		V: M CI: M TV: M			V: M CI: M TV: M	
Hospice	V: L CI: H TV: H							
PCP	V: M CI: M TV: M	V: M CI: M TV: M		V: M CI: M TV: M	V: M CI: M TV: M			
Specialist	V: M CI: M TV: M			V: M CI: M TV: M	V: M CI: M TV: M			

V= Volume
CI= Clinical Instability
TV= Time-Value of the Information

H= High
M= Moderate
L= Low

Priority	Of Interest	Expand

Priority In-pt to In-pt Hand-offs

TO: \ FROM:	ED	ICU	OR	PACU	Floor	Testing Areas
ED						V: L CI: H TV: H
ICU	V: H CI: H TV: H		V: M CI: H TV: H	V: M CI: H TV: H	V: M CI: H TV: H	
OR	V: H CI: H TV: H	V: M CI: H TV: H		V: M CI: H TV: H	V: M CI: H TV: H	
PACU			V: H CI: H TV: H			
Floor	V: H CI: H TV: H	V: H CI: M TV: H	V: M CI: M TV: H	V: H CI: M TV: H	V: M CI: M TV: H	
Testing Area	V: H CI: H TV: H	V: H CI: H TV: H	V: L CI: H TV: H	V: H CI: H TV: H	V: H CI: M TV: H	

V= Volume
CI= Clinical Instability
TV= Time-Value of the Information

H= High
M= Moderate
L= Low

Priority

Efficiency: Assessing Work-arounds Worksheet

Satisfaction with Hand-off

This hand-off was completely satisfactory

- ☐ Yes (I received everything I needed to safely care for the patient)
- ☐ No (Could be improved but adequate to safely care for the patient)
- ☐ No (Should be improved and could have led to unsafe care)

There was a verbal hand-off

- ☐ Yes
- ☐ No

The written information could be improved by: (check all that apply)	This correction is: Minor	Significant	Work-arounds: Find additional data in electronic sources	Locate clinician with knowledge of patient	Obtain information from patient or family	Make decision(s) with limited information	Other	Other	Other
☐ Adding missing clinical information Please specify____________________	☐	☐							
☐ Eliminating contradictory information Please indicate____________________	☐	☐							
☐ Clarifying ambiguous information Please comment____________________	☐	☐							
☐ Using a standardized format Please comment____________________	☐	☐							
☐ Better timing- available when needed	☐	☐							
☐ Other Please specify____________________	☐	☐							

Verbal Hand-off

☐ No verbal hand-off and it would have helped ☐ ☐

There was a verbal hand-off and it could be improved by:	Minor	Significant	Work-arounds: Ask referrer to repeat information	Ask to speak with someone more knowledgeable	Call back to ask more questions	Interrupt call to find better setting to receive it	Ask to call back at more convenient time	Other	Other
☐ Using a standardized format Please comment____________________	☐	☐							
☐ Substituting a more knowledgeable source Please comment____________________	☐	☐							
☐ Providing more opportunity to ask questions Please comment____________________	☐	☐							
☐ Quieter setting Please comment____________________	☐	☐							
☐ Improving the timing Please comment____________________	☐	☐							
☐ Other Please comment____________________	☐	☐							

Intra-Hospital Handoffs (Team "SignOuts")

- Current subject of pilot study on two services
- Work from TJC Efforts, PCC Efforts
- Core Content being established
  - Administrative information*
  - Code status*
  - ID/Chief Complaint
  - Active Problems (+/- brief plan)
  - Past Medical History
  - Allergies* and Current Medications*
  - Recent Important Events
  - Current Clinical Status
  - Disposition
  - Recent lab results*
  - Tasks in if/then format
  - Incoming information
  - Contingency Planning
- Also working on standardized processes
- Measurement underway: explicit, implicit, work-arounds

PHS Projects

- Transfers into MGH (Pilot site)
  - From NERNC to MGH Emergency Department
  - From PHS acute care community hospitals to the MGH Medicine Service

SNF to ED: The Problem

- What is the problem?
  - Patients with a sudden change in status at post acute-care sites return to the acute care hospital emergency department for evaluation, treatment and a determination of the appropriate site of care for continued treatment.
  - These patients often arrive without the essential clinical information required for their immediate management and without a process to easily obtain further information
  - The results are delays in care, inappropriate care, and potentially avoidable admissions.

Define > Measure > Analyze > Improve > Control

Project Scope

- Process Begins: When NERNC staff determine a patient has a change in status requiring emergency evaluation and/or treatment.
  - Includes all patients at NERNC
- Process Ends: When the ED staff makes a final determination of the patient's next site of care.
  - Includes all patients transferred from NERNC
- In September 2009, the NERNC incorporated the use of the INTERACT II form to reduce transfers to acute care facilities. This improvement has become our new baseline.

Pre and Post Intervention Data

Data Set Item	Baseline / Pre-implementation Standard Communication Tool, N=28	Post implementation INTERACT II Tool, N=41
Name and DOB	75% and 60%	90% and 82%
Family contact phone	50%	82%
Family notified	7%	63%
Phone/contact who sent	21%	63%
Code status	35%	75%
Baseline function	10%	75%
Risk alerts: Isolation precautions and falls	6% and 0%	54% and 71%
MAR	75%	85%
Labs of past 1 week	46%	73%
Reason for referral	64%	82%
SNF can/cannot accept back	0%	80%

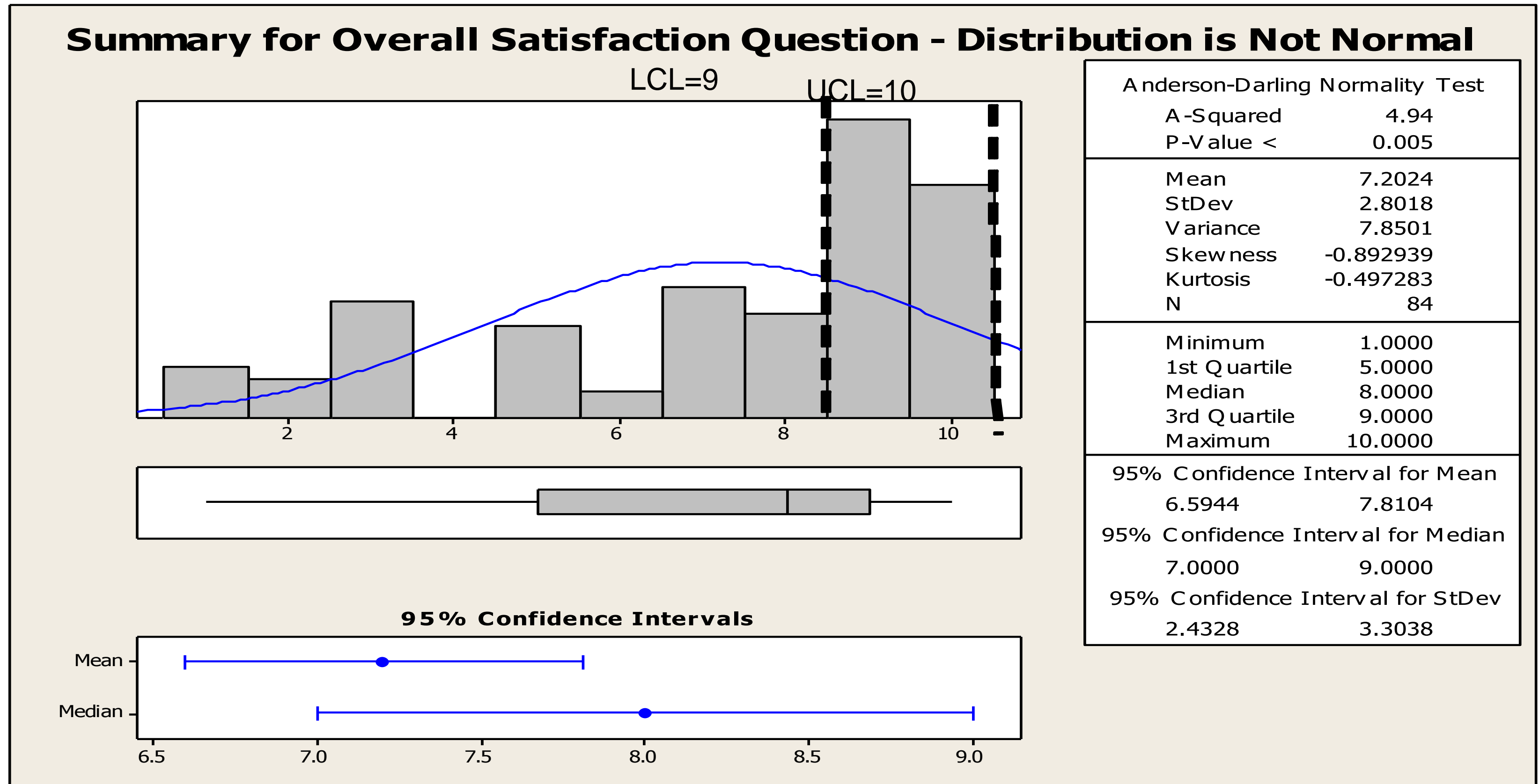
Improvements to test

- For patients who cannot tell their own stories – due to dementia, language barriers, etc. – provide more detailed explanation of the reason for transfer and baseline conditions
- Add indication for all medications
- Competency to consent to treatment, HCP
- Convert INTERACT form for electronic transmission

Community Hospital to AMC

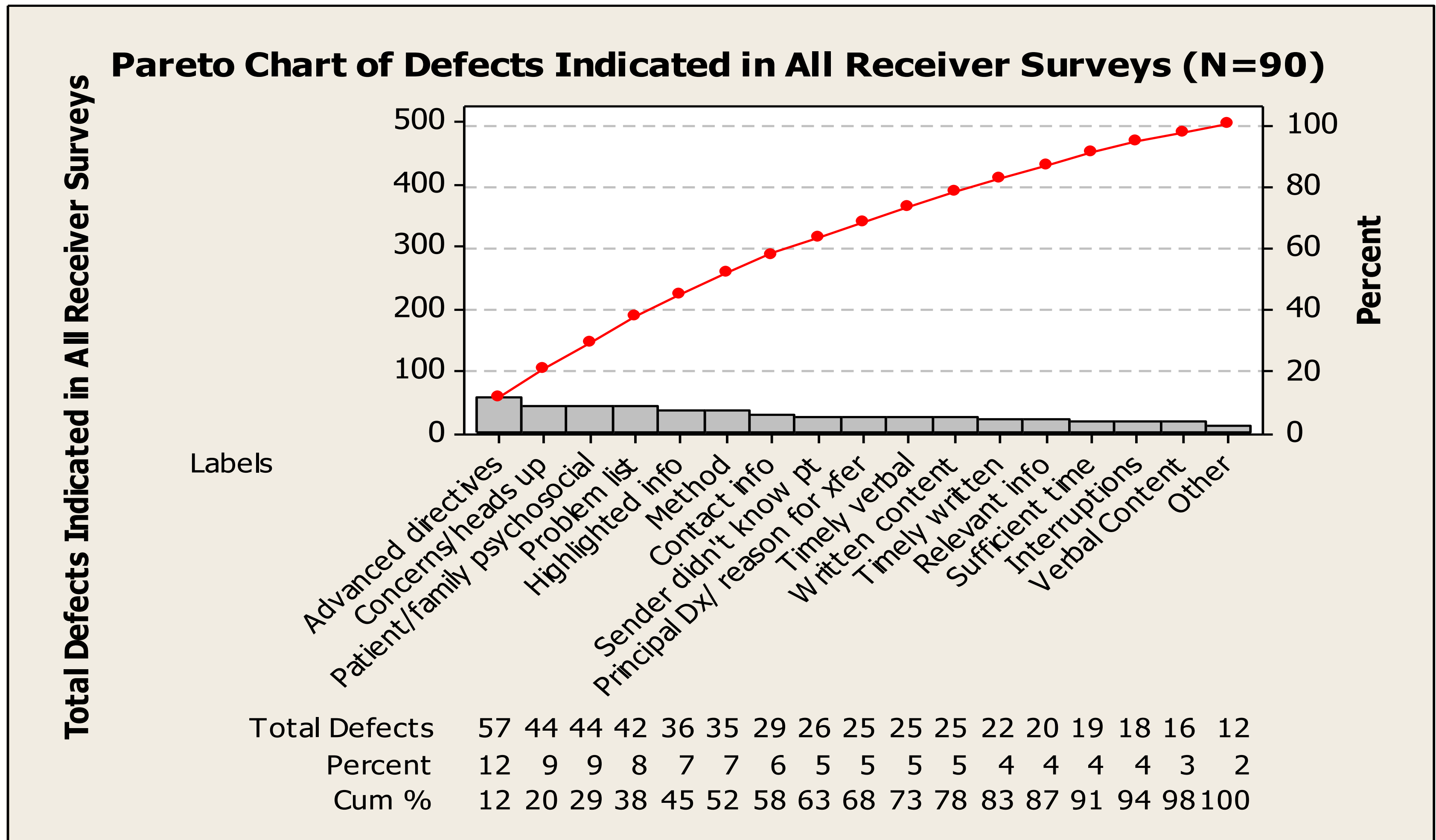
- Problem: incomplete information at time of transfer, cumbersome transfer process
- Analysis: detailed process map to identify failure modes
- Pilot transfer templates and new process

Current State - Process Capability



With p= 0.198, Moods Median test shows no statistical significance between Medical sub-services (Cardiology, General Medicine, ICU)

Total Defects* on Receiver Survey



Total Defects	57	44	44	42	36	35	29	26	25	25	25	22	20	19	18	16	12
Percent	12	9	9	8	7	7	6	5	5	5	5	4	4	4	4	3	2
Cum %	12	20	29	38	45	52	58	63	68	73	78	83	87	91	94	98	100

* Defects are defined as: Scores of 8 or less on Overall Satisfaction Question (Scale 1-10); or Scores of 4 or less on questions with a scale of 1-6; or Scores of 3 or less on questions with a scale of 1-4

Summary of Pareto Chart

- Based on the number of defects* collected through the Receiver Satisfaction Surveys, the top 58% of defects were due to:
  – 1) Incomplete or missing clinical content,
  – 2) Unsatisfactory method of communication,
  – 3) Poorly organized clinical information, and
  – 4) Lack of contact information to the clinician at the Outside Hospital (OSH)

Defects were defined by the MGH Receiver Team as:

- Scores of 8 or less on Overall Satisfaction Question (Scale 1-10); or
- Scores of 4 or less on questions with a scale of 1-6; or
- Scores of 3 or less on questions with a scale of 1-4

Define recap

Problematic handoffs from community hospitals impact the quality of care provided to Medicine patients at MGH.

Receive transfer request

Decide level of care and clinical acceptance

Triage of the request list

Confirmation of bed availability

Assignment of floor resident and RN

RN verbal report from outside hospital

Patient transport

Written info received by resident/intern

MGH care team assesses patient/ develops care plan

MGH clinicians inquire for additional info

Lack of/old/ incorrect/ incomplete info on treatment/dx/ precautions

RNs/MDs unable to supplement/ update data

Receiving MD has incomplete/ poor-quality info set and limited contact with other MDs

Guideline for Verbal Handoffs for Outside Hospital Transfers: Be PREPARED

Adapted from Arora, V., JGIM, 2009

Massachusetts General Hospital

DRAFT, April 7, 2010

P	**Presenting history and hospital course** ☐ Age/gender ☐ Initial presentation ☐ Past medical history – important issues ☐ Relevant hospital course ☐ Active and resolved problem list	
R	**Received therapies** ☐ Current list of meds ☐ Antibiotics with start dates ☐ Pressors ☐ Procedures ☐ Blood products	
E	**Existing baseline** ☐ Vital signs: current ☐ Mental status/ Neuro: baseline and current ☐ Vent settings ☐ Today's labs	
P	**Pending tests** ☐ Radiology ☐ Cultures ☐ Pathology ☐ Immunology ☐ Other pending labs	
A	**Anticipated needs/ Concerns/ Heads up** ☐ Respiratory issues ☐ Access needs – IVs ☐ Anticipated changes ☐ Precautions	
R	**Records to be sent** ☐ Radiology disks ☐ Radiology reports ☐ Discharge summary ☐ Admit H&P ☐ Medication administration record ☐ Flow sheets ☐ Original Lab/ Micro data	
E	**End of Life Preferences** ☐ Code status ☐ Health care proxy (HCP) ☐ Advanced directives ☐ When last discussed, if at all?	
D	**Discussions with family, PCP, and sending hospital** ☐ Key family member name with phone # ☐ Psychosocial issues ☐ Contact with number for questions within 24 hours	

Guideline for Written Documentation for Outside Hospital Transfers

Massachusetts General Hospital

Draft, May 12th, 2010

Administrative Information	☐ Patient name, DOB, gender ☐ Medical record number at transferring institution ☐ Contact Information: Name, Phone number, and Email address ○ Family/friend or Healthcare Proxy (if known) ○ PCP ○ Physician in your institution familiar with the patient's hospital course who the MGH physician can call with questions ○ Physician in your institution who would like a follow-up call describing the patient's hospital course at MGH ☐ Advanced Directives / Code status
Discharge Summary	**PLEASE FAX THE DISCHARGE SUMMARY:** ***prior to patient's arrival at MGH*** ☐ Admit and discharge date ☐ Reason for transfer ☐ Principal and secondary diagnoses ☐ Chief complaint and HPI (up to point of Admission) ☐ Past Medical History ☐ Allergies ☐ Home Medications ☐ Current Medications ☐ Family History/ Social History ☐ Day of Discharge Vitals/ Physical Exam ☐ Hospital Course and Plan (up to day of discharge; include major decisions and treatments)
Data	☐ Pending labs and microbiology data ☐ Recent labs (resulted, previous 72 hours) ☐ Microbiology data (resulted) ☐ Radiological exams (include disks and print out) ☐ EKG's (if relevant to patient's hospital course) ☐ Medication administration log (with last doses and time) ☐ Flow sheets (previous 48 hours)
Notes	☐ Admission notes (relevant notes only) ☐ Consult notes (relevant notes only) ☐ Prior discharge summaries for related encounters

Draft: Standard Partners Hand-off

- Clinical Data Elements:
  - Core elements:
  - Transition specific data identified by senders and receivers
- Critical Thinking Elements for each current active issue
  - What was done and why
  - What is planned
  - What is pending
  - What to look out for
- Timeliness standard agreed to by senders and receivers
- Standard Sequence of elements
- Standard Process
  - Who, what, when, how
  - Opportunity to ask and respond to questions
  - Option to involve patient

Current Metrics: Discharge Content

- Pre-admission medication list
- Allergies
- Follow-up plans
- Condition at discharge (e.g., relevant physical exam) ◊
- Discharge medication instructions, including which medications are new and which preadmission medications should be discontinued
- Advance care plan: code status, HCP info, discussion of advance care plan or documented reason why no discussion (BCBS terminal conditions only)
- Studies pending at discharge
- 24-hour/7-day contact information, including physician for emergencies related to inpatient stay
- Warfarin use (indication, target INR, anticipated duration, sufficient information for the next 72 hours or next INR draw)

Draft: Standard Process to Define Hand-off Parameters

- Receivers define what information they need
- Senders and Receivers jointly determine
  - How to provide those elements
  - The process (written, verbal, face to face, remote)
  - Timing of transfer of patient and information
  - Jointly agree on process to determine which patients can participate in the hand-off
- Use a standard format for verbal hand-off
- All teams transmit the HPM 2-4 elements
- Common process for monitoring, reporting and improving transitions