

DMC
Harper University Hospital
Hutzel Women's Hospital

Quality Measure Indicators + Throughput Metrics +
 Automated Dashboard
 = Innovation to Improve Quality Goals

DMC Harper- Hutzel Hospital

- The DMC is an 8 facility academic medical center
- Harper-Hutzel is an ANCC Pathway to Excellence™ Hospital
- 567 beds
- Tertiary care facility with OB, Level III NICU, 25 OR suites and outpatient procedural areas, and Center of Excellence in Minimally Invasive GYN, Stroke and Bariatric Surgery



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- HIMSS Level 6 Facility
- Cerner® client since 1999 conversion to CPOE, Barcode Med Administration and Nursing Documentation in 2006
- Surgical Documentation conversion in 2009 (Cerner Surginet)
- Smart Rooms implemented in 2011 with Cerner VitalsLink, AlertLink and Spacelabs Telemetry

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Objectives

1. Verbalize the design process for the creation of mutual quality goals inclusive of creating a culture of safety.
2. Translate data into action to create a culture of safety and improve patient data outcomes through the use of an automated dashboard.

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A Robust EMR/CIS – But Has It Achieved Its Intention?



- Safety and Healing
 - Do our clinicians have the information they need to make wise and safe clinical decisions?
 - Does the technology support healing as a goal?
- Quality
 - Is the information in our EMR current, reliable, and accurate?
- Value
 - Does use of our EMR contribute to achieving our strategic goals as a health system?

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Our Journey

- The journey to become a High Reliability Organization requires planning based on consistent, validated data.
- Pay for Performance, CMS, Joint Commission and other regulatory and certifying agencies utilize quality indicators to ascertain compliance with key quality practices.
- These practices are often tied to reimbursement or incentive monies.
- Leadership at HUH HWH realized that leaders had no one place to find their quality performance in “real time”

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Opportunity Identified

- How could we use the rich source of data available in our electronic medical record to drive excellence and hardwire care related to core measures and nurse-sensitive quality indicators?

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Lots of Electronic Tools

The screenshot shows a dashboard titled 'Core Measure Status' with a table of patient data. Below it is a 'Pressure Ulcer Report' table with the following data:

Nurse	Number of HAAs	Prevention Log	Prevention Score	Management Log	Management Score
HA - 19975	7	100.00 %	100.00 %	0.00 %	0.00 %
HA - 20883	4	50.00 %	50.00 %	0.00 %	0.00 %
HA - 44532	3	100.00 %	100.00 %	100.00 %	100.00 %
HA - 69975	8	133.33 %	133.33 %	0.00 %	33.33 %
HA - 5884	4	50.00 %	50.00 %	0.00 %	0.00 %
HA - 55330	2	100.00 %	100.00 %	100.00 %	100.00 %
HA - 480	4	75.00 %	50.00 %	0.00 %	0.00 %
HA - 60330	3	100.00 %	100.00 %	100.00 %	100.00 %
HA - 69975	2	50.00 %	50.00 %	0.00 %	0.00 %
HA - 99330	3	66.67 %	66.67 %	0.00 %	0.00 %
HA - 99975	4	66.67 %	66.67 %	100.00 %	0.00 %
HA - 100330	4	100.00 %	100.00 %	100.00 %	0.00 %
HA - 79990	2	50.00 %	50.00 %	0.00 %	0.00 %
HARPER HLTZEL Team	86	71.83 %	88.88 %	77.73 %	45.45 %

Pressure Ulcer Report

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More Electronic Tools

The 'Immunization Report' table shows patient immunization records with columns for ID, Name, PE Fraction Required, and Administration. The 'Catheter Days' form is titled 'Urinary Catheter Insertion/Discontinuation' and includes fields for Activity Type, Catheter Type, Insertion Site, and Catheter Size.

Dashboard Development

- Hospital COO and the Director of Clinical Transformation lead a multidisciplinary team whose goal was to innovate and create a tool and process that would empower unit leaders and staff nurses to deliver consistent, safe care.
- Team members: Hospital Administrator, Staff RN, Quality RN, Data Analyst, Physicians & Finance department

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Purpose of the Electronic Dashboard

- Demands placed on a nurse's time can lead to key pieces of quality initiatives being missed or undocumented.
- In order to avoid the problem of missing documentation, unit leaders needed a data source that would aid them in assisting the staff nurses to be accountable for their care and documentation.

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Goal of the Electronic Dashboard

- The goal of the electronic Dashboard is to synthesize all the various quality indicators and present them in a real time dashboard.
- Unit leaders could then use this data to as a tool to support staff nurses in daily nursing practice.

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HUH-HWH Daily Huddle Dashboard

Unit	Current Census	Observation	Variance	# of Pts with LOS > 4 Days	Total # of Pts	Total LOS	Total # of Pts with LOS > 4 Days	Total # of Pts with LOS > 4 Days	% LOS Compliance	Total # of AMIs	Total # of AMIs	% AMI Compliance
ED	20	26	6	4								
ICU	20	40	20	0			1					
ICUW	17	46	29	0			1					
ICUWV	11	7	-4	0			1					
ICUWV	5	14	9	2			1					
ICUWV	23	42	19	7			4					
ICUWV	10	0	-10	0			2	3	100%	0	3	100%
ICUWV	23	0	-23	0			23	6		0	1	100%
ICUWV	15	10	-5	3			3	4	114%	0	1	100%
ICUWV	34	44	10	14			0	7		0	1	100%
ICUWV	19	30	11	3			3	5	167%	0	2	100%
ICUWV	23	21	-2	6			3	4	133%	0	4	100%
ICUWV	24	34	10	12			1	1	100%	0	1	100%
ICUWV	8	3	-5	0			1	1	100%	0	1	100%
ICUWV	8	2	-6	0			1	1	100%	0	1	100%
ICUWV	10	2	-8	0			1	1	100%	0	1	100%
ICUWV	4	12	8	0			1	1	100%	0	2	100%
ICUWV	9	3	-6	0			1	1	100%	0	2	100%
ICUWV	17	0	-17	0			1	1	100%	0	1	100%
ICUWV	17	0	-17	0			1	1	100%	0	1	100%

- Each unit displays with Current Census, LOS, IP vs. OBS Status
- Tabs at bottom of report are the details of summary display

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Quality Metrics: Core Measures, Immunization Status, Urinary Catheter Days, Pressure Ulcer Status, Re-admits within 30 days & Fall Risk patients

Total # of Pts hospitalized for PH	Total # of Pts immunized for PH	PH Compliance %	Total Pts with PH	Total Pts with PH screening	# Pts with Urinary Catheter Days > 48 hours	Count of Stage 1 PU from Yesterday	Count of Stage 2 PU from Yesterday	Count of Stage 3 PU from Yesterday	Count of Stage 4 PU from Yesterday	Count of Stage 5 PU from Yesterday	Patients who had a fall in the previous 30 days	Total # of Falls
1	1	100%	12	1	2	1					2	6
2	1	100%	9	1	1							
1	0	0%	9	0								
4	3	75%	9	1	1							
2	1	50%	5	1	2	1	1	1	1	4	14	2
3	3	100%	9	3	3	1	1	1	1	8	25	1
2	1	50%	7	1	1							
2	1	50%	4	2	1	2						
2	0	0%	9	2	2	1	1	1	1	11	10	1
1	1	100%	11	1	3							
1	1	100%	2	1	3	1	1	1	1	4	3	1
1	1	100%	5	1	3							
1	1	100%	4	1	2							

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Procedural Areas & OR Summary

	Emergency	Inpatient	Observation	Outpatient	Prevalent	TOTAL	TARGET	Variance
1 ED Visits	96	14	22	2		134	103	31
2 Cath Visits		2	3	18	1	24	28	-4
3 Home Visits		13	15	28		56	56	0
4 AD		9	9	9		27	14	13
5 Inpatient		17	1	29	88	135	92	43
6 Virtual Meds OH			5	5		10		10
7 Endo	5	1	29	35	28	98		98
8 SRS	1		17	18	13	49		49

- ED, Cath Lab, Hemodialysis, Labor & Delivery, Endoscopy and OR report previous day metrics

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Implications for Practice

- Dashboard brings a summary view to nurse leaders as the CEOs of their clinical areas
- Detail tabs to allow for quick drill down to unit level metrics
- Dashboard sent to unit leaders by 0600 daily
 - Report reviewed at shift change safety huddles with staff to review together and work to hardwire the processes for best practice for patient care
 - Report focuses attention on quality, driven by data available

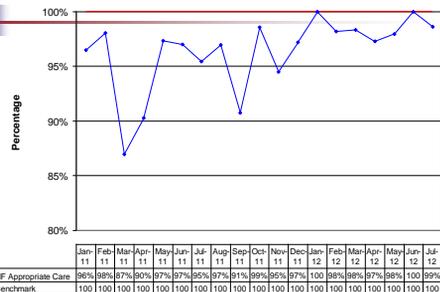
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Results

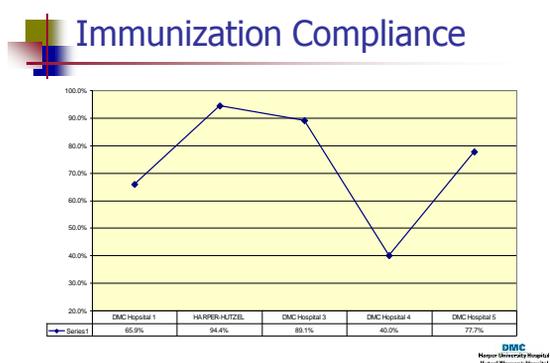
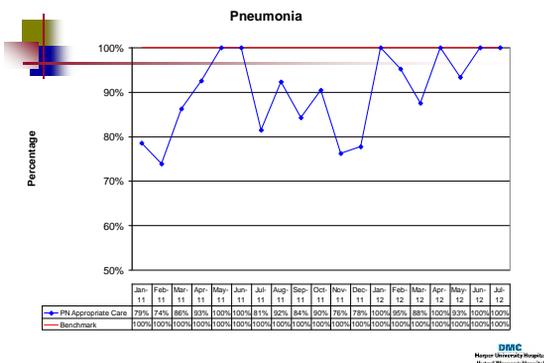
- Improvement in core measure outcomes for CHF & Pneumonia
- Lead our system in Immunization screening with 94.4% compliance for 3rd Quarter
- Hardwire quality measures as part of routine care

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Heart Failure



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Unintended Benefits

- Improved adoption of documentation in general
- Daily unit safety & quality huddles became more consistent
- Bedside report and handover for patient practices became more consistent
- Daily meeting – review great catches, falls, throughput

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