



Facility Implementation Guide
High Reliability Medicine

Condition:
Small Large Bowel

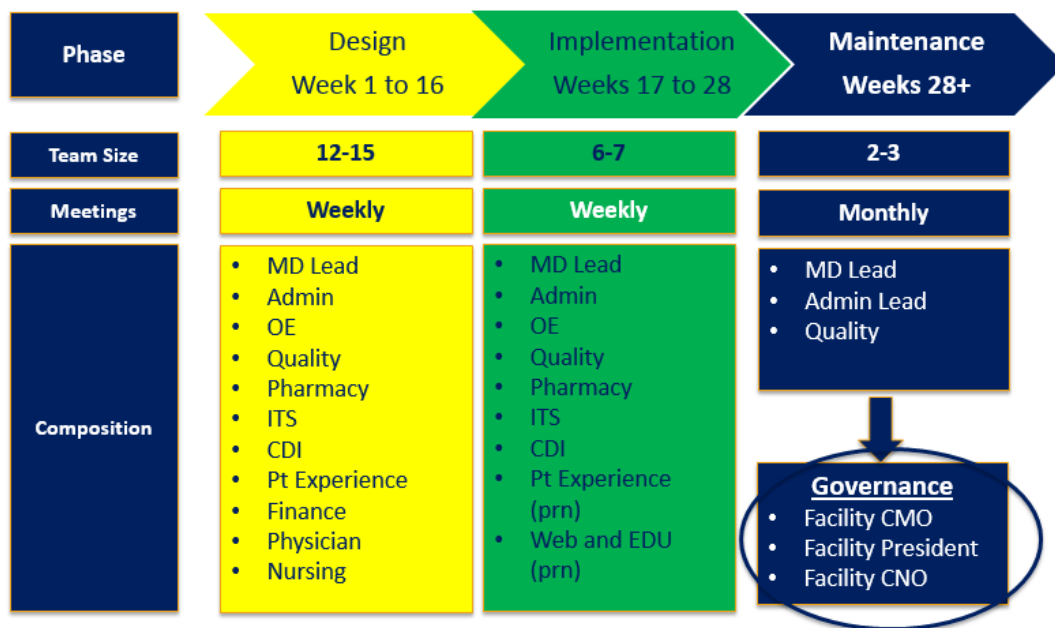
January 2017

I. Introduction

HRM, along with VIP and ROC, is one of University Hospitals' fundamental programs to transform the care provided to the system's patients. As a physician lead process, HRM is designed to drive safety, quality, and satisfaction improvement through reduction of both provider and facility care variation.

UH HRM initiatives are either vertical efforts (condition based) or Horizontal efforts (broad based, such as ICU utilization). Vertical efforts, depending on medical condition, may apply to a single facility, multiple facilities or all facilities.

The diagram below represents a typical HRM process. Each of the elements of the process are shown below.



- Design Phase: The first 16 weeks focusing on current state review, followed by redesign of existing processes (e.g. care path, order set revisions, drug use, supply utilization) and development of Key Performance Indicators. An implementation plan is completed as part of the design phase.
- Implementation Phase: After design work is complete, the team spends effort on executing the implementation plan as a means to reduce care variation. Implementation includes training/education for providers, nursing staff, and other applicable staff.
- Optimization Phase: Post implementation, Key Performance Indicators for the HRM effort are monitored with appropriate reactions occurring to sustain desired and agreed upon outcomes.
- Governance Phase: In support of the Optimization Phase, each facility will maintain a governance structure consisting of the Facility CMO, President, and CNO. This governance

team is responsible for ensuring agreed upon outcomes and for sustainability. The HRM effort physician lead is responsible to guide and advise the facility governance team.

The HRM Implementation Phase, Optimization Phase and Governance Phase are more fully described below, specific to the HRM effort.

II. HRM Condition Summary

- A. HRM Condition: Small/Large Bowel Surgery
- B. Physician Lead: Harry Reynolds, MD
- C. Expected Benefit: \$1,400,000
- D. Start Date: August 2015
- E. Implementation complete: March 2016
- F. Training/Education complete: August 2016
- G. Applicable Facilities and 2017 benefit allocation:

• CMC	\$42,818	• Parma	\$4,330
• Ahuja	\$6,575	• Elyria	\$8,499
• Geauga	\$6,254	• SJMC	\$21,970
• Richmond	\$1,283	• Samaritan	\$TBD
• Bedford	\$962	• Conneaut	\$0
• Portage	\$TBD	• Geneva	\$641

Financial allocations, above, expected for 2017 and do not represent the entire financial benefit

III. Implementation

- A. Implementation Actions
 - Implement Enhanced Recovery Pathways (ERP) at each facility performing small/large bowel procedures
 - Implement Continuum of Care (care path) process to support ERP
 - Standardize Order sets across system
 - Implement Key Performance Indicator (KPIs) targets (see below)
 - Implement standard scorecard in Statit to monitor KPIs

B. Key Performance Indicators and Targets

The Small Large Bowel team and physician lead established the following Key Performance Indicators (KPIs), along with applicable targets for CMC and UH System (Community Hospitals).

KPI	CMC Target	UH System Target
Quality		
% Postop Hemorrhage/Hematoma	0.00%	1.0%
% Accidental Puncture/Laceration	0.00%	0.0%
% Postop Respiratory Failure	0.60%	1.0%
% Postop Sepsis	1.00%	1.0%
% SSI, any wound class	1.50%	1.5%
% Postop Wound Dehiscence	0.00%	0.0%
% Postop DVT/PE	0.00%	1.0%
% Postop Intestinal Obstruction	9.40%	10.0%
% Discharged Home/Home Health	95.70%	90.0%

C. Education/Training – A summary of provider and nursing education and training sessions are shown on the table below.

Audience	Location	Dates Completed
Nursing	CMC	April 2016
Provider, central	CMC	June 2016
Provider, east	Geauga	July 2016
Provider, west	Parma	August 2016

IV. Optimization/Control

There are two principle methods to provide feedback on KPI performance related to this specific HRM effort.

- Statit Scorecard** – the Statit Scorecard is a near real time (legacy facilities) HRM condition specific scorecard available via the UH Intranet as part of the UH Quality Institute. The scorecard is populated through a Midas interface and contains data that is finalized for coding. Non-legacy facilities provide a periodic downloads of required data to the Quality Institute. An example of the HRM Statit based scorecard is shown in Appendix A. Instructions to access Statit are shown in Appendix B. Statit provides various drill downs and methods to demonstrate data for the legacy facilities. Drill down capability is limited for non-legacy facilities.
- Executive Scorecard** – The Executive Scorecard is a periodic scorecard based on the HRM condition. Data for this scorecard is derived from Premier Quality Advisor (Quality, volume data) and from EPSi (actual cost data). The Executive Scorecard has two primary components.

First, the scorecard provides an overview showing focused domains for the system as a whole. Second, the scorecard demonstrates facility level performance. The Executive Scorecard is updated monthly. Appendix C shows the Executive Scorecard for the HRM condition.

V. Governance

Successful implementation and sustainment requires continuous governance from facility leadership. Frequent and consistent review and reaction to the Statit Scorecard and the Executive Scorecard ensure that established goals and objectives are met and maintained.

- A. CMO Responsibilities – The facility CMO is responsible for overall achievement of HRM objectives.
 - Monthly review of the Statit and Executive scorecards.
 - Intervention and remediation where stated targets are consistently not met
 - Work with HRM Physician lead to develop additional educational/training sessions as required.
 - Engage facility leadership and appropriate providers to effect positive change.
- B. President Responsibilities
 - Work with facility CMO to facilitate and effect HRM goals and objectives
 - Ensure appropriate nursing and other resources are responding effectively to HRM goals and objectives
 - Communicate HRM status to facility staff
- C. CNO/Nurse Executive Responsibilities
 - Work with facility CMO to facilitate and effect HRM goals and objectives as related to nursing services
 - Ensure nursing staff and others are compliant with order sets, care paths and other related activities.
 - Work with HRM Physician lead/designee to bolster nursing training/education as needed.

Appendix D provides an example of a governance PowerPoint report.

Appendix A – Statit Scorecard

All Indicators View: HRM - Colon Surgery Scorecard

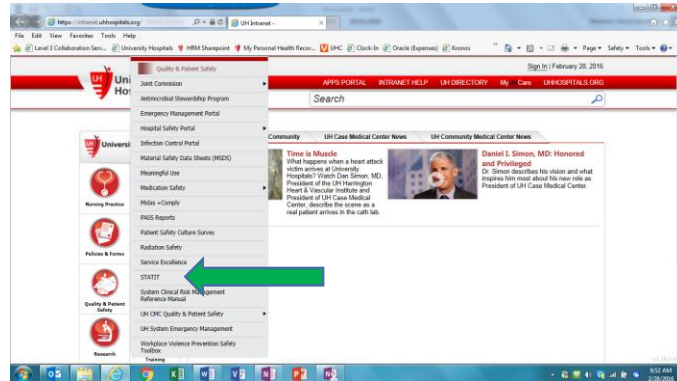
Status	Indicator	Current Value	Target	SPC Alert	Updated	Cumulative Year (Calendar)	
						Value	Start
HRM - Small-Large Bowel > A - Discharges							
▼	Major Small & Large Bowel Procedures (Colon) - MS-DRG's 329-331 Volume - by Facility	37	—		Nov 2016	370	Jan 2016
▲	Major Small & Large Bowel Procedures (Colon) - % MS-DRG 331 without CC/MCC - by Facility	32.4%	—		Nov 2016	32.4%	Jan 2016
▼	Major Small & Large Bowel Procedures (Colon) - % MS-DRG 330 with CC - by Facility	54.1%	—		Nov 2016	55.9%	Jan 2016
▲	Major Small & Large Bowel Procedures (Colon) - % MS-DRG 329 with MCC - by Facility	13.5%	—		Nov 2016	11.6%	Jan 2016
▲	Major Small & Large Bowel Procedures (Colon) - % Discharges by 1pm - by Facility	54.1%	—		Nov 2016	35.4%	Jan 2016
★ ▲	Major Small & Large Bowel Procedures (Colon) - % Discharged Home/Home Health - by Facility	94.59%	90.00%		Nov 2016	92.16%	Jan 2016
HRM - Small-Large Bowel > B - LoS							
★ ▼	Major Small & Large Bowel Procedures (Colon) - MS-DRG 329 ALOS with MCC - By Facility	8.2	11.2		Nov 2016	11.2	Jan 2016
✗ ▲	Major Small & Large Bowel Procedures (Colon) - MS-DRG 330 ALOS with CC - By Facility	7.2	6.1		Nov 2016	7.0	Jan 2016
▼ ▼	Major Small & Large Bowel Procedures (Colon) - MS-DRG 331 ALOS without CC/MCC - By Facility	3.8	3.8		Nov 2016	4.1	Jan 2016
▼ ▼	Major Small & Large Bowel Procedures (Colon) - MS-DRG's 329-331 ALOS - By Facility	6.27	6.00		Nov 2016	6.52	Jan 2016
HRM - Small-Large Bowel > C - ICU							
▲	Major Small & Large Bowel Procedures (Colon) - ICU ALOS - by Facility	4.2	—		Nov 2016	1.7	Jan 2016
▼	Major Small & Large Bowel Procedures (Colon) - % ICU Utilization - by Facility	5.4%	—		Nov 2016	7.6%	Jan 2016
HRM - Small-Large Bowel > D - Mortality							
★ —	Major Small & Large Bowel Procedures (Colon) - % Inpatient Mortality - by Facility	0.0%	0.5%		Nov 2016	0.0%	Jan 2016
HRM - Small-Large Bowel > E - Readmissions							
✗ ▲	Elective & Emergent Colon Surgery - % Readmit within 14 Days - By Facility	11.1%	7.6%		Oct 2016	7.6%	Jan 2016
✗ ▲	Elective & Emergent Colon Surgery - % Readmit within 30 Days - By Facility	15.9%	10.7%		Oct 2016	12.2%	Jan 2016
HRM - Small-Large Bowel > F - Complications							
★ —	Major Small & Large Bowel Procedures (Colon) - % Post-op Sepsis - By Facility	0.0%	1.0%		Nov 2016	0.8%	Jan 2016
✗ ▲	Major Small & Large Bowel Procedures (Colon) - % Post-op DVT/PE - By Facility	2.7%	1.0%		Nov 2016	0.5%	Jan 2016
★ —	Major Small & Large Bowel Procedures (Colon) - % Accidental Puncture/Laceration - by Facility	0.0%	0.0%		Nov 2016	0.0%	Jan 2016
	Major Small & Large Bowel Procedures (Colon) -						

Appendix B – Statit Access Instructions

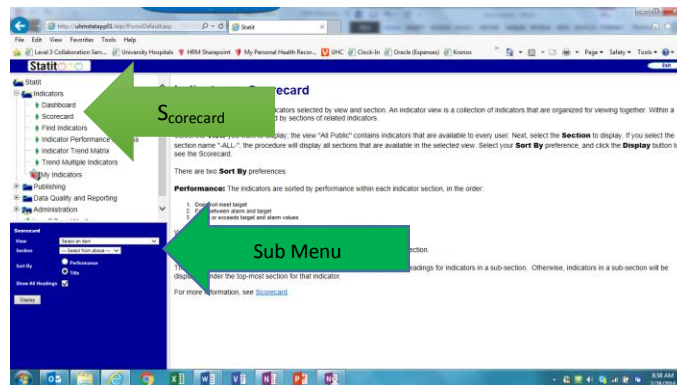
The instructions below provide brief instructions on accessing various Statit Scorecards. The Scorecard can only be accessed via the UH network, either at work or through VPN.

Instructions

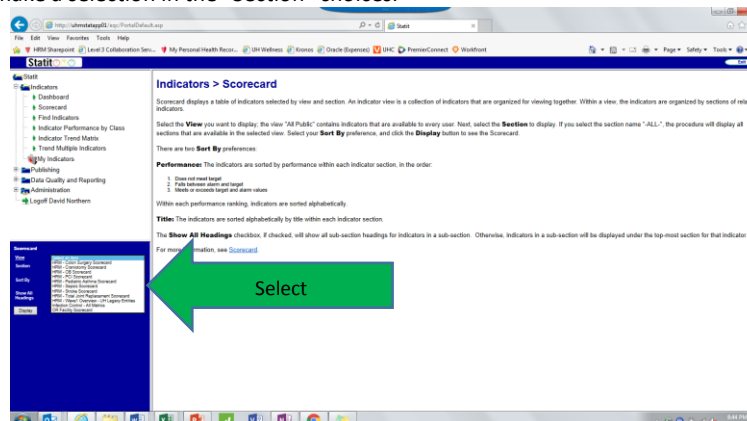
1. Open intranet (<https://intranet.uhhospitals.org>) via IE explorer.
2. Hover your mouse over the “Quality & Patient Safety” icon. Then click on the “Statit” link.



3. The following screen will open. Click on “Scorecard.”



4. From the submenu (Blue field, bottom left of screen), select from “View” the scorecard you wish to view. You will have to make a selection in the “Section” choices.



Appendix C – Executive Scorecard



Highly Reliable Medicine Facility Performance Report

Time Period: April thru October 2016

Selected Population: Small & Large Bowel ; Selected Wave: I

Population Wave
I

HRM Population
Small & Large Bowel

Apply

Indicator	Facilities	Ahuja	Bedford	Cleveland	Geauga	Geneva	Richmond	SJMC	UH Elyria Medical Center	Grand Total
Case Volume		50	12	362	63	4	7	132	67	697
Variable Cost Per Case	Baseline	\$6,960	\$10,417	\$10,569	\$8,143	\$6,959	\$8,857	\$8,448	\$9,109	\$9,257
	Target	\$6,612	\$9,896	\$10,041	\$7,735	\$6,611	\$8,414	\$8,025	\$8,654	\$8,794
	Actual	\$7,142	\$8,484	\$11,014	\$7,243	\$7,082	\$10,211	\$7,797	\$9,615	\$9,577
	Δ	\$182	(\$1,933)	\$445	(\$900)	\$123	\$1,354	(\$651)	\$506	\$321
	% Cases Compliant	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	75.0%
Average Length of Stay	Baseline	7.6	9.8	8.1	10.0	5.3	8.2	5.6	7.9	7.6
	Target	7.2	9.3	7.7	9.5	5.0	7.7	5.4	7.5	7.2
	Actual	6.8	6.6	8.8	9.0	6.3	6.9	5.8	7.0	7.9
	Δ	(0.7)	(3.2)	0.7	(0.9)	1.0	(1.3)	0.2	(0.9)	0.3
	% Cases Compliant	4.2%	12.9%	13.8%	1.2%	11.1%	7.4%	7.9%	5.6%	9.6%
Mortality Rate %	Baseline	1.8%	0.0%	1.9%	1.9%	0.0%	0.0%	0.0%	0.7%	1.3%
	Target	1.7%	0.0%	1.8%	1.8%	0.0%	0.0%	0.0%	0.7%	1.2%
	Actual	2.0%	16.7%	0.6%	3.2%	0.0%	0.0%	0.0%	1.5%	1.1%
	Δ	0.2%	16.7%	(1.3%)	1.2%	0.0%	0.0%	0.0%	0.8%	(0.1%)
Complication Rate %	Baseline	21.5%	42.1%	22.5%	34.0%	21.4%	40.0%	15.8%	21.2%	22.2%
	Target	20.4%	40.0%	21.4%	32.3%	20.4%	38.0%	15.0%	20.2%	21.1%
	Actual	26.0%	33.3%	19.6%	31.7%	25.0%	28.6%	15.2%	11.9%	19.9%
	Δ	4.5%	(8.8%)	(2.9%)	(2.2%)	3.6%	(11.4%)	(0.7%)	(9.3%)	(2.2%)
Readmission Rate %	Baseline	10.1%	23.5%	16.7%	19.8%	14.3%	10.0%	13.8%	19.3%	15.7%
	Target	9.6%	22.4%	15.9%	18.8%	13.6%	9.5%	13.1%	18.3%	15.0%
	Actual	6.1%	20.0%	12.0%	8.2%	0.0%	0.0%	13.7%	12.3%	11.5%
	Δ	(4.0%)	(3.5%)	(4.7%)	(11.6%)	(14.3%)	(10.0%)	(0.1%)	(7.0%)	(4.2%)



Highly Reliable Medicine Scorecard

Time Period : April thru October 2016

Selected Population: Small & Large Bowel ; Selected Wave: I

Population Wave
I

HRM Population
Small & Large Bowel

Apply

Financial	Total Targeted Savings		\$1,400,000		Annualized Run Rate Savings		(\$382,354)	% of Total Savings			-27.3%
	Time Period Targeted Savings		\$816,669		Time Period Realized Savings		(\$223,040)	% of Total Savings			-27.3%
Measures					Clinician			Facility			
Key Performance Indicators	Baseline	Target	Actual	Variance to Target	High	Low	% Compliance	High	Low	% Compliance	
Total Cases	1,348		697		87	3		362	4		
Initiatives			12								
Mortality	1.3%	1.2%	1.1%	(0.1%)	25.0%	0.0%	29.8%	16.7%	0.0%	25.0%	
Complications	22.2%	21.1%	19.9%	(1.1%)	80.0%	0.0%	57.2%	33.3%	11.9%	25.0%	
Readmission Rate, 30 Day	15.7%	15.0%	11.5%	(3.4%)	66.7%	0.0%	39.1%	20.0%	0.0%	75.0%	
LOS	7.6	7.2	7.9	0.7	21.5	4.8	15.3%	9.0	5.8	62.5%	
Cost per Case (Variable)	\$9,257	\$8,794	\$9,577	\$784	\$24,008	\$3,280	35.8%	\$11,014	\$7,082	75.0%	
Room/Board	\$3,363	\$3,194	\$3,498	\$304	\$10,122	\$913	16.3%	\$3,889	\$2,346	25.0%	
Supplies	\$1,418	\$1,348	\$1,321	(\$26)	\$7,069	\$249	63.7%	\$2,571	\$450	50.0%	
Pharmacy	\$808	\$768	\$1,054	\$287	\$2,663	\$4	47.9%	\$1,504	\$9	75.0%	
Lab	\$548	\$520	\$609	\$88	\$3,513	\$131	26.0%	\$848	\$225	75.0%	
Imaging	\$117	\$111	\$121	\$10	\$674	\$41	18.1%	\$207	\$84	37.5%	
Therapy	\$186	\$177	\$175	(\$2)	\$1,441	\$12	32.6%	\$296	\$63	37.5%	
OR	\$2,688	\$2,554	\$2,652	\$98	\$5,260	\$460	51.6%	\$3,097	\$1,728	75.0%	
Others	\$129	\$123	\$147	\$24	\$682	\$22	50.7%	\$223	\$90	75.0%	

Appendix D – Monthly Presentation (Sample Format)

High Reliability Medicine Governance Overview

2017

*Quality Assurance/Peer Review Privileged Pursuant to Ohio Rev. Code secs. 2305.24, 2305.25,
2305.251, 2305.252 and 2305.253*

Facility HRM Performance – Wave I

Effort/ Condition	Mortality	Complications	Readmit	LOS	Cost
PCI	✗	✓	✗	✗	✗
Sepsis	✓	✓	✗	✗	✓
SLB	✓	✗	✗	✗	✗
TJR	✓	✗	✗	✗	✗

Focus Areas

- Bullet point areas where intervention is either required or recommended

Quick Overview
+ = at or better
than target
- = not meeting
target

Facility HRM Performance – Wave II

Effort/ Condition	Mortality	Complications	Readmit	LOS	Cost
Crani	✓	✓	✗	✗	✗
Ped Asthma	✓	✓	✗	✗	✗
Stroke	✓	✓	✗	✗	✗
GU Onc	✓	✓	✗	✗	✗
L/D	✓	✓	✗	✗	✗

Focus Areas

- Bullet point areas where intervention is either required or recommended

Quick Overview
+ = at or better
than target
- = not meeting
target

Action Steps

Effort/ Condition	Issue/Concern	Action(s) to Take	By Whom	Target Date
Sepsis	Mortality Rate above Target	Reinforce Sepsis protocol with Medical Staff	CMO	02/12
Sepsis	Sepsis Bundle not used consistently	Reinforce use	CMO	02/12