The University of Vermont Health Network: Increasing Value for Vermonters

Vermont Senate Finance Committee

February 10, 2016

THE
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HEALTH NETWORK

Overview

- Introductions
- Progress of health reform/cost containment initiatives
- Value-Driven Health Care
- High Value Care Program
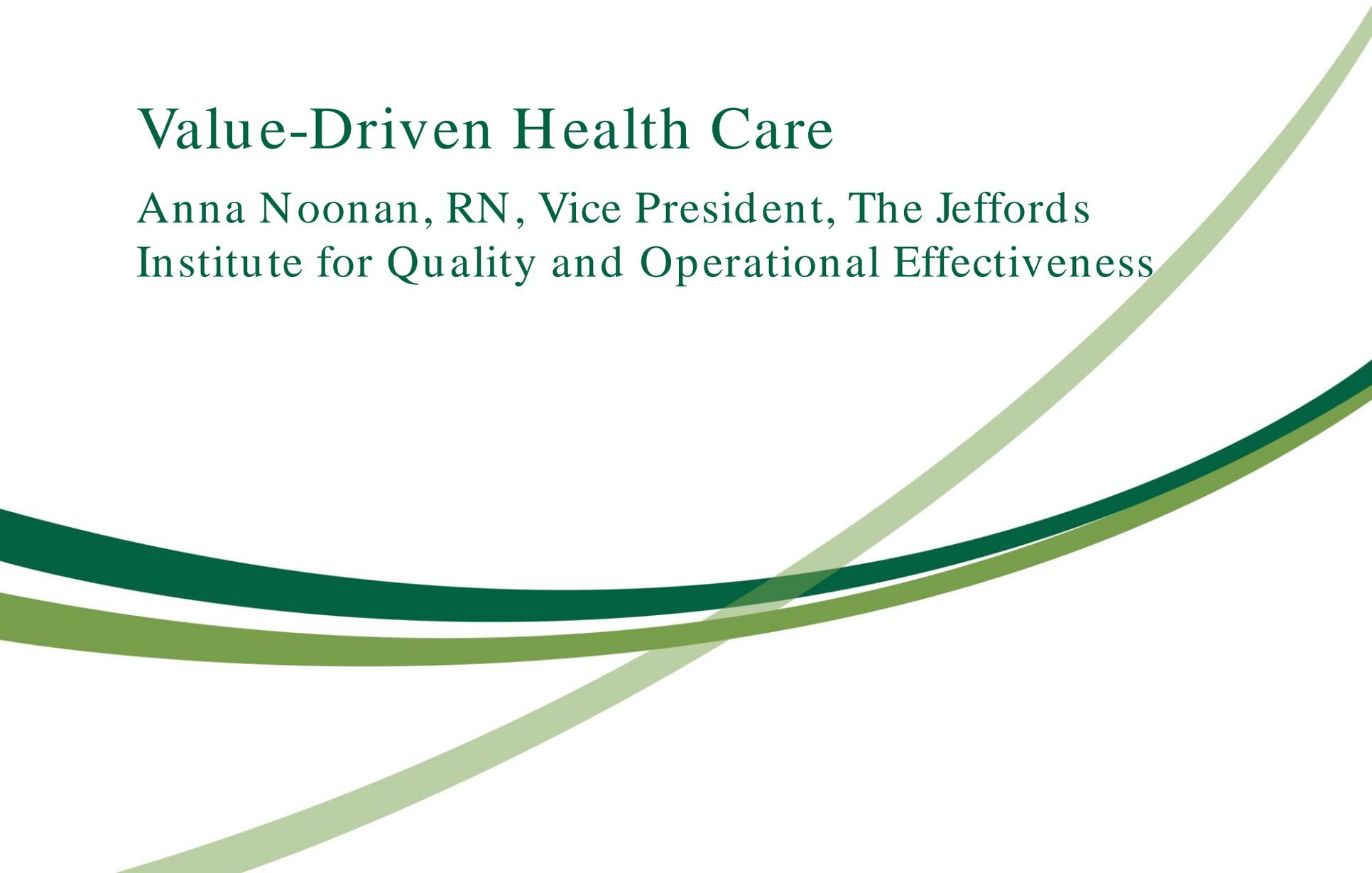- Total Cost Management
- Questions

Introductions

- John R. Brumsted, MD, President & CEO, UVM Health Network and CEO, UVM Medical Center

- Anna Noonan, RN, Vice President, The Jeffords Institute for Quality and Operational Effectiveness, UVM Medical Center

- Justin Stinnett-Donnell, MD, Value Care Initiative Coordinator, Central Vermont Medical Center

- Todd Keating, Chief Financial Officer, UVM Health Network

- Judy Tartaglia, President and CEO, Central Vermont Medical Center

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Working together, we improve people's lives.

Value-Driven Health Care

Anna Noonan, RN, Vice President, The Jeffords Institute for Quality and Operational Effectiveness

Working together we improve people's lives

The Jeffords Institute for Quality uses evidenced based performance improvement methodologies to optimize the value of the care and services provided to our patients and families.

The patient and their family are at the center of everything we do.

Quality

Our fundamental belief is that ***safe, effective and high quality care is <u>cost-effective</u>*** care.

The right care, at the right time, by the right provider, in the right location with the best outcome possible.

$$Value = \frac{\underline{Improved\ Outcomes}}{Cost}$$

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Jeffords Institute for Quality: Inspiring Extraordinary Outcomes

Jeffords Institute for Quality
- Patient Safety
  - Office of Patient and Family Advocacy
- Data Analytics
- Regulatory Affairs
- Continuous Systems Improvement
- Research
- Infection Prevention
- Community Health Improvement
  - Community Health Team
  - EFAP & Employee Health Management
  - Outreach Services
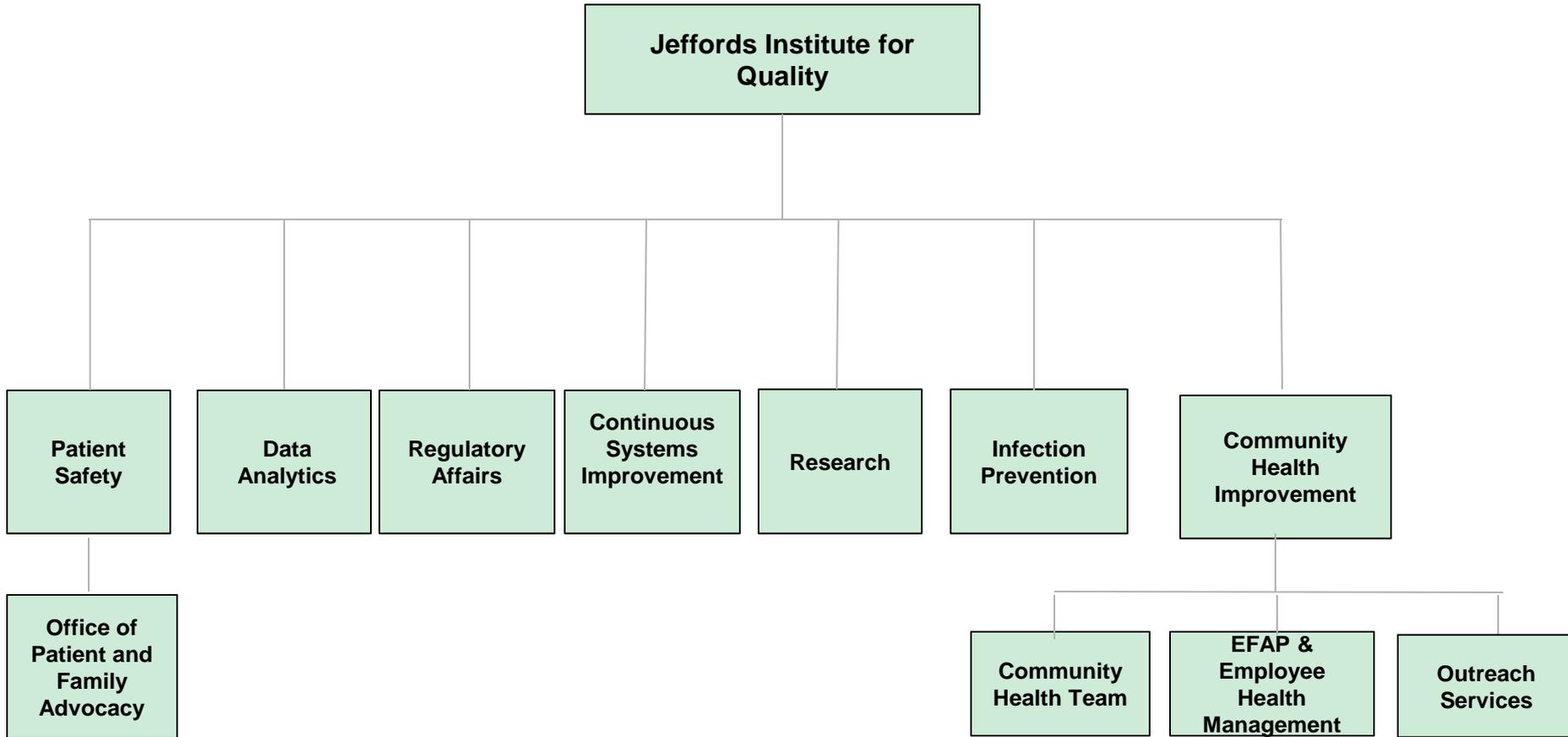
The Jeffords Institute provides expertise in the following areas:

- Implementation of proactive risk reduction and patient safety strategies across the health care delivery system.

- Project management of clinical and operational initiatives that optimize outcomes and enhance the "value" of the healthcare services provided in our region.

- System improvement and standards interpretation to achieve continuous compliance with local, state, and federal health care related regulations.

- Deployment of evidence-based infection prevention strategies that minimize risk to our patients.

- Data analytics and informatics services that advance clinical, operational and research priorities of the organization.

- Promotion of research directed towards improving the quality of care, safety, operational efficiency at the University of Vermont Medical Center and its affiliated partners.

- Implementation of system level redesign and program development that result in improvement in the health of our population and our community.

- Deployment of evidenced based community wellness programs that optimize the health of the populations we serve.

- Advocacy for our patients and families to enhance service quality.

- Use of risk adjusted comparative data sets to drive improvement

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Institute of Medicine's Six Domains of Quality

- Safety
- Timeliness
- Efficiency
- Effectiveness
- Equity
- Pt Centeredness

2015 Quality and Accountability Performance Scorecard
University of Vermont Health Network_UVM Medical Center

Star Rating	Overall Rank	Overall Score	Top Performers
★ ★ ★ ★	16	68.75%	

Domain Performance

Overall Score
68.75%

- Mortality 14.69% of 25%
- Equity 5.00% of 5%
- Efficiency 6.25% of 10%
- Patient Centeredness 9.38% of 15%
- Safety 17.19% of 25%
- Effectiveness 16.25% of 20%

Color based on domain rank

| 01 - 10 | 11 - 20 | 21 - 30 | 31 - 40 | 41 - 50 | 51 - 60 | 61 - 70 | 71 - 80 | 81 - 90 | 91 - 102 |

Top Performers

NYU	72.55%
RUSH	72.37%
MAYOCLINIC_MN	72.16%
EMORY	72.06%
FROEDTERT	71.48%
COLORADO	71.46%
UTAH	71.38%
METHODIST_HOUSTON	70.65%
OHIOSTATE	70.63%
HERMANN	70.47%
BEAUMONT-ROYALOAK	70.36%
TUFTS	69.97%
KANSAS	69.84%

Ranked 16th Overall Among Academic Medical Centers in the U.S.

2015 Quality and Accountability Performance Scorecard
University of Vermont Health Network_UVM Medical Center
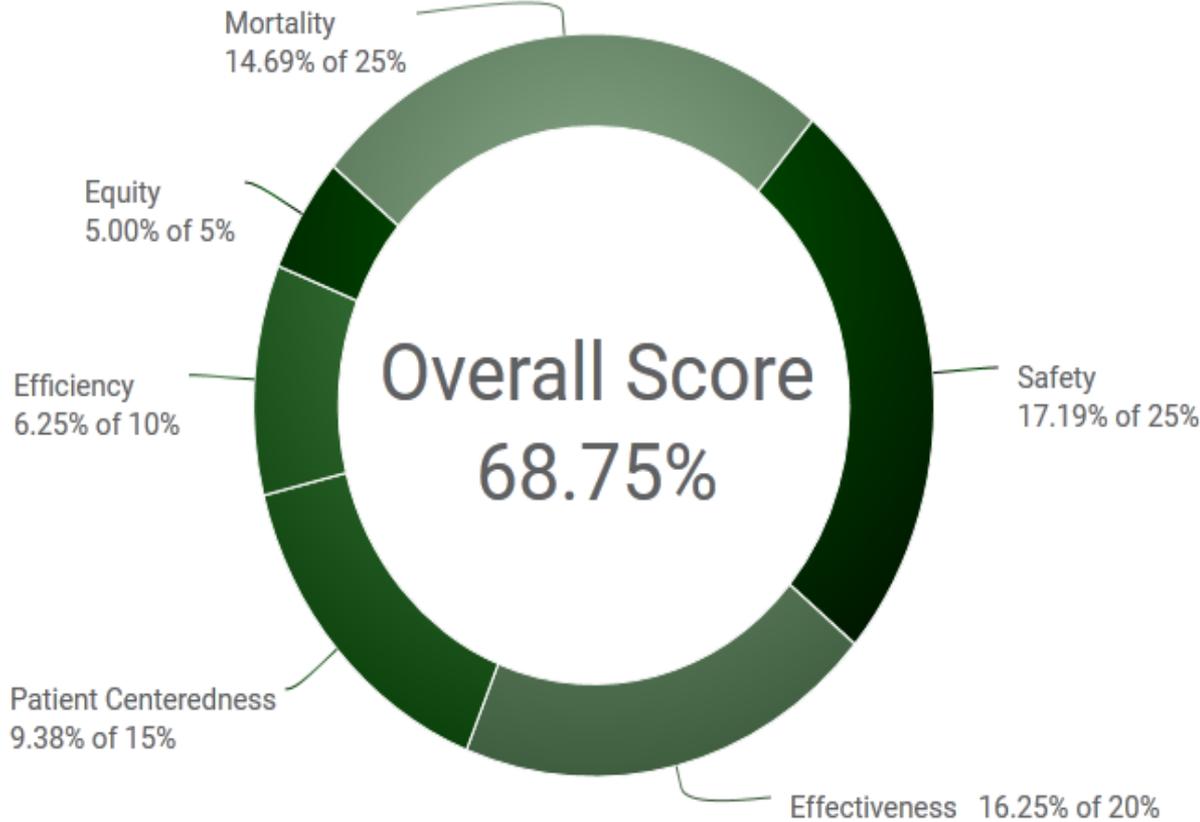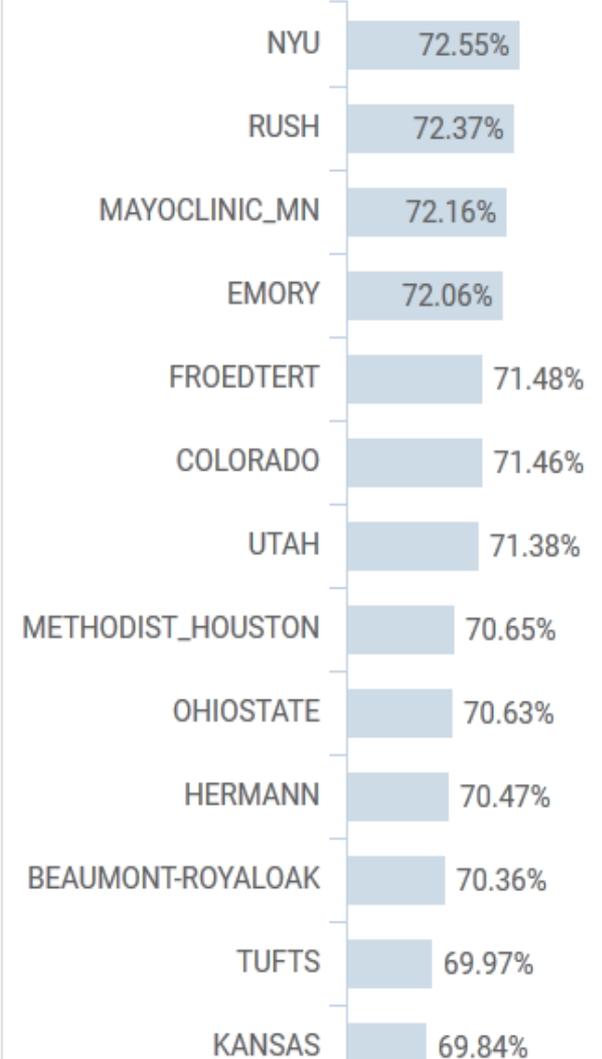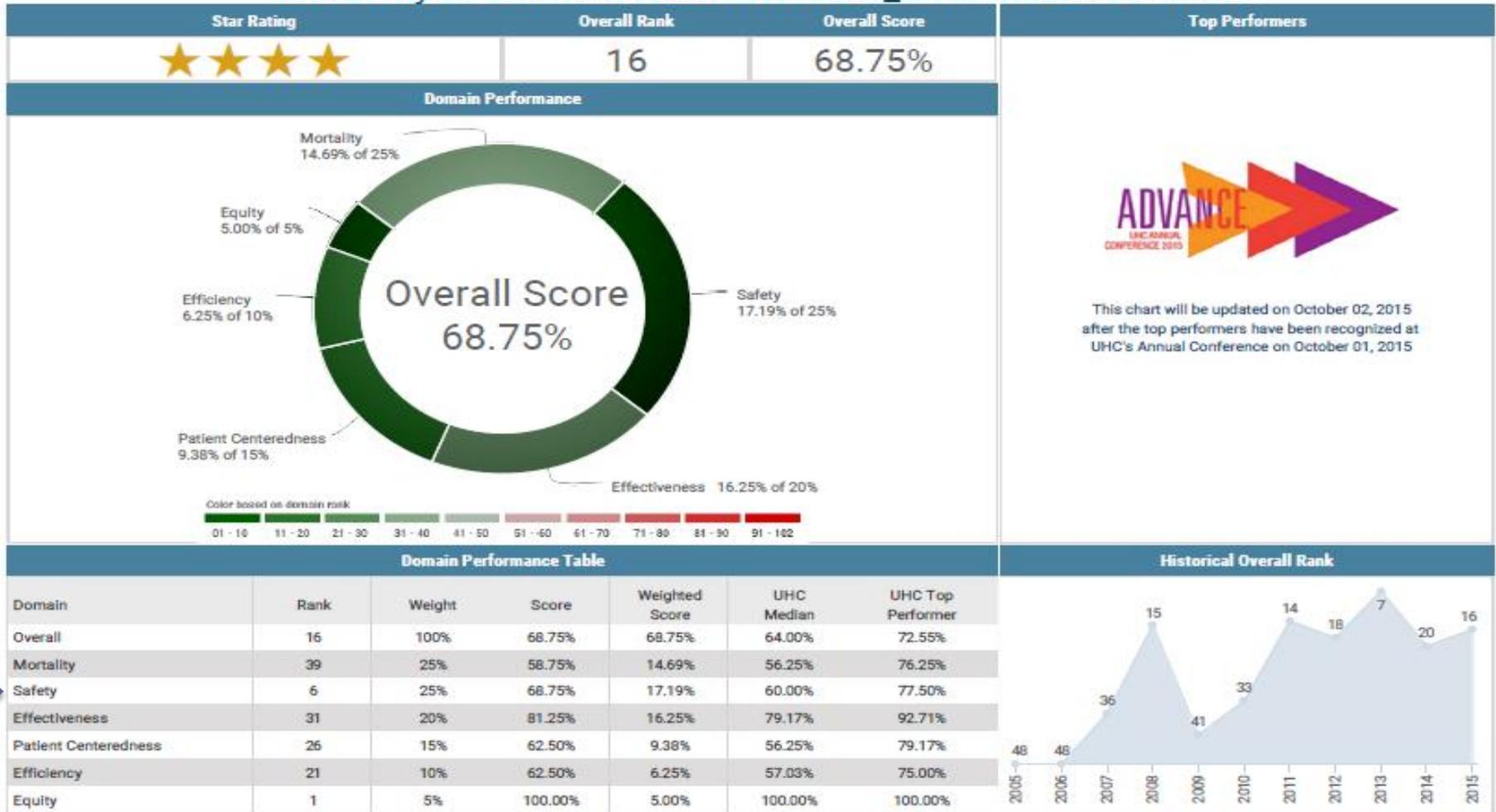
Star Rating	Overall Rank	Overall Score	Top Performers
★★★★	16	68.75%	

Domain Performance

Mortality 14.69% of 25%

Equity 5.00% of 5%

Efficiency 6.25% of 10%

Overall Score 68.75%

Safety 17.19% of 25%

Patient Centeredness 9.38% of 15%

Effectiveness 16.25% of 20%

Color based on domain rank

01 - 10   11 - 20   21 - 30   31 - 40   41 - 50   51 - 60   61 - 70   71 - 80   81 - 90   91 - 102

This chart will be updated on October 02, 2015 after the top performers have been recognized at UHC's Annual Conference on October 01, 2015

Domain Performance Table

Domain	Rank	Weight	Score	Weighted Score	UHC Median	UHC Top Performer
Overall	16	100%	68.75%	68.75%	64.00%	72.55%
Mortality	39	25%	58.75%	14.69%	56.25%	76.25%
Safety	6	25%	68.75%	17.19%	60.00%	77.50%
Effectiveness	31	20%	81.25%	16.25%	79.17%	92.71%
Patient Centeredness	26	15%	62.50%	9.38%	56.25%	79.17%
Efficiency	21	10%	62.50%	6.25%	57.03%	75.00%
Equity	1	5%	100.00%	5.00%	100.00%	100.00%

Historical Overall Rank

48 48 36 41 33 15 14 18 7 20 16

2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

Ranked 8th Among Academic Medical Centers In Ambulatory Care

2015 Ambulatory Care Quality and Accountability (AQA) Performance Scorecard
★★★★

The University of Vermont Medical Center, University of Vermont Medical Group

This document presents the measures evaluated in the 2015 UHC Ambulatory Care Quality and Accountability ranking. This scorecard provides a comparison of your organization's performance with that of other academic medical centers. The data were obtained from existing UHC data resources, including the Faculty Practice Solutions Center (Q2 2014 – Q1 2015), the Access Initiative (Q2 2014 – Q1 2015), Core Measures Data Base (Q2 2014 – Q4 2014), and the Operational Data Base (Q2 2014 – Q1 2015). Data from the most recent CMS Quality Resource Use Report (Mid-Year QRUR) was also used. The goal of the Ambulatory Care Quality and Accountability ranking is to assess organizational performance across a broad spectrum of high-priority dimensions using measures developed by UHC, national organizations or the federal government. The 2015 scoring and ranking cover the domains of access to care, quality and efficiency, equity, continuum of care and capacity management and throughput. Refer to the methodology white paper (available at www.uhc.edu) for specifics regarding the metrics, scoring, and data sources used.

Overall Composite Performance	Rank (*denotes ties)	Overall	Your Weighted Score	AQA Top Score	AQA Median Score
Overall (Based on Domain Performance)	8	60.9%	60.9%	65.0%	56.6%

Domain (Weight)	Rank (*denotes ties)	Your Score	Your Weighted Score	AQA Top Score	AQA Median Score
Access to Care (30%)	23*	55.5%	16.7%	20.0%	16.7%
Includes performance on new patient visits, new patient visit schedule lag and provider-initiated bump rates for various medical and surgical subspecialties.					
Continuum of Care (10%)	19*	57.5%	5.8%	7.4%	5.8%
Includes performance on Joint Commission Hospital Core Measures ED-1b and ED-OP-18b (median time); ED patients that are low acuity and ED frequent fliers.					
Quality & Efficiency (25%)	3	66.8%	16.7%	18.4%	14.1%
Includes select CMS Value-Based Payment Modifier Quality and Cost measures at the medical group-level and CT-scan utilization for specific ED patient populations.					
Capacity Management & Throughput (30%)	21	56.0%	16.8%	20.5%	16.6%
Includes encounters per physician per session and utilization of exisitng capacity for select medical and surgical subspecialties and high cost imaging throughput. Also includes an information-only metric on encounters per room per hour for select medical and surgical subspecialties.					
Equity (5%)	1*	100.0%	5.0%	5.0%	5.0%
Includes access to care measures on appointment schedule lag by payer class (Medicaid and Medicare) for select medical and surgical subspecialties and ED length of stay (ED-1b) by gender and race.					

4 Year Award Winner in Supply Chain: Ranked 1st in 2012 Among AMC's and Ranked 2nd from 2013 -> 2015

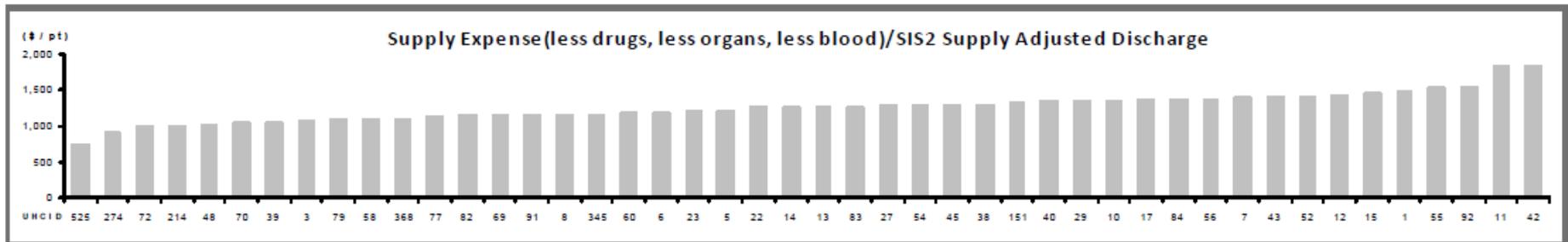## UHC 2015 Supply Chain Performance Excellence Scorecard

University of Vermont Health Network_UVM Medical Center (214)

This document is designed to help you identify your organization's strengths and opportunities for improvement at the overall hospital level as well as the 5 largest supply consuming functional areas .The time period for this information is 2Q14-1Q15 (April 2014 – March 2015). Information about the initiative and the methodology can be found on the Supply Chain Performance Excellence Scorecard (SCPES) informational page. If you have questions about your performance, contact your UHC Supply Chain Account Executive.

Key Performance Measures	Unit of Measure	% Weight	Relative Performance	Hospital Value	Best Quartile	UHC Median	Rank
Facility-Wide Supply Use							
Supply Expense(less drugs, less organs, less blood)/SIS2 Supply Adjusted Discharge	($/pt)	30	⊙⊙	$991	$1,130	$1,265	4/46
Major Department Supply Use							
IP Drug Exp/Rx Intensity-Weighted Discharge	($/pt)	20	⊙	$306	$326	$377	7/46
Cardiology Medical Supply Expense/Amb Pay Classifications	($/APC)	10	⊙	$32	$31	$34	17/46
Surgical Services Medical Supply Expense/Case	($/Case)	20	⊙⊙	$1,661	$2,132	$2,422	5/46
Imaging Medical Supply Expense/Amb Pay Classifications	($/APC)	10	⊙⊙	$5.9	$7.3	$9.9	4/46
Laboratory Services (Clinical Operation) Medical Supply Expense/CMI-Weighted Lab Adj Disch	($/pt)	10	⊖	$87	$60	$77	27/45

Legend

⊙⊙ Substantially better than best quartile range   ⊖ Worse than best quartile range   ⊗ Outlier

⊙ Within best quartile range   ● Substantially worse than best quartile range   ⊘ No data or incomplete data from your institution

Supply Expense(less drugs, less organs, less blood)/SIS2 Supply Adjusted Discharge

UHC 2015 Supply Chain Performance Excellence Rank: 2/46

Vital signs™
March 2011

Making Health Care Safer

1 in 20

About 1 in 20 patients gets an infection each year while receiving medical care.

41,000

About 41,000 bloodstream infections strike hospital patients with central lines each year.

37,000

About 37,000 bloodstream infections happen each year to kidney dialysis patients with central lines.

www   http://www.cdc.gov/vitalsigns

National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion

CDC

- Nearly 75,000 people die from an HAI each year.
- These infections cost the U.S. healthcare system billions of dollars each year

University of Vermont Medical Center's

" Getting to Zero"
Infection Prevention Initiatives

Reducing Central Line Infections: Optimizing Quality and Lowering Costs

- Multidisciplinary team approach: Evidenced based practice

- Product consolidation

- Simulation lab training for team

- Insertion checklist in electronic medical record

- Ultrasound-guided placement

- Daily assessment of continued need

- Weekly rounds

- Monthly data to team and leadership

- Nursing education – care & maintenance bundle

Primary Bloodstream Infection Count - Nosocomial
1987 - 2015

Getting to Zero

https://youtu.be/d3XkWRjk-CU
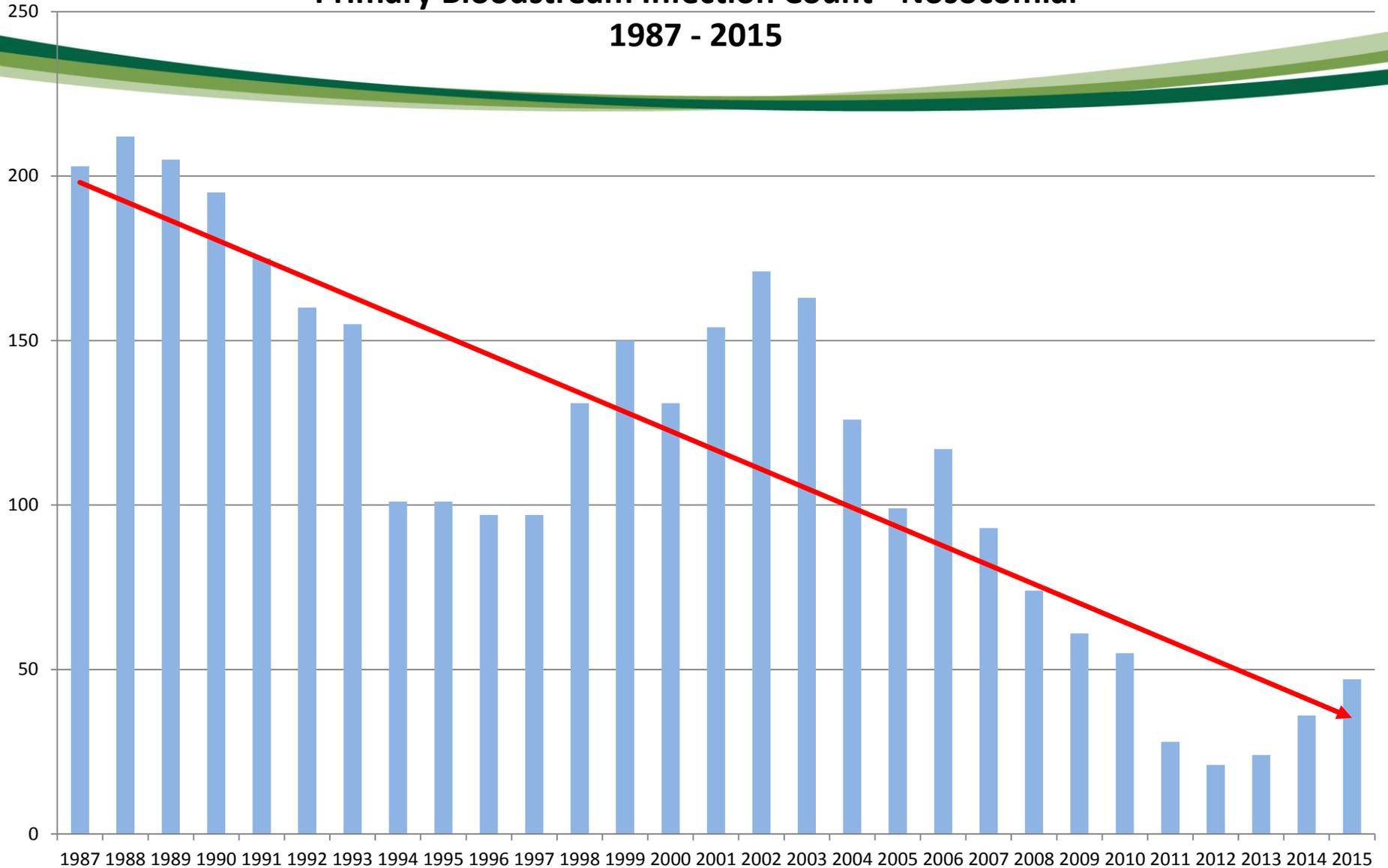
Recognized As Leader in Reducing Hospital Acquired Infections

Washington, DC, **November 21, 2014** – The U.S. Department of Health and Human Services (HHS), the Association for Professionals in Infection Control and Epidemiology (APIC), and the Society for Healthcare Epidemiology of America (SHEA) today recognized the **University of Vermont Medical Center** with the

2014 Partnership in Prevention Award for achieving sustainable improvements toward eliminating healthcare-associated infections (HAIs).*

*Excerpt from 2014 HHS Press Release

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Results

- 77% reduction in Central Line infection rates in Medical Intensive Care and Neonatal Intensive Care Units from baseline in 2010

- Two surgeon directed initiatives standardized and reduced variation in practice resulting in:
  - 81% reduction in total joint infection rates
  - 62% reduction in spinal fusion infection rates

- Joined the Centers for Disease Control and Prevention's (CDC) Dialysis Bloodstream Infection Prevention Collaborative and reduced access-related bloodstream infections in six outpatient dialysis centers by 83%.

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CDC Collaboration- A National Impact

CDC Approach to BSI Prevention in Dialysis Facilities
(i.e., the Core Interventions for Dialysis Bloodstream Infection (BSI) Prevention)

1. Surveillance and feedback using NHSN
Conduct monthly surveillance for BSIs and other dialysis events using CDC's National Healthcare Safety Network (NHSN). Calculate facility rates and compare to rates in other NHSN facilities. Actively share results with front-line clinical staff.

2. Hand hygiene observations
Perform observations of hand hygiene opportunities monthly and share results with clinical staff.

3. Catheter/vascular access care observations
Perform observations of vascular access care and catheter accessing quarterly. Assess staff adherence to aseptic technique when connecting and disconnecting catheters and during dressing changes. Share results with clinical staff.

4. Staff education and competency
Train staff on infection control topics, including access care and aseptic technique. Perform competency evaluation for skills such as catheter care and accessing every 6-12 months and upon hire.

5. Patient education/engagement
Provide standardized education to all patients on infection prevention topics including vascular access care, hand hygiene, risks related to catheter use, recognizing signs of infection, and instructions for access management when away from the dialysis unit.

6. Catheter reduction
Incorporate efforts (e.g., through patient education, vascular access coordi... identifying and addressing barriers to permanent vascular access placemen...

7. Chlorhexidine for skin antisepsis
Use an alcohol-based chlorhexidine (>0.5%) solution as the first line skin an... insertion and during dressing changes.*

8. Catheter hub disinfection
Scrub catheter hubs with an appropriate antiseptic after cap is removed an... time catheter is accessed or disconnected.**

9. Antimicrobial ointment
Apply antibiotic ointment or povidone-iodine ointment to catheter exit site...

* Povidone-iodine (preferably with alcohol) or 70% alcohol are alternatives for pa...

** If closed needleless connector device is used, disinfect device per manufacture...

*** See information on selecting an antimicrobial ointment for hemodialysis cath... Safety website (http://www.cdc.gov/dialysis/prevention-tools/core-interventions... chlorhexidine-impregnated sponge dressing might be an alternative.

For more information about the Core Interventions for Di... Infection (BSI) Prevention, please visit http://www.cdc.gov...

National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion
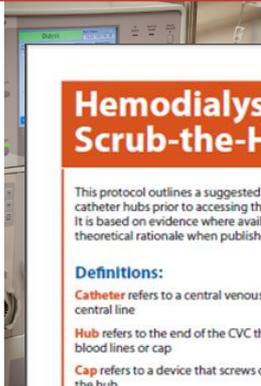
Hemodialysis Central Venous Catheter Scrub-the-Hub Protocol

This protocol outlines a suggested approach to preparing catheter hubs prior to accessing the catheter for hemodialysis. It is based on evidence where available and incorporates theoretical rationale when published evidence is unavailable.

Definitions:

Catheter refers to a central venous catheter (CVC) or a central line

Hub refers to the end of the CVC that connects to the blood lines or cap

Cap refers to a device that screws on to and occludes the hub

Limb refers to the catheter portion that extends from the patient's body to the hub

Blood lines refer to the arterial and venous ends of the extracorporeal circuit that connect the patient's catheter to the dialyzer

Catheter Connection and Disconnection Steps:

Connection Steps

1. Perform hand hygiene and don new clean gloves.

2. Clamp the catheter (Note: **Always** clamp the catheter before removing the cap. Never leave an uncapped catheter unattended).

3. Disinfect the hub with caps removed using an appropriate antiseptic (see notes).

   a. (Optional) Prior to cap removal, disinfect the caps and the part of the hub that is accessible and discard the antiseptic pad (i.e., use a separate antiseptic pad for the next step).

   b. Remove the caps and disinfect the hub with a new antiseptic pad for each hub. Scrub the sides (threads) and end of the hub thoroughly with friction, making sure to remove any residue (e.g., blood).

   c. Using the same antiseptic pad, apply antiseptic with friction to the catheter, moving from the hub at least several centimeters towards the body. Hold the limb while allowing the antiseptic to dry.

   d. Use a separate antiseptic pad for each hub/catheter limb. Leave hubs "open" (i.e., uncapped and disconnected) for the shortest time possible.

4. Always handle the catheter hubs aseptically. Once disinfected, do not allow the catheter hubs to touch nonsterile surfaces.

5. Attach sterile syringe, un... blood, and flush per facil...

6. Repeat for other limb (th...

7. Connect the ends of the... aseptically.

8. Remove gloves and perf...

Disconnection Step...

1. Perform hand hygiene a...

2. Clamp the catheter (Note... before disconnecting. Ne... unattended).

3. Disinfect the catheter hu... using an appropriate ant...

   a. (Optional) Disinfect... disconnection. If th... pad for the subsequ...

   b. Disconnect the blo... disinfect the hub w... the sides (threads)... with friction, makin... (e.g., blood).

   c. Use a separate antis... hubs "open" (i.e., un... shortest time possi...

4. Always handle the cathe... disinfected, do not allow... nonsterile surfaces. Hold... dried.

5. Attach the new sterile ca... Use caution if tape is use... (see notes).

6. Ensure that catheter is st...

7. Remove gloves and perf...

National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion

Checklist: Dialysis Station Routine Disinfection

This list can be used if there is no visible soil on surfaces at the dialysis station. If visible blood or other soil is present, surfaces must be cleaned prior to disinfection. The proper steps for cleaning and disinfecting surfaces that have visible soil on them are not described herein. Additional or different steps might be warranted in an outbreak situation. Consider gathering necessary supplies[1] prior to Part A.

Part A: Before Beginning Routine Disinfection of the Dialysis Station

☐ Disconnect and takedown used blood tubing and dialyzer from the dialysis machine.

☐ Discard tubing and dialyzers in a leak-proof container[2].

☐ Check that there is no visible soil or blood on surfaces.

☐ Ensure that the priming bucket has been emptied[3].

☐ Ensure that the patient has left the dialysis station[4].

☐ Discard all single-use supplies. Move any reusable supplies to an area where they will be cleaned and disinfected before being stored or returned to a dialysis station[5].

☐ Remove gloves and perform hand hygiene.

PART B: Routine Disinfection of the Dialysis Station – AFTER patient has left station

☐ Wear clean gloves.

☐ Apply disinfectant[6] to all surfaces[7] in the dialysis station using a wiping motion (with friction). -

☐ Ensure surfaces are visibly wet with disinfectant. Allow surfaces to air-dry[8]. -

☐ Disinfect all surfaces of the emptied priming bucket[3]. Allow the bucket to air-dry before reconnection or reuse. -

☐ Keep used or potentially contaminated items away from the disinfected surfaces. -

☐ Remove gloves and perform hand hygiene.

Do not bring patient or clean supplies to station until these steps have been completed.

Making dialysis safer for patients

CDC Centers for Disease Control and Prevention
National Center for Emerging and Zoonotic Infectious Diseases

The New York Times

The Experts Were Wrong About the Best Places for Better and Cheaper Health Care

By KEVIN QUEALY and MARGOT SANGER-KATZ DEC. 15, 2015

Grand Junction, Colo.
3rd lowest-spending for Medicare out of 306 places

← Lower-spending places   Higher-spending →

Grand Junction, Colo.
42nd highest-spending for private insurance

← Lower-spending places   Higher-spending →

Burlington, Vt.
51st lowest-spending for Medicare out of 306 places

← Lower-spending places   Higher-spending →

Burlington, Vt.
24th lowest-spending for private insurance

← Lower-spending places   Higher-spending →

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Health care markets ranked from most- to least-spending, in two ways

Grand Junction, Colo.

Low Medicare,
High Private

High Medicare,
High Private

Low Medicare,
Low Private

High Medicare,
Low Private

Burlington, Vt.
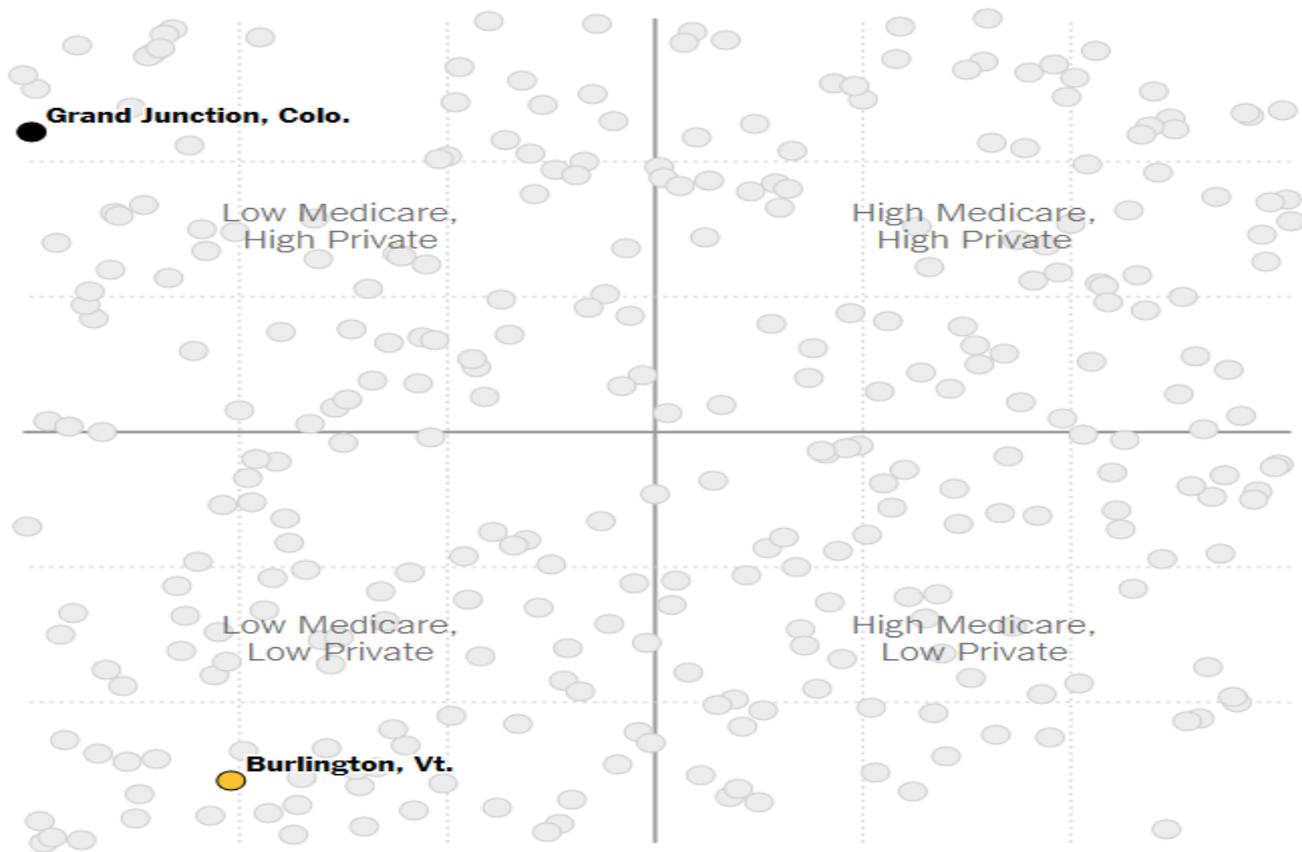
High Value Care Program

Justin Stinnett-Donnell, MD, Value Care Initiative Coordinator, Central Vermont Medical Center

National Efforts – High Value Care

Evidence for the Physician

Information for the Patient

UVM Medical Center – High Value Care Program

- Began July, 2012
  - Dr. Parsons asked the medical faculty of each department to submit ideas for choosing wisely type projects.

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UVM Medical Center – High Value Care Program

Cardiology
Reduce Radiotracer Use

Cardiology
Monitor Procedural Radiation

Cardiology
Offer Stress Echo's to Inpatients

Critical Care
Reduce daily CXR

Critical Care
Decrease Blood Product usage

Critical Care
Reduce i-Ca. testing

Dermatology
CXR and labs for melanoma

Endocrinology
TgAB lab limited to endocrine

Endocrinology
Salivary cortisol only for Cushing's

Gastroenterology
No Elective Colo if PCI < 6 months

Gastroenterology
No Elective Colo if age > 75

Medicine Operations And Efficiency Committee

- ✓ Noncontroversial and evidence-based
- ✓ Measure available electronically
- ✓ Meaningful outcome (reduce harm, reduce cost, improved patient outcome or experience = value add)
- ✓ Potential intervention to not increase physician workload

Infectious Disease
Guidelines for Blood Cx's

ID /Pulm / Palliative
Reduce Daily / Duplicate Labs

Nephrology
BUN/Cr. On ESRD Patients

Oncology
CA – 125 Usage Guidelines

Oncology
Improve Thora/ Paracentesis

Palliative Care
Early Introduction of PC

Palliative Care
Outpatient Palliative Care Plan

Pulmonology
Spirometry With Bronchodilator

Pulmonology
COPD Referrals without Dx

Rheumatology
Repeat Pos. ANA

Rheumatology
DXA Scan Usage / Risk Factors

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UVM Medical Center – High Value Care Program

FY 2013

Gastroenterology No Elective Colo if age > 75	Rheumatology DXA Scan Usage / Risk Factors	Rheumatology Repeat Pos. ANA	Nephrology BUN/Cr. On ESRD Patients
Dr. James Vecchio	Dr. Edward Leib	Dr. Bonnie Liebman	Dr. Virginia Hood
Rate Less then Expected	1070 DXA on target population Over 4 years	602 Repeat (+) ANA's in 2.5 years	3850 Cr. Checked in 2 years

FY 2014

Cardiology Reduce Redundant Echos	Critical Care Reduce Daily CXR	Gastroenterology Reduce Repeat Labs	Oncology Staging of Breast Cancer
Dr. David Schneider	Drs. Clouser and Allen	Dr. Steven Lidofsky	Drs. Wood and Khan
18.2% of echocardiograms were repeats within one year	873 CXR 1000 Vented Patient Days	150 Repeat Hep A 138 Repeat Hep C	35 of 74 CT-bone or PET images non-indicated by ASCO Criteria

FY 2015

Cardiology Reduce CK/MB	Nephrology Reduce Blood Draws on ESRD	Hospitalist Reduce Folate Testing	Cardiology Evaluation Troponin Testing
Dr. Keating	Dr. Virginia Hood	Dr. Bartsch	Dr. Lewinter
19,790 CK/MB checked in 1 year	87% of labs not drawn in Dialysis	27/4,468 (0.6%) Folate tests were deficient	Data under evaluation

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Process

D_{efine}   M_{easure}   A_{nalyze}

Do we have
an
opportunity?

System Change and Education

Clinical Champion

Resident

Data Analytics

Jeffords Project Manager

Laboratory

Nursing

PRISM

HVC Coordinators
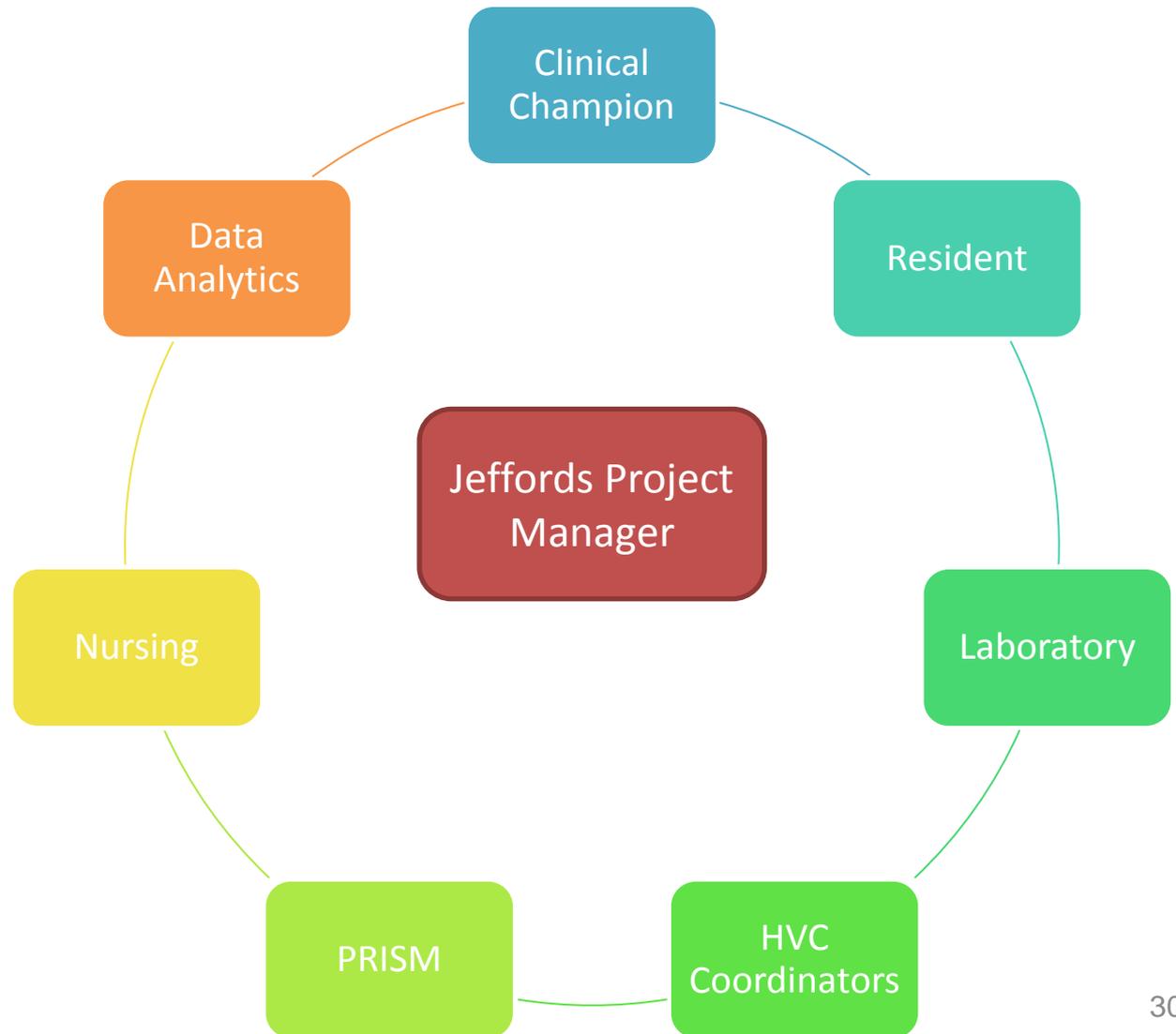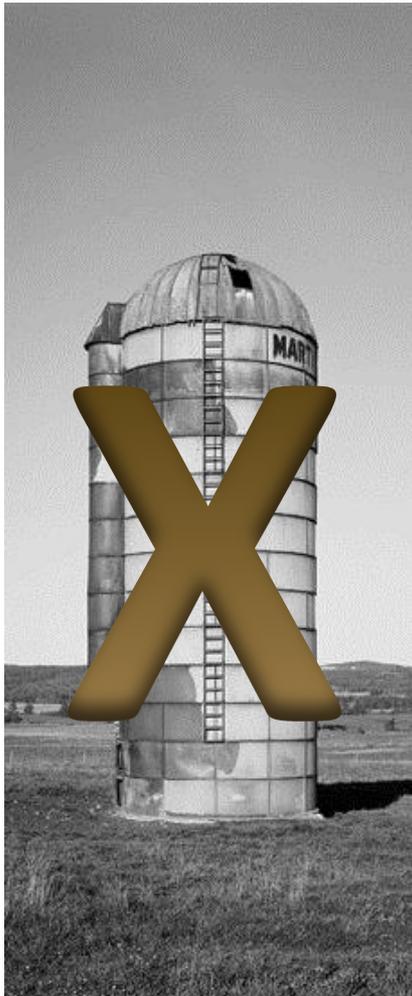
Medical ICU and Chest X-Rays

Objective: Reduce automated morning CXR's on intubated patients.

Quality

- ↓ Radiation Exposure
- ↓ Patient Discomfort
- ↓ Sedative medications
- ↑ Sleep
- ↓ Delirium

Cost

- ↓ Radiology Tech Time
- ↓ Radiologist Time
- ↓ Nursing Time
- ↓ Image storage costs

Gilman Allen, MD

Ryan Clouser, DO

Ben Keveson, MD

Cost Savings

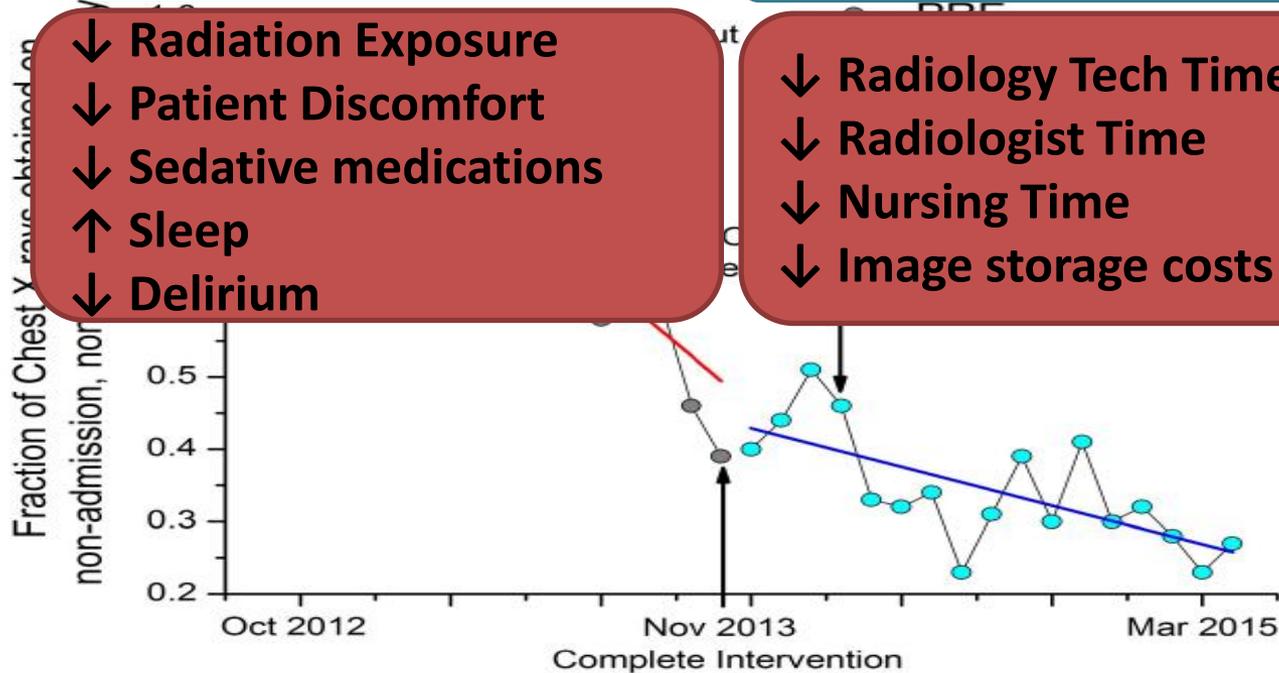|		Q3 2013	Q4 2013	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015
CXR # Saved		-1989	-135	-239	-176	-260	-236	-290	-311	-341
CXR $	349,388	-$23,769	-$42,028	-$30,852	-$45,766	-$41,471	-$50,894	-$54,705	-$59,904

Goals

- Answer the question:
  - Can this be scaled?
- Maintain momentum in the Department of Medicine for future projects
- Expand to support other departments at UVM Medical Center
- Expand across the Network
- Share experience in the public domain

Alice Hyde

Champlain Valley

UVM MC

Elizabethtown

Central Vermont

The University of Vermont
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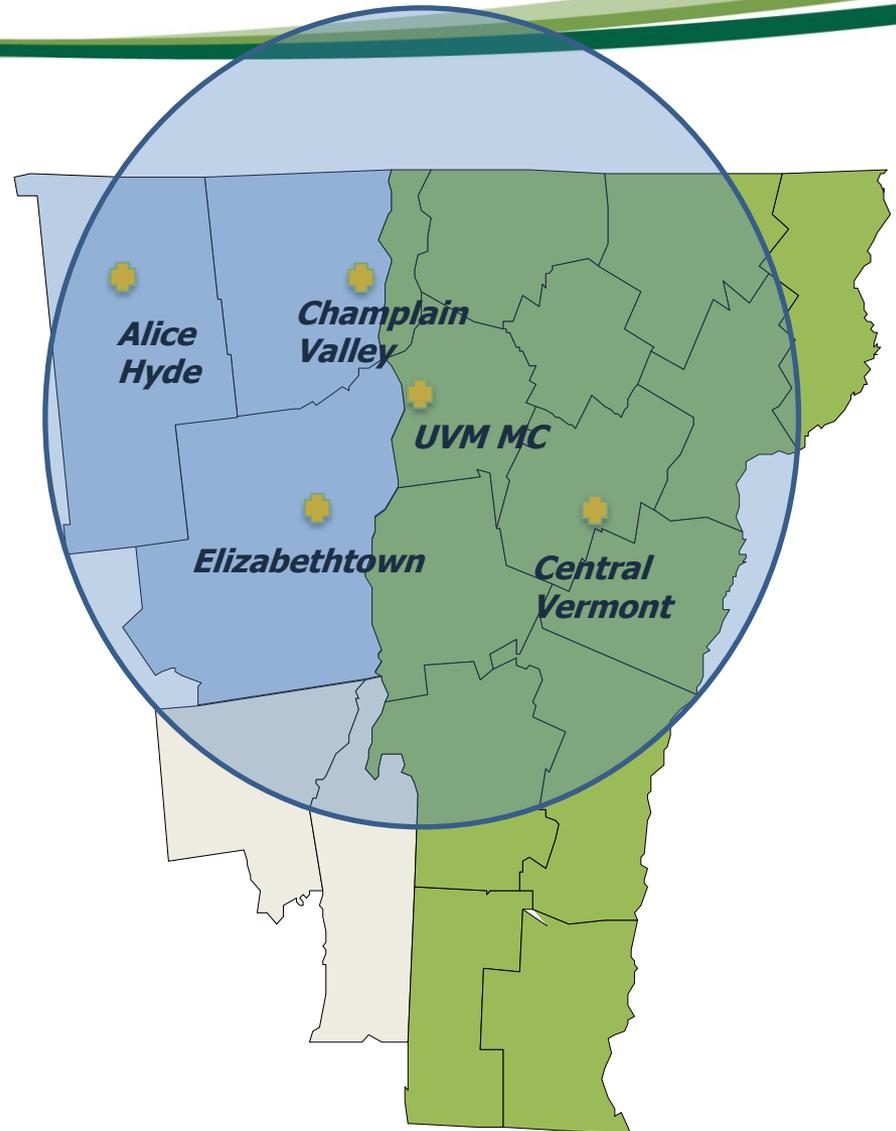
Vermont - Optimizing Laboratory Testing V-OLT

Primary Investigators:

Alan Repp, MD

Cy Jordan, MD

© John Vose - Jericho Hills Photography

Recommendation

Choosing Wisely®

An initiative of the ABIM Foundation

Society of Hospital Medicine – **Adult Hospital Medicine**

shm
Society of Hospital Medicine

Five Things Physicians and Patients Should Question

5

Don't perform repetitive CBC and chemistry testing in the face of clinical and lab stability.

Hospitalized patients frequently have considerable volumes of blood drawn (phlebotomy) for diagnostic testing during short periods of time. Phlebotomy is highly associated with changes in hemoglobin and hematocrit levels for patients and can contribute to anemia. This anemia, in turn, may have significant consequences, especially for patients with cardiorespiratory diseases. Additionally, reducing the frequency of daily unnecessary phlebotomy can result in significant cost savings for hospitals.

V-OLT - Background

- Funded by Vermont Health Care Innovation Project award – part of State Innovation Model Grant (CMS)
  - Grant title: Vermont Hospital Medicine Choosing Wisely™ Project
  - PI: Cy Jordan, MD and Allen Repp, MD
- Goals:
  - Over the course of 2 year grant duration, undertake two projects focused on reducing unnecessary tests and treatments in hospitalized Vermonters
- **Project #1**: regional (8 hospital) collaborative to reduce unnecessary lab testing in hospitalized adults

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Participants

University of Vermont Medical Center

Porter Medical Center

Rutland Regional Medical Center

Southwestern Vermont Health Center

Northeastern Vermont Regional Hospital

Central Vermont Medical Center

Dartmouth Hitchcock Medical Center

Brattleboro Memorial Hospital

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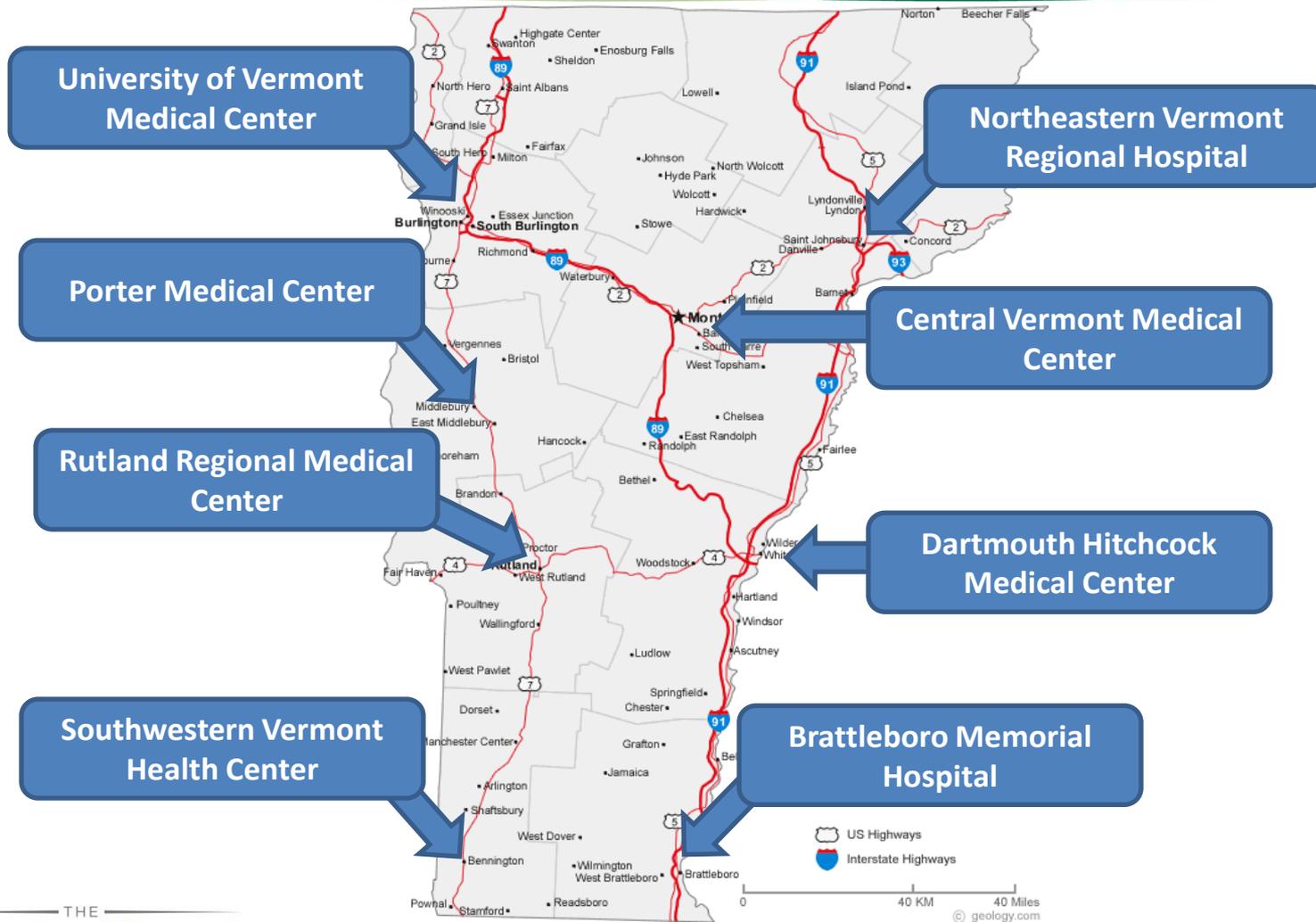
Selected Results – CVMC, UVM Medical Center

- CVMC - Estimated blood saved over 12 month period 12.8 L
- UVM Medical Center- Estimated $135,000 cost savings per year
- Est blood saved = 3.4 L/month = **40.5 L/year**

Value Based Culture

"... many of the traditional s...
increase quality—monetary ...
and sharing of best practices...
Instead,... companies that ta...
driven approach develop a culture of quality,
resulting in employees who make fewer
mistakes—and the companies spend far less time
and money correcting mistakes."

https://hbr.org/2014/04/creating-a-cultur...

High Value Care Program:
- Project Management
- Data Analytics
- System Based Change
- Results
- Feedback

QUALITY IMPROVEMENT REPORT

Developing a high value care programme from the bottom up: a programme of faculty-resident improvement projects targeting harmful or unnecessary care

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BACKGROUND

In the USA, healthcare costs are far greater than those in any other industrialised country.[1] Currently, they comprise almost 18% of the gross domestic product and 30% of government expenditures.[2] US healthcare costs encroach on all other areas of spending public and private. Cost drivers are multifactorial but up to 30% of Medicare spending is potentially avoidable without worsening health outcomes[3] [4] with overuse and misuse of tests and treatments accounting for approximately 10%. Physicians have a responsibility to ensure that the diagnostic tests and treatments they order are safe, effective and provide value.[5] [6] Hence, they can lead the effort to pre-

oriented organisations.[10] However, processes to implement and sustain programmes in local, state and national settings are rarely described.[11] We report here on our initial 2 years' experience, which took a grass-roots approach to developing a high value care (HVC) programme. The goals of this project were to improve the care and experience of patients, reduce harm, cost and educate our resident trainees. We describe the process, projects and lessons learnt.

ASSESSMENT OF PROBLEMS
Programme development

In June 2012 the chair of the Department of Medicine asked the faculty to submit

Challenges Identified

- Project Management and Data Analytics is resource intensive
- Multiple Different Electronic Health Records:
  - Sharing and Benchmarking of data is difficult
  - Best Practices in Decision Support must be built and maintained independently by each institution
  - Different functionality makes one solution incompatible with other systems
- Economic disincentives of a fee-for-service payment model
- Maintaining enthusiasm and momentum for this ground up model

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A Huge Team Effort!

Department of Medicine
Polly Parsons
Cardiology
David Schneider
Martin LeWinter
Frederique Keating
Critical Care
Gil Allen
Ryan Clouser
Gastroenterology
James Vecchio
Steven Lidofsky
Hospitalist
Jason Bartsch
Rheumatology
Edward Leib
Bonita Libman
Nephrology
Virginia Hood
Bette Gilmartin
Oncology
Marie Wood

Steering Committee
Virginia Hood
Justin Stinnett-Donnelly
Pamela Stevens
Allen Mead

Jeffords Institute for Quality
Anna Noonan
Jason Minor
Patricia Bouchard
Mike Nix
Deirdre LaFrance
Mike Gianni
Cynthia Gagnon
Melissa Holman

PRISM
Doug Gentile
William Eaton
Randy Ensley
Alicia Cardoza
Merrill Cate
Jan Gannon
William Eaton

Pathology / Laboratory
Mark Fung
Greg Sharp
Jill Warrington
Jocelyne Stocker
Michelle Baker
Luke Purvis

GME / Residents / Fellows
Elizabeth Hall
Maria Burnett
Patrick Hohl
Sean McMahon
Sadi Raza
Samreen Raza
Benjamin Keveson
Heather Shank
Adedayo Fashoyin
Tim Leclair
Sam Merrill

Radiology
Mike Blakeslee

Resident Involvement

"I learned that the only easy part of a quality improvement project is the proposal of a seemingly simple idea…the challenge lies in multiple departments collaborating together to achieve a common goal."

- Sean McMahon MD (Cardiology fellow)

"The High Value Care project provided me a conduit to evolve from a worker bee/resident to becoming an active leader in our organization."

- Ben Kevesson MD (Pulm/Critical Care fellow)

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Total Cost Management

Todd Keating, Chief Financial Officer, UVM Health Network
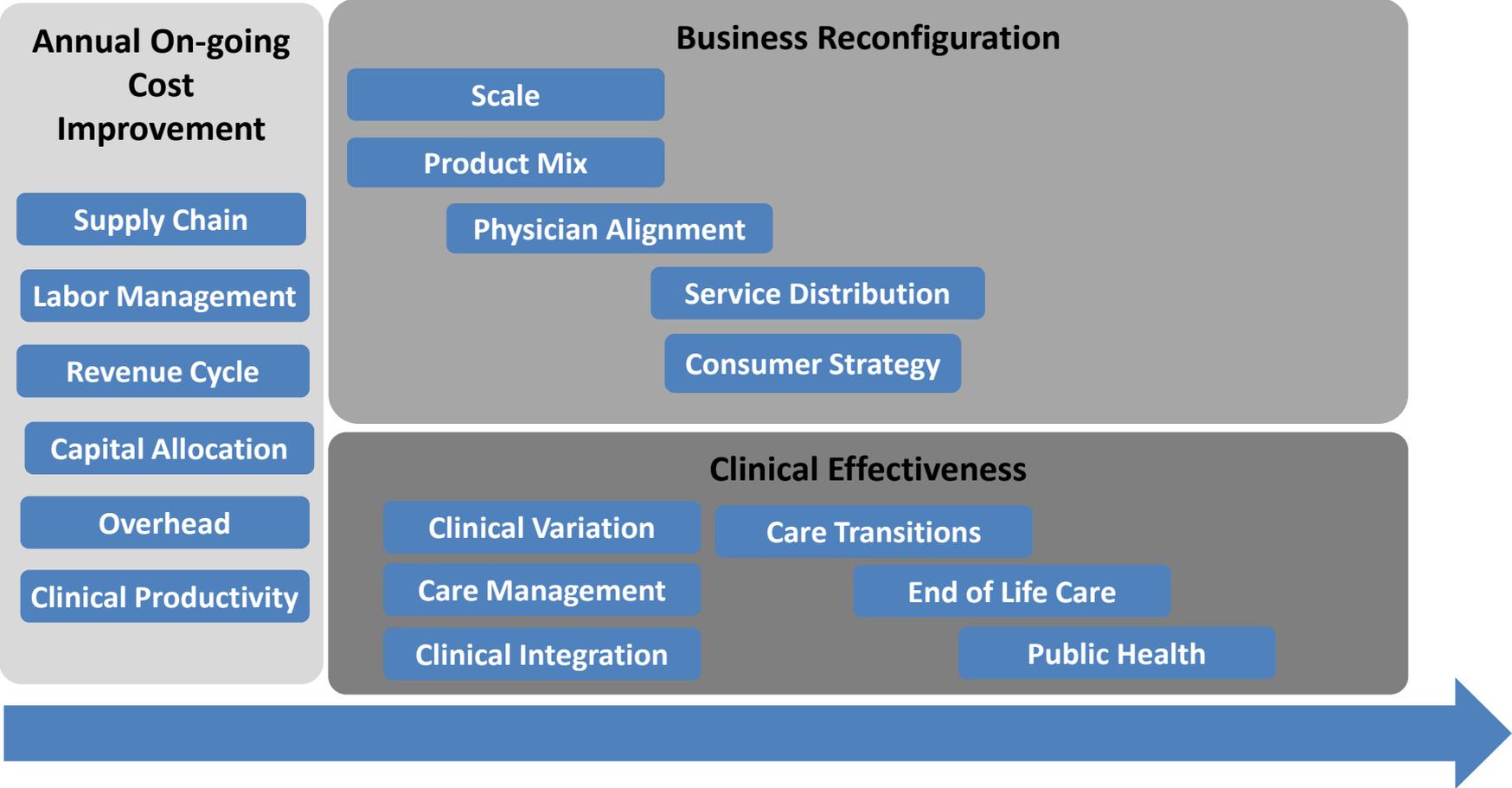
Key Challenges Facing Health Care Providers

- Health care transformation is going to require improvement in quality, cost management and productivity due to lower reimbursement levels (direct or indirect)

- Investments need to be made in technology, facilities and education to improve quality outcomes

- Maintaining an operating margin in order to make the investments above requires a different philosophy that incorporates:

  1. Clinical effectiveness

  2. Cost management/margin improvement

  3. Business reconfiguration

Reimbursement Model Transition

Quality drives financial performance

- Fee for Service Model – Patients are willing to pay more for better quality outcomes

- Population Health Management Model – Providers will strive for better access to drive high quality preventative care

Total Cost Transformation

Annual On-going Cost Improvement
- Supply Chain
- Labor Management
- Revenue Cycle
- Capital Allocation
- Overhead
- Clinical Productivity

Business Reconfiguration
- Scale
- Product Mix
- Physician Alignment
- Service Distribution
- Consumer Strategy

Clinical Effectiveness
- Clinical Variation
- Care Management
- Clinical Integration
- Care Transitions
- End of Life Care
- Public Health

Required Investments to Better Manage Our Business

- Electronic Health Record delivering the following benefits:
  - Improved quality
  - Decrease costs through reduced re-admissions and reduced length of stay
  - Efficiency of having total patient medical information available when needed
- Decision Support (Cost Accounting) system is needed to:
  - Identify best practice in quality
  - Cost management/margin improvement by identifying best practice in resource consumption and productivity
  - Reduce resources by automating manual analysis processes
  - Capital avoidance through better capital planning

Enterprise Management Performance System

- Decision Support: Individual organization- and network-wide tool for developing cost at the procedure level (cost accounting) and analyzing service line profitability

- Financial Planning: Network planning tool for developing multi-year financial forecasts and determining the impact of strategic initiatives

- Capital Planning and Tracking: Individual organization- and network-wide tool for evaluating capital proposals and for tracking spending/future obligations

Enterprise Management Performance System

- Budget Migration and Reporting: Individual organization- and network-wide tool for budget development, variance reporting and productivity monitoring

- Financial Reporting/Dashboards: Visualized financial and performance data to foster understanding and decision-making driven by key performance indicators showing trends, rankings, contributions, variances and outliers

- Strategic Cost Management: System monitors productivity and identifies areas of opportunity by comparing current staffing levels against historical, as well as benchmarks

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Other Areas of Focus

- Uniform Group Purchasing Organization pricing efficiencies

- Refunding and refinancing existing debt

- Request for Proposals for Financial Advisor roles, Investment Managers, Actuaries, Commercial Banking and Pharmacy Benefits Manager as a few examples to reduce overhead costs

- Enhanced technology will result in an increase in productivity

- Work with Payers to reduce administrative waste

Summary

Judy Tartaglia, President and CEO, Central Vermont Medical Center

John R. Brumsted, MD, President and CEO, UVM Health Network and CEO, UVM Medical Center

UVM Health Network's Commitments

- We commit to moving away from a "sick care" system to one that promotes or restores health, as efficiently and effectively as possible, through:
  - Partnering with patients and families, who want an active voice in their care
  - Collaborating with other providers in our community who share in caring for our patients
  - Working with social service agencies on issues like housing, transportation and food security that affect health
  - Leveraging the education and research expertise and the innovations of our academic partners at UVM
- To help make care more affordable for Vermonters, we commit to moving away from FFS payments to 80% risk-based payments by 2018

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Questions?