

Using the Force to Teach Quality, Safety, & Value in Academic Health Centers

VINEET ARORA MD MAPP
 SOCIETY OF ACADEMIC ANESTHESIOLOGY ASSOCIATIONS
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Disclosures



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National Heart Lung and Blood Institute
 People Science Health

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Objectives

To describe a conceptual framework for how to align medical education and the health system to improve the value of care provided by trainees

To share how to “Use the FORCE” to engage trainees to improve quality, safety, and value

Merging Health System & Education Silos

Merging the Health System and Education Silos to Better Educate Future Physicians

Bridging leaders
Engage frontline
Go for win-win



Gupta & Arora 2015

Clinical Learning Environment Review (CLER Program)



Focus is on alignment at the GME-hospital leadership level to coordinate the 6 focus areas

Accreditation Council for Graduate Medical Education

Clinical Learning Environment Review

QI Pathway 1:
Residents/fellows receive experiential training in... overuse in diagnosis or treatment of patients

CLER Pathways to Excellence

Expectations for an optimal clinical learning environment to achieve safe and high quality patient care

EXECUTIVE SUMMARY



JAMA Internal Medicine
Formerly Archives of Internal Medicine

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March 2014 >

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Research Letter | March 2014

Teaching Residents to Provide Cost-Conscious Care
A National Survey of Residency Program Directors

Mirsh S. Patel, MD, MBA¹; Darcy A. Reed, MD, MPH²; Laura Loebner, MD³; Purman S. McDonnell, MD, MPH⁴; Vinod M. Arora, MD, MAPP⁵

Has Curriculum? Yes No, but working on it No

(Emanated March 2013 13222) Text Size: A A A

Teaching method	%
Informal	76
Didactic	58
Review of bill, chart etc.	22

Assessment Method	%
None	47
Supervising faculty	36
Resident self-assessment	14

1 for nearly \$3 trillion annually. Evidence shows that US practice medicine at a higher cost than most Medicare Payment and Advisory Commission advise medical education (CGME) be redesigned to elicit high-value, cost-conscious care.²

IM Program Directors Perceptions

Perceptions of Cost-Conscious Care	% Agree
GME has a responsibility to curtail costs of care	85
Majority of faculty who work with residents model cost-conscious care	47
Residents are prepared to incorporate value & costs into medical decisions	43
Residents in our program have access to information about costs of tests & procedures	22



Hidden Curriculum

- imbalanced focus on identifying rare cases
- sins of omission > sins of commission
- misperception that considering cost is not aligned with patient interests



You must unlearn what you have learned! --Yoda

What is the Force?

"It's an energy field created by all living things. It surrounds us and penetrates us; it binds the galaxy together."



--Obi Wan Kenobi

Ways to Use the Force to Teach Value

- Cultivate "situational awareness"
- Find the right champions
- Observe & understand cultural norms
- Embed "nudges" to promote the right thing
- Redesign the system



Situational Awareness

Situational awareness = mindfulness of pt environment

- E.g. surgical timeout
- Reduces likelihood of medical errors

Simulation promotes situational awareness

- Hands-on training
- Risk-free environment for learning



Do incoming interns have situational awareness as it relates to low value care practices?

The "Horror Room"



GME Orientation Boot Camp: 125 incoming interns

Inpatient simulation

- 55 y/o male, pneumonia, C. diff (+)
- Mock door chart

12 hazards of hospitalization

- 8 - patient safety
- 4 - low-value (overuse)

Assessment form

- List hazards identified
- Prior training



Farnan et al. BMJ Qual Saf 2015

Safety Hazards in Horror Room

SAFETY HAZARDS

- No hand hygiene
- Latex allergy
- Bed rail down
- Wrong name/wrong patient
- No isolation precautions
- Penicillin allergy
- Wrong medication
- No VTE prophylaxis



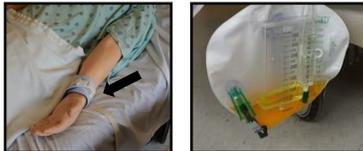
Patient: Washington, Michael MR 352687
PCP: Dr. Poston
FULL CODE



Low Value Hazards in Horror Room

LOW-VALUE HAZARD

- Unnecessary restraints
- Unnecessary Foley catheter (CAUTI risk)
- Unnecessary blood transfusion
- Unnecessary stress ulcer prophylaxis

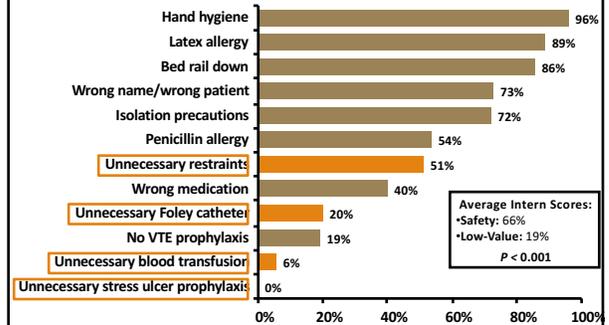


Patient is continuing a course of antibiotics for his pneumonia. He also has a history of HTN and DM2, well controlled on current regimen. Patient's home medications have been continued with the addition of a PPI for stress ulcer prophylaxis.



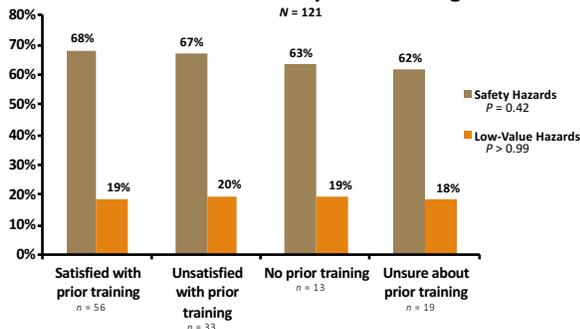
% of Interns who Identified Hazards

N = 125



% Identification by Prior Training

N = 121



Intern Feedback & Follow-Up

I will [now] inherently approach every patient room "looking" for issues

Wish I had done this earlier in my career!

Really fun way to emphasize the importance of safety & value

One month into internship:

•69% more aware of how to identify hospital hazards as a result of the Horror Room (N = 119)

•52% had taken action to reduce a hazard included in the simulation (N = 119)

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safety, effectiveness, efficiency, timeliness, patient-centeredness, equity

The Office of Clinical Effectiveness

Home | Scholarship | Quality Symposium | Innovation Grant | **Choosing Wisely Challenge** | Blog | Competition | Calendar

Choosing Wisely Challenge at University of Chicago Medicine
Bright Ideas due April 1, 2015

Around the world, the capabilities of modern medicine are being delivered inside of health systems with staggering complexity. Too often this complexity contributes to avoidable harm and unsustainable cost. Moreover, clinicians rarely have the support necessary to deliver **value**—defined as the best possible care at the lowest possible cost.

To help address this gap, and mirroring the Costs of Care (an American nonprofit) and the ABIM Foundation, the University of Chicago Medicine is launching the inaugural Choosing Wisely® Challenge. We want to identify the most promising bright ideas that can be successfully implemented here at the medical center.

Challenge is open to Residents and Fellows of any program and to any employee of the University of Chicago

Challenge co-sponsored by GME & CQO Office (Michael Howell MD)

COSTS of CARE

Choosing Wisely
An initiative of the ABIM Foundation

About | Lists | In Action | Resources | Video

Search Recommendations > SHM - Medications for stress ulcer prophylaxis inpatients

Society of Hospital Medicine – Adult Hospital Medicine
View all recommendations from this society

Released February 21, 2013

Don't prescribe medications for stress ulcer prophylaxis to medical inpatients unless at high risk for GI complications.

According to published guidelines, medications for stress ulcer prophylaxis for stress ulcer prophylaxis are not recommended for adult patients in non-ICU settings. Histamine-2 receptor antagonists (H2RAs) and proton-pump inhibitors (PPIs), commonly used to treat stress ulcers, are associated with adverse drug events and increased medication costs, and commonly enhance susceptibility to community-acquired nosocomial pneumonia and Clostridium difficile. Adherence to therapeutic guidelines will aid health care providers in reducing treatment of patients without clinically important risk factors for gastrointestinal bleeding.

COST Framework for Value Improvement: Skip the Drips

Interventions	Description	Skip the Drips
Culture	Valuing cost-consciousness and resource stewardship at the individual and team level	Subspecialty faculty champions recruited to email peers
Oversight	Requiring accountability for cost-conscious decision-making at a peer and organizational level	Pharmacy receives a monthly audit of PPI drips ordered and why
Systems Change	Creating systems to make cost-conscious decisions using institutional policy, decision-support tools, and clinical guidelines	Epic now requires indications for PPI drips when ordering
Training	Providing knowledge & skills clinicians need to make cost-conscious decisions	"Brochures" on Skip the Drips shared in workrooms & at morning report

Levy et al. Acad Med 2014

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Choosing Wisely Challenge
SKIP THE DRIPS
Improve meaningful use of continuous infusions to improve value of care

PPI FOR UPPER GI BLEED

- **Goals**
 - ✓ Improve survival from life threatening GI bleed
 - ✓ Avoid complications such as C diff
 - ✓ Improve likelihood of successful endoscopy
- **Recommend**
 - ✓ Pre-endoscopy: reserve PPI drip for suspected high risk upper GI bleeds.
 - ✓ Post-endoscopy:
 - All PPIs should be discontinued unless endoscopy identifies ulcers or erosions
 - Continuous IV PPI can be used for ulcers with high-risk lesions

Dr. Gautham Reddy, GI Fellowship Program Director

Special thanks to USM Office of Clinical Effectiveness, led by Michael Howell, MD.

Inappropriate PPI Orders by “Skip the Drips” Education

Skip the Drips Education Compared to No Education

Date	Skip the Drips (%)	Non-Skip the Drips (%)
Jul 15	~15	~25
Aug 15	~15	~25
Sep 15	~15	~25
Oct 15	~15	~40
Nov 15	~10	~40
Dec 15	~10	~15
Jan 16	~10	~30
Feb 16	~10	~35

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Choosing Wisely
An initiative of the ABIM Foundation

Search

About Lists In Action Resources Videos

Home > Lists > Search Recommendations > ASCP - Myoglobin or CK-MB in the diagnosis of myocardial infarction

American Society for Clinical Pathology
View all recommendations from this society

Released February 3, 2015

Don't test for myoglobin or CK-MB in the diagnosis of acute myocardial infarction (AMI). Instead, use troponin I or T.

Unlike CK-MB and myoglobin, the release of troponin I or T is specific to cardiac injury. Troponin is released before CK-MB and appears in the blood as early as, if not earlier than, myoglobin after AMI. Approximately 30% of patients experiencing chest discomfort at rest with a normal CK-MB will be diagnosed with AMI when evaluated using troponin. Single-point troponin measurements equate to infarct size for the determination of the AMI severity. Accordingly, there is much support for relying solely on troponin and discontinuing the use of CK-MB and other markers.

Patient Materials
• Search patient-friendly resources by Consumer Reports.

Ordering Wisely

An educational initiative to improve value

Cardiac Biomarkers

Troponin is the preferred biomarker “overall and for each specific category of MI” according to AHA/ACC Guidelines:

TABLE 2 Summary of Recommendations for Cardiac Biomarkers and the Unmet Definition of MI

Recommendations

1 Measure cardiac troponin (troponin I or T) at presentation and 3-6 hours after symptom onset in all patients with suspected ACS to identify patients at risk.

2 Obtain additional troponin results beyond 3-6 hours only in patients with initial normal serial troponins with intermediate troponin (single-point) or intermediate troponin (serial) results.

3 Consider time of presentation, the type of event, and other clinical features when determining whether value into contemporary troponin assays. CK-MB and myoglobin are not useful for diagnosis of ACS.

Reviews of 30,000 patients from the CRUSADE Trial and 10,000 patients from the GRACE Registry have shown routine use of CK-MB rarely adds prognostic value to Troponin alone

Health systems (Mayo, Mass Gen, Brigham, Hopkins-Bayview, and others) have taken steps to reduce volume of CK-MB testing

Troponin rises earlier than CK-MB. Troponin is more specific than CK-MB in CKD and ESRD

RECOMMENDATIONS:

- (1) If concern for ACS, initially check Troponin only.
- (2) If Troponin is negative, there is no role for CK-MB.
- (3) If Troponin is positive (either acutely or at baseline) and concern for infarction or reinfarction, recommend serial Troponins (q 3-6 hrs). CK-MB may aid in diagnosis and/or prognosis in certain clinical circumstances, such as reinfarction (consider lab-adding to screening Troponin).

Courtesy Matt Modes PGY3

Data from UChicago

Are we outliers?

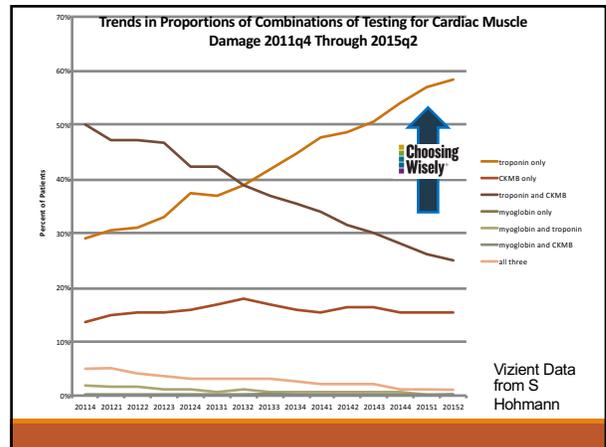
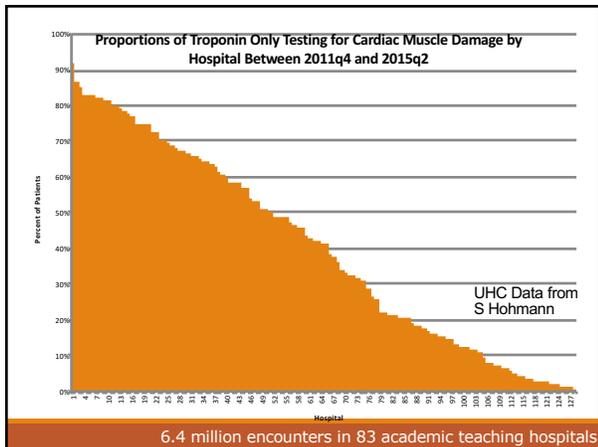
Ways to order Cardiac Biomarkers

Troponin; CK-MB (inc Total CK); ER Cardiac Panel (Total CK, CK-MB, Trop)

Total Cardiac Biomarkers Resulted in 2014 at U of C

Category	ER-PANEL	Troponin	CK-MB
Total	~12500	~11500	~10500
Inpatient	~6500	~8500	~7500
Outpatient	~5000	~3500	~3000

Data from M Modes



Ways to Use the Force to Teach Value

- Cultivate “situational awareness”
- Recruit the right champions
- Understand the culture you work in
- Embed “nudges” to promote the right thing
- Redesign the system



“FLIP” For Discharge

- Combines 4 SHM Choosing Wisely Recommendations
- “FLIP”
- Foley (1)
- Labs (routine daily) (5)
- Indications for Telemetry (4)
- Prophylaxis- Inappropriate GI Prophylaxis (2)

Choosing Wisely
Society of Hospital Medicine – Adult Hospital Medicine
Five Things Physicians and Patients Should Question

1. Don't place, or leave in place, urinary catheters for incontinence or convenience or monitoring of output for non-critically ill patients (acceptable indications: critical illness, obstruction, hypoxia, perioperatively for <2 days for urologic procedures; use weights instead to monitor diuresis).
2. Don't prescribe medications for stress ulcer prophylaxis to medical inpatients unless at high risk for GI complications.
3. Avoid transfusions of red blood cells for arbitrary hemoglobin or hematocrit thresholds and in the absence of symptoms of active coronary disease, heart failure or stroke.
4. Don't order continuous telemetry monitoring outside of the ICU without using a protocol that governs continuation.
5. Don't perform repetitive CBC and chemistry testing in the face of clinical and lab stability.

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FLIP for discharge

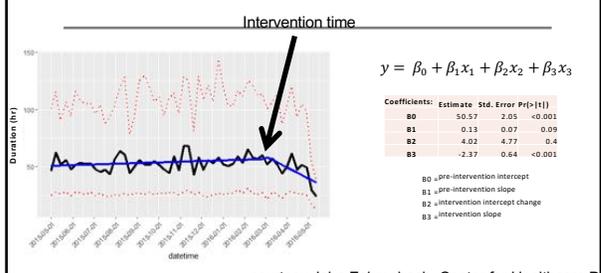
Charles Wray, PGY4



Account ID	Location	Accession	Component	Units	Units	Units	Units	Units	Units	Units	Units
7337601	MSA M. Ross-Foster, M.	32016	1	36.3 (87.3)	98	8467	98				
7342001	MSA M. Ross-Foster, M.	32016	4	36.0 (85.8)	87	18875	98				
7342101	MSA M. Ross-Foster, M.	32016	1	36.4 (87.5)	89	11275	98				
7342201	MSA M. Ross-Foster, M.	32016	0	36.0 (85.8)	78	13484	98				
7342301	MSA M. Ross-Foster, M.	32016	15	36.1 (87)	119	18887	98				
7342401	MSA M. Ross-Foster, M.	32016	3	36.0 (85.8)	79	13886	98				
7342501	MSA M. Ross-Foster, M.	32016	8	35.6 (84.1)	81	12679	100				
7342601	MSA M. Ross-Foster, M.	32016	8	37.0 (88.3)	113	18979	98				
7342701	MSA M. Ross-Foster, M.	32016	71	37.4 (89.3)	124	13787	87				

*Clicking on the Check mark will take you directly to the Manage Orders Screen

Telemetry Order Duration



courtesy John Fahrenbach, Center for Healthcare Data Science & Innovation

Ways to Use the Force to Teach Value

- F** Find the right champions
- O** Observe & understand the cultural norms
- R** Redesign the system
- C** Cultivate “situational awareness”
- E** Embed “nudges” to promote the right thing



Lessons for Jedi to Teach Value

- You must unlearn what you have learned.
- Use the FORCE.
- Do or do not. There is no try.
- Stay on target.



Acknowledgements

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