Commonwealth of Massachusetts
Board of Registration in Medicine
Quality and Patient Safety Division

ASSESSING THE STRENGTH OF HEALTH CARE FACILITY IMPROVEMENT ACTIONS

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The goal of an investigation of an unexpected adverse event is to identify the causes and implement solutions that will be effective in preventing a recurrence. In September 2011, the Quality and Patient Safety Division (QPSD) co-sponsored, with the Massachusetts Society for Healthcare Risk Management, the Massachusetts Hospital Association and the Massachusetts Medical Society, a full day workshop entitled *Gain Value From Your Root Cause Analysis Investigations.* The workshop was led by Patrice L. Spath, an expert and educator in health care quality and resource management. The workshop focused on the importance of continuing to ask "why" during a Root Cause Analysis, until the health care facility is able to pinpoint all of the "fundamental, correctable causes" and, most importantly, the latent conditions - those circumstances that made the event more likely to occur.

Once all causes and conditions are identified, the health care facility is faced with the difficult task of finding and implementing an action plan that will be effective in preventing recurrence. As an example, the Department of Veterans Affairs, National Center for Patient Safety (NCPS), Root Cause Analysis tool provides a cognitive aid, intended to guide an assessment of the "strength" of specific actions taken in response to an event. "Stronger actions are viewed as those that are more likely to be successful in accomplishing the desired changes, rendering greater utility for the effort expended."[1]

Through the Safety and Quality Review (SQR) process, the QPSD wants to support health care facility efforts to identify improvement actions that will be successful. We are recommending that health care facilities indicate their opinion of the "strength" of the actions that are described in the SQR report. The instructions for completing the SQR form have been revised to include the cognitive aid developed by the NCPS, which provides a list of actions categorized as "stronger," "intermediate," or "weaker." (Attachment A). The revised SQR form has a new section where the health care facility can note the "type" of action and indicate an assessment of its "strength." Understanding that it may be difficult to assess the strength of every corrective action or improvement measure implemented, completion of this section is not mandatory. However, we hope that by prompting health care facilities to think about the success and sustainability of their action plans, they will view this as a positive addition to the SQR form and one that supports their quality and patient safety goals.

The NCPS tool is a guide and only intended to provide examples of actions and their relative effectiveness. Health care facilities should not be discouraged from implementing actions that might be considered to be "weaker," according to the guide. Weaker actions can often be extremely effective when accompanied by stronger interventions, such as "training" coupled with periodic competency assessments. The "strength" of an action may also depend on the situation. For example, if a weaker action has not been used before (e.g.,

[1] The NCPS Root Cause Analysis tools are at www.patientsafety.gov/CogAids/RCA/index.html and the cognitive aid for measuring the strength of actions is in the "Actions and Outcomes section. See also, Attachment A which provides the evidence based research used to develop this tool.

staff are trained on how to use a new piece of equipment) then training is essential and not a weaker action. But, in a situation where training has been used over and over again, it is weaker (e.g., nurses are trained in the "5 rights" of medication administration in school, so to use remedial training about the "5 rights" when a practicing nurse makes a medication error would be a less effective exercise.) We also acknowledge that multiple actions are often required to respond to an event, and it is the cumulative effect of these actions that will result in the desired improvement.

An example of how this section might be completed in response to a medication error follows.

"Type" of Action	**"Strength" of Action**
Training and Periodic Competency Assessment	☒Stronger ☐ Intermediate ☐Weaker
Reinforce double check system/random audit for compliance	☒Stronger ☐ Intermediate ☐Weaker
Leadership support of additional staffing for xx unit	☒Stronger ☐ Intermediate ☐Weaker
Addition of new medication alert for xx drug	☐Stronger ☒ Intermediate ☐Weaker
Purchase of new smart pumps for xx medication administration	☒Stronger ☐ Intermediate ☐Weaker

This Advisory and the related changes to the SQR reporting form are intended to encourage health care facilities to evaluate their actions with the goal of identifying those solutions that have the highest degree of success. The health care facility is ultimately the best judge of the best solution.

The revised SQR form and instructions are at the Quality and Patient Safety link at the Board's website: http://www.mass.gov/eohhs/gov/departments/borim. The QPSD appreciates the opportunity to support your work in quality and patient safety.

See ATTACHMENT A (page 3-4)
Evidence Guided Patient Safety - Hierarchy of Treatments

ATTACHMENT A

Assessing the Strength of Health Care Facility Improvement Actions

Evidence-Guided Patient Safety (Hierarchy of "Treatments")

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[Adapted from DeRosier & Stalhandske; VA NCPS; www.pateintsafety.gov]

	Type	Example	Refs
Stronger Treatments	Architectural/physical plant changes	Suicide-resistant door-jamb for inpatient psych rm.	1, 2
	New devices with usability testing	Automated defibrillator	3, 4
	Engineering control (forcing function)	IV tubing auto-clamp when pump door opens	5
	Simplify the process	Remove unnecessary steps for LP preparation	
	Standardize equipment or process	Standard defibrillator on all code carts	6
	Tangible involvement by leadership	Supporting purchase of standard CVC	6
Intermediate Treatments	Redundancy	Abnormal x-ray f/u to physician & separate tech.	7
	Increase in staffing/decrease workload	2 → 3 HO-1s per ward	
	Software enhancements/modifications	Computer alerts for drug-drug interactions	8
	Eliminate/reduce distractions	Quiet rooms for programming PCA pumps	
	Checklist/cognitive aid	Ensure all anesthesia equipment is operational	9, 10
	Eliminate look and sound-alikes	Losec and Lasix not stored near each other	11
	Standardized communication tools	Readback of critical lab value	12
	Enhance documentation/communication.	Medication name and dose **highlighted** on IV bag	13
	Education	Knowing cognitive biases decreases misdiagnoses	17
Weaker Treatments	Double checks	One person calculates dosage, another person reviews their calculation	14
	Warnings	Adding audio alarms or caution labels	15, 16
	New procedure/memorandum/policy	Remember to check IV sites every 2 hours	
	Training	In-service on hard-to-use defibrillator with hidden door	

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