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Colin T. Phillips
Maine Medical Center

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COMMENTARY

Time-Out in Madrid: Considering the Role of Time-Outs in Clinical Practice

Colin T. Phillips, MD | Department of Medicine, Maine Medical Center, Portland, ME

Certain medical practices are reflexive and ingrained in training. Whether it is wearing a white coat and stethoscope on the wards or washing hands before and after patient interactions, some activities are part of the core makeup of working in a healthcare system.

I recently had the opportunity to work in Madrid, Spain, where I observed the inner workings of their medical system. My training is in interventional cardiology, and I was interested in learning new techniques and methods for approaching coronary artery disease. In the cardiac catheterization laboratory, I was familiar with the room layout, emphasis on radial artery access, and medications used. I expected certain aspects to be different, such as their commonly used stents and balloons, and the system-wide differences following universal access to care.

What I didn't expect was the omission of the pre-procedural time-out. It took a few cases for me to figure out that one of our keystones of patient safety was missing. At first, I thought it may be happening somewhere else that I just wasn't seeing. But before each case, the familiar review of the demographics and planned procedure was not there.¹

Done well, the time-out is an opportunity to invigorate the care team, review the case strategy, and ensure there are no surprises that may be overlooked. From my earliest memories in medical training, the pre-procedural time-out was there. Checklists were what kept airplanes flying safe in the sky. In medicine, they prevented never-events, such as operating on the incorrect leg. But here was a cardiac catheterization laboratory in a quaternary medical center that was successfully treating patient after patient without a time-out. All

the involved parties seemed relaxed and on-board with the planned procedure and the cases ran smoothly.

When I broached the subject with the physicians, nurses, and technologists, I had trouble finding a direct Spanish translation for the word "time-out". I went to sports for an analogy, but quickly realized that the national sport of soccer also operates without time-outs. I began to wonder why we placed such an emphasis on performing the pre-procedural time-out in the first place.

Part of the answer turns out to be hospital accreditation. In 2004, the Joint Commission instituted the Universal Protocol, formalizing the use of a time-out before procedures.² For some hospitals, this change linked time-outs with Medicare reimbursement.^{3,4} In 2008, the Universal Protocol was followed by the World Health Organization's Second Global Patient Safety Challenge, which included a preprocedural checklist. Between 2007 and 2008, a version of this checklist was tested worldwide in 3955 surgical patients from 8 large hospitals after collecting baseline data on 3733 patients. Remarkably, the procedural death rate was cut nearly in half—from 1.5% to 0.8%—with the introduction of the checklist.⁵ This simple intervention that saved lives bolstered the push for checklists in various procedural settings outside of the operating room, including intensive care units, emergency departments, and cardiac catheterization laboratories. These checklists also had to be documented in the medical record. Using the procedure checklist significantly reduced complications and turnaround time in the cardiac catheterization laboratory.⁶ One could also imagine using formalized checklists in other high-risk areas, such as patient hand-offs and hospital discharges.

Outside of clinical studies, proving that checklists save lives is difficult. One consideration is the Hawthorne Effect, in which a subject's behavior is

Correspondence: Colin T. Phillips, M.D.
Department of Medicine, Maine Medical Center
96 Campus Drive, Scarborough, ME 04074
cphillips@mmc.org

altered when they know they are being watched. Is it possible that the improvement in mortality seen with the checklist was simply because people were paying more attention when they knew they were being monitored? Another challenge to the value of checklists comes from registry data in Canada. Using the natural experiment created when checklists were mandated in Ontario from July 2010 onward, the investigators compared operative mortality, rates of surgical complications, lengths of hospital stay, and readmission rates. Interestingly, there were no significant reductions in these endpoints in the 101 hospitals assessed.⁷ These findings question the added value of a time-out and pre-procedural checklists, and they conflict with previously published studies and systematic reviews.^{8–10}

As I pondered the role of a time-out, I realized that as a proceduralist, having a game-plan involving the team in the procedure was integral to patient safety. While assessing the value of the time-out for individual providers is limited by confounding factors, the main value is likely outside of identifying the correct patient or the correct side of the operation. It is rather in the exercise of pausing for “a moment to plan,” which I found was the best translation of “time-out” in Spanish. It is with that planning, and reviewing potential complications, that disaster is averted. I presented my thoughts to the cardiology division in Madrid as a part of a grand rounds. It may have inspired them to approach pre-procedure planning differently. By the time I completed my visit, they were doing a time-out before each case. I’m hopeful that this “moment to plan” makes a positive difference in patient care.

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