Expanding the SOAP Note to SOAPS (With *S* for *Safety*): A New Era in Real-time Safety Education

Patrice M. Weiss, MD
Eduardo Lara-Torre, MD
Amanda B. Murchison, MD
Laurie Spotswood, MS, CLS

Abstract

The challenges inherent in medical education are multiple, including recognition of different learning styles among students, incorporation of the Accreditation Council for Graduate Medical Education competencies and outcomes measurement into the curriculum, and compliance with mandated duty hours along with a heightened awareness of patient safety required by our regulatory institutions. With the requirement that safety become an explicit part of the residency curriculum across all specialties, educators are charged with innovative ways of achieving this goal. The following commentary addresses this need and suggests an innovative approach to the traditional daily rounds' SOAP (subjective, objective, assessment, and plan) note to incorporate a second *S* for *safety*. The use of a SOAPS note elevates each encounter by integrating quality and error avoidance as a component of care. This method teaches the next generation of physicians the importance of patient safety as an integral part of every doctor-patient interaction.

Background

The medical educator and the patient-safety officer are both deeply committed to quality in health care education. Though they share the same working environment, each focuses on different issues while striving for a common goal. Medical educators, whether working with undergraduate or graduate learners, must recognize different learning styles and adapt the curriculum to incorporate Accreditation Council for Graduate Medical Education (ACGME) competencies and outcomes measurement and duty hour compliance, while also ensuring appropriate supervision and oversight as students gain independence. An additional focus is the heightened awareness of patient safety as an explicit expectation for learning. Patient-safety officers and risk managers focus their attention on recognizing practice patterns of providers while attempting to incorporate practice guidelines and protocols to reduce variance and the likelihood of error. Common ground lies in finding ways to measure quality indicators and patient outcomes and in continuing to focus on building trusting relationships with providers to create a culture of transparency with nonpunitive error reporting. At the same time, patient-safety education and quality-improvement measures must be offered to providers of care.

A decade ago, the Institute of Medicine focused national attention on the incidence of medical error in its report *To Err is Human*.[1] Consumers learned that nearly 100 000 deaths per year were potentially preventable. As a result, patient safety and medical errors have become topics of household conversation. These are now at the forefront of the minds of administrators and clinicians, insurers and consumers, as well as medical educators who are challenged to include quality improvement and patient safety in medical education, both at the graduate and undergraduate level.

In February 2003, the Association of American Medical Colleges[2] highlighted the focus of patient safety in medical education, stating that "[t]he ability to practice medicine, in a fashion which includes patient safety as a specific outcome goal, is a competency that transcends each of the 6 general (ACGME) core competencies. Specific patient safety activities should be included in the residency curriculum…." More recently, in 2007, Vohra et al[3] noted the effect of patient-safety teaching on physician training: "A lack of formal patient safety curricula has contributed to the suboptimal training of medical student and house staff." Additionally, their study results support "the need for implementing a sustained patient safety

Patrice M. Weiss, MD, is Professor and Residency Program Director and Vice Chair at the Department of Obstetrics and Gynecology, Virginia Tech Carilion School of Medicine; **Eduardo Lara-Torre, MD,** is Assistant Professor and Associate Program Director at the Department of Obstetrics and Gynecology, Virginia Tech Carilion School of Medicine; **Amanda B. Murchison, MD,** is Assistant Professor, Assistant Program Director, and Clerkship Director at the Department of Obstetrics and Gynecology, Virginia Tech Carilion School of Medicine; and **Laurie Spotswood, MS, CLS,** is Research and Quality Coordinator at the Department of Obstetrics and Gynecology, Virginia Tech Carilion School of Medicine.

Presented at the 2009 Annual Association of Professors in Gynecology and Obstetrics, Palm Beach Florida, 2009.

Corresponding author: Eduardo Lara-Torre, MD, , Department of Obstetrics and Gynecology, Virginia Tech Carilion School of Medicine/Carilion Clinic, 1906 Belleview Avenue, Roanoke, VA 24014, 540.981.2987, eltorre@carilion.com

DOI: 10.4300/JGME-D-09-00051.1

curriculum that promotes learning regarding adverse events.''

This poses a series of new challenges to educators. How do we develop competent clinicians and enhance resident learning in a system of standardization and protocols? How do we as educators and risk managers teach providers to be thinkers in a world of protocols? How does one incorporate quality and patient safety into an already-packed education curriculum? As the demand increases from government agencies, administrators, and the public for this essential component of training and practice, the need for a better and more reliable method of instruction in this topic has become urgent.

Proposal

One response to this challenge is to design a new and separate patient-safety and quality-improvement curriculum consisting of error-prevention strategies, disclosure of unanticipated outcomes, and root case analysis, to mention a few topics. This could be incorporated into protected education time as required by ACGME program requirements.[4] However, this would necessitate additional didactic time for both faculty and students/residents, potentially taking away from clinical and/or surgical exposure in an already time-limited environment.

Another option is to develop an Internet-based online learning activity, where learners work through situational modules and sample cases and encounters. Here too time would be required to write these cases and create scenarios, as well as complete them. Informatics-technology expertise would be required to establish this online method and secure access, which could add initial and ongoing costs. Requiring less time than live didactic training, faculty lectures could be videotaped, and learners could view them at their convenience. Although this does not add much extra time, the valuable interaction between teacher and learner would be lost.

SOAPS Note

An alternative approach, which we believe best incorporates live interaction and real-time learning while enhancing patient care and maintaining clinical applicability, is a modification of the standard SOAP (subjective, objective, assessment, and plan) case-presentation format. This option redefines the classic SOAP note to a SOAPS note, with the additional *S* standing for *safety*. This method directs providers, at the point of care, to identify potential safety issues during each encounter using a case-presentation format, whether that be morning report, rounds, or sign-outs. Residents, students, and faculty expand the subjective, objective, assessment, and plan to include patient-safety issues or potential safety concerns that may have been overlooked.

Discussion

The success of this approach relies on health care providers recognizing that each patient encounter occurs at an intersection of patient safety and medical education. Elevating each encounter to a SOAPS note should highlight potential medical errors and improve quality of care. However, for key patient-safety recommendations to be incorporated effectively into the traditional SOAP note, learners, teachers, and health care providers must first have a broad understanding of what constitutes patient safety. Second, high-risk factors and contributors to adverse outcomes must be identified before being incorporated into the new SOAPS note.

While the concept of patient safety is seemingly self-evident, it is interesting to note that there is no single universally agreed-upon definition. According to the Institute of Medicine,[1] patient safety is ''freedom from accidental injury; ensuring patient safety involves the establishment of operational systems and processes that minimize the likelihood of errors and maximizes the likelihood of intercepting them when they occur.'' The National Patient Safety Foundation[5] defines patient safety as ''the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the processes of healthcare, including errors, deviations and accidents. Safety emerges from the interactions of the components.'' Further, the Agency for Healthcare Research and Quality[6] defines patient safety as ''[a] type of process or structure whose application reduces the probability of adverse events resulting from exposure to the healthcare system across a range of diseases and procedures.''

While these 3 definitions vary in exact wording, a common underlying concept of patient safety emerges. This common concept focuses on creating improvements in processes and systems in order to create a culture of safety for our patients. Creating this culture of safety can begin with and continue by using the new SOAPS format. Its effectiveness requires an identification of factors that put safety at risk before we can incorporate them into the ''new S.''

Veltman et al[7] described several of these high-risk factors. These include providers being needed in more than one place, high-volume practice, poor sign-out practices, inadequate protocols for consults, transfers and referrals, off-site monitoring of situations, operation of hierarchy, inadequate backup, and failure to recognize ''human factors.'' In medical education, specific contributors to adverse events include communication and culture, supervision and inexperience, task and technology factors, workload scheduling, and institutional context.[8]

As a final component of risk-factor identification, knowledge of yearly Joint Commission national patient safety guidelines is essential. These include eliminating abbreviation usage,[9] deleting trailing zeros, and implementing standardized communication for patient handoffs, lack of SBAR communication and read back of verbal orders. With this rationale in mind, we present 2

examples of how we have implemented patient safety at the point of patient care through our new SOAPS approach.

Case 1

Medical student Smith sees patient Jane Doe, who is postpartum day 1 from a term vaginal delivery. Ms. Doe underwent an induction of labor at 37 weeks for severe preeclampsia. She is on magnesium sulfate seizure prophylaxis. Ms. Doe reports she is ambulating and eating. Medical student Smith asks Ms. Doe if she is voiding, and she reminds him she still has the Foley catheter in place. She reports minimal vaginal bleeding and has no complaints of visual changes, headaches, or right-upper-quadrant pain.

Vitals BP: 120–144/70–88; P: 85; RR: 16; I/O: 2500 mL/3000 mL

S (Safety)

- Remove Foley when magnesium sulfate discontinued.
- Fall precautions—only ambulate with assistance while on magnesium.
- Seizure precautions—pad bed rails if appropriate, make sure suction available in room.

Case 2

Medical student James sees patient Sara White. Ms. White is POD 3 from a classical cesarean at 26 weeks secondary to preterm premature rupture of membranes and cord prolapse. She reports she is doing well on painkillers. She is ambulating, voiding, and tolerating food. Her bleeding is now less than a period. She reports her baby is doing well in the nursery. Ms. White reports that she lives fairly close to the hospital and plans to see the baby daily. She is pumping breast milk and desires a birth control pill. Medical Student James inquires about transportation to and from hospital after discharge.

Vitals BP: 115/70; P: 72; RR: 14

S (Safety)

- Patient counseled on classical cesarean and need for repeat cesarean in future pregnancies.
- Patient counseled on birth control options and associated risks, including potential decrease in milk supply.
- Patient informed she should not drive while on painkillers.
- Offer influenza vaccine (October–January).

Medical students, residents, and attendings should incorporate patient safety into daily rounds. By modifying SOAP to SOAPS, we are emphasizing the importance of patient safety at every doctor-patient interaction and thus teaching the next generation of physicians to incorporate patient safety issues into day-to-day practice.

References

1 Kohn KT, Corrigan JM, Donaldson MS, eds. *To Err Is Human: Building a Safer Health System*. Washington, DC: National Academy Press; 1999.

2 Association of American Medical Colleges. Patient safety and graduate medical education. Available at: https://services.aamc.org/publications/showfile.cfm?file=version13.pdf&prd_id=90&prv_id=89&pdf_id=13. Accessed April 14, 2009.

3 Vohra PD, Johnson JK, Daugherty CK, et al. Housestaff and medical student attitudes toward medical errors and adverse events. *Jt Comm J Qual Patient Saf*. 2007;33:493–501.

4 Accreditation Council for Graduate Medical Education. Common program requirements. Available at: http://www.acgme.org/acWebsite/dutyHours/dh_dutyhoursCommonPR07012007.pdf. Accessed April 14, 2009.

5 National Patient Safety Foundation. Patient safety definitions. Available at: http://www.npsf.org/rc/mp/n-z.html. Accessed April 14, 2009.

6 Agency for Healthcare Research and Quality. Making health care safer: a critical analysis of patient safety practices. Available at: http://www.ahrq.gov/Clinic/ptsafety/Summary.htm. Accessed April 14, 2009.

7 Veltman, LL. Getting to Havarti: moving toward patient safety in obstetrics. *Obstet Gynecol*. 2007;110:1146–1150.

8 Shojania KG, Fletcher KE, Saint S. Graduate medical education and patient safety: a busy—and occasionally hazardous--intersection. *Ann Intern Med*. 2006;145(8):592–598.

9 Joint Commission. 2010 national patient safety goals (NPSGs). Available at: http://www.jointcommission.org/patientsafety/nationalpatientsafetygoals/. Accessed April 14, 2009.