

Attacking Medical Errors in Dermatology

Stephen E. Helms, MD

You're expected to be perfect the day you start, and then improve.

Ed Vargo¹

This sentiment by Ed Vargo, a veteran National League umpire, also holds true for patients' expectations for physicians. No one, however, is perfect. Even dedicated, patient-focused dermatologists with many years of long and arduous training will make mistakes. A 1999 report by the Institute of Medicine's Committee on Quality of Health Care in America highlighted the morbidity and mortality that are directly related to medical errors in the hospital setting,² which led to an upswing of public and professional interest in this issue. A concerted effort to reduce medical errors in hospitals is now beginning to spill over into outpatient settings, including dermatology offices. Although dermatologists and other visual specialties appear to make fewer medical errors, it appears that errors occur in the treatment of approximately 5% of our dermatology patients, while errors occur in as many as 10% to 20% of patient encounters in other specialties.³⁻⁶ One report reviewing adverse events in hospitalized Medicare patients determined that 44% were preventable.⁶ It is time for each of us to devote ourselves to reasonable efforts to minimize preventable medical errors.

Developing measures to decrease medical errors in dermatology requires an understanding of the underlying causes. Physicians are plagued by both technical/system errors and cognitive/thinking errors.^{7,8} Technical errors are common in dermatology and include incorrect lateralization (ie, left vs right), incorrect dosing of medication, incorrect dispensation of drugs due to illegible handwriting, mislabeled specimens with the wrong patient's name, incorrect placement or labeling of patch tests, and placement of a biopsy specimen in the wrong medium for

direct immunofluorescence testing. Dermatologists may reduce the incidence of these technical errors by using checklists.^{9,10} According to Atul Gawande in his book *The Checklist Manifesto: How to Get Things Right*, checklists can be used to "catch mental flaws inherent in all of us—flaws of memory and attention and thoroughness."¹⁰

In a dramatic example, intensive care units in Michigan designed a successful system involving the use of checklists to implement 5 evidence-based procedures recommended by the Centers for Disease Control and Prevention to reduce catheter-related bloodstream infections. Infection rates decreased dramatically in one hospital after another.⁹ Similar systems can be designed to improve patient safety in outpatient surgery settings.¹¹ It must be stressed that communication and teamwork are critical for these checklists to work. Some examples of situations in which checklists may be used in dermatology include surgical procedures with separate checklists for biopsies, simple excisions, and Mohs micrographic surgery; systemic medications including methotrexate, cyclosporine, isotretinoin, and all biologics; UV light therapy; laser therapy; and patch testing. Checklists can ensure that all necessary laboratory studies are ordered in specific clinical settings according to published guidelines. Nurses can read back locations of lesions submitted for biopsy when they write them on pathology requisitions or formalin bottles. Electronic medical record systems also can be designed to provide a checklist of recommended laboratory studies for women before isotretinoin treatment is initiated, for example.

One report proposed the following patient safety strategies that can be utilized to prevent medical errors, a number of which are directly applicable to dermatology: preoperative checklists to prevent operative and postoperative events; proper hand hygiene; the do-not-use list for hazardous abbreviations; barrier precautions to prevent health care-associated infection; team training; and medication reconciliation.

From the Department of Dermatology, University of Mississippi Medical Center, Jackson.

The author reports no conflict of interest.

Correspondence: Stephen E. Helms, MD, Department of Dermatology, University of Mississippi Medical Center, 2500 N State St, Jackson, MS 39216 (shelms@umc.edu).

Most of these approaches lead to improved communication of health care team members, which is a key component of any plan to reduce system errors in medical care.¹²

Although technical errors may be the low-hanging fruit for the reduction of medical errors, in actuality it appears that these errors are only the tip of the iceberg. Evidence has shown that 74% of all diagnostic errors usually are due to cognitive deficiencies rather than a lack of knowledge.^{7,8,13} In his book *How Doctors Think*, Jerome Groopman, MD, refers to these deficiencies as “cognitive traps” (or biases) that lead physicians to make a quick “anchoring” diagnosis based on the most “available” prototype of a disease.⁷ Other facts are then attributed to this diagnosis or are ignored. When an incorrect diagnosis has been added to a patient’s medical record, there is a risk that it will be carried forward without question, especially if the original misdiagnosis was proposed by an experienced veteran—the so-called “gray-haired professor”; Groopman⁷ refers to this kind of error as diagnosis momentum. These cognitive errors can be minimized if we force ourselves to make a longer differential diagnosis before we settle on the initial obvious choice. Always ask yourself, what else could this be?

It is time for dermatologists to accept our fallibility and prepare to win the battle to reduce medical errors. In the words of Bobby Knight, “The key is not the will to win . . . everybody has that. It is the will to prepare to win that is important,”¹⁴ which requires acceptance of a new culture in medicine. Two-way communication with the dermatology team must replace authoritarian arrogance. Checklists, either on paper or within electronic medical record systems, must replace sole reliance on memory. Finally, sometimes we must force ourselves not to accept the first diagnosis that comes to mind as the only possible diagnosis. It is time to get started.

REFERENCES

1. Applewhite A, Evans WR III, Frothingham A. *And I Quote: The Definitive Collection of Quotes, Sayings, and Jokes for the Contemporary Speechmaker*. New York, NY: St. Martin’s Press; 1992.
2. Institute of Medicine Committee on Quality of Health Care in America. *To Err is Human: Building a Safer Health System*. Washington, DC: National Academy Press; 1999.
3. Berner ES, Graber ML. Overconfidence as a cause of diagnostic error in medicine. *Am J Med*. 2008;121 (suppl 5):S2-S23.
4. Graber ML. The incidence of diagnostic error in medicine [published online ahead of print June 15, 2013]. *BMJ Qual Saf*. 2013;22(suppl 2):ii21-ii27.
5. Elstein A. Clinical reasoning in medicine. In: Higgs J, Jones M, eds. *Clinical Reasoning in the Health Professions*. Boston, Massachusetts: Butterworth-Heinemann; 1995:49-59.
6. Levinson DR. *Adverse Events in Hospitals: National Incidence Among Medicare Beneficiaries*. Washington, DC: Office of Inspector General, Department of Health and Human Services; November 2010.
7. Groopman JE. *How Doctors Think*. New York, NY: Houghton Mifflin Harcourt; 2008.
8. Croskerry P. From mindless to mindful practice—cognitive bias and clinical decision making. *N Engl J Med*. 2013;368:2445-2448.
9. Pronovost P, Needham D, Berenholtz S, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. *N Engl J Med*. 2006;355: 2725-2732.
10. Gawande A. *The Checklist Manifesto: How to Get Things Right*. New York, NY: Metropolitan Books; 2010.
11. Diamond S, El Tal AK, Mehregan D. A dermatology surgical safety checklist: an objective resident performance tool. *Int J Dermatol*. 2013;52:1231-1234.
12. Shekelle PG, Pronovost PJ, Wachter RM, et al. The top patient safety strategies that can be encouraged for adoption now. *Ann Intern Med*. 2013;158(5, pt 2):365-368.
13. Pham JC, Aswani MS, Rosen M, et al. Reducing medical errors and adverse events [published online ahead of print November 4, 2011]. *Annu Rev Med*. 2012;63:447-463.
14. Knight B, Hammel B. *The Power of Negative Thinking: An Unconventional Approach to Achieving Positive Results*. New York, NY: Houghton Mifflin Harcourt; 2013.

QUICK POLL QUESTION



Which patient safety measures do you currently use in your practice?

- a. apps to expand differential diagnoses
- b. rewarding employees for new ideas to prevent errors
- c. team training exercises
- d. all of these
- e. none of these

Go to www.cutis.com to answer our Quick Poll Question and see how your peers have responded