

# High Tech Health Care

John J. Frey III, MD, Medical Editor

For those of us whose experience with technology early in our careers consisted of spinning hematocrits in fragile, breakable tubes and looking at spun urines for sediment, the diagnostic technologies today are still a bit of a dazzle. Those early experiences created a healthy skepticism about the added value of each “new thing.” My teacher’s voice asking, “So, will this test make you more certain or will it lead to more tests?” still rings in my head.

Research in technology assessment is notoriously post hoc. Teaching someone how to use a new technology—whether robotic surgery or, in the study by Wong and colleagues in this issue of the *WMJ*, teaching residents to use hand-held ultrasound<sup>1</sup>—often takes priority over comparing the value of that technology to what already exists. For example, do ultrasounds or CT scans improve the assessment of the risk of appendicitis over the increasingly lost art of physical examination of the patient? Is the cost worth it?

It has been known for decades that the presence of a technology increases the likelihood of its use, but the effects on care can be negative.<sup>2</sup> If we can get by the problems of identity and control that a technology almost always raises, we need to study the effects of its use in patient care. If a hand-held ultrasound can save time, improve diagnostic accuracy, decrease cost, and be subjected to quality assurance in the hands of the operator, then it should become part of the armamentarium of clinicians. That research, however, remains to be done.

The potential exists for social media to be used for everything from virtual grouping of patients sharing experiences and education on social networks to the epidemiology of infectious diseases by looking for an increase in terms in common social media.<sup>3</sup> Moreno

and her colleagues<sup>4</sup> looked at college students who displayed the term for a local block party on their Facebook pages and compared them to a cohort who attended the party but did not display, and found that displaying the party was associated with a much higher level of drinking at the event.

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They use these findings to suggest that advertising directed against binge drinking stimulated by the mention of an event highly correlated with drinking might, for example, be put on Facebook. At first one wonders how that could be done, but the next time you travel and read a newspaper online and see advertisements geared to the location where you are reading it, realize that the same could be done with warnings about high-risk behavior in lots of situations. The possibilities, just like the ads, seem endless.

A scale is a much simpler technology and available everywhere. So, ask Boyle and Boyle,<sup>5</sup> why do we ignore it so often when we prescribe antibiotics for adults? They use a chart review of rhinosinusitis as a proxy to look at weight-adjusted dosing for antibiotics and find, perhaps to no one’s surprise, that there are no adjustments. We spend a

great deal of time carefully looking at weight-adjusted dosing for children but, they ask, why does that need disappear above a certain age? If anything, with the widely acknowledged increase in adult obesity in the country, why do we treat everyone as if they are the “standard 70 kilogram man” that represented

the “average” in textbooks from 40 years ago? I am not sure when I last actually saw a 70 kilogram man.

Kasirye and colleagues<sup>6</sup> study of the predictive value of blood glucose on hospitalized patients with COPD represents an important way of identifying patients who are more likely to have higher levels of morbidity, longer length of stay, and be at greater risk of dying. It would be safe to say that all patients admitted to hospitals get glucose as part of their admission panels. While clinicians might emphasize controlling elevated blood sugars in patients, this study in a population of patients with identified pulmonary disease shows that we should be alerted to patients with low blood sugars as high risk and offer more aggressive monitoring and treatment. The work by Kasirye and colleagues needs to be expanded to other populations of hospital-

ized patients, but represents an important and widely available marker for patients who need closer and more intensive care. The standardization of treatment is important in areas such as prevention of hospital-acquired infections, but it is the individualization of patients into higher or lower risk groups that often is the greatest challenge. This study offers one simple method of doing so.

An odd tumor in an odd place is the lesson from the case study of Subramanian and colleagues.<sup>7</sup> Case reports are always reminders that zebras do in fact exist, and when one spots one it is good to tell others.

Finally, on behalf of the *WMJ* Editorial Board and staff, I'd like to thank everyone who served as a reviewer this year. In addition to being an important collegial act, manuscript review is essential to the integrity of *WMJ*. A complete list of reviewers and information about joining this group is on page 265 in this issue.

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