When One Size Doesn’t Fit All

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There are few things in this world that we buy and use that don’t require some form of variation or customization to achieve a satisfactory outcome or experience. Whether it’s cars, clothing, or cooking oils, personal experience and comfort level are important factors in arriving at the right choice.

I’ve worked in pharmacy clinical decision support at several database companies over the years, and I once naively thought that if we tried hard enough and used evidence-based inclusion criteria, we could eventually arrive at a mutual general agreement. Could electronic medical record (EMR) alerts, generated by systems for drug–drug interactions, drug allergies, drug–disease precautions or duplicate drug therapy, ever achieve universal acceptance?

Unfortunately, studies show that there is a considerable lack of acceptance by prescribing clinicians to stop, look, listen, and act.1–3 The much discussed phenomenon of alert fatigue suggests that there is too much information to process in the typical workflow when it comes to order prescribing. Alerts have often been considered to be duplicative, lacking in patient-specific context, or just generally spurious. The problem for content vendors is that one clinician’s “noise” might be another clinician’s safety net.

Computerized prescriber order entry (CPOE) systems should be smarter. For instance, the ideal system would know the following:

1. The prescriber has practiced medicine for more than 10 years.
2. A prescriber of antibiotics is an infectious-disease specialist.
3. A specific combination of medications has been used in many patients without incident.
4. The patient is currently being monitored, or laboratory values have been ordered.
5. The patient has no pre-existing comorbidities.
6. One of the duplicate class drug orders is categorized as “as needed.”

A system as intelligent as this could create useful alerts that would improve the workflow for clinicians.

Such a system is not yet commercially available. Although organizations can turn various severity levels of alerts on or off, these rudimentary cutoffs leave much to be desired in ensuring overall patient safety. Even so, progress is being made. Local customization of individual medication-related alerts (e.g., drug–drug interactions), based on clinician experiences and perspectives at individual institutions, is improving. My employer, First DataBank, has created solutions to support these modifications, to document and track them, and to allow for seamless loading of these changes back into the information system for use within the workflow. Multum, a division of Cerner Corp., is also said to be working on a similar data-customization approach.

As health care is local in practice, so is clinical decision support. I expect that either P&T committees or a clinical informatics subcommittee will be involved in suggesting and approving changes in alert status. Some national standard sets might be developed for quality-credentialing purposes in the future, but most alert decisions will be debated by local experts who know the strengths and weaknesses of their care processes.

Until then, I look forward to a day when instead of waking up feeling lousy, I can jump on my computer or smart phone, connect with “Watson” (the famous IBM supercomputer that never sleeps or vacations), type or speak my login and password (which automatically populates all information on personal health records), and tell the good doctor that I have a headache, slight fever, and a runny nose. The good Dr. Watson would then tell me to take two aspirin, drink plenty of fluids, and go back to bed, because it has already generated and e-mailed a note to my boss excusing me from work. You see, Watson knows that I’m not taking warfarin, that my renal clearance is fine, and that my colleagues can cover for me. There is no over-alert fatigue for this clinician.

REFERENCES