Befuddled by yet another medical acronym? Bar-coded medication administration (BCMA), a powerful technology with the goal of preventing medical errors, is worthy of a recent detailed analysis by The University HealthSystem (UHC) Consortium in Oak Brook, Illinois. I would like to discuss the highlights of a recent UHC-sponsored review of BCMA, and I encourage P&T readers to explore the potential of this technology at their own institutions.

The UHC is a membership-based organization, composed primarily of academic medical centers. Its mission is to demonstrate the power of collaboration through sharing and benchmarking of information. One cornerstone of the UHC is the Clinical Knowledge Service Technology Assessment Group, ably led by Karl Matuszewski, MS, PharmD, P&T’s Associate Editor-in-Chief. Entitled UHC Technology Report: Bar-Coded Medication Administration, this literature is available only to UHC members, but the essence of the paper has broad applicability.

BCMA is used in approximately 5% of hospitals nationwide and by only 3% of current UHC members. A UHC Member Task Force believes that BCMA technology will be commonplace in most hospitals within the next five to 10 years. As a result, the UHC suggests that hospitals begin planning their budgets, evaluating their technology, setting up a process of medication review, and upgrading their information technology infrastructure. In a nutshell, all of us should become familiar with BCMA because it is coming to our institutions soon!

Current BCMA systems use various devices that are applied at the point of care, such as laser bar-code scanners and wireless hand-held computers. These are linked to hospital and pharmacy information system computers. Special software then verifies the “five rights”—the right patient, the right drug, the right dose, the right route, and the right time—before the medication is actually administered to the patient.

Some systems may generate warnings or approvals, provide administrative instructions and drug information, or deliver reminders for caregivers. It is worth noting that the system documents the activity in the medication administration record (MAR) and logs it for billing purposes.

According to the UHC report, a BCMA system can stand alone, or it can be an integrated modular component of a hospital’s information system. Costs to add the system depend on the institution’s size; its infrastructure needs; and the number and type of scanners, portable computers, and servers that need to be purchased. Apparently, the initial capital cost can range from $1 million to $5 million. It is possible that training and other hidden expenses might even double these cost estimates.

Implementation is a complex process and involves a significant modification of pharmacy and nursing practices, technology, and pilot programs in selected hospital units. UHC members have explained that full implementation can take from one to two years or more after the technology is acquired and put into place.

The UHC report provides a comprehensive review of all current manufacturers of BCMA. It also summarizes the literature supporting the clear connection between BCMA and a marked decrease in medical errors resulting from the administration of medications. I think that some of the recommendations for the technology’s implementation are important for institutions to consider so that common mistakes can be prevented.

Although only UHC members can access the full report directly, I am confident that Karl will be happy to give you more details on a case-by-case basis. From my reading of this breakthrough report, I am convinced that the use of BCMA will become inevitable in all patient settings. Next time your P&T committee meets, it might be prudent to ask some probing questions concerning the planning for BCMA technology.

As usual, I am interested in your views. My e-mail address is david.nash@jefferson.edu. Karl’s e-mail address is matuszewski@uhc.edu.