

## Patient Safety Tip of the Week

February 18, 2014

### Nudged, But Who Nudged Who?

A new study “Nudging Guideline-Concordant Antibiotic Prescribing. A Randomized Clinical Trial” ([Meeker 2014](#)) showed that a simple, inexpensive intervention resulted in a 19.7% absolute reduction of inappropriate prescribing of antibiotics for acute respiratory infections. The intervention was posting in clinic sites visible to patients a poster-sized letter signed by the clinician committing to not prescribe antibiotics inappropriately. The letter explained the reasons for not prescribing antibiotics in many cases and was displayed in both English and Spanish at the eighth-grade reading level. A photograph and signature of the clinician appeared on the poster.

Baseline rates of inappropriate prescribing were about 43% in both the control group and the intervention group before the intervention began. During the intervention, the rate of inappropriate prescribing decreased in the intervention group to 33.7% but increased in the control group to 52.7%. And the effect of the intervention was sustained each month the letter remained posted.

These results are remarkably better than seen with interventions attempting to reduce inappropriate prescribing with education, audit and feedback, financial incentives, CPOE alerts and reminders, or even simple posters. The authors note that the two most prevalent models for prompting performance improvement, audit/feedback and pay-for-performance, rely on assumptions about clinician behavior that may not be adequate. Their proposed model is one in which clinicians are influenced by interpersonal factors and, in particular, “a desire to remain consistent with a prior public commitment”.

The authors do acknowledge that the patients’ response to the posted letter may also have played a role. Hence the question of who was actually “nudged”. But the bottom line is that it doesn’t really matter whether it was the clinician, patient, or both who were most influenced by the intervention. It’s the outcome that matters.

We think there were two important factors here contributing to the good outcomes. One is the **public commitment**. The other relates to **timing**.

The powerful influence of the public commitment cannot be overestimated. In our September 28, 2010 Patient Safety Tip of the Week “[Diagnostic Error](#)” we mentioned

anchoring becomes a more significant problem once a diagnosis or other decision has been declared publicly. Many of you may have done an exercise in executive training where a scenario is presented in which you must state a position publicly. You are then given a bit of disconfirming evidence and a chance to change your decision. Almost no one changes their decision! (The scenario is actually a poorly disguised parallel of the Challenger disaster).

A number of years ago we began to alert physicians when they prescribed for a geriatric patient a drug appearing on Beers' list as a potentially inappropriate medication (PIM). The physician almost never took that particular patient off the drug but may in the future be less likely to prescribe that drug in other geriatric patients. In a way, he/she had made a "public commitment" to that particular patient to use that drug (though there are certainly legitimate reasons one might choose to continue a medication that could be a PIM) and was unlikely to change that decision.

Though the above two examples show how the public commitment may have negative consequences, they do demonstrate how strong the public commitment phenomenon is. So we concur with Meeker and colleagues that the public commitment is likely a key driver of the success they saw in their intervention.

But the timing is critical, too. An alert that pops up on a computer screen when the clinician is in the process of prescribing a medication almost always occurs **after** the clinician has already discussed his plans with the patient. And, as above, the clinician is very unlikely to reverse a previously "publicly" committed position.

In our January 2012 What's New in the Patient Safety World column "[Need for New Transfusion Criteria](#)" we noted a study ([Scheurer 2010](#)) that showed little impact on appropriateness of transfusions 2 years after transfusion guidelines were instituted and clinical decision support tools implemented within CPOE. The authors felt that this study showed that the decision to transfuse had "already been made" prior to the CPOE so that, in effect, the clinical decision support was rendered too late. (They also felt that CPOE targeted the intern or more junior resident in most cases and might be better directed toward the more senior clinicians making the decision to transfuse.)

But perhaps the biggest message from the Meeker study is that **small changes may have a big impact**. Our July 7, 2009 Patient Safety Tip of the Week "[Nudge: Small Changes, Big Impact](#)" we reviewed the book "**Nudge**" by Richard Thaler and Cass Sunstein ([Thaler 2008](#)) and gave some examples of the usefulness of "nudges" in healthcare.

One example we give is ensuring that your staff having patient contact are appropriately immunized against influenza. You can substantially increase your immunization rates by not only providing the immunization free but by having a nurse go out and give the staff their shots right where they are working. The point is that the simple "nudge" makes it easier for them to do the right thing.

We often use the nudge principle in design of various CPOE screens. Making the most desirable (from a quality perspective) choices the default choices is one example. Our August 6, 2013 Patient Safety Tip of the Week "[Let Me Sleep!](#)" noted use of the default option as one way to get physicians to order a protocol to reduce sleep interruptions in hospitalized patients.

Of course, several commercial laboratories have utilized "nudges" to their advantage. By placement of items on their requisition slips they make it easier for clinicians to order vitamin D levels and a variety of allergy tests of dubious value that are quite profitable to the labs.

One can argue whether the intervention by Meeker and colleagues is a "nudge" or whether the "public commitment" is the real driver of change. We happen to think that both are true. However, we also think that if we are going to change prescribing or ordering behaviors the intervention needs to occur at a time and place where the clinician is with the patient. If you wait until the clinician picks up his/her pen or mouse you are probably too late in the game to facilitate a change.

The real contribution made by Meeker and colleagues is that relatively simple and inexpensive interventions can produce significant changes. And they demonstrated that you can test those interventions in a randomized fashion in a clinical setting. Purists will say we need now to replicate their findings in similar settings and other settings. But we're willing to bet that those results will be replicated.

## **References:**

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