

Pulling out all the stops for test-utilization management

January 2020—Pathologist Ron B. Schiffman, MD, practices what he preaches and preaches about what others practice relative to implementing such computer-based test-utilization management techniques as soft stops, hard stops, and those that fall in between. In a 2019 American Association of Clinical Chemistry presentation on strategies and tactics for test-utilization management, and in an interview with CAP TODAY, Dr. Schiffman offered insights into a variety of information technology-based interventions.

Computer-based test-ordering interventions run the gamut with regard to complexity, commercial availability, and usefulness and can be tailored to the needs and characteristics of an institution, said Dr. Schiffman, professor of pathology at the University of Arizona College of Medicine and chief of pathology and laboratory medicine at the Southern Arizona VA Healthcare System, Tucson. The weakest interventions, known as soft stops, alert providers to a possible problem with a test but don't stop the order. "The nice thing about soft stops is they're easy to do, can provide useful information, and nearly all laboratory information systems and EMRs have this capability built into them," said Dr. Schiffman. "Ideally, soft stop messages provide relevant information that might affect the decision to order a test."



Dr. Schiffman

The downside to soft stops, he noted, is that they are "speed bumps" that typically don't have a significant impact on test ordering, likely because providers get inundated with alerts and messages, which they ignore. Yet despite this drawback, soft stops can save time and money in some situations. For example, said Dr. Schiffman, citing a study conducted at the Cleveland Clinic (Riley JD, et al. *Am J Clin Pathol*. 2018;149:530-535), "When expensive tests—more than \$1,000—were ordered, the cost was displayed along with a warning that the patient might be responsible for charges not covered by insurance. This intervention reduced orders by 12 to 14 percent."

A step up from soft stops are interventions that can be developed by configuring test menus within the computerized physician order entry system. Among these is selecting the most appropriate test nomenclature. "For example," said Dr. Schiffman, "vitamin D orders are easily mixed up. Renaming 1,25 dihydroxyvitamin D as calcitriol is a simple way to address this 'sound-alike' test problem." Another nomenclature technique is to create a test menu using the names of various diagnostic conditions, such as pheochromocytoma, myasthenia gravis, carcinoid, Wilson's disease, and acute intermittent porphyria, he explained. Selecting one of these names would trigger the most relevant tests or testing algorithms for that condition. "This can be especially helpful in guiding the nonspecialist in ordering the optimal tests," Dr. Schiffman said.

A CPOE intervention that has proven particularly effective at the Tucson VA is to remove tests from the menu that are not commonly ordered or that providers are prone to disorder. To obtain these tests, the clinician must place a free text order with a brief justification.

"We get about 20 of these a day," said Dr. Schiffman. "Most of them can be handled pretty quickly using a business process automation application by Bonitasoft that involves review by a resident or pathologist. A few free text orders are typically changed or discontinued each day after contacting the ordering provider for clarification."

The most powerful intervention, the hard stop, "requires more resources and more IT support," said Dr. Schiffman.

"The hard stop means you can't order the test without special effort." Hard stops are triggered by decision support rules that typically are created by customized middleware that interacts with the lab information system and the ordering system, he explained. When a provider tries to order a test through the CPOE system, the middleware intercepts it and processes it using utilization rules to determine whether or not the order should be accepted.

The Tucson VA uses homegrown decision support rules that are designed to manage such inappropriate testing as HbA1c tests that are ordered too frequently and genetic tests that should only be ordered once. Other rules address orders that lack value based on prior results from the same test, such as a repeat hepatitis A test after a positive hepatitis A test, or a different test, such as an anti-HCV order for a patient with a prior positive HCV RNA result.

Before using a hard stop rule, Dr. Schiffman recommends back-testing it, if possible, to determine if it's worthwhile, a process he follows at the VA. "Let's say we wanted to evaluate a rule that said don't measure hepatitis A if your previous hepatitis A serology was ever positive," he said. "Then we would go back through our historical data set and find out how many patients met this criterion. We're not going to spend the resources to create and test this rule if this condition is infrequent but would proceed, and could project its benefit, if it happens frequently." Another advantage of back testing is that it can help pinpoint such potential system-based test-ordering issues as poor menu design and panel configuration.

Most hard stop functionality is designed to trigger when the order is being placed in the CPOE system, said Dr. Schiffman, but the Tucson VA took a different approach to configuring its homegrown middleware for test utilization. The VA laboratory allows orders to go through and collects the specimens necessary to run the tests. However, the middleware rule can intercept and cancel an order at the accession stage. In such instances, it sends a message to the lab information system that the test has been completed, but the test result is reported as not done and the comment section describes the reason for the cancellation.

The disadvantage of incorporating hard stops at the accession stage, said Dr. Schiffman, is that the patient may have blood drawn unnecessarily. "But in most cases," he noted, "the blood collection was needed anyway for other tests that were ordered. We hold the sample for about a week [in the event that] the provider wants to override the cancellation by contacting the laboratory."

Providers can not only override cancellations but also prevent them, Dr. Schiffman said. If providers know in advance of ordering a test that they are doing so more frequently than the rule allows, they can automatically bypass a cancellation by selecting the same test name but with the prefix XS.

Hard stops, whether at the order or accession stage, are not typically a cost-saving measure, Dr. Schiffman concluded, because they lead to no more than three percent of tests being cancelled. So if you're going to inconvenience the lab and the provider, he said, "you need to ask, 'Are there other reasons for doing this?' The answer, in some cases, is yes, especially if it affects higher cost tests or if it can reduce diagnostic error [and prevent] reporting misleading information." □—*Jan Bowers*

Xifin and Infinx Healthcare partner to extend prior authorization functionality

Xifin has enhanced the prior authorization and appeals functionality in its machine learning-enabled revenue cycle management platform Xifin RPM through a strategic partnership with Infinx Healthcare, a provider of cloud-based prior authorization and RCM software driven by artificial intelligence and automation.

The products, when used together, can automatically hold claims that require prior authorization. Once a prior authorization is obtained via Infinx, Xifin RPM can capture the PA number, letter, and other supporting documentation for claim submission. Xifin RPM then manages back-end exceptions or errors. The software provides automated appeal workflows.

"Now Xifin diagnostic clients have multiple options in how they can secure and manage prior authorizations for

proprietary, esoteric, and toxicology testing and remote patient monitoring,” according to a press release from Xifin.

[Xifin](#), 866-999-4346

Schuyler House adds to LIS standing orders module

Schuyler House has announced that it has incorporated a module into its SchuyLab laboratory information system, effective with version 3.3.8, that lets users create standing orders. The module holds the scheduled orders in limbo until the specified release time and then automatically generates an accession for the test.

[Schuyler House](#), 800-706-0266

AP-Visions forges deal with Softactics for lab billing

AP-Visions has entered a partnership with Softactics to interface its xLab laboratory information system with Softactics’ lab billing system.

[AP-Visions](#), 866-526-7099

Proscia works with Johns Hopkins on AI applications

Proscia has reported that it is collaborating with the Johns Hopkins School of Medicine to develop computational applications that incorporate artificial intelligence and are intended to advance the practice of pathology.

[Proscia](#), 877-255-1341

A fond farewell

Editor’s note: After nearly 20 years of service as “Newsbytes” contributing editor, Hal Weiner has announced his retirement. During his tenure, Hal has also served as a contributing editor for the CAP TODAY information technology product guides and been interviewed for numerous articles. CAP TODAY is deeply grateful for Hal’s contributions, and we wish him well in his retirement.□

Dr. Aller teaches informatics in the Department of Pathology, University of Southern California, Los Angeles. He can be reached at raller@usc.edu. Hal Weiner is president of Weiner Consulting Services LLC, Eugene, Ore. He can be reached at hal@weinerconsulting.com.