

# Many patients don't understand electronic lab results

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(Medical Xpress)—While it's becoming commonplace for patients to see the results of lab work electronically, a new University of Michigan study suggests that many people may not be able to understand what those numbers mean.

Research conducted by a team at the U-M schools of Public Health and

Medicine found that people with low comprehension of numerical concepts—or numeracy—and low [literacy skills](#) were less than half as likely to understand whether a result was inside or outside the reference ranges. They also were less able to use the data to decide whether or not to call their doctor.

As more medical professionals and facilities have adopted electronic [health](#) record keeping, increasing numbers of patients can see their [test results](#) outside of a doctor's visit. One goal of giving patients access to the data is to help them become partners in managing their own care, said Brian Zikmund-Fisher, associate professor of health behavior and health education at the U-M School of Public Health.

"We can spend all the money we want making sure that patients have access to their test results, but it won't matter if they don't know what to do with them," he said. "The problem is, many people can't imagine that giving someone an accurate number isn't enough, even if it is in complex format."

Zikmund-Fisher and the research team administered an Internet survey asking more than 1,800 adults ages 40-70 to respond as though they had Type 2 diabetes (nearly half actually had the disease). They were given displays showing test results for hemoglobin A1c, commonly measured to check [blood sugar control](#), as well as other blood tests. Participants also were given tests to measure their numeracy and health literacy skills.

While 77 percent of those considered to have higher numeracy and literacy skills could identify levels outside of the standard range, only 38 percent of those with lower numeracy and literacy scores were able to do so. Participants with higher numeracy and literacy scores also were more sensitive to how high the test result was when deciding whether it was time to call the doctor.

Zikmund-Fisher said more research is needed to identify how best to display this type of information.

"If we can design ways of presenting test results that make them intuitively meaningful, even for people with low numeracy and/or literacy skills, such data can help patients take active roles in managing their health care," he said. "In fact, improving how we show people their health data may be a simple but powerful way to improve health outcomes."

Other authors were Nicole Exe, U-M Center for Bioethics and Social Sciences in Medicine, and Holly Witteman, Université Laval, Québec City, QC, Canada.

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The study is reported online in the *Journal of Medical Internet Research*.

Provided by University of Michigan

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