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Why Doctors Can't Predict How Long a Patient Will Live

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Constantini/Getty ImagesIs it possible to predict when a patient will die?

Slender, in her 60s and possessing the stoicism of someone who had single-handedly raised children in the toughest section of the city, our patient faced a difficult challenge of the medical kind. She had diabetes and such severe peripheral vascular disease that even the strongest antibiotics could not heal a long-standing foot infection. She needed an operation.

This grandmother who regularly held court in her hospital room with her extended brood also suffered from high blood pressure and heart disease, and all of us on the surgical team knew that operating would be no easy feat. We could amputate her infected foot, a relatively quick operation that would carry few risks, but she would never walk again. Or we could do an arterial bypass, a more complex operation that would save her leg but that might disable or even kill her before her surgical scars ever healed.

The final decision hinged on our assessment of her likely course, or prognosis. If she was unlikely to live long, we would amputate, because it wouldn't make sense to put her at risk of other life-threatening complications just to save her leg. But to throw out some ballpark figure, an actual number of the weeks, months or years this woman we had grown to care about had left to live, meant shouldering the responsibility none of us were eager to be reminded of – that is, our potential role in hastening her death because of poor clinical decisions based on the wrong prognosis.

A week after her bypass operation, our patient died of a heart attack. The prognosis of her senior surgeon and our entire team — that she would tolerate the surgery and survive long enough to walk again — had been incorrect.

While not all assessments of how long someone has to live result in life-or-death clinical decisions, addressing prognosis remains a challenge for most doctors. And after struggling for several years with determining their own patients' prognoses, a group of physicians at the University of California in San Francisco set out to collect and study all the research that had been done on so-called prognostic indexes, tools that help with determining general prognosis in older patients.

Given the growing use of age-based treatment and preventive care guidelines, the doctors assumed there would be plenty of data to help decide whether, for example, an 80-year-old patient might live long enough to benefit from a colonoscopy, a cancer screening procedure that can have its own set of complications.

But they found little.

Prognosis was rarely, if ever, alluded to in the most popular medical textbooks and on clinical Web sites used by practicing physicians. Even the widely used medical database PubMed, maintained by the National Library of Medicine, had no specific indexing category for prognosis, making finding any published study on the subject like searching for a book in a library before the Dewey Decimal System.

While the researchers were finally able to single out 16 indexes that hold promise in helping doctors predict how long a patient might live, there was "insufficient evidence at this time" to recommend any of them for widespread clinical use. None of the indexes had been tried with groups of individuals other than the initial test group to confirm reliability, and every single one had a potential source of bias. Some studies were never able to follow up on the final outcomes of a substantial subset of patients; others used researchers intimately involved with the development of the prognostic tool, and not impartial observers, to validate findings.

"There's a need for much more research in this area," said Dr. Eric W. Widera, one of the authors of the study, which appeared in The Journal of the American Medical Association. "Compared to diagnosis and treatment, prognosis is like the unloved stepchild of medicine."

A century ago, predicting a patient's life expectancy was an essential part of doctoring. Details relating to the art and science of "prognosticating" occupied a prominent position in textbooks, journals and conversations with patients. That emphasis began to shift as technology advanced, with doctors focusing more and more of their time on treatment and diagnosis.

Economic forces reinforced this new emphasis, as it became clear that while the ability to predict the timing of a patient's death was useful, the tools to treat and diagnose were profitable.

Perhaps even more important, prognosis has now become a potent symbol of the limits of medicine. With a growing array of successful treatments at hand, doctors often have the power to forestall death. But thinking about prognoses means recognizing not only fallibility but also possible culpability.

"Even in the privacy of their own minds, doctors don't like to think about prognosis," said Dr. Nicholas A. Christakis, a professor of medicine and medical sociology at Harvard Medical School and author of "Death Foretold" (University of Chicago Press, 2001), a book on the sociocultural issues of prognosis.

With so little research on how to predict how long a patient might live and few resources to turn to, physicians often end up relying on intuition. But studies have shown that these "guesstimates" can be wildly inaccurate, and that inaccuracy can adversely affect an older patient's quality of life and care. Doctors who are too optimistic may prescribe unnecessary and painful procedures and treatments; those who are too pessimistic may neglect to offer adequate care.

Most current clinical guidelines sidestep considerations about prognosis by relying on simple age-based cutoffs. The United States Preventive Services Task Force, for example, uses 75 as the age to stop routine colon cancer screening. "But age is an incredibly blunt tool," Dr. Widera

noted. “We all know of 65-year-olds who are much sicker than some 95-year-olds.”

While the authors of the study have created a Web site, www.eprognosis.org, to help physicians and patients access available prognostic tools, they are quick to acknowledge that this interactive tool is only a small part of what doctors and patients need. More work and resources must be devoted to creating accurate assessment tools, testing the reliability of those that exist and teaching doctors once again the art and science of determining, and talking about, prognoses.

“We actually have a moral responsibility to our patients to help provide them with the best prognostic information,” said Dr. Alexander K. Smith, another of the study authors. “But somehow, we have lost sight of that responsibility as a profession.”