Lost in Translation: Physician Understanding and Communication of Risk to Patients With Possible Acute Coronary Syndrome Is Unacceptable and in Dire Need of Resuscitation

Erik P. Hess, MD, MSc*

*Corresponding Author. E-mail: hess.erik@mayo.edu, Twitter: @ErikHessMD.

In this issue of Annals, Meyers1 reports the results of a matched-pair survey study designed to assess risk communication between physicians and patients being admitted to the hospital for possible acute coronary syndrome. Four hundred twenty-five such patients and their physicians completed matched-pair surveys querying perceived and communicated current risk for myocardial infarction and future risk of mortality from myocardial infarction at home versus in the hospital. Post hoc application of risk prediction models on the patient cohort indicated a mean risk for death or myocardial infarction of less than 2% within 30 days. Physicians’ median estimate of 30-day adverse event risk was 5% (95% confidence interval 3% to 7%), and patients’ median estimate was 8% (95% confidence interval 5% to 11%). Despite physicians’ lower median estimate of risk, 63% of patients reported that their estimate of risk remained the same or increased after speaking with their physician. Patients’ median estimate of mortality risk after myocardial infarction was 80% if they were to go home and 10% if they were to stay in the hospital; physicians corresponding risk estimates were 15% and 10%, respectively. So not only did both physicians and patients substantially overestimate the current risk of myocardial infarction and future risk of mortality but also the data suggest poor physician communication in that agreement between patients and physicians did not improve after discussion.

What is one to make of these data? Despite several validated approaches to assessing patients’ short-term risk of major adverse cardiac events that are readily available and feasible to calculate,2-5 physicians’ risk estimates in this study were grossly inaccurate. These data suggest that physicians are not using validated prediction models in their usual clinical practice. In the absence of reliable, quantifiable risk estimates to guide decisionmaking, by process of elimination other factors must be influencing decisionmaking in regard to patients with possible acute coronary syndrome, such as one’s usual pattern of practice, local practice protocols, and fear of litigation, in addition to other potentially perverse factors such as financial incentives.

Not only were physicians’ risk estimates inaccurate but also they were not effectively communicated to their patients. Risk communication in a busy emergency department (ED) setting to patients with various levels of health literacy and education who may have a different cultural and ethnic background than their provider is far from straightforward. Both physicians and patients may have difficulty understanding and using numeric information, leading to what has been referred to as “collective statistical illiteracy.”6 Furthermore, in part because of patients’ difficulty with health literacy and numeracy, physicians often resort to using verbal qualifiers when communicating risk (eg, your future risk of heart attack is “low”), and studies have shown that interpretation of these imprecise terms is highly variable.7 For example, low risk to a physician might mean less than 5%, whereas to a patient it might mean less than 25%. Though beyond the scope of this editorial to describe in detail, there are several evidence-based approaches for risk communication of health information, such as use of absolute rather than relative risks, diagrams and pictographs to communicate risk and benefit information, and a consistent denominator when comparing risk and benefits of alternative management strategies, among others.8

Risk communication is a key element of shared decisionmaking, a collaborative process in which patients and providers make health care decisions together, taking into account the best scientific evidence available, as well as the patient’s values and preferences.9 To facilitate shared decisionmaking for patients with possible acute coronary syndrome, Meyers’ suggests that calibration of physician risk...
to improve accuracy is a key component. Developing approaches that facilitate accurate risk communication and comprehension and allaying patient anxiety before engaging them in the decisionmaking process are also critical.

Decision aids, interventions or tools that facilitate shared decisionmaking and patient engagement in health care decisions have been developed for a number of medical conditions and decisions, some of which are frequently encountered in the ED setting. They have been shown to increase patient knowledge, increase the accuracy of risk perception, and decrease patients’ uncertainty related to feeling uninformed. Standards for decision aid design have been developed in an effort to overcome several of the challenges pointed out by the current investigation, including physician comprehension of risk, risk communication using evidence-based approaches, and transparent communication of the risks and benefits of alternative management strategies to patients. Additional work is needed to determine which decisions in the ED setting are appropriate for shared decisionmaking, to prioritize these conditions according to their potential effect, and to develop and test contextually sensitive approaches to risk communication.

Supervising editor: Deborah B. Diercks, MD

Author affiliations: From the Department of Emergency Medicine, the Knowledge and Evaluation Research Unit, the Division of Healthcare Policy Research, Department of Health Services Research, and the Robert D. and Patricia E. Kern Center for the Science of Healthcare Delivery, Mayo Clinic, Rochester, MN.

Funding and support: By Annals policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article as per ICMJE conflict of interest guidelines (see www.icmje.org). The author has received peer-reviewed funding from the Patient Centered Outcomes Research Institute to test the impact of two shared decision making interventions on patient-centered outcomes and resource utilization.

REFERENCES