

Improving Diagnosis in Health Care

Quality Chasm Series

Getting the right diagnosis is a key aspect of health care: It provides an explanation of a patient’s health problem and informs subsequent health care decisions. For decades, diagnostic errors—inaccurate or delayed diagnoses—have represented a blind spot in the delivery of quality health care. Diagnostic errors persist throughout all settings of care and continue to harm an unacceptable number of patients.

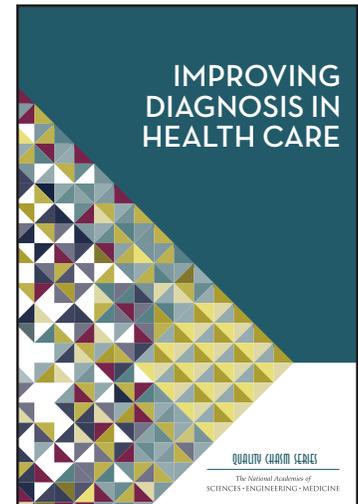
Improving the diagnostic process is not only possible, but also represents a moral, professional, and public health imperative. The National Academies of Sciences, Engineering, and Medicine, with support from a broad coalition of sponsors, convened an expert committee to synthesize what is known about diagnostic error and propose recommendations to improve diagnosis.

Improving Diagnosis in Health Care, a continuation of the landmark Institute of Medicine reports *To Err Is Human: Building A Safer Health System* (2000) and *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001) finds that diagnosis—and, in particular, the occurrence of diagnostic errors—has been largely unappreciated in efforts to improve the quality and safety of health care. The result of this inattention is significant: The committee concluded that most people will experience at least one diagnostic error in their lifetime, sometimes with devastating consequences. Urgent change is warranted to address this challenge.

WHAT IS DIAGNOSTIC ERROR?

The committee defines diagnostic error as “the failure to (a) establish an accurate and timely explanation of the patient’s health problem(s) or (b) communicate that explanation to the patient.” The definition frames diagnostic error from the patient’s perspective, because a patient bears the ultimate risk of harm from diagnostic errors. It also reflects the iterative and complex nature of the diagnostic process, as well as the need for a diagnosis to convey more than simply a label of a disease.

Diagnostic errors stem from many causes, including inadequate collaboration and communication among clinicians, patients, and their families; a health care work system that is not well designed to support the diagnostic process; limited feedback



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to clinicians about diagnostic performance; and a culture that discourages transparency and disclosure of diagnostic errors, which in turn may impede attempts to learn from these events and improve diagnosis.

Diagnostic errors may cause harm to patients by preventing or delaying appropriate treatment, providing unnecessary or harmful treatment, or resulting in psychological or financial repercussions. It is estimated that 5 percent of U.S. adults who seek outpatient care each year experience a diagnostic error. Postmortem examination research spanning decades has shown that diagnostic errors contribute to approximately 10 percent of patient deaths, and medical record reviews suggest that they account for 6 to 17 percent of adverse events in hospitals. Furthermore, diagnostic errors are the leading type of paid medical malpractice claims and are almost

twice as likely to have resulted in the patient’s death compared to other claims.

The committee recognized that a sole focus on reducing diagnostic errors will not achieve the extensive change necessary. Instead, a broader focus on improving diagnosis is warranted. To provide a framework for this dual focus, the committee developed a conceptual model to articulate the diagnostic process (see figure), describe work system factors that influence this process, and identify opportunities to improve the diagnostic process.

GOALS FOR IMPROVEMENT

The committee outlined eight goals to reduce diagnostic error and improve diagnosis (see insert for the report’s recommendations, anchored to each of the eight goals):

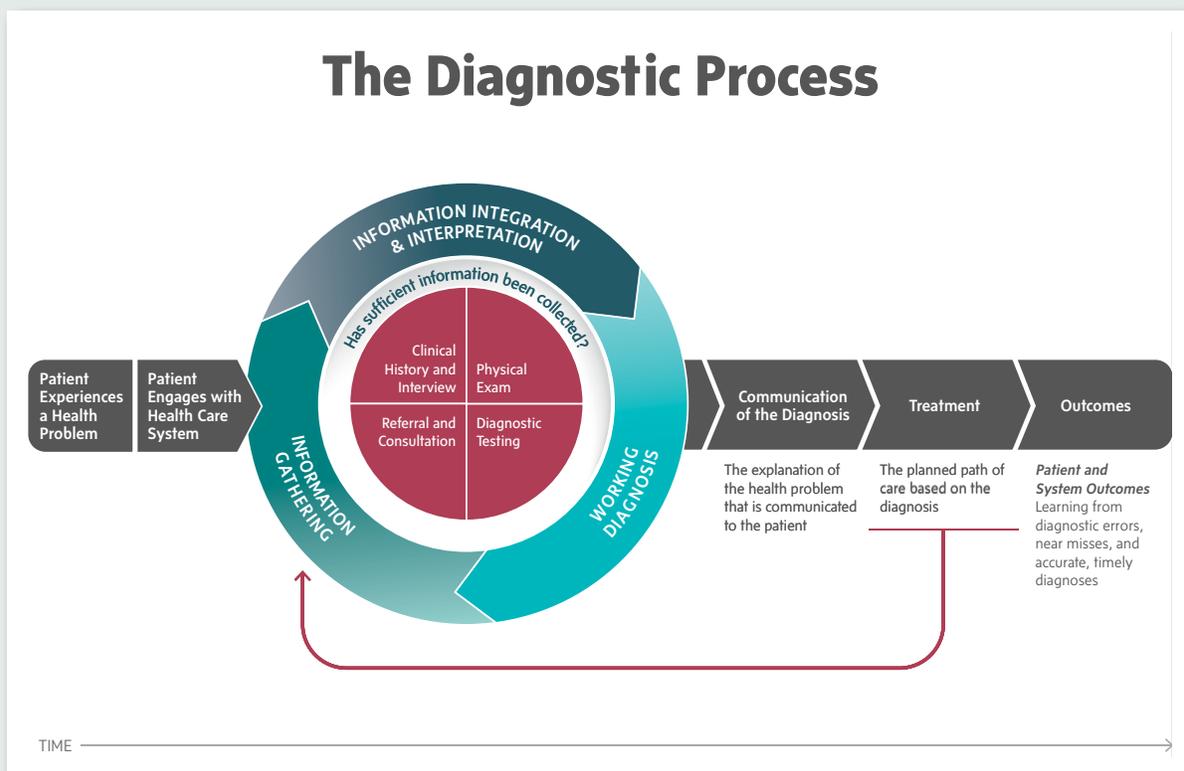


FIGURE The committee’s conceptual model of the diagnostic process.

Diagnostic errors may cause harm to patients by preventing or delaying appropriate treatment, providing unnecessary or harmful treatment, or resulting in psychological or financial repercussions.

- **Facilitate more effective teamwork in the diagnostic process among health care professionals, patients, and their families.**

The diagnostic process hinges on successful collaboration among health care professionals, patients, and their families. Patients and their families are critical partners in the diagnostic process. In addition, all health care professionals need to be well prepared and supported to engage in diagnostic teamwork.

- **Enhance health care professional education and training in the diagnostic process.**

Getting the right diagnosis depends on all health care professionals involved in the diagnostic process receiving appropriate education and training. Improved emphasis on diagnostic competencies and feedback on diagnostic performance are needed.

- **Ensure that health information technologies (IT) support patients and health care professionals in the diagnostic process.**

Although health IT has the potential to improve diagnosis and reduce diagnostic errors, many experts are concerned that it currently is not effectively facilitating the diagnostic process and may even be contributing to errors. Collaboration among health IT vendors, users, and the Office of the National Coordinator for Health Information Technology is needed to better align health IT with the diagnostic process.

- **Develop and deploy approaches to identify, learn from, and reduce diagnostic errors and near misses in clinical practice.**

Few health care organizations have processes in place to identify diagnostic errors and near misses in clinical practice. But collecting this information, learning from these experiences, and implementing changes are critical for achieving progress. Health care professional societies can also be engaged to identify high-priority areas to improve diagnosis.

- **Establish a work system and culture that supports the diagnostic process and improvements in diagnostic performance.**

The work system and culture of many health care organizations could better support the diagnostic process. For example, health care organizations should promote a non-punitive culture that values feedback on diagnostic performance, ensure effective communication in diagnostic testing, and design a work system that supports team members involved in the diagnostic process, including integrating error recovery mechanisms.

- **Develop a reporting environment and medical liability system that facilitates improved diagnosis through learning from diagnostic errors and near misses.**

There is a need for safe environments, without the threat of legal discovery or disciplinary action, where diagnostic errors, near misses, and adverse events can be analyzed and learned from in order to improve diagnosis and prevent diagnostic errors. Voluntary reporting efforts should be encouraged and evaluated for their effectiveness. Reforms to the medical liability system are needed to make health care safer by encouraging transparency and disclosure of medical errors, including diagnostic errors.

Committee on Diagnostic Error in Health Care

John R. Ball (Chair)

Executive Vice President
Emeritus, American College of
Physicians

Elisabeth Belmont

MaineHealth

Robert A. Berenson

The Urban Institute

Pascale Carayon

University of Wisconsin–
Madison

Christine K. Cassel

National Quality Forum

Carolyn M. Clancy

U.S. Department of Veterans
Affairs

Michael B. Cohen

University of Utah

Patrick Croskerry

Dalhousie University

Thomas H. Gallagher

University of Washington

Christine A. Goeschel

MedStar Health

Mark L. Graber

RTI International

Hedvig Hricak

Memorial Sloan-Kettering
Cancer Center

Anupam B. Jena

Harvard Medical School

Ashish K. Jha

Harvard School of Public
Health

Michael Laposata

University of Texas Medical
Branch at Galveston

Kathryn McDonald

Stanford University

Elizabeth A. McGlynn

Kaiser Permanente

Michelle Rogers

Drexel University

Urmimala Sarkar

University of California,
San Francisco

George E. Thibault

Josiah Macy Jr. Foundation

John B. Wong

Tufts Medical Center

Study Staff

Erin Balogh

Study Director

Bryan Miller

Research Associate
(from August 2014)

Sarah Naylor

Research Associate
(until August 2014)

Kathryn Ellett

Research Associate
(April 2015 to July 2015)

Celynne Balatbat

Research Assistant
(until June 2015)

Patrick Ross

Research Assistant
(from April 2015)

Laura Rosema

Christine Mirzayan Science And
Technology Policy Graduate
Fellow
(January 2014 to April 2014)

Beatrice Kalisch

Nurse Scholar-In-Residence
(until August 2014)

Patrick Burke

Financial Associate

Roger Herdman

Director, Board on Health Care
Services (until June 2014)

Sharyl Nass

Director, Board on Health Care
Services (from June 2014);
Director, National Cancer
Policy Forum

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• Design a payment and care delivery environment that supports the diagnostic process.

Payment likely influences the diagnostic process and the occurrence of diagnostic errors. For example, fee-for-service payment lacks incentives to coordinate care, and distortions between procedure-oriented and cognitive-oriented care may be diverting attention from important tasks in the diagnostic process. A fundamental research need is an improved understanding of the impact of payment and care delivery models on diagnosis.

• Provide dedicated funding for research on the diagnostic process and diagnostic errors.

Federal resources devoted to diagnostic research are overshadowed by those devoted to treatment. Dedicated, coordinated funding for research on diagnosis and diagnostic error is warranted. Public–private collaboration and coordination can help extend financial resources to address research areas of mutual interest.

CONCLUSION

Without a dedicated focus on improving diagnosis, diagnostic errors will likely worsen as the delivery of health care and the diagnostic process continue to increase in complexity. Just as the diagnostic process is a collaborative activity, improving diagnosis will require collaboration and a widespread commitment to change among health care professionals, health care organizations, patients and their families, researchers, and policy makers. The committee's recommendations contribute to the growing momentum for change in this crucial area of health care quality and safety. ♦♦♦

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