

Reform of primary care could reduce diagnostic errors

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Errors in diagnosis place a heavy financial burden on an already costly health care system and can be devastating for affected patients. Strengthening certain aspects of a new and evolving model of comprehensive and coordinated primary care could potentially address this highly relevant, but underemphasized safety concern, said health researchers from Baylor College of Medicine and Stony Brook University Medical Center.

"Diagnostic errors are the single largest contributor to malpractice claims (about 40 percent) and cost approximately \$300,000 per claim," said Dr. Hardeep Singh, assistant professor of medicine and health services research at the Veterans Affairs Health Services Research and Development Center of Excellence and BCM, in a commentary published in the current issue of the [Journal of the American Medical Association](#). "Coordination, communication and continuity of care deficits are associated with these errors."

A unique model of primary care, called the patient-centered medical home, that emphasizes comprehensive and coordinated primary care could potentially reduce diagnostic errors if certain key elements of safety are also addressed, Singh said.

The commentary was co-authored by Dr. Mark Graber, associate chair of medicine at Stony Brook University Medical Center in New York and chief of medical service at the Northport Veterans Affairs Medical Center.

The principles of the patient-centered medical home were developed and endorsed by the American Academy of Family Physicians, the American Academy of Pediatrics, American College of Physicians and the American Osteopathic Association.

The model facilitates partnerships between individual patients, their personal physicians and, when appropriate, the patient's family. Care is assisted by physician "extenders," nurse empowerment, information technology and other means to assure that patients get care when and where they need and want it in a culturally and linguistically appropriate manner.

In the commentary, Singh and Graber outline five principles that the model needs to incorporate in order to reduce the incidence of diagnostic errors.

Right teamwork

The medical home model places emphasis on team-based care. Primary care teams could include not only physicians but also nurses, allied health professionals and administrative personnel, Singh said.

"Task delegation within the 'team' has to be done correctly to avoid errors related to patient follow-up, a common breakdown in the process," said Singh. "The physician could take the leadership role, while the entire group collectively takes care of the patient."

For example, monitoring test results, referrals and appointments to ensure appropriate follow-up could be performed by other team members under physician supervision.

Through innovative team-training programs, care should be undertaken to ensure that the new model of care does not introduce ambiguous

responsibility between team members. Individual accountability and ownership of patients should continue to be emphasized, the researchers wrote.

Right information management

Breakdowns in information management, such as communication and coordination of care, are the root of many diagnostic errors, Singh and Graber wrote.

"Electronic health records can help facilitate information transfer but this information then needs a required follow-up action for the task to be considered completed," they note. "The information loop needs to be closed."

Major issues affecting safe information management are the unclear responsibility for patient follow-up between the [primary care](#) physician and subspecialist or team member, as well as the overwhelming volume of alerts, reminders and other diagnostic information in electronic health records.

If information management problems (technological, as well as non-technological in nature) are not addressed now, they are likely to worsen when medical homes are fully implemented, the researchers wrote.

"Comparative effectiveness studies should be conducted to evaluate which features and functions of electronic records are more effective in reducing diagnostic errors in medical homes."

Right measurement and monitoring

Improving the current performance monitoring strategies of providers' competence are also necessary, Singh and Graber wrote, including better

measurement of processes and outcomes related to compliance with preventive measures as well as key indicators of diagnostic performance (e.g. appropriate management of diagnostic test results).

"Newer methods that include electronic surveillance and monitoring techniques could be used to detect diagnostic errors proactively. These approaches could be accompanied by feedback to clinicians about specific prevention strategies."

Right patient empowerment

Patients are key partners in the medical home team, Singh and Garber wrote.

"Encouraging 'activating' questions should become part of the patient centered medical home commitment to reduce errors."

Activating questions may include: "How do I make sure I hear about all my test results?," "Do I need another opinion?" and "How and when should I get back to you if I'm not better?"

Right safety culture

The current conversation about the patient-centered medical home is focused on reimbursement and chronic disease care, Singh and Graber note.

"But patient safety must be a central, organizing principle and not just an afterthought" they said. "From a practical standpoint, this necessitates an appropriate infrastructure and skill set to ensure effective implementation of the four rights described above."

"The great majority of diagnostic errors have root causes that derive from the properties of the healthcare setting, organization, and practice," said Graber.

By working together, cognitive scientists, informaticians, clinicians, and human factors engineers have a unique opportunity to decrease the likelihood of diagnostic error to the extent that the five principles can be incorporated into every new medical home.

More information: <http://jama.ama-assn.org/>

Provided by Baylor College of Medicine

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