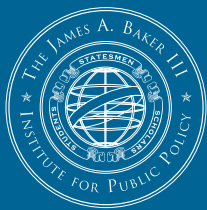


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The study, “Medical Errors Involving Trainees: A Study of Closed Malpractice Claims From 5 Insurers,” appears in the Oct. 22 issue of the *Archives of Internal Medicine*. The authors are Hardeep Singh, M.D., M.P.H., and Laura A. Petersen, M.D., M.P.H., (Michael E. DeBakey Veterans Affairs Medical Center; Baylor College of Medicine), Eric J. Thomas M.D., M.P.H., (University of Texas Center of Excellence for Patient Safety Research and Practice; University of Texas Medical School at Houston), and David M. Studert, LL.B., Sc.D., M.P.H., (Harvard School of Public Health during this work).



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## HEALTH POLICY research

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### Do Medical Trainee Errors Differ from Those Involving More Experienced Physicians?

“Yes,” says Hardeep Singh, M.D., M.P.H., a staff physician at the Michael E. DeBakey VA Medical Center and assistant professor of medicine at Baylor College of Medicine. “Trainees (medical students, interns, residents or fellows) were more likely to make errors related to poor teamwork and poor communication. Errors by trainees were also more likely to be related to technical failures (for example, errors related to medical procedures or medical knowledge) and problems of excessive workload.”

As a group, medical trainees have several vulnerabilities that may increase their risk of involvement in medical errors. They are relatively inexperienced, are often fatigued due to long shifts, and frequently work in large, complex medical centers that serve the sickest patients. Although these and other factors pose risks for patient safety, until now little has been known about the nature and causes of medical errors involving trainees. Better knowledge of errors that occur in training environments could lead to changes in medical education that could enhance patient safety.

To understand the characteristics of trainee errors, Singh and his colleagues analyzed data from a sample of closed medical malpractice claim files at five insurance companies. The claims represented physicians and medical trainees in a variety of specialties across the United States and were categorized into one of four common types of malpractice claims: obstetric, surgical, diagnostic and medication-related. Singh and colleagues closely examined contributing factors in cases of errors that resulted in adverse outcomes, focusing on teamwork problems, cognitive errors, and “system factors” such as workload and distractions in the work environment. They analyzed the frequency of these contributing factors in 649 claims involving experienced physicians and in 240 claims in which a trainee – a medical student, intern, resident or fellow – was judged by expert

reviewers to have substantially contributed to an error.

Errors in judgment, failures in vigilance or memory, lack of technical competence or knowledge, and teamwork-related factors were the most common contributory factors identified in trainee errors. Among trainees, problems in technical competence occurred most frequently during diagnostic decision making; teamwork breakdowns were most often related to inadequate supervision and problems with patient “handoffs” (times when doctors or trainees go off-shift and transfer care of the patient to someone else) between staff. Lack of technical competence and teamwork factors, as well as excessive workload, were also significantly more prevalent among trainee errors compared to nontrainee errors. Trainee cases had a greater average number of contributory factors than did nontrainee cases, suggesting that the causes of trainee-related errors may have more complex origins.

Although this study focused on errors that disproportionately resulted in serious adverse outcomes, other studies based on surveys and interviews have also implicated problems of teamwork and technical competence in trainee errors. While complicated, many trainee errors are also likely to be preventable. Identifying the specific processes and competencies that are most vulnerable to error is a first step toward improving the safety of patients who receive care in medical training environments. Singh and colleagues conclude by proposing that potentially important targets for medical education reform include improving teamwork, supervision at multiple levels, and diagnostic decision making.

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