Which Health Conditions Are Most Likely to Be Misdiagnosed?

Diagnostic errors are associated with missed strokes, lung cancers and blood infections that can lead to death or serious disability.

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Patients depend on doctors to accurately diagnose their illnesses. But a recent study published in the journal Diagnosis has found that diagnostic errors account for nearly three fourths of all severe medical problems in three disease categories: vascular events, infections and cancers, according to a Johns Hopkins Medicine news release.

For the study, researchers evaluated 11,592 diagnostic error cases from 2006 to 2015 drawn from a list of open and closed malpractice claims in the United States. Scientists classified all the health conditions presented in the claims using a system that allowed them to identify and rank top conditions.

Misdiagnosed cancers represented 37.8% of diagnostic errors that led to death or serious permanent disability while vascular events and infections accounted for 22.8% and 13.5% of misdiagnosed conditions.

The top illnesses in each category were lung cancer, stroke and sepsis, respectively. These conditions were followed by heart attack, venous thromboembolism (clots in the legs and lungs), aortic aneurysm and dissection (a rupture of the aorta), arterial thromboembolism (a blockage of the blood supply to internal organs), meningitis and encephalitis, spinal infection, pneumonia, endocarditis (a heart infection), and breast, colorectal, prostate and skin cancers.

Up to 71% of diagnostic errors occurred in ambulatory settings. In emergency departments, missed infections and vascular events were more common while cancer-related misdiagnoses occurred more often in outpatient clinics. Investigators also identified failures in clinical judgement as the cause in more than 85% of misdiagnosed cases—evidence that more must be done to support bedside evaluations by clinical providers, researchers said.

“Our current annual federal investment to fix diagnostic errors is less than what we spend each year researching smallpox, a disease eradicated in the U.S. over half a century ago,” observed David Newman-Toker, MD, PhD, the director of the Johns Hopkins Armstrong Institute Center for Diagnostic Excellence and the study’s lead researcher. “If we devoted appropriate resources to

tackling misdiagnosis of the ‘big three’ diseases we identified, we could potentially save half of the people who die or are permanently disabled from diagnostic errors.”

Ways to address this problem, scientists suggested, include computer-based diagnostic decision support tools, increasing immediate access to specialists at the point of care, encouraging more effective teamwork and patient engagement in diagnosis, providing routine diagnostic performance feedback for clinicians and improving diagnostic education through simulation training.

For the next phase of the three-part study, researchers plan to estimate how often the 15 most common conditions are misdiagnosed. The final stage of the inquiry will use nationally representative data sets to generate a population-level estimate of the overall number of people harmed by diagnostic error annually.

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