Diagnostic Errors as a Form of Mismedicine

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Introduction

Accurate diagnosis is a critical part of medical care because treatment decisions depend on correctly identifying a patient's condition. Failing to diagnose a patient correctly can lead to serious and unnecessary consequences. Diagnostic error refers to situations in which a disease is missed, incorrectly identified, or diagnosed too late (Singh et al., 2017). These inaccuracies can lead to delayed treatment, unnecessary medical procedures, and preventable harm to patients. Research suggests that diagnostic errors affect approximately 5% of U.S. adults in outpatient care each year (Singh et al., 2014).

Diagnostic errors can also be understood through the broader concept of mismedicine, a term introduced by Dr. Pooya Beigi to describe medical actions, decisions, or system failures that result in harm, inefficiency, or care that falls below expected standards of care (Mismedicine, n.d.). Rather than focusing solely on individual mistakes, mismedicine emphasizes how failures often arise from interactions between human judgment, communication, and healthcare systems (Beigi, 2023). Diagnostic errors represent an important illustration of mismedicine because they frequently result from multiple interacting factors.

What Is a Diagnostic Error?

A diagnostic error appears when a patient's condition is not correctly identified during the diagnostic process. Researchers commonly classify diagnostic errors as missed, delayed, or incorrect diagnoses (Singh et al., 2017). A missed diagnosis occurs when a disease is never identified. A delayed diagnosis occurs when the correct condition is eventually discovered but only after a significant period of time has passed. An incorrect diagnosis occurs when a patient is diagnosed with the wrong disease entirely.

The diagnostic process itself involves multiple steps. Physicians must collect patient history, perform physical examinations, order diagnostic tests, interpret results, and communicate findings with other healthcare professionals. Errors can occur at any stage of this process. For example, symptoms may be misinterpreted, laboratory results may be misunderstood, or important information may not be communicated effectively between healthcare providers (Graber et al., 2005).

Viewing diagnostic errors through the framework of mismedicine emphasizes how these failures often result from interactions between individual decision-making and system-level elements. In many cases, diagnostic mistakes do not arise from a single incorrect judgment but from several small issues that accumulate during the diagnostic process (Beigi, 2023).

Prevalence and Impact of Diagnostic Errors

Diagnostic errors are a significant concern within healthcare systems worldwide. Studies estimate that approximately 5% of adults experience a diagnostic error each year in outpatient settings (Singh et al., 2014). While some of these errors may have minor consequences, others can result in serious harm to patients.

When conditions such as cancer, stroke, or serious infections are not recognized early, patients may lose the opportunity for effective treatment. Delayed diagnosis can allow diseases to progress to more severe stages, increasing both medical risks and treatment complexity (Singh et al., 2017). In addition to harming patients, diagnostic errors contribute to increased healthcare costs because they may lead to unnecessary tests, additional hospital visits, and inappropriate treatments (Newman-Toker & Pronovost, 2009). These outcomes clarify the broader concept of mismedicine. According to Dr. Beigi's framework, medical harm often emerges from systemic weaknesses rather than isolated mistakes. Diagnostic errors demonstrate how limitations in communication, decision-making processes, and healthcare infrastructure can collectively produce detrimental outcomes (Beigi, 2023).

Contributing Factors

Several different factors contribute to diagnostic errors. One important factor involves cognitive bias, which refers to systematic distortions in judgment and decision-making that can affect clinical reasoning (Webster et al., 2021). Physicians may rely heavily on their first impression when evaluating symptoms. This phenomenon, known as anchoring bias, occurs when clinicians focus on an initial diagnosis and fail to consider alternative explanations for a patient's condition (Graber et al., 2005).

Communication and System-Level Factors

Communication problems also contribute significantly to diagnostic mistakes. Healthcare often requires collaboration among multiple professionals. Therefore, information must be transferred accurately between providers. Miscommunication during patient handoffs, referrals, or documentation can result in incomplete information, hindering accurate diagnosis.

System-level factors also play a role. Physicians frequently work under significant time pressure, which may limit their ability to thoroughly evaluate complex cases. In addition, technological challenges such as incomplete medical records or delayed laboratory reporting can disrupt diagnosis. These factors demonstrate why diagnostic errors are better understood as part of a broader system of mismedicine rather than simply individual failures (Beigi, 2023).

Consequences of Diagnostic Errors

The consequences of diagnostic errors can be severe for both patients and healthcare providers. When the correct diagnosis is delayed or missed, patients may receive ineffective or potentially harmful treatments. In conditions such as stroke or severe infection, even small delays in diagnosis can significantly worsen patient outcomes (Newman-Toker & Pronovost, 2009).

Beyond physical harm, diagnostic errors can also have psychological consequences. Patients who experience medical errors may lose trust in healthcare providers and feel uncertain about seeking future care. Healthcare professionals involved in diagnostic errors may also experience emotional distress and professional consequences (Balogh et al., 2015; Ullstrom et al., 2014).

Diagnostic errors are also a major source of medical malpractice claims. Misdiagnosis is frequently cited as a leading cause of malpractice litigation, with significant financial and professional implications for healthcare providers (Schiff et al., 2009). These consequences highlight the importance of improving diagnostic safety within healthcare systems.

Prevention and Current Solutions

Reducing diagnostic errors requires improvements at both the individual and system levels. One approach involves the use of diagnostic checklists and clinical decision-support tools. These strategies encourage clinicians to consider a broader range of possible diagnoses before reaching a final conclusion and can help reduce the influence of cognitive bias.

Technology and Education

Advances in technology may also improve diagnostic accuracy. Artificial intelligence systems and advanced data analysis tools are increasingly used to support clinicians by identifying patterns in medical data and assisting with diagnostic decision-making. These technologies may help physicians recognize possible diagnoses that could otherwise be overlooked (World Health Organization, 2023; U.S. Food and Drug Administration, 2025).

Improvements in education and communication are equally important. Training programs that help clinicians recognize cognitive biases and communicate effectively with patients may reduce diagnostic mistakes. As emphasized by Dr. Beigi's concept of mismedicine, meaningful improvement requires both individual awareness and systemic reforms designed to prevent harm across the healthcare system (Beigi, 2023).

Conclusion

Diagnostic errors are a major challenge in healthcare and illustrate the broader problem of mismedicine. When diseases are missed, delayed, or incorrectly identified, patients may experience worsened health outcomes and reduced trust in healthcare systems. These errors often arise from cognitive biases, communication problems, and systemic pressures within

healthcare environments. Improving diagnostic safety, therefore, requires both individual awareness and system-level changes. Understanding diagnostic errors through the concept of mismedicine highlights the complexity of medical failures and underscores the importance of developing strategies to improve patient safety.

Q & A

What is a diagnostic error?

A diagnostic error occurs when a disease or condition is missed, diagnosed too late, or identified incorrectly. As discussed in this paper, these errors can happen at different stages of the diagnostic process, including collecting patient history, interpreting tests, or communicating findings between healthcare professionals.

Why are diagnostic errors considered a form of mismedicine?

Diagnostic errors reflect the broader concept of mismedicine because they can result in harm, inefficiency, and care that falls below expected standards. Rather than being caused only by one individual mistake, diagnostic errors often stem from the interaction of human judgment, communication problems, and weaknesses within healthcare systems.

What factors commonly contribute to diagnostic errors?

Several factors can contribute to diagnostic errors. These include cognitive biases such as anchoring bias, communication breakdowns between healthcare providers, time pressure, incomplete medical records, and delays in reporting test results. Together, these issues can interfere with accurate clinical decision-making and increase the likelihood of harm.

How can diagnostic errors affect patients and healthcare providers?

Diagnostic errors can lead to delayed treatment, unnecessary procedures, worsening illness, and preventable harm. They may also have psychological effects, such as reducing patients' trust in healthcare providers. In addition, healthcare professionals involved in these errors may experience emotional distress and professional consequences, including malpractice claims.

What can be done to reduce diagnostic errors?

Reducing diagnostic errors requires improvements at both the individual and system levels. Possible solutions include using diagnostic checklists, improving communication, training clinicians to recognize cognitive bias, and using decision-support technologies such as artificial intelligence tools. As the paper explains, meaningful improvement depends on both personal awareness and broader healthcare reform.

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