

# How healthcare leaders can break the link between diagnostic error and delayed care

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## Introduction

Delayed care negatively impacts every area of the quadruple aim: cost, outcomes, patient satisfaction, and the clinician experience.

Social determinants of health are a major contributor for patients delaying needed care. For example, unstable housing and frequent moves lead to difficulties in maintaining a primary care relationship. Employment challenges can limit the time available to make – and keep – an appointment.

More recently, the pandemic added to the dilemma as people limited their time in public and healthcare facilities reduced access to limit exposure. The results are measurable. According to one study, 1/3 of older adults delayed care during 2021 with one in five experiencing negative impacts.<sup>1</sup>

Delayed care can also be a direct result of misdiagnosis or delayed diagnosis. Patients rely on diagnoses to act; they can't get the right treatment in a timely manner without first being accurately diagnosed. Let's explore how healthcare providers can address this reason for delayed care.

## The complexity of diagnosis

Healthcare complexity has outstripped human capacity to retain and apply every piece of new knowledge. The sheer volume of advances is even more overwhelming when combined with the limited time available to clinicians.

## Who is diagnosing?

As patients put off seeking care, initial diagnoses are often the responsibility of primary care providers and emergency department clinicians. Managing these time-pressured resources while ensuring swift and exact diagnoses is a challenge faced by clinical leaders across the country. ED physicians often have limited or no patient history, starting from scratch to analyze symptoms and start the diagnostic process. Both ED and primary care providers address broad ranges of symptoms and diagnoses with little time to home in on the final answer.

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### **The impact of misdiagnosis for providers and patients**

The impact of misdiagnosis is staggering. In the U.S., an estimated 40,000 – 80,000 people die in hospitals each year because of an incorrect diagnosis.<sup>2</sup>

The same disciplines that are on the frontline of diagnosis also account for high malpractice claims due to misdiagnosis.<sup>3</sup> Managing this risk must balance seeing large volumes of patients with the resources needed to weed through common symptoms to reach an accurate diagnosis.

The patient and patient's family suffer the most when misdiagnosis occurs. It has the potential to do not only physical harm, but mental and financial harm.

**When a diagnosis is accurate and made in a timely manner, a patient has the best opportunity for a positive health outcome because clinical decision making will be tailored to a correct understanding of the patient's health problem.<sup>4</sup>**



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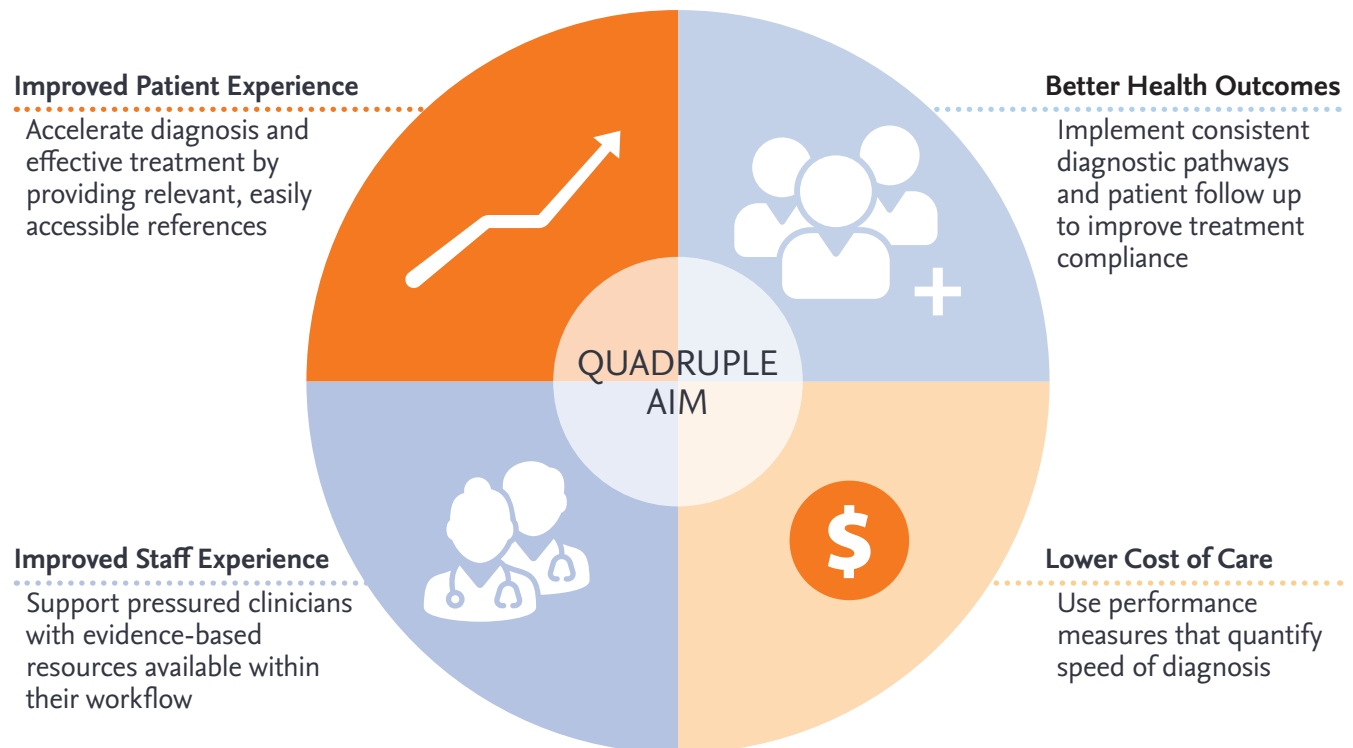
## Causes of diagnostic errors and delays

When examined in depth, diagnostic delays can be driven by several areas.

- 1 Time Crush.**  
With appointments measured in minutes, the time to create and discuss a diagnosis is short.
- 2 Common Symptoms.**  
Many symptoms can lead to hundreds of diagnoses. The right one requires a diligent and comprehensive process.
- 3 Patient Expectations.**  
Using “Dr. Internet” may mean patients may not share symptoms that don’t match their self-diagnosis.
- 4 Diagnostic Complexity.**  
Following up on test results and checking for meaningful symptom changes may be overlooked after an ED or clinic visit.

For healthcare leaders the expense of diagnostic errors and delays is tangible.

## The Healthcare Quadruple Aim points to possible resolutions



In the case of Tick-Borne Disease the CDC estimates that delayed diagnosis adds between \$712 million and \$1.3 billion a year in treatment costs. <sup>6</sup>



### A practical example

One disease category that has a high incidence of delayed diagnosis and misdiagnosis is Tick-Borne Disease (TBD). Symptoms can be long-lived and delayed or misdiagnosis can extend and worsen its impact. Estimates of those experiencing chronic tick-borne disease range from 20% to an incredible 50%. When symptoms linger, patient satisfaction may drop despite ongoing treatment.<sup>5</sup>

In the case of TBD the CDC estimates that delayed diagnosis adds between \$712 million and \$1.3 billion a year in treatment costs. <sup>6</sup>

The cost is high for patients, too. For example, one qualitative study found that 34.6% of participants who had Lyme disease were not correctly diagnosed with the disease during their first clinical encounter with a healthcare provider concerning their symptoms.<sup>7</sup> Col. Nicole Malachowski, USAF (Ret) experienced this firsthand. It took just over 4 years and seeing over 20 doctors until she received an accurate diagnosis. Unfortunately, due to the late stage of her illness by this point, Nicole was forced to take medical retirement from the career she dreamed of as a child.

### Patient perspective

*“I endured disorientation, confusion, anxiety, and even moments of temporary paralysis... I could not play with my children, care for myself, or interact with my husband... My doctors, civilian and military alike, were woefully uneducated about the breadth of tick-borne diseases and how they present.” <sup>8</sup>*

– Col. Nicole Malachowski, USAF (Ret)



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## What can healthcare leaders do?

Clinical leadership can implement solutions designed to improve the diagnostic process for their teams. Increased ease of diagnosis can lead to patient satisfaction, clinical success, and staff well-being, all underlying the Quadruple Aim.

1. Ensure providers have reputable resources that drive accurate diagnoses.
2. Identify the process and responsible parties throughout the care plan.
3. Ease mental pressure on clinicians by reducing the risk of misdiagnosis.

The financial impact of more timely and exact diagnoses can potentially save \$100 billion annually. Cost savings sources include reducing costs for unneeded testing and treatment and avoiding legal expenses.<sup>9</sup>

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## References

- 1 <https://pubmed.ncbi.nlm.nih.gov/35393637/> Delayed medical care and its perceived health impact among US older adults during the COVID-19 pandemic accessed July 22, 2022.
- 2 <https://www.improvediagnosis.org/what-is-diagnostic-error/> accessed July 22, 2022.
- 3 <https://www.cdc.gov/lyme/stats/humancases.html#:~:text=There%20is%20no%20way%20of,and%20treated%20for%20Lyme%20disease,> accessed July 22, 2022.
- 4 Holmboe ES, Durning SJ. Assessing clinical reasoning: Moving from in vitro to in vivo. *Diagnosis*. 2014;1(1):111–117.
- 5 <https://www.improvediagnosis.org/facts/>, accessed July 22, 2022.
- 6 <https://publichealth.jhu.edu/2015/lyme-disease-costs-more-than-one-billion-dollars-per-year-to-treat-study-finds,> accessed July 22, 2022.
- 7 Hirsch AG, Herman RJ, Rebman A, et al. Obstacles to diagnosis and treatment of Lyme disease in the USA: a qualitative study. *BMJ Open* 2018;8:e021367. doi: 10.1136/bmjopen-2017-021367.
- 8 Retrieved from Nicole Malachowski's public comments during the Tickborne Disease Working Group in Washington, DC, December 2017: <https://www.youtube.com/watch?v=WAeyjdc39Yo>.
- 9 <https://www.improvediagnosis.org/what-is-diagnostic-error/>, accessed July 22, 2022.

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