

Diagnostic Errors: A Persistent Risk

Laura M. Cascella, MA

PEACE OF MIND

EXPERTISE

CHOICE

THE MEDPRO GROUP DIFFERENCE

The term “medical error” often conjures thoughts of wrong-site surgeries, procedures performed on the wrong patients, retained foreign objects, serious medication mistakes, and other sensational mishaps. In recent years, however, diagnostic errors have gained increasing notoriety as a prominent member of the medical error family.

Although diagnostic errors have been a long-standing medical malpractice concern, their relatively newfound fame in the public sphere is due to various factors, such as changing care models, increased advocacy and funding, high-profile news stories, and health information technology opportunities.

Over the years, MedPro Group has monitored and analyzed diagnosis-related malpractice allegations to better understand how and why diagnostic errors occur and to develop comprehensive risk education and strategies for healthcare providers. This article represents part of that effort and



Like the diagnostic process itself, defining diagnostic errors is not always simple or straightforward.”

(a) provides an overview of the issues surrounding diagnostic errors, and (b) examines detailed closed claims data that show how these errors contribute to malpractice allegations and claims.

Defining Diagnostic Errors

Like the diagnostic process itself, defining diagnostic errors is not always simple or straightforward. Multiple definitions have existed in the past, and members of the healthcare community have debated the semantics of diagnostic error labeling.

The Society to Improve Diagnosis in Medicine (SIDM) notes that diagnostic errors generally fall into three broad categories:

- 1. Delayed diagnosis:** An error that occurs if sufficient information is available to make a correct diagnosis, but the information is not acted upon in a timely manner. For example, a delayed diagnosis might occur if a healthcare provider fails to follow up on a critical lab result until the patient comes in for a routine appointment a year later.
- 2. Wrong diagnosis:** An error that occurs if an incorrect diagnosis is made prior to the correct diagnosis. For example, a wrong diagnosis might occur if a patient is diagnosed with acid reflux when, in fact, she is having a heart attack.
- 3. Missed diagnosis:** An error that occurs if no correct diagnosis is ever made. For example, following a patient's death, an autopsy reveals that the patient had undiagnosed congestive heart failure. SIDM notes that major diagnostic errors are found in 10-20 percent of autopsies.¹

In 2015, the Institute of Medicine (IOM) released its influential report titled *Improving Diagnosis in Health Care*. The report updated the definition of diagnostic error as “the failure to (a) establish an accurate and timely explanation of the patient’s health problem(s) or (b) communicate that explanation to the patient.”²

With this revamped definition – and in keeping with modern ideals of patient-centered care – the IOM reframed diagnostic errors from a patient perspective, explaining that patients ultimately bear the consequences of these errors. Further, the IOM notes that the new definition “reflects the iterative and complex nature of the diagnostic process, as well as the need for a diagnosis to convey more than simply a label of a disease.”³

The Scope of the Problem

Estimates related to the incidence of diagnostic errors tend to fluctuate. Some studies suggest that the diagnostic error rate is in the range of 5-15 percent, with variations across specialties.⁴ Dr. Hardeep Singh, a renowned expert on diagnostic errors and a reviewer for the IOM’s *Improving Diagnosis in Health Care* report, has estimated that 1 in 20 U.S. adults will

experience a misdiagnosis every year.⁵ Further, diagnostic errors likely contribute to 40,000-80,000 patient deaths in the United States annually.⁶

The statistics associated with diagnostic errors raise an obvious question: If these errors represent such a significant burden, as research suggests, why have they historically been overlooked? Although it's

difficult to find a definitive reason, a number of factors might have played a role in their previous “wallflower” status. For example, diagnostic errors (a) often go



Although important strides have been made in elevating awareness about diagnostic errors, additional research is needed to identify gaps in the diagnostic process and study various risk-reduction techniques.”

unrecognized or unreported, (b) can be difficult to understand and measure due to the complexity of the diagnostic process and the factors that contribute to these errors, and (c) don't always have clear-cut solutions.⁷

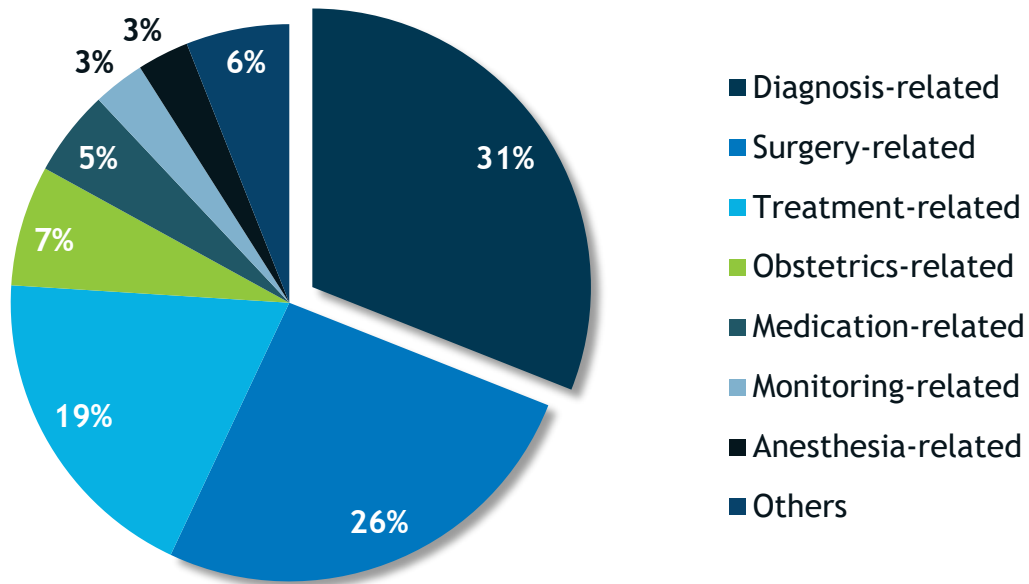
Although important strides have been made in elevating awareness about diagnostic errors, additional research is needed to identify gaps in the diagnostic process and study various risk-reduction techniques.

Learning From Malpractice Claims Data

Beyond the statistics associated with incidence of diagnostic errors and patient-related deaths, overall these medical errors account for a high frequency of malpractice claims, severe patient harm, and costly indemnities.⁸ Although diagnosis-related malpractice claims “may not be a representative measure of adverse events, they can provide insight into the types and sources of adverse events.”⁹

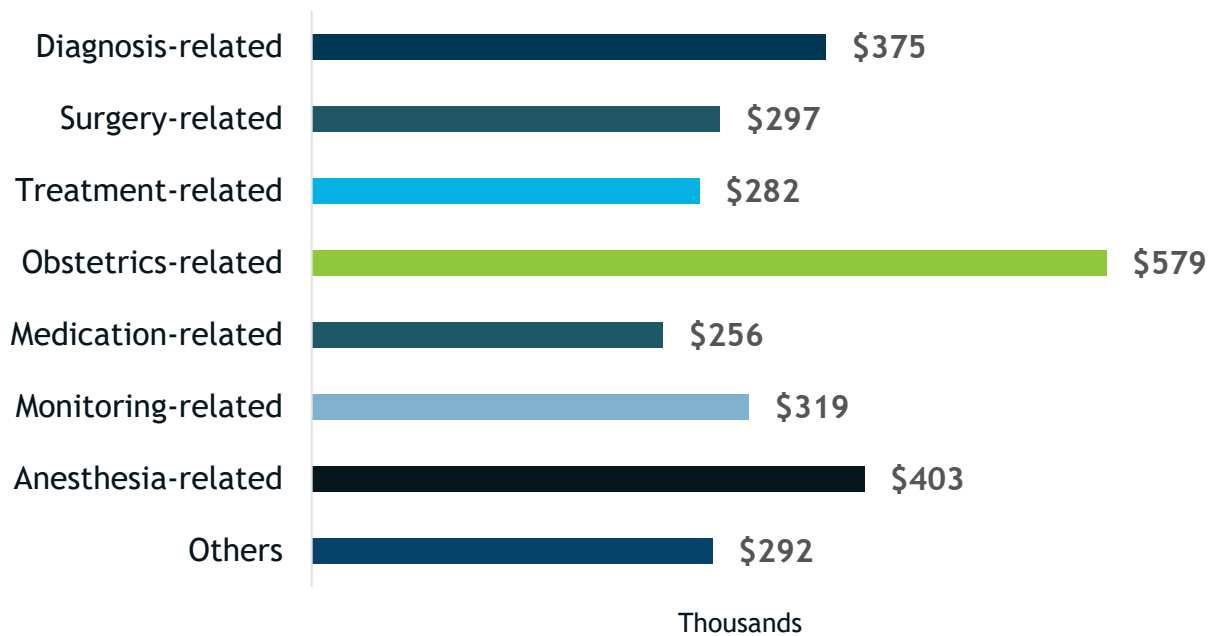
With this in mind, the following National Practitioner Data Bank (NPDB) and MedPro Group data help illustrate the impact of diagnostic errors in relation to patient care and medical liability.

Figure 1a. Percentage of Claims by Allegation Group for Physicians, 2007-2016



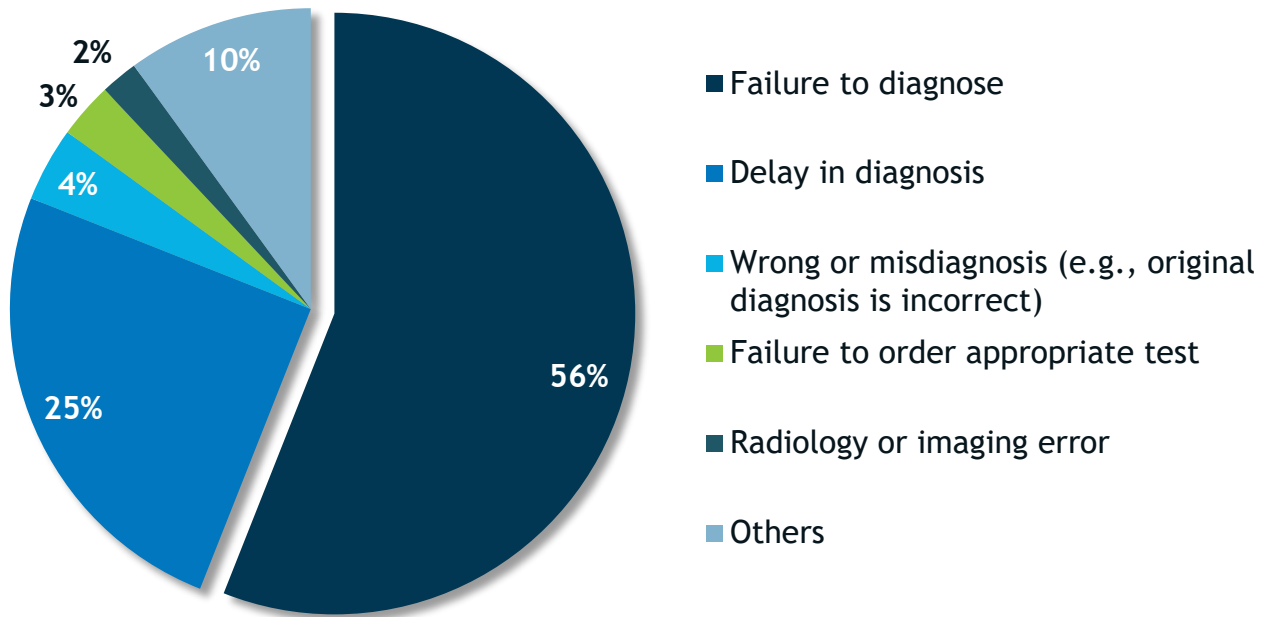
Source: National Practitioner Data Bank Public Use File, Dec. 2016. Note: Data does not include any payments by patient compensation funds.

Figure 1b. Average Indemnity by Allegation Group for Physicians, 2007-2016



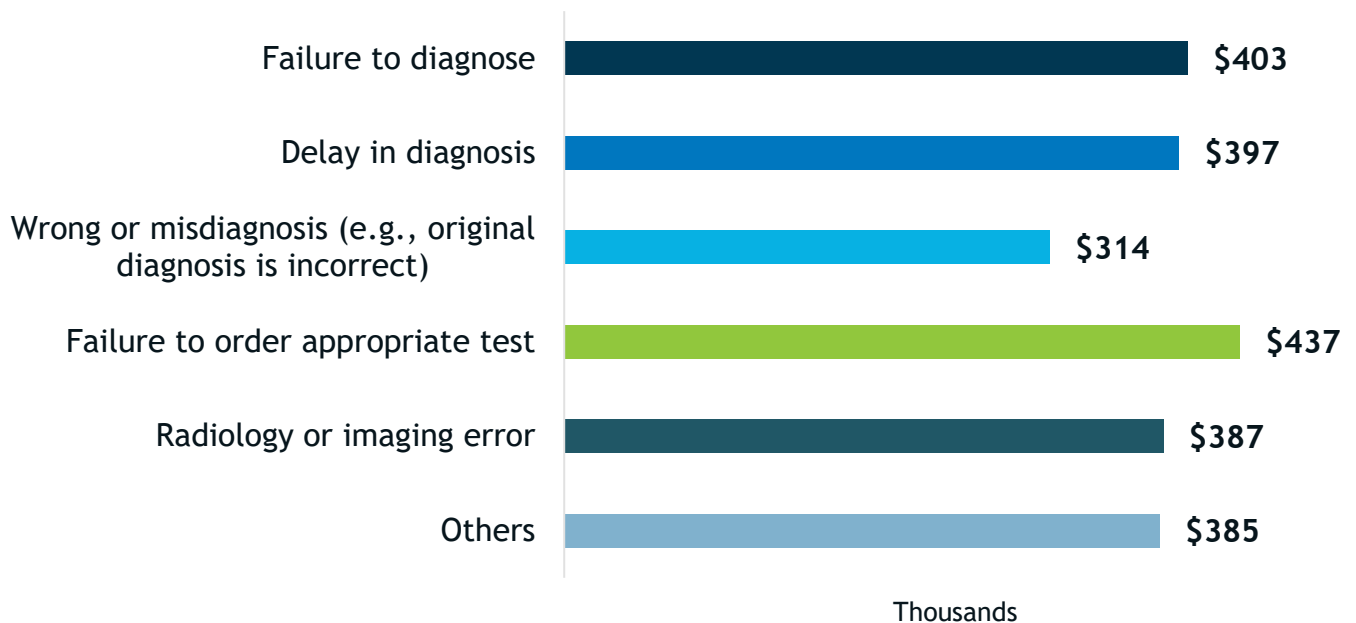
Source: National Practitioner Data Bank Public Use File, Dec. 2016. Note: Data does not include any payments by patient compensation funds.

Figure 2a. Diagnosis-Related: Top Allegations for Physicians, 2012-2016



Source: National Practitioner Data Bank Public Use File, Dec. 2016. **Note:** Data does not include any payments by patient compensation funds.

Figure 2b. Diagnosis-Related: Average Indemnity for Physicians, 2012-2016



Source: National Practitioner Data Bank Public Use File, Dec. 2016. **Note:** Data does not include any payments by patient compensation funds.

The NPDB data in Figures 1a, 1b, 2a, and 2b show that diagnosis-related allegations account for almost one-third of all physician claims and represent the third highest average indemnity. Failure to diagnose is the top allegation category within diagnosis-related claims and accounts for the second highest average indemnity of the diagnostic categories, following failure to order the appropriate test.

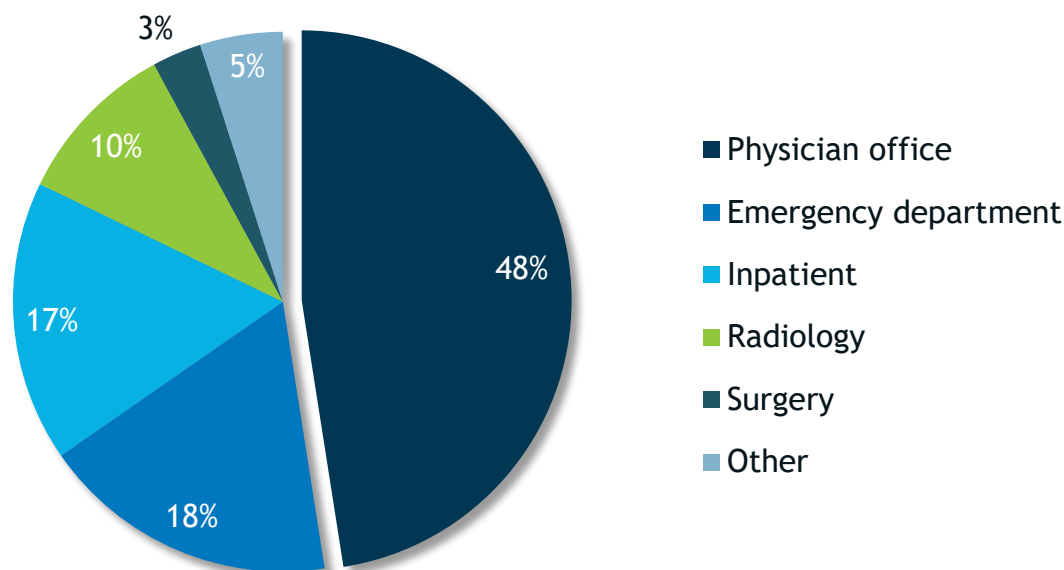
MedPro closed claims data from 2007 to 2016 show that diagnosis-related claims volume varies based on

practice setting, with the emergency department (ED) having the highest percentage of diagnosis-related claims (more than 60 percent of all ED claims). However, when looking at diagnosis-related claims in total – that is, across practice settings – most are attributed to physician offices.

“

Failure to diagnose is the top allegation category within diagnosis-related claims and accounts for the second highest average indemnity of the diagnostic categories . . .”

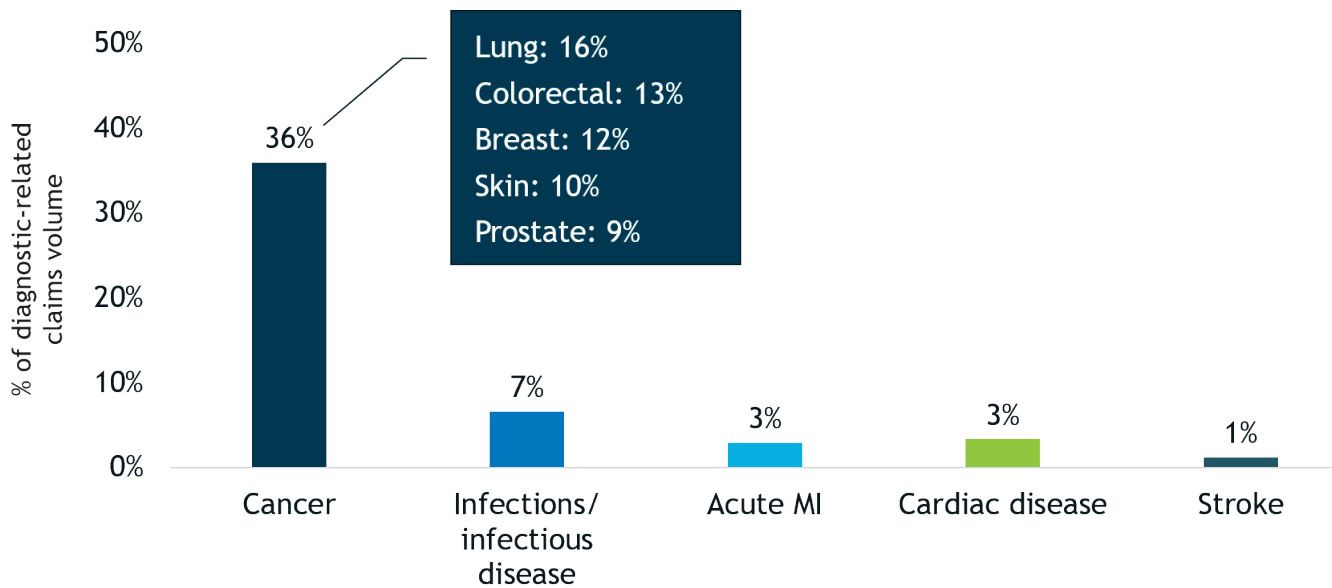
Figure 3. Diagnosis-Related Claims by Location



Source: MedPro closed claims data, 2007-2016. **Note:** The total does not equal 100 percent due to rounding.

Further analysis of diagnosis-related claims in physician offices and clinics reveals cancer as the leading condition cited in these claims. The top five types of cancer cited are lung, colorectal, breast, skin, and prostate.

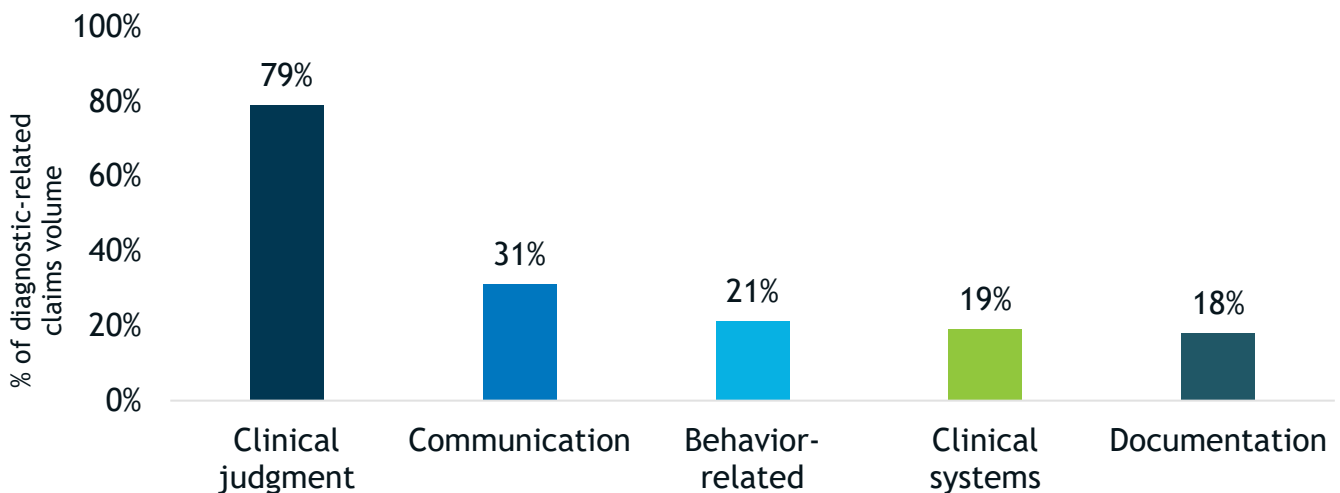
Figure 4. Top Conditions in Diagnosis-Related Claims in Physician Offices and Clinics



Source: MedPro closed claims data, 2007-2016.

MedPro Group data also give insight into the factors that contribute to diagnostic errors. Contributing factors are broad areas of concern that may play a role in allegations, injuries, or initiation of claims. Clinical judgment is the most prevalent contributing factor; it is noted in almost 8 of 10 diagnosis-related allegations – a rate more than double the next most common risk factor (communication).

Figure 5. Top Risk Factors in Diagnosis-Related Allegations



Source: MedPro closed claims data, 2007-2016.

Within the broad areas of risk noted in Figure 5 are more specific issues that lead to diagnostic failures or mishaps. Examples of such issues include:

- Vulnerabilities in clinical workflow processes and organizational policies
- Cognitive and affective biases
- Breakdowns in communication between systems and providers
- Issues with information synthesis

Further, claims may involve multiple contributing factors and more than one provider. For this reason, the authors of a study about diagnostic errors in primary care settings explain that strategies to address these errors should target their common contributing factors, rather than “just attempt to augment knowledge or clinical skills related to specific diseases because such interventions may not generalize across diseases or care settings.”¹⁰

From a risk management perspective, identifying and understanding the factors that contribute to diagnostic errors is an important first step in devising feasible risk-reduction strategies for various practice settings.

Take-Away Message

Diagnostic errors represent a frequent, serious, and costly risk. Although not all diagnostic errors result in adverse events, many do – creating legitimate patient safety and liability concerns. By identifying and better understanding the factors that contribute to diagnosis-related malpractice claims, healthcare organizations and providers can implement corrective actions to improve quality of care and reduce liability exposure.

Endnotes

¹ The Society to Improve Diagnosis in Medicine. (n.d.). Diagnostic error: Common, costly, and harmful. Retrieved from www.improvediagnosis.org/page/Diagnosis

² National Academies of Sciences, Engineering, and Medicine. (2015). *Improving diagnosis in health care*. Washington, DC: The National Academies Press.

³ Ibid.

-
- ⁴ The Society to Improve Diagnosis in Medicine. (n.d.). Facts: Improving diagnostic accuracy in medicine. Retrieved from www.improvediagnosis.org/page/Facts; Crosskerry, P. (2013, June). From mindless to mindful practice – cognitive bias and clinical decision making. *New England Journal of Medicine*, 368(26), 2445-2448.
- ⁵ Landro, L. (2015, September 26). A medical detective story: Why doctors make diagnostic errors. *The Wall Street Journal*. Retrieved from www.wsj.com/articles/a-medical-detective-story-why-doctors-make-diagnostic-errors-1443295859
- ⁶ The Society to Improve Diagnosis in Medicine, Diagnostic error: Common, costly, and harmful.
- ⁷ Zwaan, L., Schiff, G. D., & Singh, H. (2013, August). Advancing the research agenda. *BMJ Quality and Safety*, 22(Suppl 2), ii52-57; Graber, M. L., Wachter, R. M., & Cassel, C. K. (2012). Bringing diagnosis into the quality and safety equations. *Journal of the American Medical Association*, 308(12), 1211-1212.
- ⁸ National Practitioner Data Bank Public Use File, Dec. 2016; The Society to Improve Diagnosis in Medicine, Diagnostic error: Common, costly, and harmful.
- ⁹ Brown, T. (2013, July 18). Missed diagnoses may trigger primary care malpractice claims. Medscape. Retrieved from <http://www.medscape.com/viewarticle/808132>
- ¹⁰ Singh, H., Giardina, T. D., Meyer, A. N., Forjuoh, S. M., Reis, M. D., & Thomas, E. J. (2013, March 25). Types and origins of diagnostic errors in primary care settings. *Journal of the American Medical Association Internal Medicine*, 173(6), 418-425.

This document should not be construed as medical or legal advice. Because the facts applicable to your situation may vary, or the laws applicable in your jurisdiction may differ, please contact your attorney or other professional advisors if you have any questions related to your legal or medical obligations or rights, state or federal laws, contract interpretation, or other legal questions.

MedPro Group is the marketing name used to refer to the insurance operations of The Medical Protective Company, Princeton Insurance Company, PLICO, Inc. and MedPro RRG Risk Retention Group. All insurance products are underwritten and administered by these and other Berkshire Hathaway affiliates, including National Fire & Marine Insurance Company. Product availability is based upon business and regulatory approval and may differ among companies.

© 2018 MedPro Group Inc. All rights reserved.