Diagnostic Errors: Contributing Factors and Risk Strategies

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Objectives

At the conclusion of this program, participants should be able to:

- Describe how diagnostic errors occur throughout the diagnostic process
- Identify and analyze contributing factors that affect patient safety
- Identify processes and systems that reduce and prevent diagnostic errors

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Experience

"Good judgment comes from experience, and a lot of that comes from bad judgment."

— **Will Rogers**

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What is a diagnostic error?

A diagnostic error is a failure to:

- Establish an accurate and timely explanation of the patient's health problem(s); or
- Communicate that explanation to the patient.

"It is likely that most of us will experience at least one diagnostic error in our lifetimes, sometimes with devastating consequences."

Diagnostic errors account for the largest percentage of malpractice claims and the most severe clinical and financial outcomes.

National Academies of Sciences, Engineering, and Medicine. (2015). *Improving diagnosis in health care*. Washington, DC: The National Academies Press; Society to Improve Diagnosis in Medicine. (n.d.). What is diagnostic error? Retrieved from www.improvediagnosis.org/what-is-diagnostic-error/

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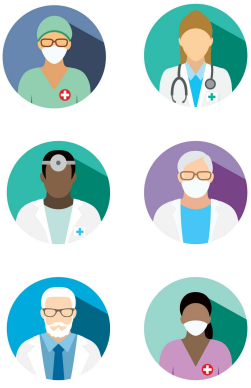
Key myths that can contribute to diagnostic errors

Healthcare providers

- It won't happen to me.
- I can always trust my intuition.
- I always communicate effectively with my patients.
- I'm a good listener.
- Most diagnostic errors involve rare or uncommon diseases.
- I rarely need to make a complete differential diagnosis.
- If I made a diagnostic error, I'd find out about it.



National Patient Safety Foundation, Cautious Patient Foundation, Society to Improve Diagnosis in Medicine. (n.d.). *Myths and facts about diagnostic error: Physicians.*

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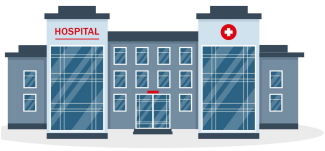
Key myths that can contribute to diagnostic errors

Patients

- No news is good news.
- My doctors are talking to each other.
- I would be disloyal if I ask for a second opinion.
- The more tests I have, the better.

Healthcare organizations

- If something went wrong, we would hear about it.
- Diagnosis is the physician's problem.
- We open ourselves to liability if we look too hard at diagnostic errors.
- Only physicians have a role in diagnosis.



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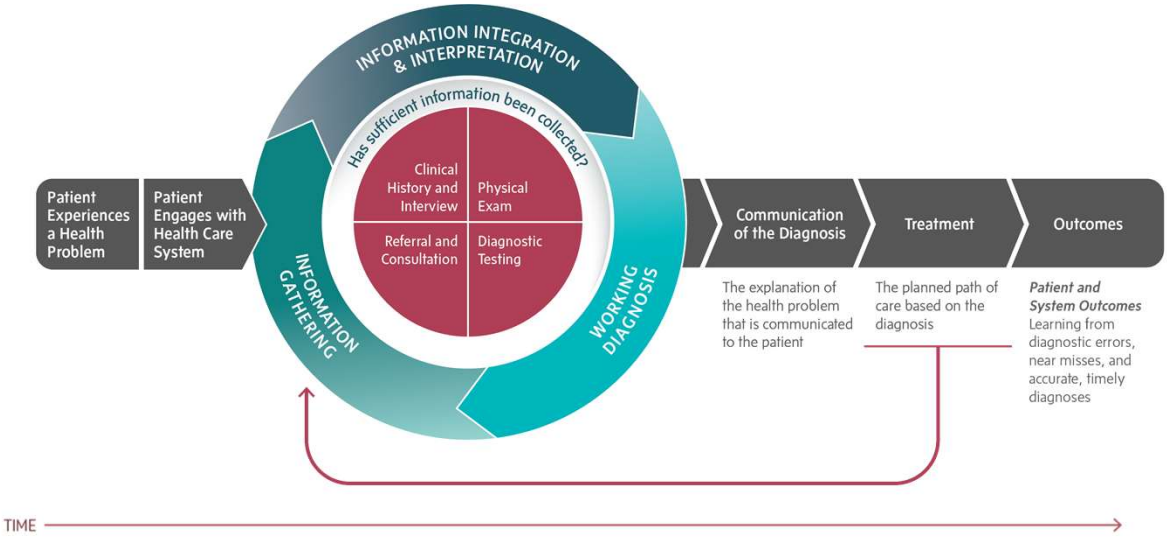
The diagnostic process



National Academies of Sciences, Engineering, and Medicine, 2015. *Improving Diagnosis in Health Care*. Washington, DC: The National Academies Press.

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Assessing diagnostic errors: why it's difficult

Dispersed nature of care in ambulatory settings; time and place

Long gap between error and detection

Retrospective studies require time-consuming and costly manual chart reviews

Frequent disagreement on whether an error or delay occurred

Easier to measure infection rates, treatment failures, and procedural issues

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Increasing attention to diagnostic errors

Awareness

- Outpatient diagnostic errors of 5.08% (12 million patients, 1 in 20 adults).
- 50% could be potentially harmful (Symptom-Disease Pair Analysis of Diagnostic Error [SPADE] study suggests 33% are serious).

Greater focus, though studies still lag

- The Society to Improve Diagnosis in Medicine (SIDM); National Academies of Science, Engineering, and Medicine (NASEM), and others have made diagnostic errors a priority.
- The SPADE study (Johns Hopkins) aims to better measure errors and track performance in hospitals.

Medical malpractice cases

- Claim volume, clinical severity, financial severity.

Singh, H., Meyer, A.N.D., & Thomas, E.J. (2014). The frequency of diagnostic errors in outpatient care: Estimations from three large observational studies involving US adult populations. *BMJ Quality & Safety*, *23*, 727-731; Liberman, A.L., & Newman-Toker, D.E. (2018). Symptom-Disease Pair Analysis of Diagnostic Error (SPADE): A conceptual framework and methodological approach for unearthing misdiagnosis-related harms using big data. *BMJ Quality & Safety*, *27*, 557-566.

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The diagnostic process: Where do mistakes occur?

Initial diagnostic assessment → Testing and results processing → Follow-up and coordination

CRICO Strategies. (2014). *Annual benchmarking report: Malpractice risks in the diagnostic process.* Retrieved from www.rmf.harvard.edu/Malpractice-Data/Annual-Benchmark-Reports/Risks-in-the-Diagnostic-Process 10

The data

Allegations, locations, clinical & financial severity, specialties, claimant types

Data review

Diagnostic errors represent a frequent, serious, and costly risk.

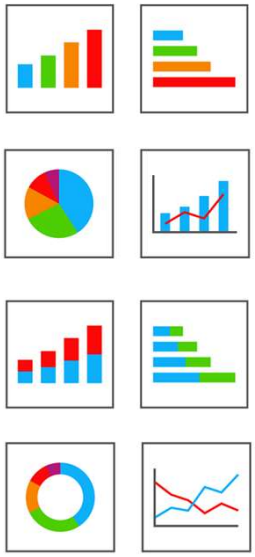
They account for almost a quarter of all malpractice cases and a third of total dollars paid (expense plus indemnity).

Diagnosis-related cases are among those more likely to close with an indemnity payment.

Patient injuries in diagnosis-related cases often are more severe than in other types of malpractice cases.

Every specialty contributes to the volume of diagnosis-related cases. For many specialties, diagnosis-related allegations account for more than half or close to half of their malpractice cases.

Cancer continues to be the top diagnosis cited in diagnosis-related cases from the office/clinic setting.



MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K

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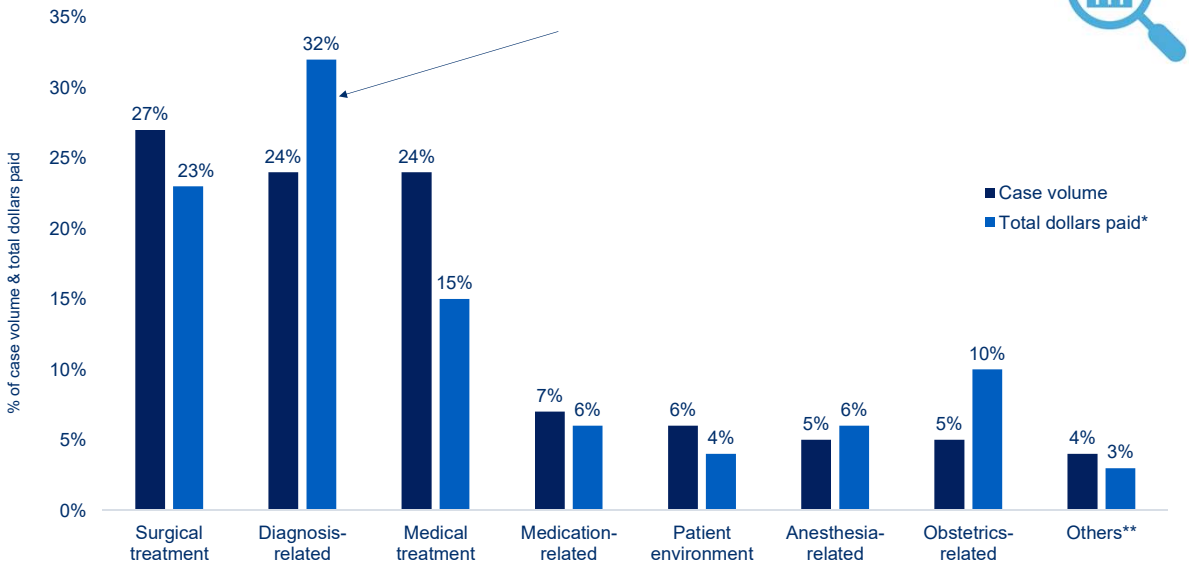
All claims data by allegation category



MedPro Group closed cases, 2011-2020; N = >25K; Any totals not equal to 100% are the result of rounding; *Total dollars paid = expense + indemnity; **Includes allegations for which no significant case volume exists

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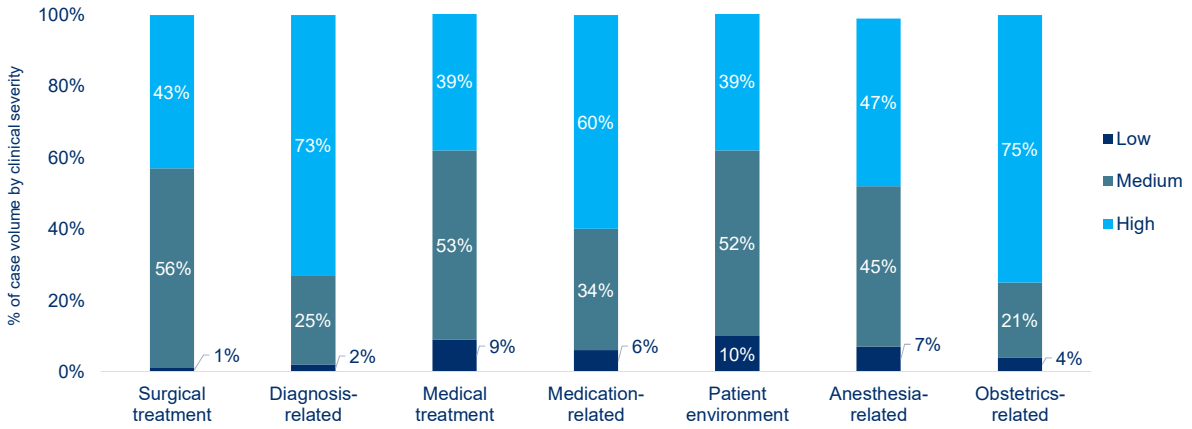
Clinical severity relates to financial severity

Diagnosis-related cases are among those more likely to close with an indemnity payment; when they do, average indemnity payments are 30% higher than other cases (only OB-related and anesthesia-related cases are more expensive).

Half of the high-severity cases result in death.



MedPro Group closed cases, 2011-2020; N = >25K; Any totals not equal to 100% are the result of rounding

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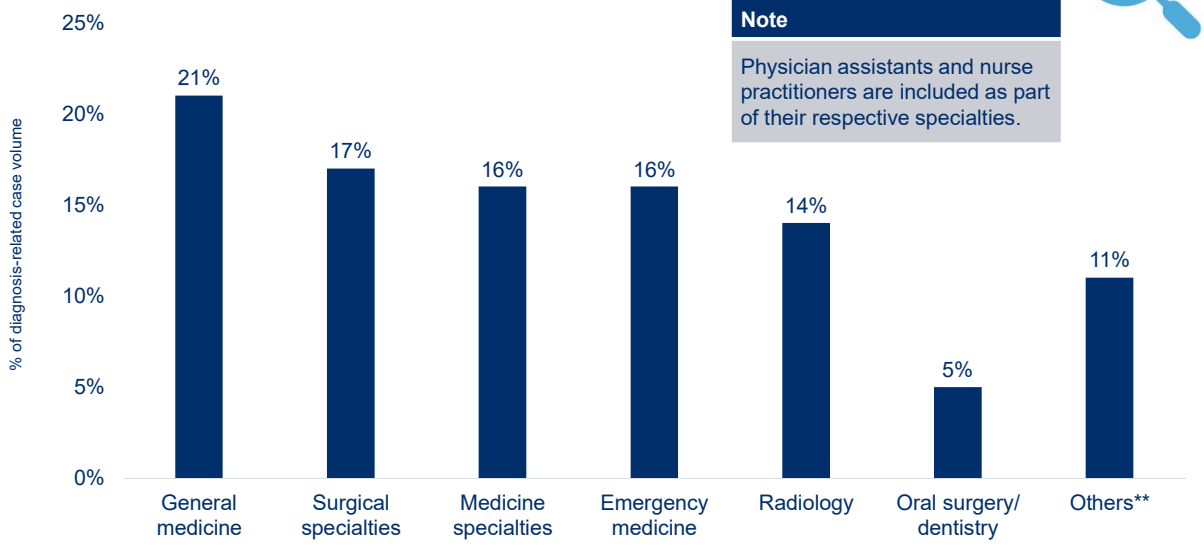
Diagnosis-related cases by responsible service category

Note

Physician assistants and nurse practitioners are included as part of their respective specialties.



MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; Responsible service = specialty/provider type determined to be most responsible for the patient's outcome; **Includes services for which no significant case volume exists

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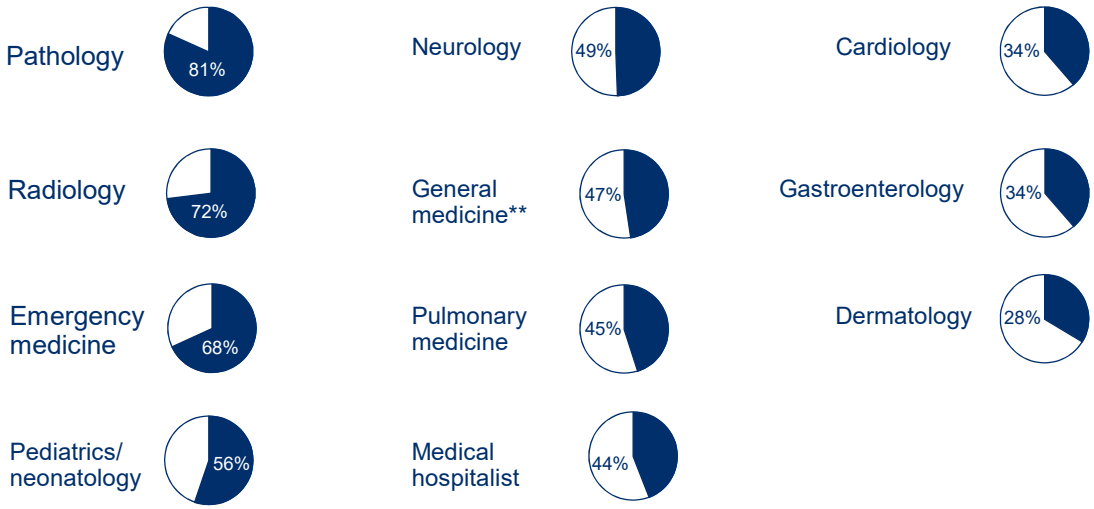
Responsible services* with a significant portion of diagnosis-related case volume

% of each specialty's case volume that is diagnosis-related



MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; *Responsible service = specialty/provider type determined to be most responsible for the patient's outcome; **General medicine includes both family and internal medicine

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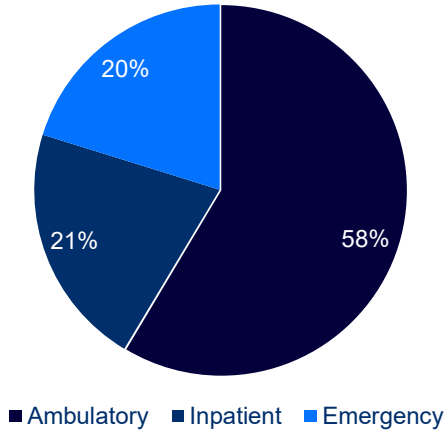
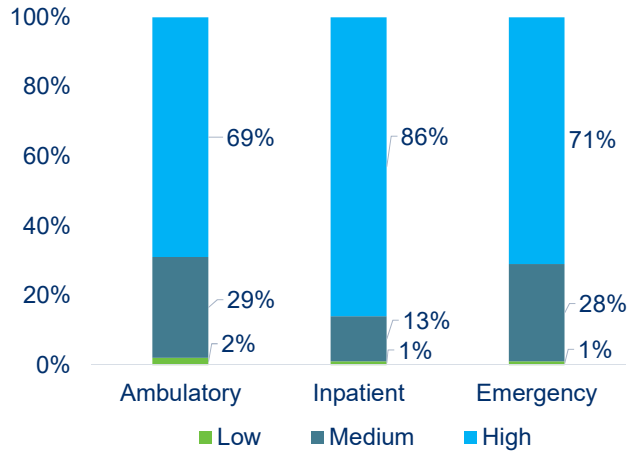
Diagnosis-related claims by claimant type and clinical severity

% of diagnosis-related case volume

Claimant (patient) type



Clinical severity



MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; Any totals not equal to 100% are the result of rounding; *National Association of Insurance Commissioners' severity rating scale

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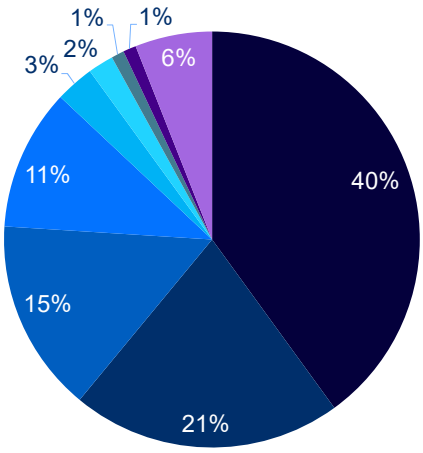
Where do diagnosis-related issues occur?



- Medical office/clinic
- Emergency department
- Patient room
- Radiology/imaging
- Dental office/clinic
- Pathology
- Inpatient surgery
- Ambulatory surgery
- Others*

Over 40% of all diagnosis-related cases arise in a medical or office/clinic.

For an additional perspective, consider that 30% of ALL cases in medical office are diagnosis-related.

MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; *Locations without significant case volume, including catheterization labs and other special procedure areas

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Case Study-Physician office-Test Tracking and Follow-Up Failures Lead to Delayed Cancer Diagnosis

- 42 year old female
  - History of HPV, infertility, yeast infections, and abnormal PAP smears
- Presented to provider for routine Pap smear
  - Specimen sent to private lab versus hospital lab
- Provider reviewed results which revealed endocervical adenocarcinoma in situ
- Provider delegated office staff to call and notify patient of results & schedule a return appointment
- Patient presents 2 years later for routine checkup

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Specific locations

Specialties, diagnoses

Office-based diagnosis-related cases: responsible services*

For these specialties, the percentage of their office-based cases that are diagnosis-related are noted here.

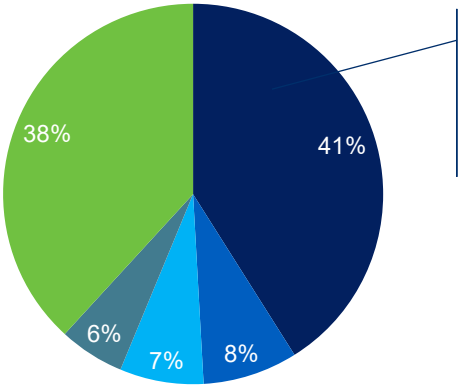
- 64% Pediatrics
- 53% General medicine
- 32% Surgical specialties
- 32% Medicine specialties

Compare the case volume with the percentage of total dollars paid** for diagnosis-related cases. The financial severity paints an even clearer picture of the significance of these allegations.

- 86% Pediatrics
- 70% General medicine
- 42% Surgical specialties
- 44% Medicine specialties

MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; *Responsible service = specialty/provider type determined to be most responsible for the patient's outcome; **Total dollars paid = expense + indemnity; Note: Diagnosis-related allegations account for 30% of all office-based allegations

Medical office diagnosis-related cases: most common diagnoses



Cancer
Heart-related
Infection
Vascular
Others*

The most common cancer diagnoses noted in these cases include colorectal, breast, skin, and prostate. Genitourinary and oropharynx cancers also are common.

By far, cancer represents the most common diagnosis in these cases, followed distantly by heart-related, infection-related, and vascular-related diagnoses.

Cancer has steadily remained at the top of the most common diagnoses in diagnosis-related cases over the past 10 years.

MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; *Diagnoses without significant case volume

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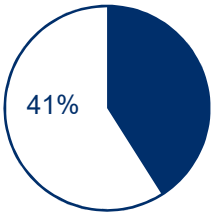
Medical office diagnosis-related cases: cancer and responsible services

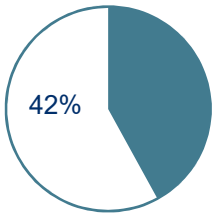
Specialty doesn't matter in the office setting. Cancer is the top diagnosis in diagnosis-related allegations as shown by the percentages listed here.

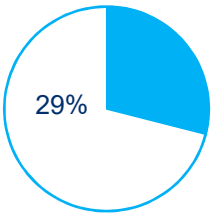
General medicine

Other medicine specialties

Surgical specialties







MedPro Group diagnosis-related close cases, 2011-2020; N = >6K; *Responsible service = specialty/provider type determined to be most responsible for the patient's outcome

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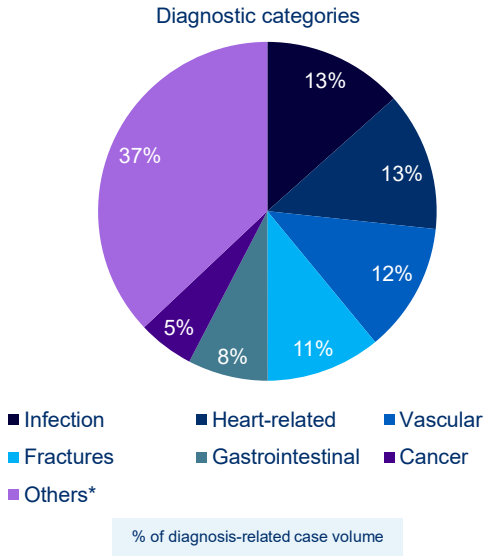
Emergency department diagnosis-related cases



Specific diagnosis	Case volume	Total dollars paid**
Stroke	8%	10%
Myocardial infarction	6%	6%
Other cardiac	4%	4%
Appendicitis	4%	7%
Aortic aneurysm	4%	2%
Pulmonary emboli	3%	3%
Spinal fracture	3%	6%
Testicular torsion	2%	1%
Intraspinal abscess	2%	4%
Lung cancer	2%	2%

MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; Any totals not equal to 100% are the result of rounding; *Includes diagnoses for which no significant claim volume exists; **Total dollars paid = expense + indemnity

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Case study-ED-Failure to Diagnose Myocardial Infarction Leads to Tragic Outcome

- 47 year old female
  - Presented to ED with complaints of shoulder discomfort, back pain, nausea, dizziness, and chest tightness
  - Had been working in the yard earlier that day
- ECG ordered and negative
- Bias of physician
- Found dead 2 days later
- Autopsy concluded death was a result of an MI due to atherosclerotic cardiovascular disease

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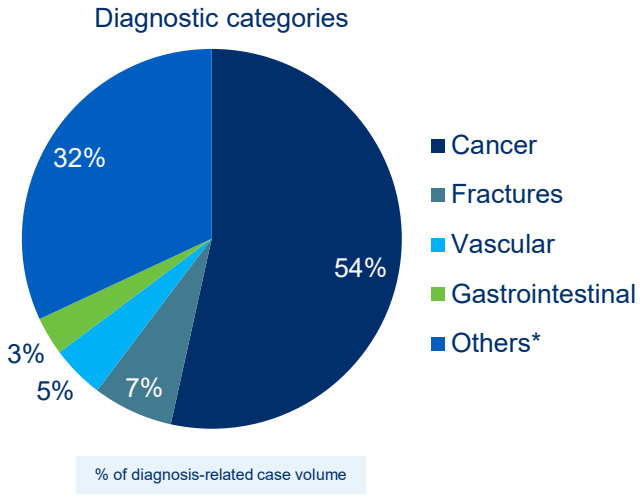
Radiology/imaging department diagnosis-related cases



Once again, cancer is the top diagnosis — most notably breast cancer missed during mammography.

The identification and reporting of incidental findings remains a top concern.

MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; Any totals not equal to 100% are the result of rounding; *Includes diagnoses for which no significant case volume exists

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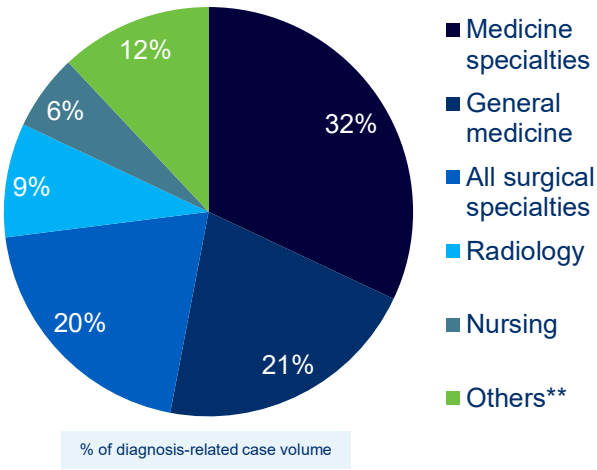
Inpatient diagnosis-related cases by responsible service



Common diagnoses noted in the inpatient cases:

- Sepsis
- Intraspinal abscess
- Failures to timely note evolving symptoms of procedural perforations
- Myocardial infarctions
- Strokes
- Infections
- Pulmonary emboli

MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; *Responsible service = specialty/provider type determined to be most responsible for the patient's outcome; **Includes specialties for which no significant case volume exists

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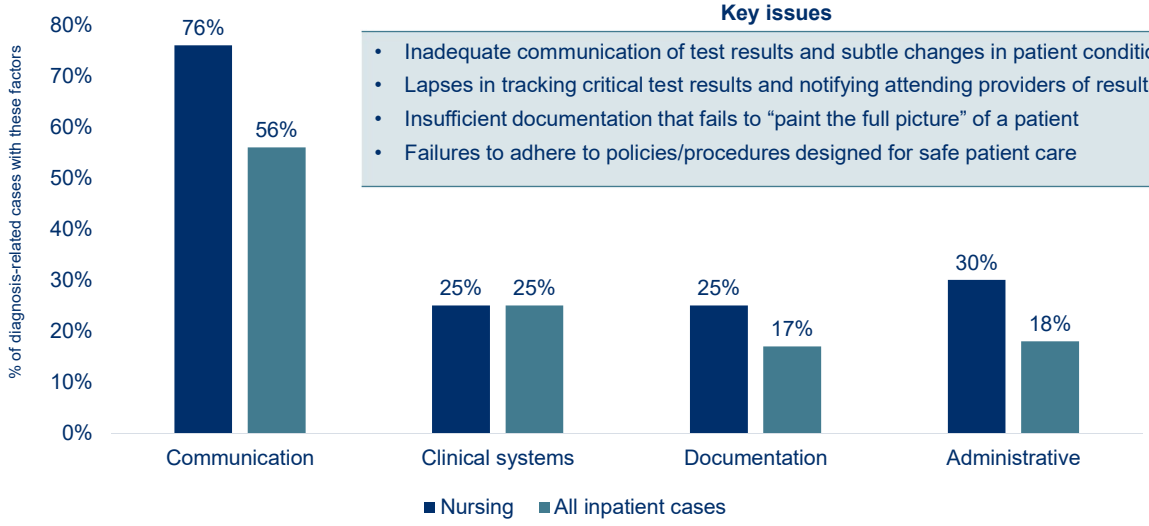
Key factors in inpatient cases with nursing as a contributing responsible service



Key issues

- Inadequate communication of test results and subtle changes in patient condition
- Lapses in tracking critical test results and notifying attending providers of results
- Insufficient documentation that fails to "paint the full picture" of a patient
- Failures to adhere to policies/procedures designed for safe patient care

MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; Totals do not equal 100% because more than one factor often occurs in each case; *Nursing = inpatient cases in which nursing is noted as a contributory responsible service

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Contributing risk factors

Definition, their role in the diagnostic process, and risk-mitigation strategies

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Contributing factors

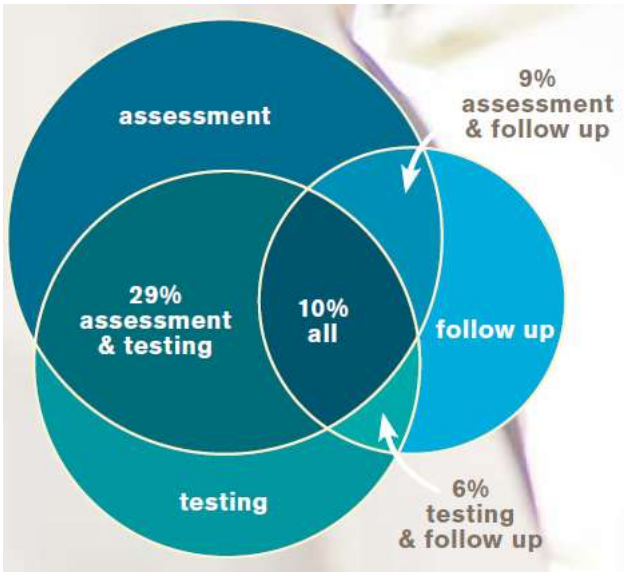
Contributing factors are multilayered issues or failures in the process of care that appear to have contributed to the patient outcome and/or to the initiation of the case.

Generally, a combination of issues — rather than just one issue — leads to malpractice cases.

"Contributing factors reflect both provider and patient issues. They denote breakdowns in technical skill, clinical judgment, communication, behavior, systems, environment, equipment/tools, and teamwork. The majority are relevant across clinical specialties, settings and disciplines; thus, they identify opportunities for improvement."

CRICO Strategies. (2020). *The power to predict: Leveraging medical malpractice data to reduce patient harm and financial loss.* Retrieved from www.rmf.harvard.edu/Malpractice-Data/Annual-Benchmark-Reports/The-Power-to-Predict

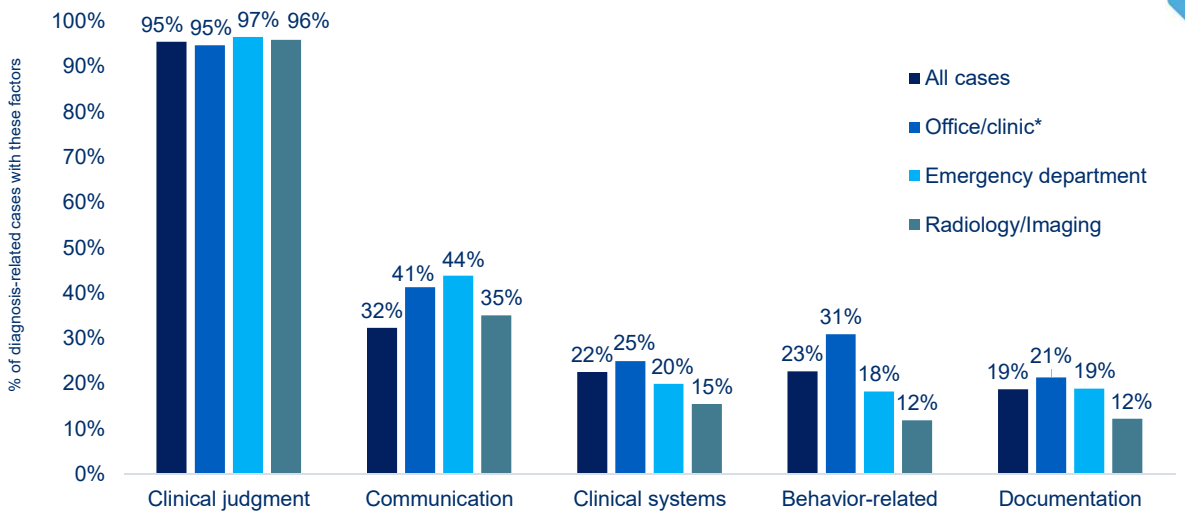
Overlap of errors in diagnosis-related cases



"Errors commonly take place during more than one phase of the patient's route from presentation to diagnosis. Further investigating cases that expose a cross-section of errors enables clinical and patient safety leaders to identify underlying systems issues that recurrently impede providers from completing the diagnostic process successfully."

CRICO Strategies. (2014). *Annual benchmarking report: Malpractice risks in the diagnostic process.* Retrieved from www.rmf.harvard.edu/Malpractice-Data/Annual-Benchmark-Reports/Risks-in-the-Diagnostic-Process

Top contributing risk factors by location



MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; Totals do not equal 100% because more than one factor often occurs in each case; *Office/clinic cases include dentistry/oral surgery

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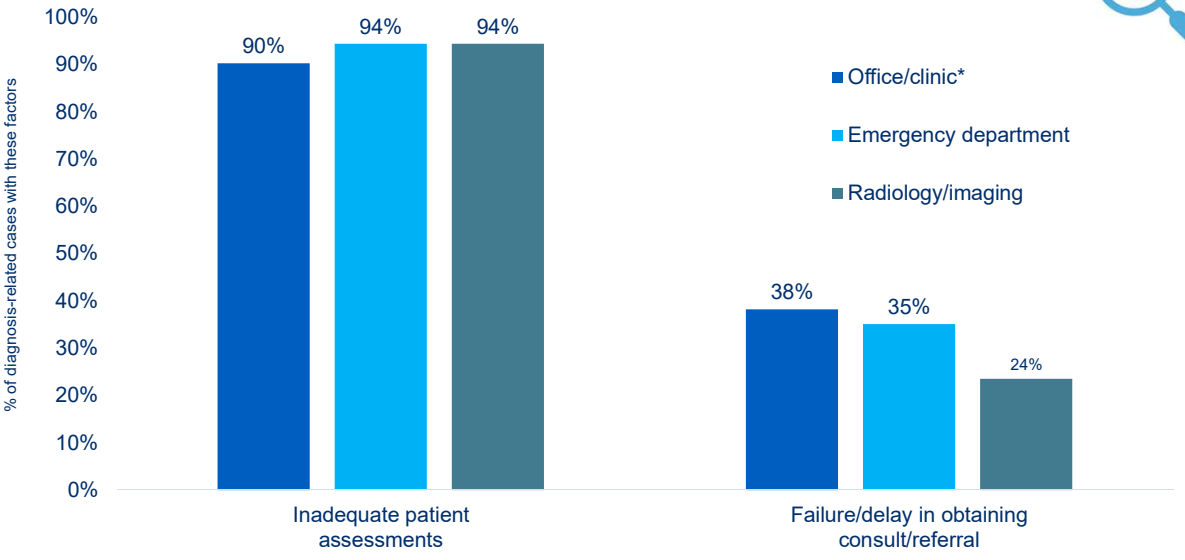
Top clinical judgment factors



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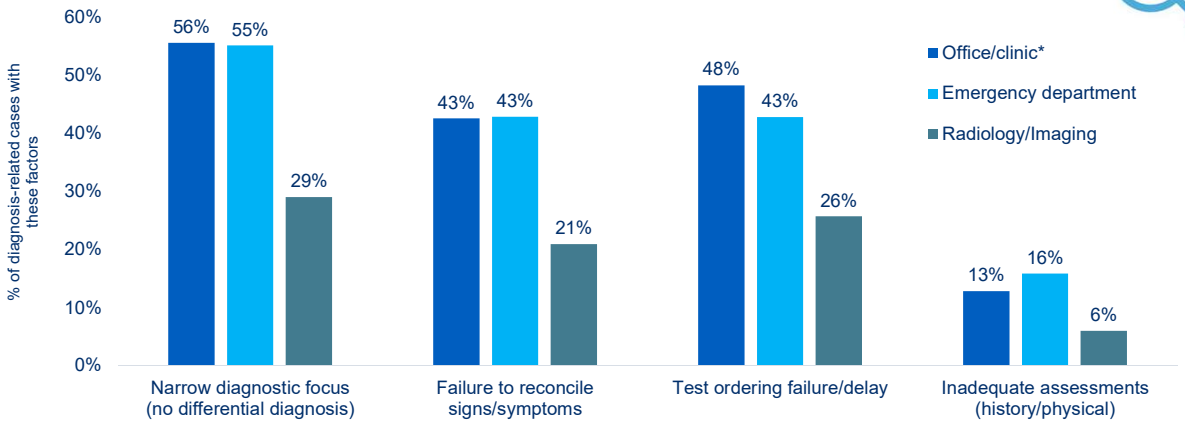
Clinical judgment: most common patient assessment issues



Misinterpretation of diagnostic test results

This issue is commonly noted in diagnosis-related cases, especially those involving radiologists and pathologists. Misinterpretations, including those involving incidental findings, were noted in 87% of radiology diagnosis-related cases (and in 27% and 16% of emergency department [ED] and office-based cases, respectively).

MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; Totals do not equal 100% because more than one factor often occurs in each case; *Office/clinic cases include dentistry/oral surgery

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Diagnostic biases affect decision-making

Anchoring	• Locking onto initial presentation
Availability	• Relying on recent experience
Confirmation	• Looking for confirming evidence
Diagnosis momentum	• Accepting a previous diagnosis without question
Gender bias	• Making gender a determining factor when no basis exists
Need for closure	• Feeling pressure due to time or feelings of doubt
Framing effect	• Perceiving the story in the way it is framed or presented
Sunk costs	• Maintaining a diagnosis due to time/effort invested
Zebra retreat	• Feeling less confident in a remote or unusual diagnosis

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Case studies: cognitive biases

Gender bias

40-year-old woman presented to the ED for abdomen and jaw pain. She had a recent history of treatment for gastroesophageal reflux disease. ED documentation didn't reflect cardiac concern, and the patient was discharged with gastrointestinal (GI) medication and a colonoscopy order. Five days later, she died from myocardial infarction.

Framing

Male in his early twenties, an intravenous drug user, presented to the ED with low back pain (rated 8/10 on pain scale). He was treated with ketorolac and ibuprofen and discharged with no diagnostic testing and an unresolved pain level. The patient returned to the ED the next day with lower extremity paralysis. He was diagnosed with a spinal abscess and suffered permanent paralysis.

Anchoring/ diagnostic momentum

A 38-year-old female, who was receiving care for anemia from a hematologist, complained several times of nausea and diarrhea over a 2-year timeframe. She was diagnosed with Graves' disease and had a total thyroidectomy. GI symptoms continued, but no rectal exam or hemoccult screening was ever performed. The patient eventually was diagnosed with Stage IV colon cancer.

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General diagnosis-related checklist

Have I ruled out must-not-miss diagnoses?	Yes	No
Did I just accept the first diagnosis that came to mind?	Yes	No
Was the diagnosis suggested to me by the patient or another healthcare provider?	Yes	No
Is information available about this patient that I haven't obtained and reviewed (e.g., from old records, family members, or a primary care provider)?	Yes	No
Are there any pieces that don't fit?	Yes	No
Did I review the X-ray myself?	Yes	No
Was this patient handed off to me from a previous shift?	Yes	No
Was this patient seen in the ED or clinic recently for the same problem?	Yes	No
Was I interrupted/distracted excessively while evaluating this patient?	Yes	No
Am I feeling fatigued right now or cognitively overloaded?	Yes	No
Is this a patient I don't like (e.g., a difficult patient) or like too much (e.g., a friend)?	Yes	No

Graber, M., Sorensen, A., Biswas, J., et al. (2014). Developing checklists to prevent diagnostic error in emergency room settings. *Diagnosis, 1*(3):223-231.

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The Safer Dx Checklist


The Safer Dx Checklist
10 High-Priority Organizational Practices for Diagnostic Excellence

PREPARED BY:
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ACKNOWLEDGMENTS

The Safer Dx Checklist
10 High-Priority Practices for Diagnostic Excellence

Why Use the Checklist?

How to Use the Checklist

Checklist Responses

Interpreting Checklist Results

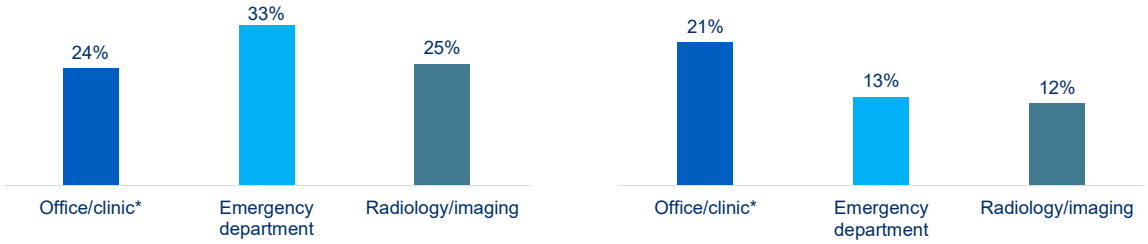
> "The Safer Dx Checklist is an organizational self-assessment tool with 10 recommended practices to achieve diagnostic excellence. Developed using a rigorous multimethod approach, health care organizations can use the checklist to understand the current state of diagnostic practices, identify areas to improve, and track progress toward diagnostic excellence over time."

Institute for Healthcare Improvement. (2022). *Safer Dx checklist: 10 high-priority practices for diagnostic excellence*. Retrieved from www.ihi.org/resources/Pages/Tools/safer-diagnostic-checklist.aspx

Strategies to address clinical judgment factors

- Take a complete personal and family history.
- Perform a thorough physical exam.
- Consider differential diagnoses.
- Seek access to prior health records.
- Retake vital signs prior to discharge.
- Prioritize care coordination among specialties.
- Recognize significance of integrated electronic health record (EHR) systems.

Top communication factors



MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; Totals do not equal 100% because more than one factor often occurs in each case; *Office/clinic cases include dentistry/oral surgery

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Strategies to improve communication

Collect and review all pertinent diagnostic information via:

- An EHR structure that allows access to other providers' notes.
- Verbal communication of findings about the patient from other providers.
- Identification of subtle changes that might not be individually noteworthy, but could be significant as part of the big picture (particularly when multiple providers are involved in patient care).
- Reading the health record/incidental findings.

And then:

- Focus on care coordination (next steps and who is responsible).
- Give thorough and clear patient instructions.
- Consider the patient's health literacy and other comprehension barriers.

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Case study: lapses in communication and care coordination

Patient	60-year-old male who presented for inguinal hernia surgery.
Summary	Preoperative X-rays revealed right lobe lung nodule (incidental finding).
	Surgeon and internal medicine (IM) physician both received the radiology report, which included a recommendation for a computed tomography (CT) scan.
	X-ray report was included in the IM office's EHR system; however, the system was new, and providers/staff had not received complete training. Thus, the IM physician did not see the report.
	The surgeon did not discuss the results with the patient because she assumed the IM physician would do so.
Outcome	One year later, the patient was diagnosed with Stage IV lung cancer.

Clinical systems factors: testing and follow-up

"The ordering [providers] and patients rely on the proper performance, interpretation, and transmittal of the [diagnostic testing] results to reach diagnostic certainty."

CRICO Strategies. (2014). *Annual benchmarking report: Malpractice risks in the diagnostic process*. Retrieved from https://rmf.harvard.edu/Malpractice-Data/Annual-Benchmark-Reports/Risks-in-the-Diagnostic-Process; MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; Totals do not equal 100% because more than one factor often occurs in each case; *Office/clinic cases include dentistry/oral surgery

Case studies: failure to follow up with patient

New finding (ED)	Liver lesion on CT scan noted as consistent with hemangioma, and a follow-up CT scan was recommended. Follow-up testing revealed nonspecific, conflicting findings. An internist told the patient that no further treatment was needed. The doctor did not further investigate the conflicting reports. Two years later, the patient presented to an ED with abdominal pain. A radiology tech reported that a CT scan showed a possible renal stone. The official CT report was not reviewed until after the patient was discharged. The report noted a liver lesion suspicious for malignancy. No one notified the patient. Three years later, the patient was diagnosed with metastatic colon cancer.
Routine screening (office)	Lab results showed that a patient's prostate-specific antigen level was elevated; however, the finding was located on the second page of the lab report. The physician did not see it, which resulted in a long-delayed diagnosis of prostate cancer.
No problem list (office)	A patient's routine mammogram revealed new micro-calcifications. A 3-6-month follow-up was recommended and completed. The patient's primary care provider reviewed the results, but did not notify the patient. The patient was seen several times over the next 18 months, but no problem list was present in her record, and the provider did not communicate the results of the follow-up mammogram. As a result, the patient had a delayed diagnosis of breast cancer.

Strategies to address clinical systems factors

- Create and review problem lists at each visit.
- Develop a reliable process for communicating test results received after discharge.
- Track and document missed and cancelled appointments.
- Document follow-up attempts.
- Coordinate care among specialties.

Key Point

Do not use a "no news is good news" approach. Advise patients to call for test results if they do not receive them within a specified timeframe.

Patient behaviors

Patient behavioral issues affect the diagnostic process.

Nonadherence to care is noted in 23% of all diagnosis-related cases, most predominately in the office/clinic setting.

Patient failures to adhere to scheduled follow-up appointments and treatment regimens are the most common adherence issues.

MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K

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Strategies to address patient behavioral issues

- Engage patients as active participants in their care.
- Use technology such as patient portals and apps.
- Encourage patients to ask questions and voice concerns.
- Consider patients' health literacy when communicating.
- Identify barriers such as financial, social, and cultural factors.
- Carefully document nonadherence using objective information.

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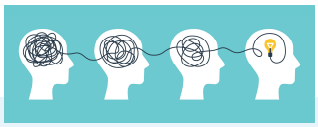
Addressing low health literacy

Clear communication can improve a patient's comprehension and adherence.

- Speak slowly and clearly.
- Focus on and repeat "need to know" concepts and information.
- Avoid medical jargon.
- Use illustrations and other visual aids to explain important concepts.
- Involve patients' families and significant others (with permission).
- Use plain language educational materials.
- Encourage interactive dialogue.
- Use the "teach-back" technique to gauge comprehension.
- Encourage patients to ask questions and raise concerns.
- Provide treatment and follow-up care instructions verbally and in writing.



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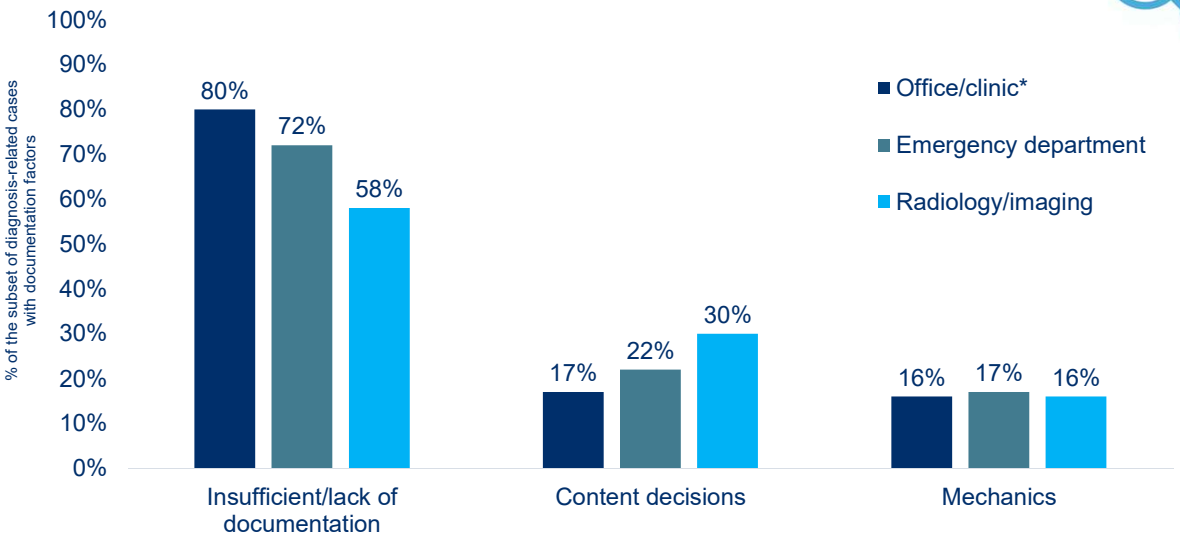
Top documentation factors



MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K; Totals do not equal 100% because more than one factor often occurs in each case; *Office/clinic cases include dentistry/oral surgery

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Electronic documentation risks

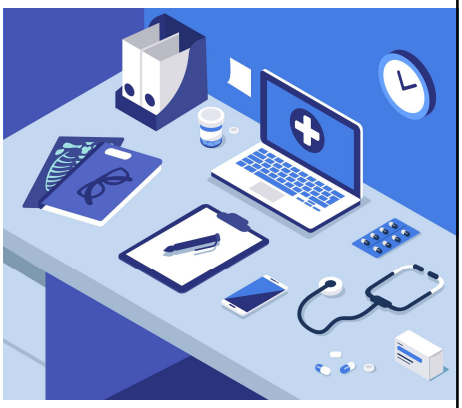
- Documentation gaps/errors in transition from paper records to electronic records or from one EHR system to another
- New error pathways, particularly when trying to force old habits on a new system
- Inconsistencies in use of the system and following policies
- Flow of information not intuitive
- Copy/paste errors
- Failure to use system capabilities (e.g., alerts and reports related to patient allergies and medication lists)
- Hybrid systems — paper and electronic
- First year of use — experience and training

Case study: inaccurate transcription of lab test order

Patient	Male patient in his mid-eighties was admitted to the hospital for shortness of breath.
Summary	The patient was diagnosed with restrictive lung disease.
	He was given a prescription for an inhaler; no pulmonary function tests were ordered.
	A week later, a B-type natriuretic peptide (BNP) test to evaluate for congestive heart failure was ordered.
	A blood metabolic profile (BMP) test order was transcribed and THAT test was completed.
	The error was not discovered for several weeks.
Outcome	By the time of discovery, the patient had been diagnosed with severe heart failure and died shortly thereafter.

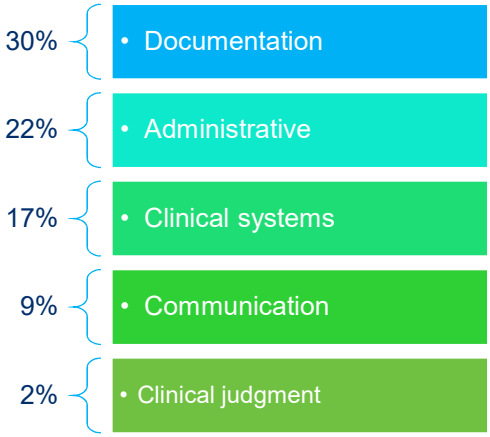
Strategies to address electronic documentation risks

- Take a collaborative approach that includes all system users when evaluating the need to make changes or updates.
- Set stringent documentation guidelines and eliminate workaround processes.
- Tailor the system's alert function to specific patient populations.
- Use system reporting functions to support an active quality and performance improvement plan.
- Develop a comprehensive policy to define the legal patient record.



Diagnosis-related cases closed with indemnity payments

How much more often do cases with these factors close with indemnity payments (when compared to the overall number of diagnosis-related cases closing with indemnity payments)?

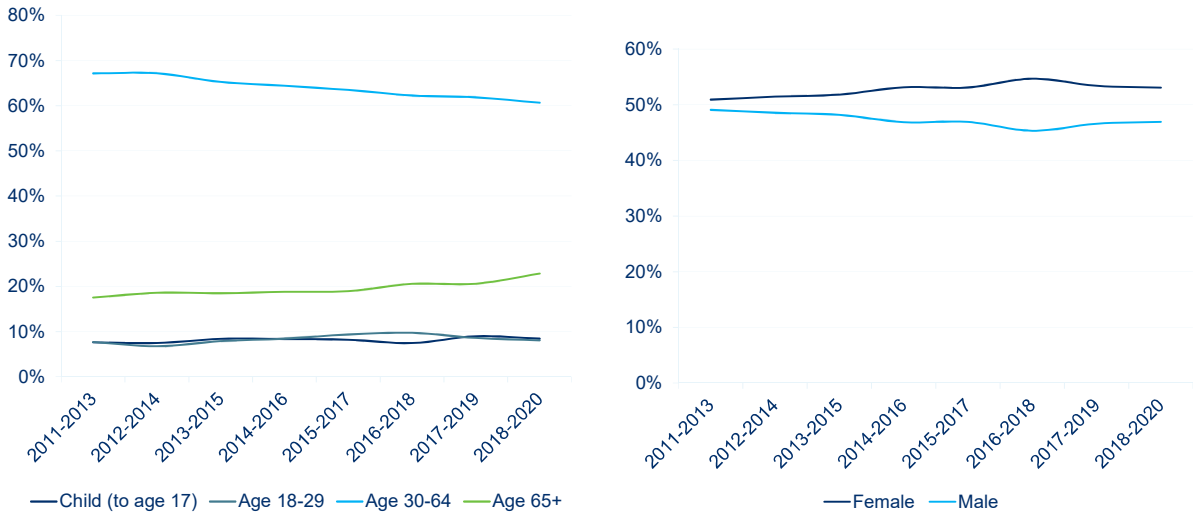


MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K

Emerging risks

What's changing and what's around the corner?

Diagnosis-related claims by age/gender



% of diagnosis-related case volume

MedPro Group diagnosis-related closed cases, 2011-2020; N = >6K

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Emerging issues

- **Delays in diagnosis related to COVID-19**
- **Genetic testing**
  - Cancer, pre/antenatal decisions, rare significant disease
- **Electronic health records**
  - Volume of information
- **New technology**
  - Clinical decision support
  - Artificial intelligence
  - False positives (a shift from underdiagnosis to overdiagnosis)
- **Access to care**
  - Telehealth, mobile technology, wearable technology
  - Informed consent for technical deficiencies
- **Preventive care for transgender patients**
- **Burnout**

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Wrap-up

Risk efforts require time

Listening/ patient assessment	Understand patient complaint and concerns.
	Update and review medical and family history.
Awareness/ suspicion	Be alert for high-risk diagnoses, such as cancer, myocardial infarction, pulmonary embolism, stroke, and certain infections (specialty oriented).
	Maintain problem lists.
Reconsideration	Use cognitive aids (e.g., decision support, metacognition, and debiasing techniques), acknowledge emotions, plan for alternative diagnoses, and use checklists.
Consults/testing	Assess procedures for handoffs and care coordination, and identify areas for improvement.
	Formalize procedures for notifications of results and overreads.
Tracking/follow-up	Review processes for test tracking, consults/referrals, appointment setting, and patient nonadherence.
Documentation	Document thorough, objective information about informed consent discussions, patient education, and patient nonadherence.

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Risk-reduction strategies

Evaluate and revise current processes for risk exposure.

- Assess policies and procedures.
- Review tracking mechanisms for diagnostic results.

Monitor data continuously.

- Review occurrence data.
- Review patient complaints.

Establish processes to address emerging risks within the practice.

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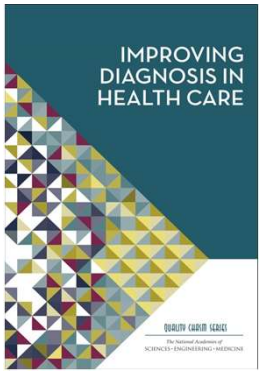
Improving Diagnosis in Health Care

Eight goals

1. Facilitate teamwork (include patients/families).
2. Enhance professional education/training in the diagnostic process.
3. Ensure technology supports the diagnostic process.
4. Monitor the diagnostic process to identify, learn from, and reduce diagnostic errors and near misses.
5. Establish a nonpunitive culture that supports the diagnostic process and improves diagnostic performance.
6. Facilitate voluntary reporting of errors and near misses.
7. Design a payment and care delivery system that supports the diagnostic process.
8. Provide dedicated funding for research on the diagnostic process and errors.



Solving diagnostic errors requires a broad focus.

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

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Summary

Diagnostic errors represent a frequent, serious, and costly risk. Significant opportunities exist to reduce them.

Diagnosis-related cases often involve multiple contributing factors and more than one provider. Strategies to address diagnostic errors should target common contributing factors.

Every specialty contributes to the volume of diagnosis-related cases. For many specialties, diagnosis-related allegations account for more than half or close to half of their malpractice cases.

Cancer continues to be the top diagnosis cited in diagnosis-related cases from the office/clinic setting.

By identifying and better understanding the factors and biases that contribute to diagnostic errors and subsequent malpractice cases, healthcare organizations and providers can implement corrective actions to improve quality of care and reduce liability exposure.

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MedPro Group resources

Clinical Judgment in Diagnostic Errors: Let's Think About Thinking
www.medpro.com/documents/10502/2820774/Article_Clinical+Judgment.pdf

Communication in the Diagnostic Process
www.medpro.com/documents/10502/2820774/Communication+in+the+Diagnostic+Process.pdf

Risk Factors That Contribute to Diagnostic Errors www.medpro.com/documents/10502/2820774/Risk+Factors+That+Contribute+to+Diagnostic+Errors.pdf

Risk Tips: Engaging Patients to Improve Diagnosis www.medpro.com/documents/10502/3667697/Risk+Tips_Engaging+Patients+to+Improve+Diagnosis_MedPro+Group.pdf

Risk Tips: Reducing Diagnostic Errors in Emergency Medicine www.medpro.com/documents/10502/3667697/Risk+Tips_Reducing+Diagnostic+Errors+in+Emergency+Medicine.pdf

More resources are available at www.medpro.com/dynamic-risk-tools.

Other resources

Agency for Healthcare Research and Quality

- Patient Safety Primer: Diagnostic Errors https://psnet.ahrq.gov/primers/primer/12/Diagnostic-Errors

Institute for Healthcare Improvement

- Safer Dx Checklist: 10 High-Priority Practices for Diagnostic Excellence www.ihi.org/resources/Pages/Tools/safer-diagnostic-checklist.aspx

National Academies of Science, Engineering, and Medicine

- Improving Diagnosis in Health Care www.nap.edu/catalog/21794/improving-diagnosis-in-health-care

Society to Improve Diagnosis in Medicine

- Clinical Reasoning Toolkit www.improvediagnosis.org/clinicalreasoning/
- Clinician Checklists www.improvediagnosis.org/clinician-checklists/
- Patient's Toolkit for Diagnosis www.improvediagnosis.org/patients-toolkit/

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Questions?

Thank you for your time

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