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Diagnostic Errors: Lessons Learned

A 10-Year Claims Analysis

Speaker Bio

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Tom is responsible for the direction and management of patient safety and loss prevention activities for Princeton/MedPro Group-insured providers and facilities. He has more than 30 years of healthcare-related experience.

Tom served as a medical corpsman in the United States Air Force and later became a physician assistant in emergency medicine. Tom's nonclinical experience includes bond financing for healthcare facilities, risk/compliance consulting, and healthcare insurance contracting and account management.

Tom completed his physician assistant training at Hahnemann Medical College in Philadelphia and his emergency medicine residency at Maine Medical Center in Portland, Maine. Tom received a master of business administration degree in healthcare management and a master's of science degree in healthcare financial management from Temple University.

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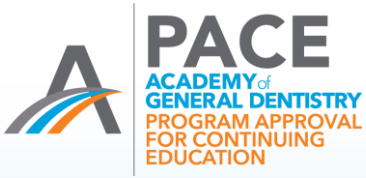

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Today's faculty, as well as CE planners, content developers, reviewers, editors, and Patient Safety & Risk Solutions staff at MedPro Group have reported that they have no relevant financial relationships with any commercial interests.

Objectives

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

- Discuss claims data and trends related to diagnostic errors
- Identify and analyze contributing factors/root causes of diagnostic errors that affect patient safety
- Identify processes and systems that reduce and prevent diagnostic errors
- Identify at least one risk-reduction strategy that they can implement in their practices

Experience

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

WILL ROGERS

What is a diagnostic error?

Per the National Academy of Medicine (NAM), 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 significant 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.

Sources: 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/

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

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.

Source: National Patient Safety Foundation, Cautious Patient Foundation, Society to Improve Diagnosis in Medicine. (n.d.). *Myths and facts about diagnostic error: Patients, physicians, and healthcare organizations.* Retrieved from www.npsf.org/page/psaw2014

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, I 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.

Source: National Patient Safety Foundation, Cautious Patient Foundation, Society to Improve Diagnosis in Medicine. (n.d.). *Myths and facts about diagnostic error: Patients, physicians, and healthcare organizations.* Retrieved from www.npsf.org/page/psaw2014

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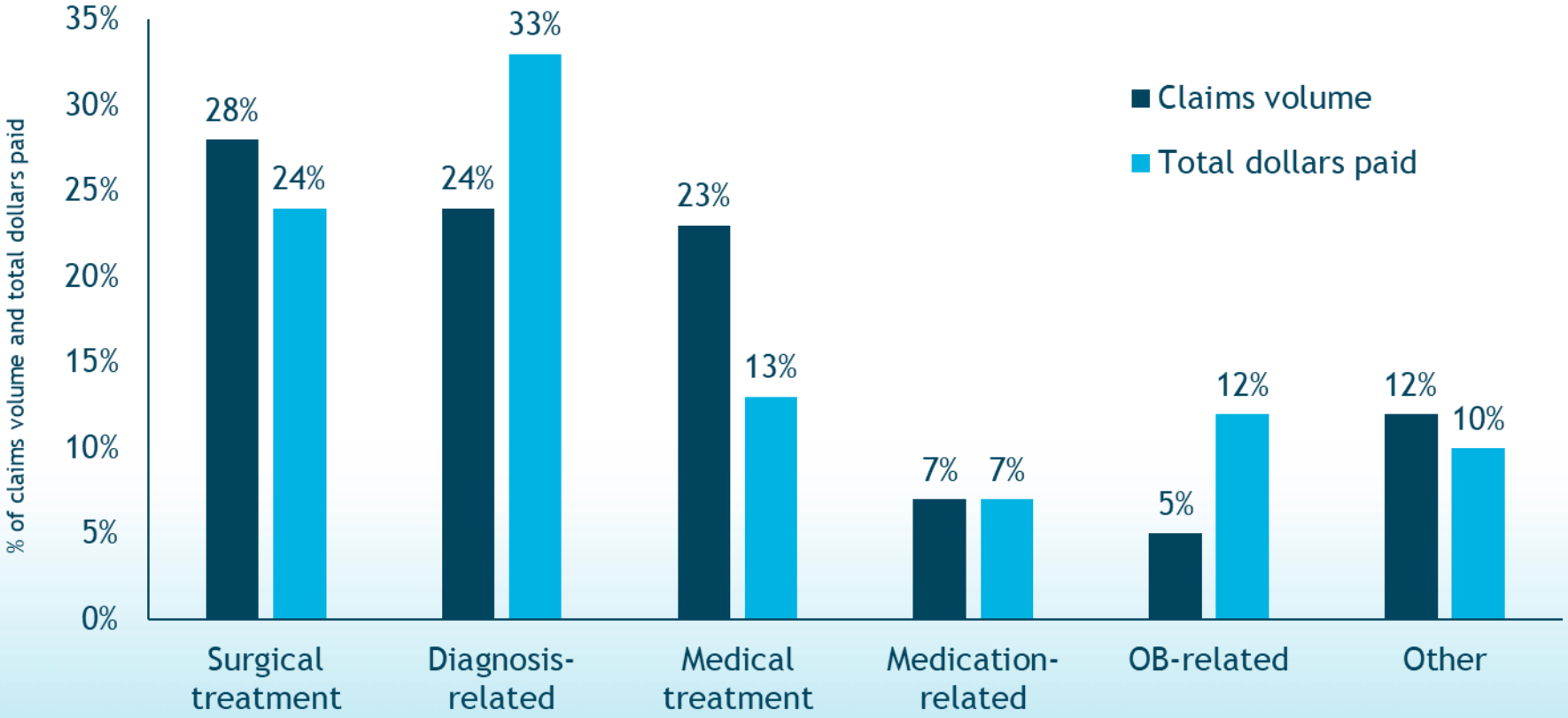
Claims

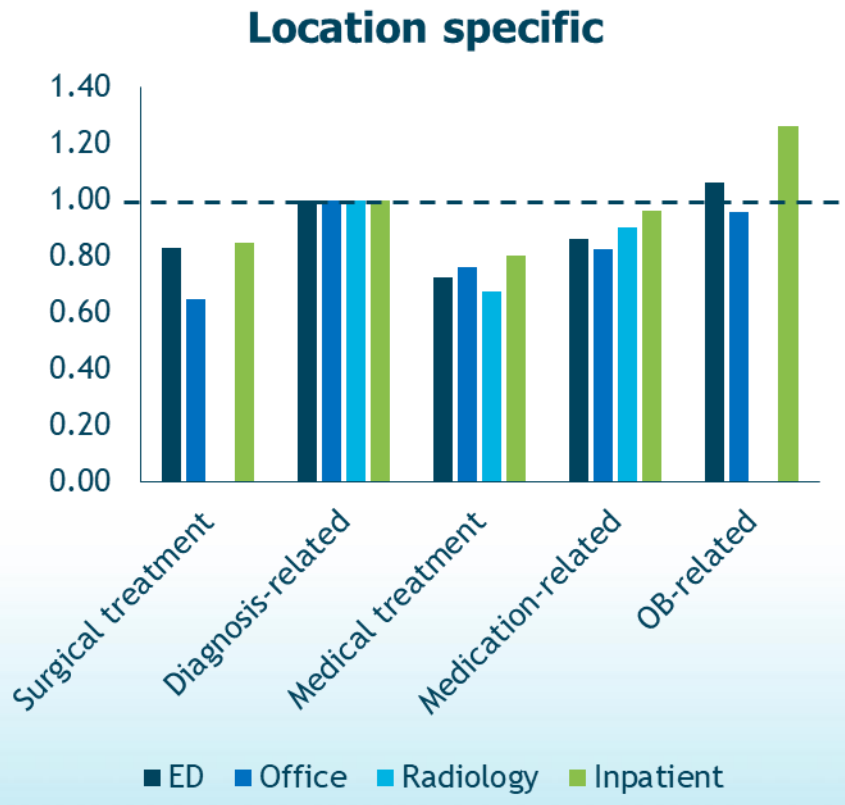
Allegations, locations, clinical & financial severity, specialties, claimant types

All claims data by allegation category



Data source throughout: MedPro Group closed claims, 2008-2017; total paid = indemnity + expense; "Other" includes allegations for which no significant claim volume exists; any totals not equal to 100% are a result of rounding

Closed with indemnity payment

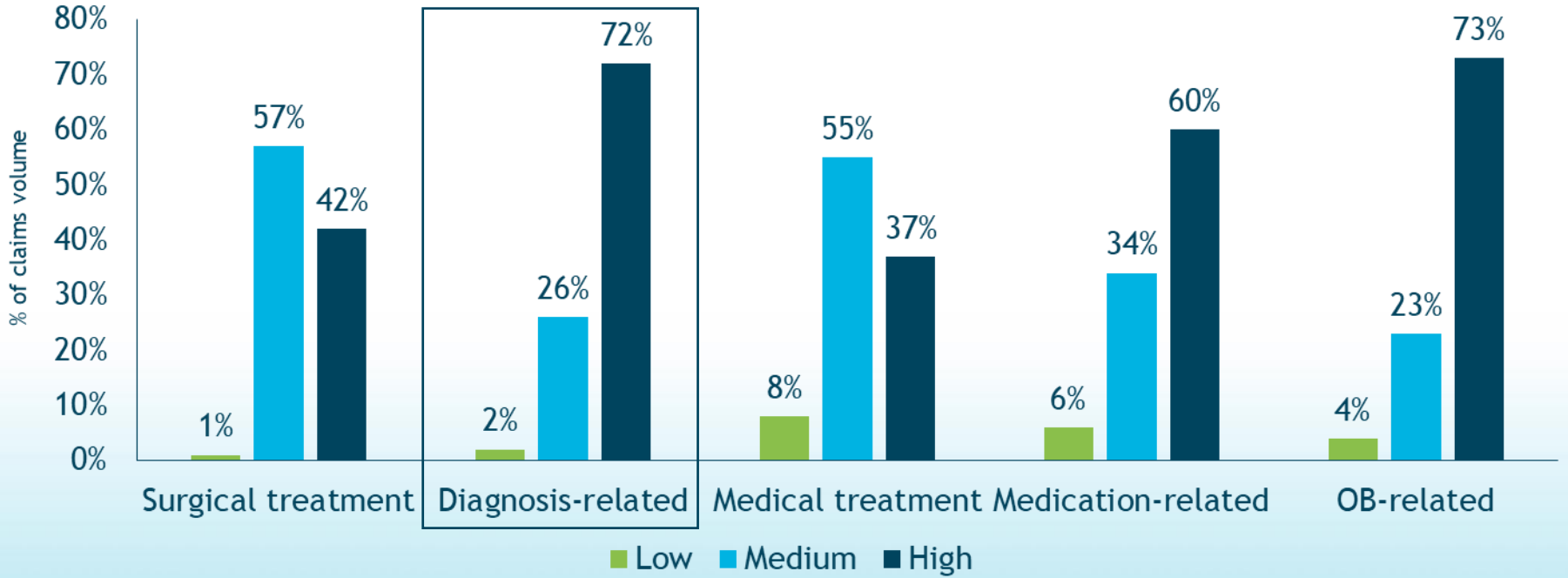


Note: OB = obstetrics; ED = emergency department

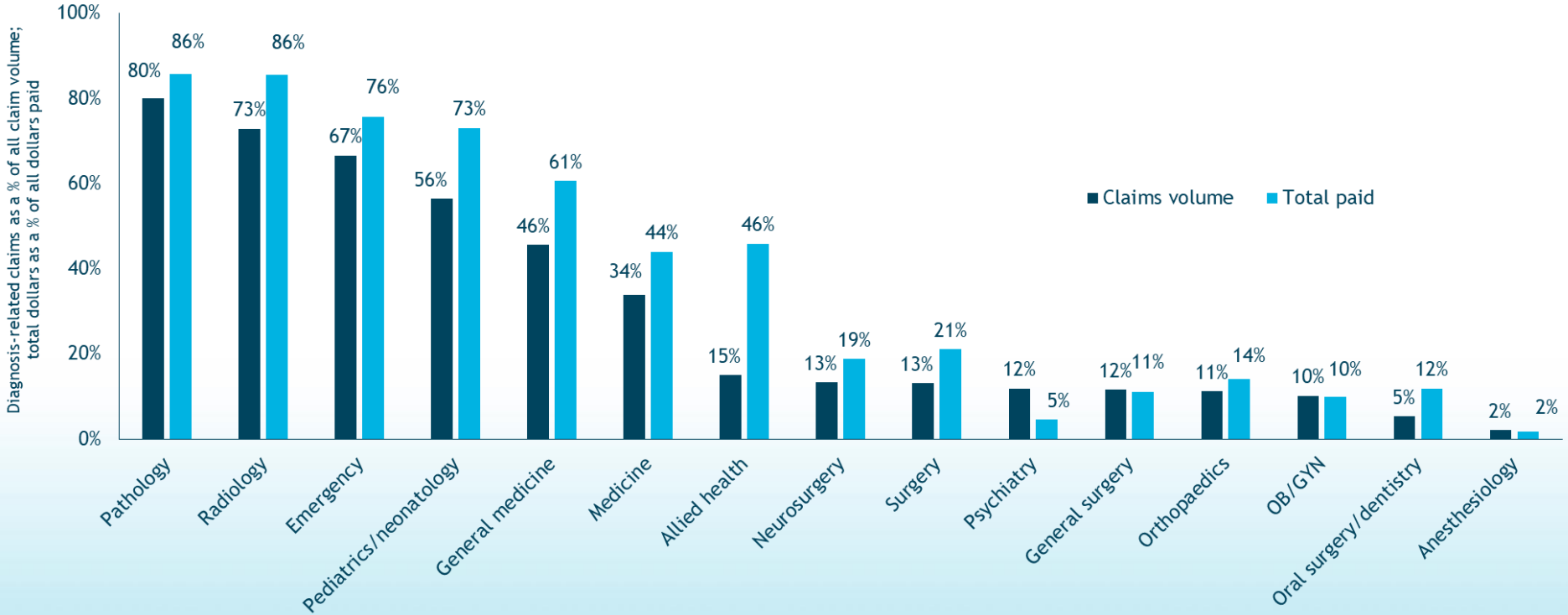
Clinical severity relates to financial severity

Diagnosis-related claims are more likely than most other claim types to close with an indemnity payment.

Half of the high-severity cases result in death.

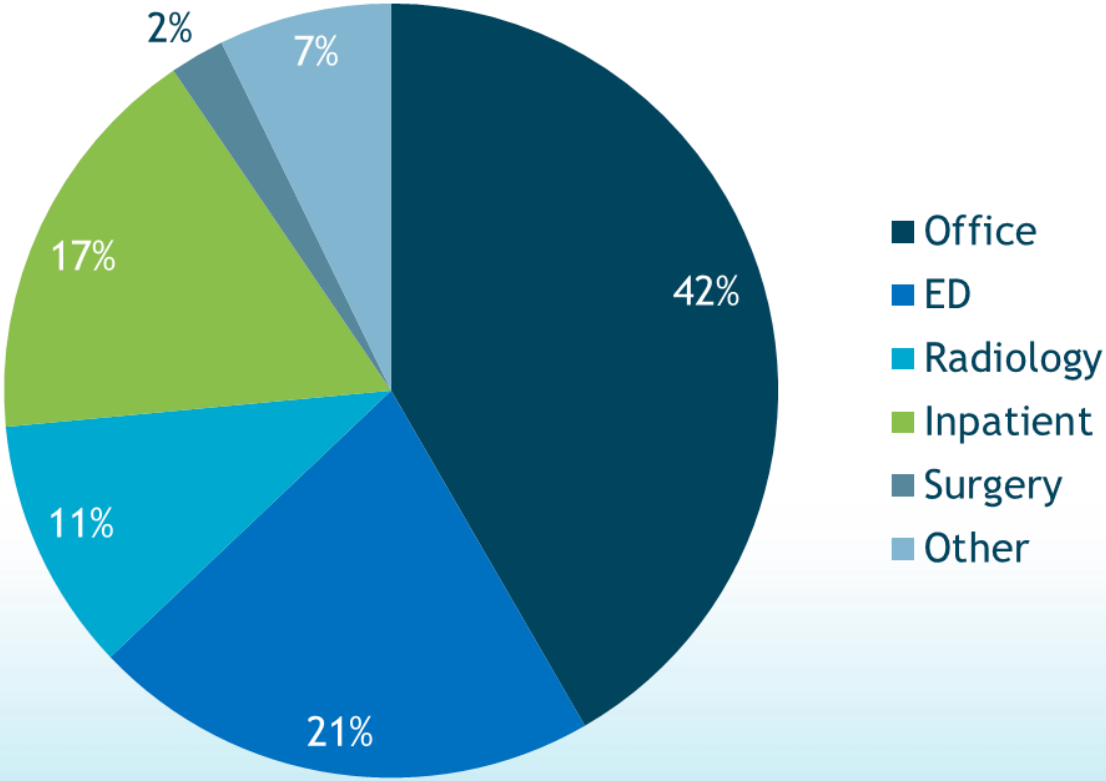


Diagnosis-related claims: Volume and financial severity by responsible service

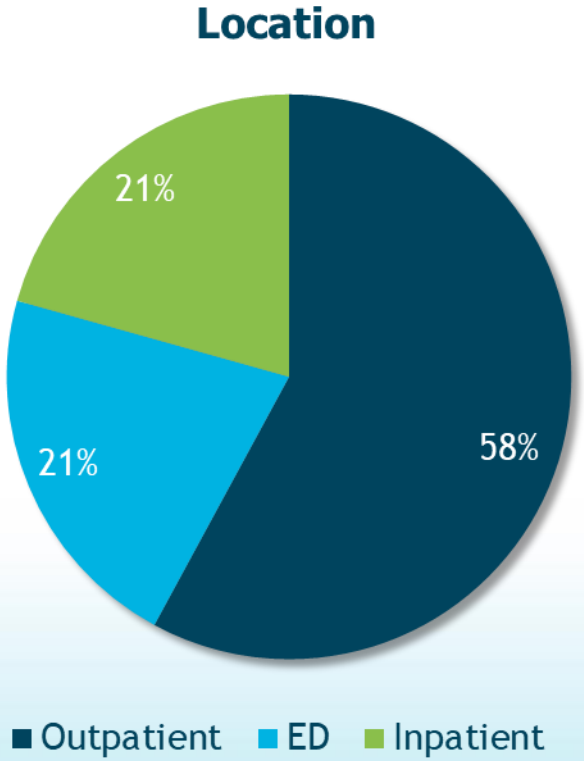


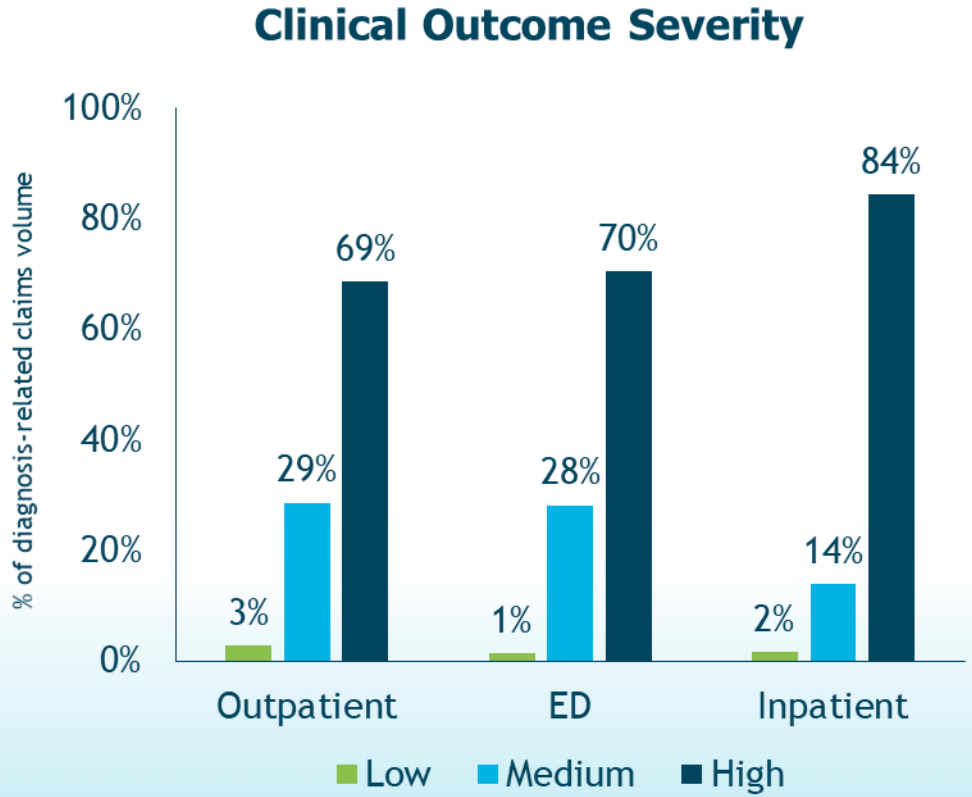
Note: Responsible services are the specialty services that are identified as responsible for the allegation(s) of a claim. Physician assistants and nurse practitioners are included as part of their respective specialties.

Diagnosis-related claims: Location



Diagnosis-related claims: Claimant (patient) type





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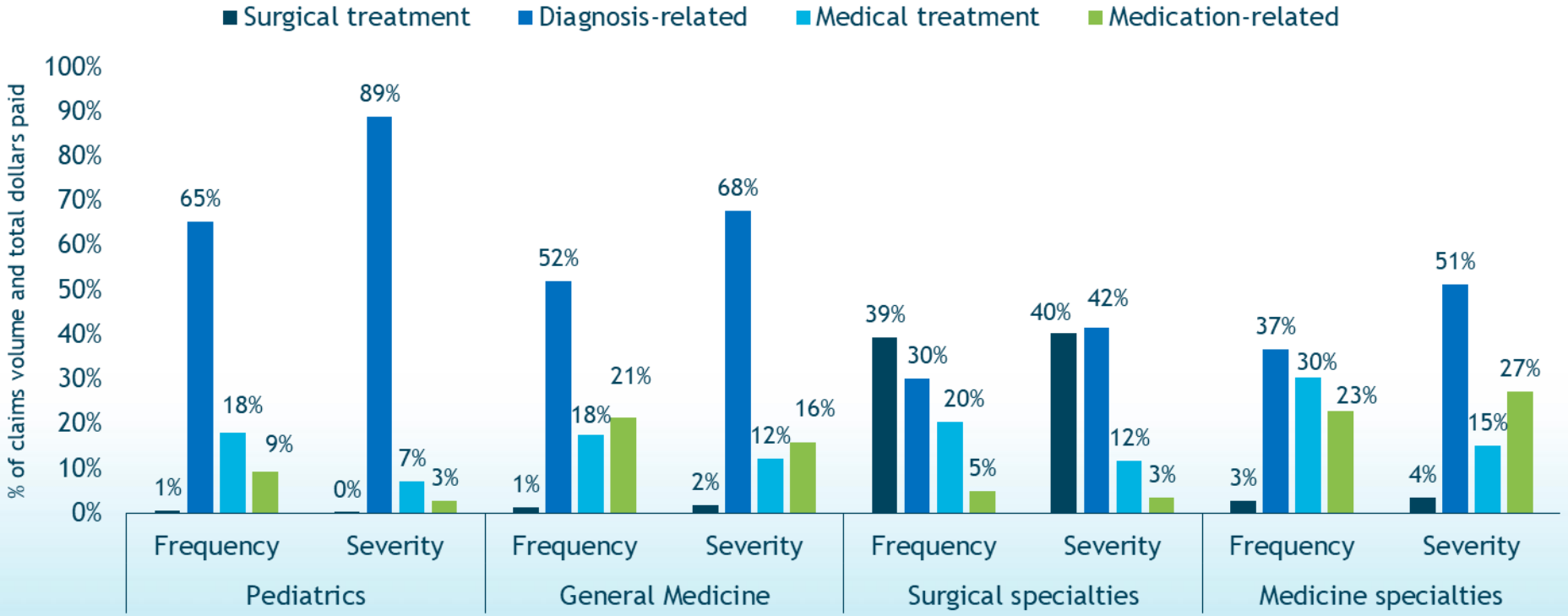
Specific Locations

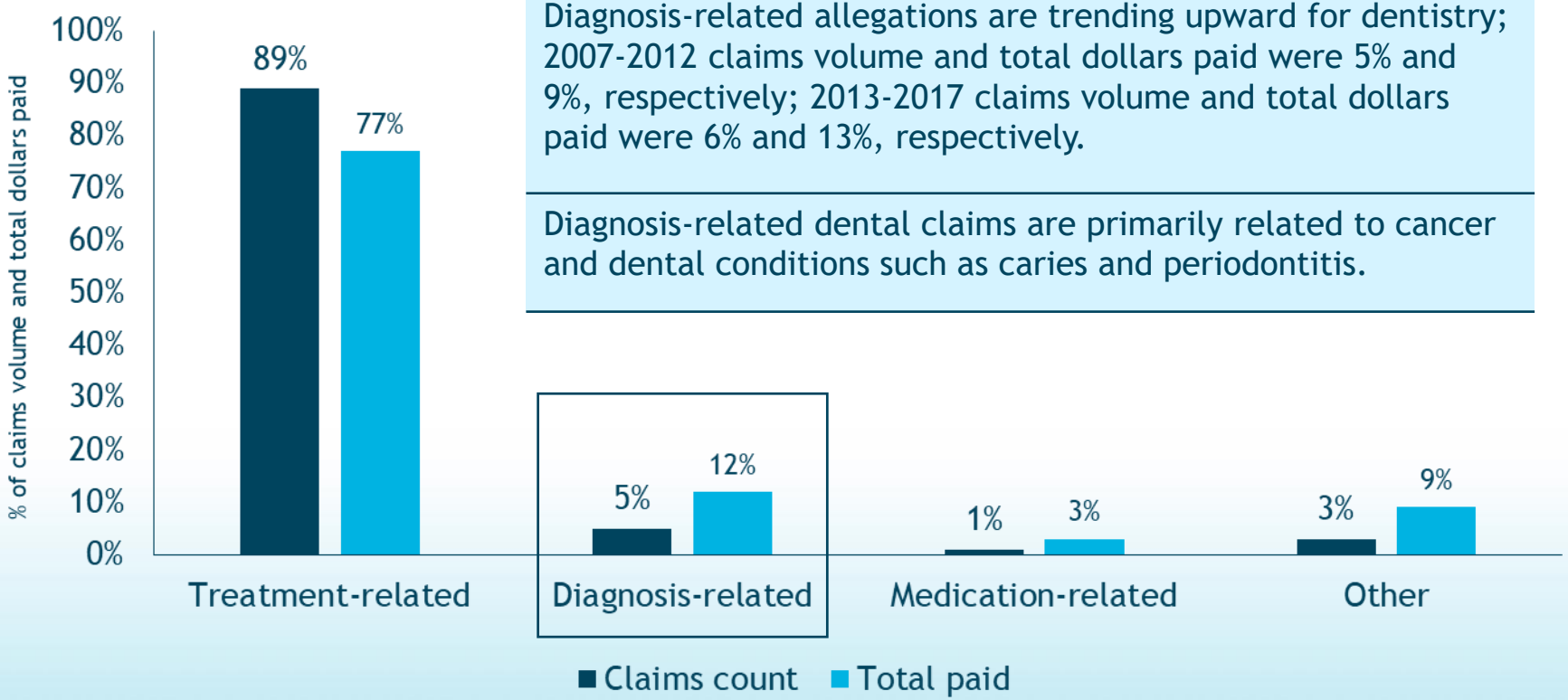
Specialties, diagnoses

Office: Top allegation categories (frequency and financial severity by responsible service)



Note: Diagnosis-related allegations account for 37% of all office-based allegations.

Focus on dental allegations and financial severity

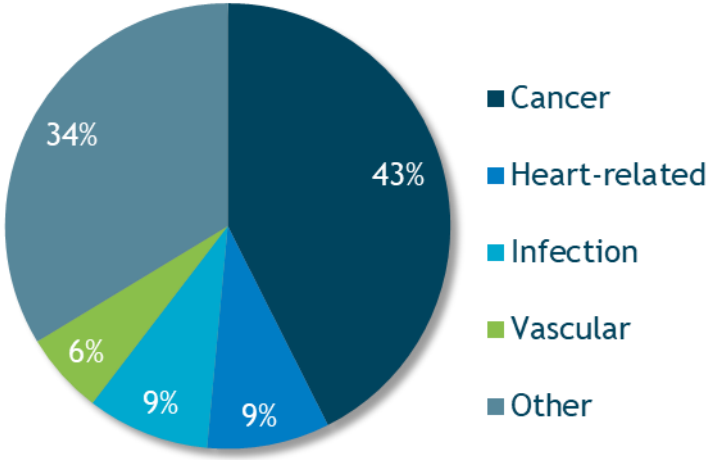


Diagnosis-related allegations are trending upward for dentistry; 2007-2012 claims volume and total dollars paid were 5% and 9%, respectively; 2013-2017 claims volume and total dollars paid were 6% and 13%, respectively.

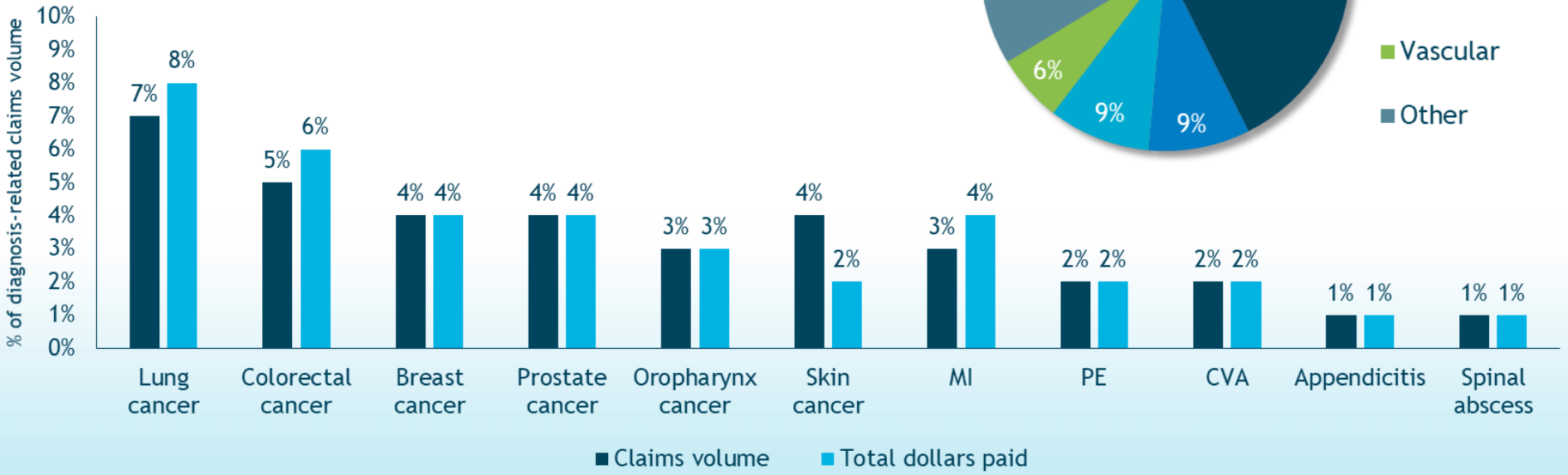
Diagnosis-related dental claims are primarily related to cancer and dental conditions such as caries and periodontitis.

Office: Diagnostic categories and top diagnoses/ financial severity

Diagnostic categories



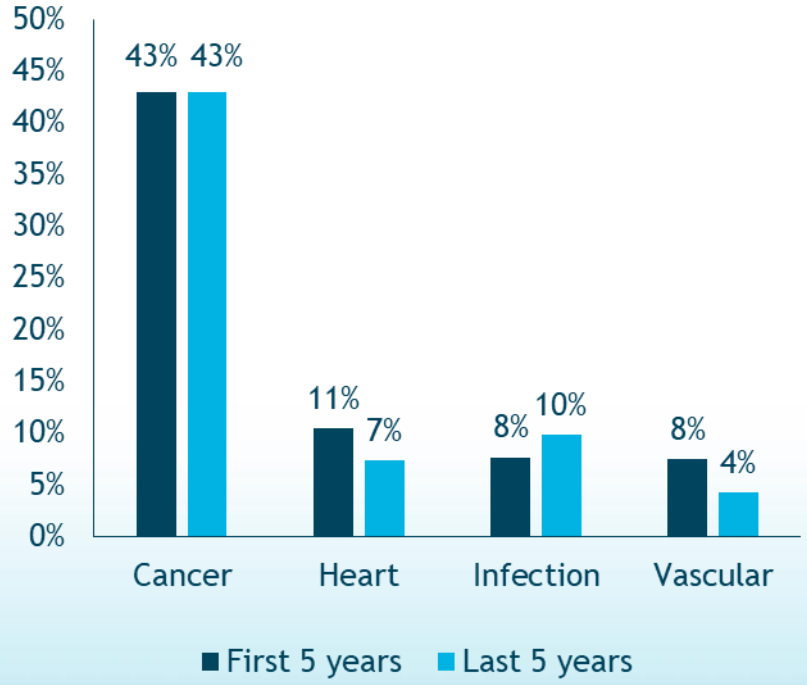
Top diagnoses/financial severity



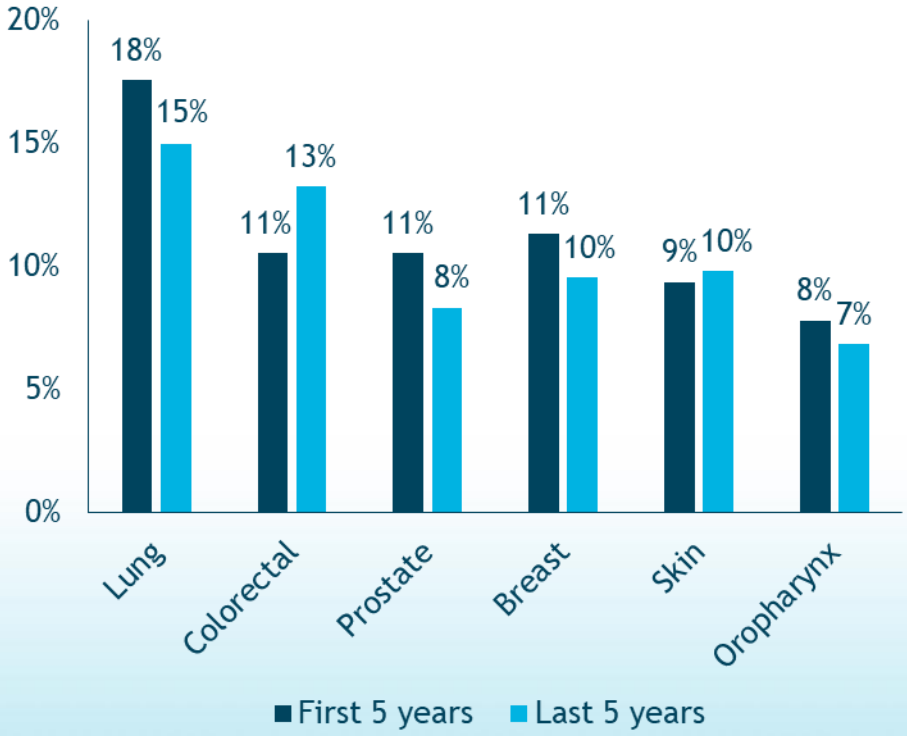
Note: MI = myocardial infarction; PE = pulmonary embolism; CVA = cerebrovascular accident

Office: Diagnostic trends

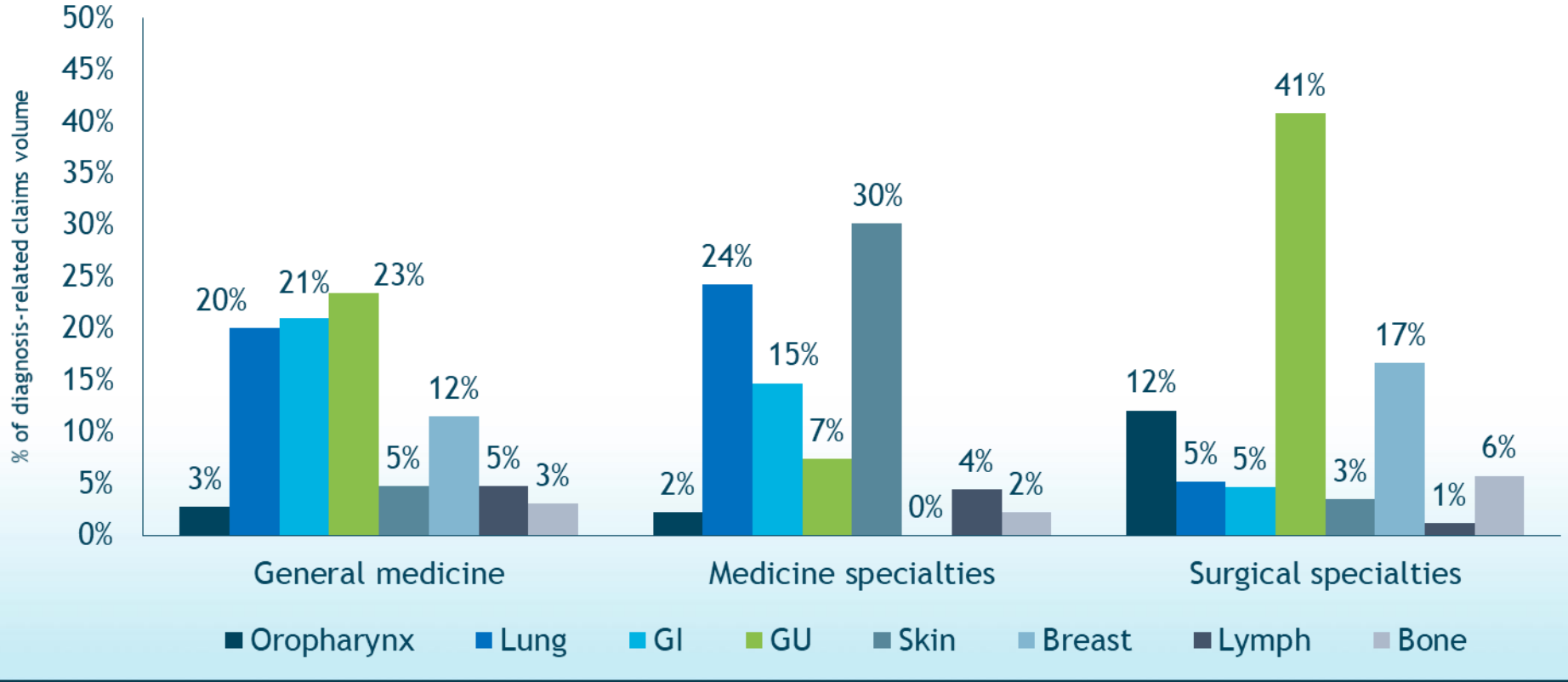
Diagnostic category trend



Cancer trend



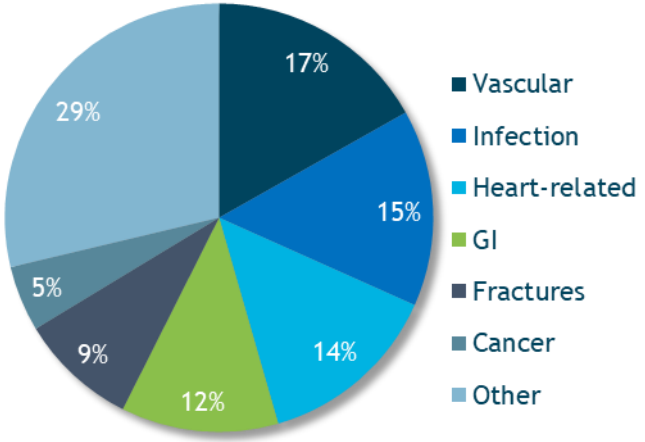
Top office cancer diagnoses by responsible service



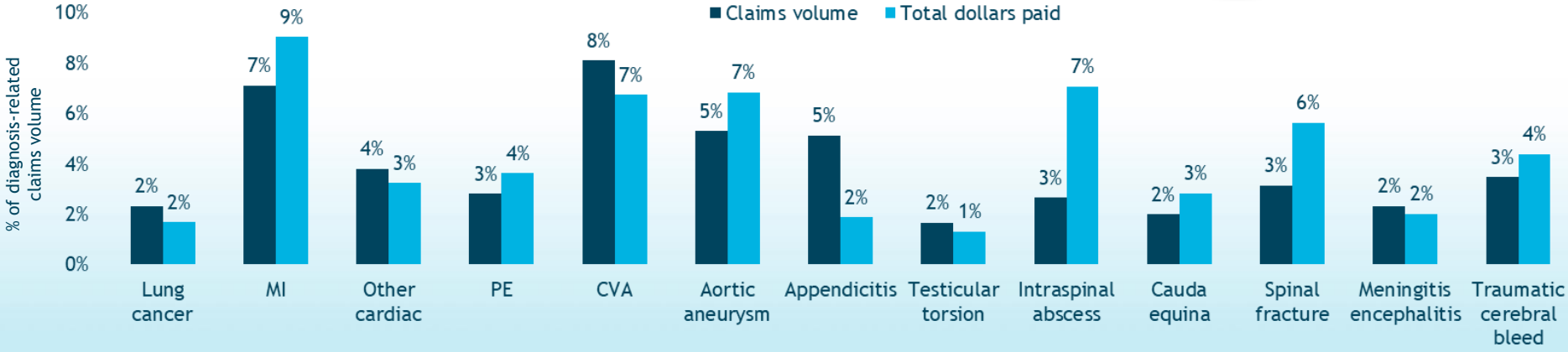
Note: GI = gastrointestinal; GU = genitourinary

Emergency department: Diagnoses & financial severity

Diagnostic categories

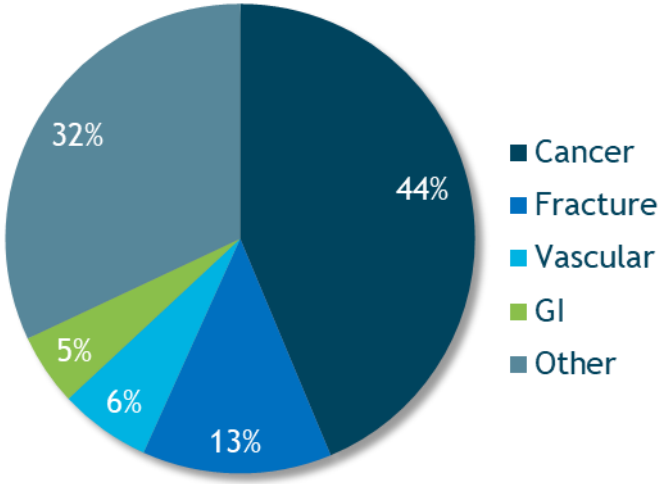


Top diagnoses

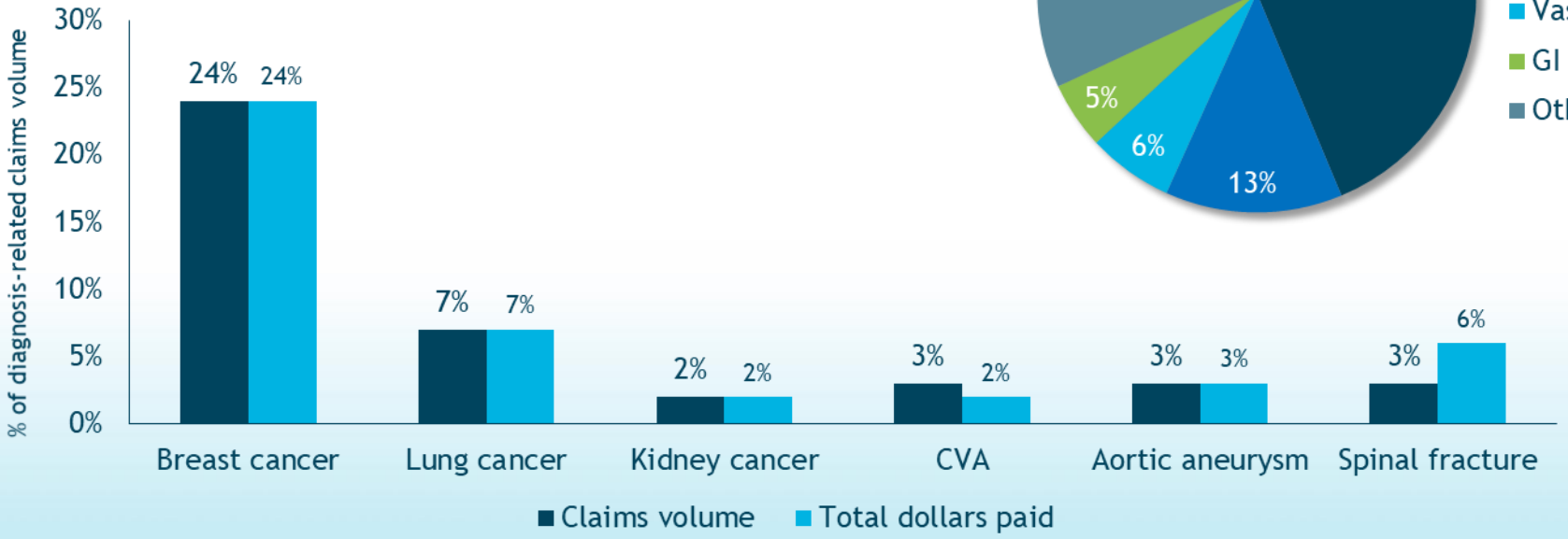


Radiology department: Diagnoses & financial severity

Diagnostic categories



Top diagnoses



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Emerging Risks

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

Emerging issues

- Genetic testing
  - Cancer, pre/antenatal decisions, rare significant disease
- Electronic health records (EHRs) — volume of information
- New technology
  - Clinical decision support — silver bullet?
  - Reliance versus adoption
  - False positives — a shift from underdiagnosis to overdiagnosis
- Access — mandate for the underserved?
  - Telehealth, mobile technology, wearable technology
  - Informed consent for technical deficiencies
- Preventive care for transgender patients
- Burnout

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Contributing (risk) factors

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

The diagnostic process: Where do mistakes occur?

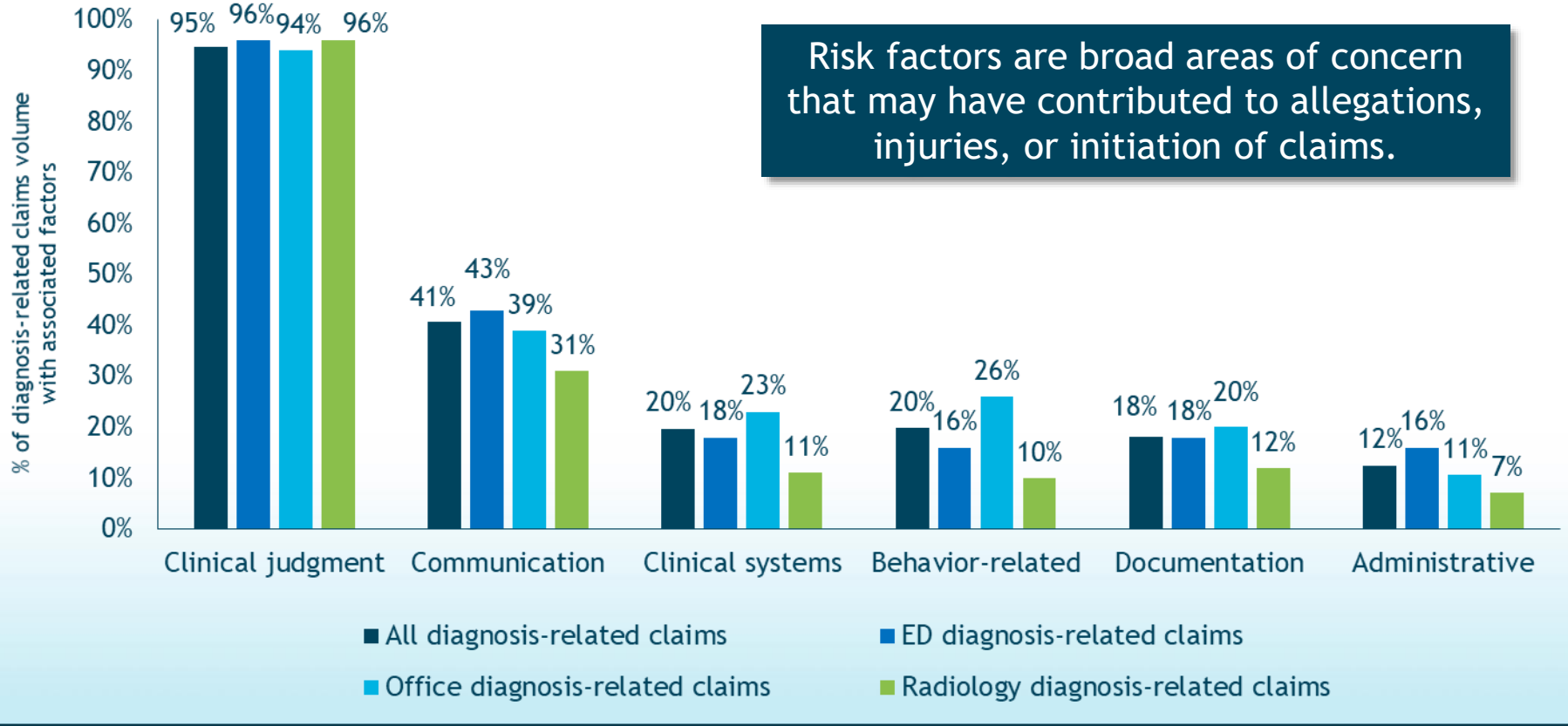
Initial diagnostic assessment

Testing and results processing

Follow-up and coordination

Source: 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

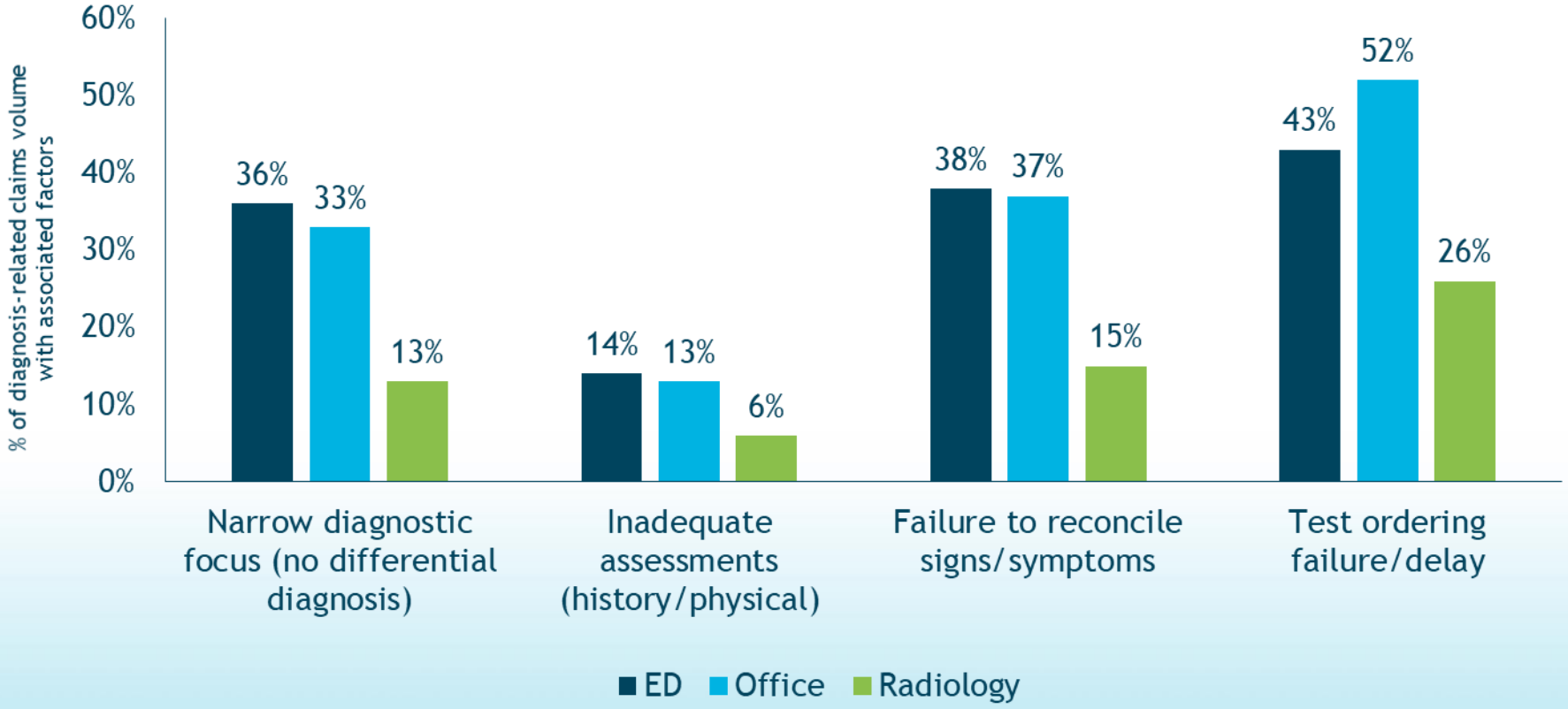
Top contributing risk factors



Risk factors are broad areas of concern that may have contributed to allegations, injuries, or initiation of claims.

Note: Totals do not equal 100% because more than one factor often occurs in each case.

Clinical judgment: Top patient assessment details



Diagnostic biases affect decision-making

Anchoring
- Locking onto initial presentation

Availability
- Relying on recent experience

Confirmation bias
- 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

General checklist: Useful in situations at high risk for diagnostic error

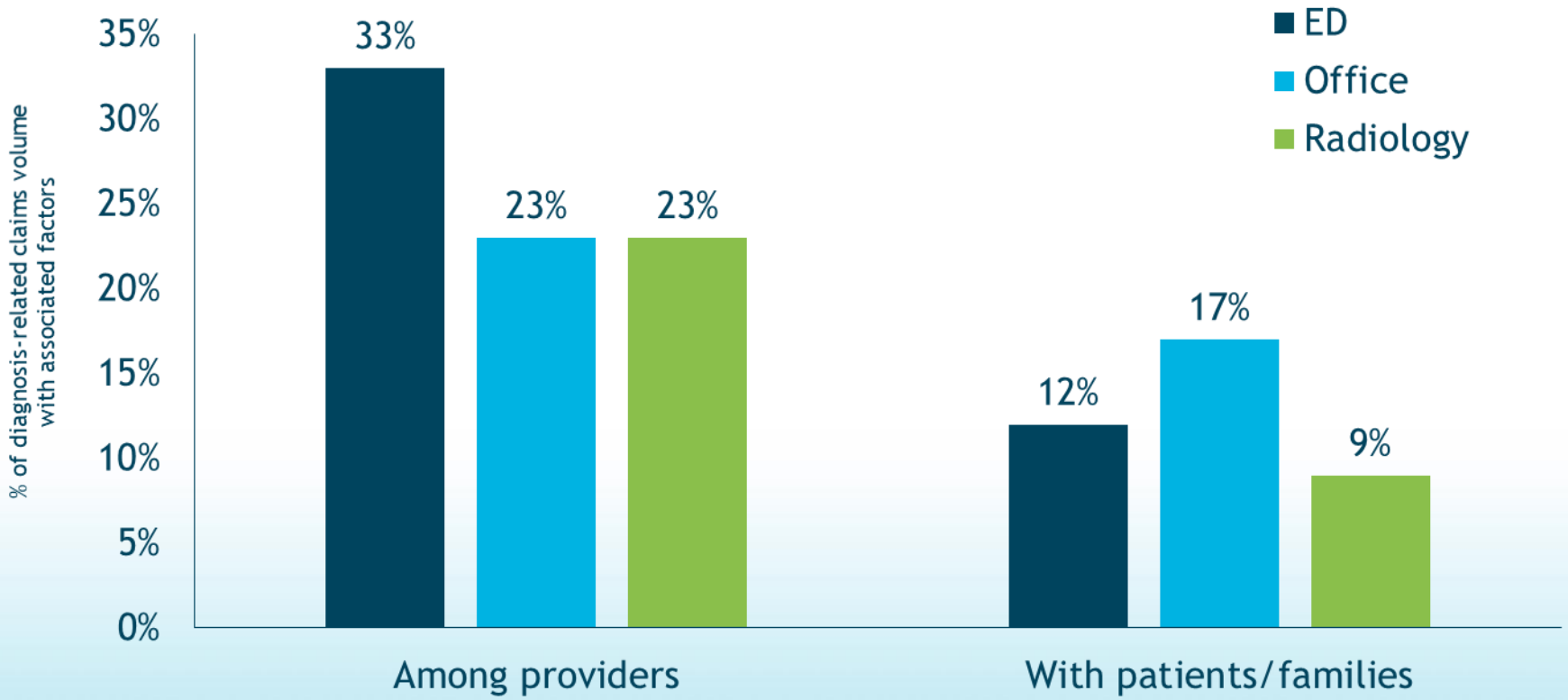
- ✓ Have I ruled out must-not-miss diagnoses?
- ✓ Did I just accept the first diagnosis that came to mind?
- ✓ Was the diagnosis suggested to me by the patient, nurse, or another doctor?
- ✓ Did I consider other organ systems besides the obvious one?
- ✓ Are data available about this patient that I haven't obtained and reviewed (e.g., from old records, family members, or a primary care provider)?
- ✓ Are there any pieces that don't fit?
- ✓ Did I read the X-ray myself?
- ✓ Was this patient handed off to me from a previous shift?
- ✓ Was this patient seen in the ED or clinic recently for the same problem?
- ✓ Was I interrupted/distracted excessively while evaluating this patient?
- ✓ Am I feeling fatigued right now or cognitively overloaded?
- ✓ Is this a patient I don't like (e.g., a difficult patient) or like too much (e.g., a friend)?

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

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 EHR systems.

Top communication factors



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.
- Appreciation 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.

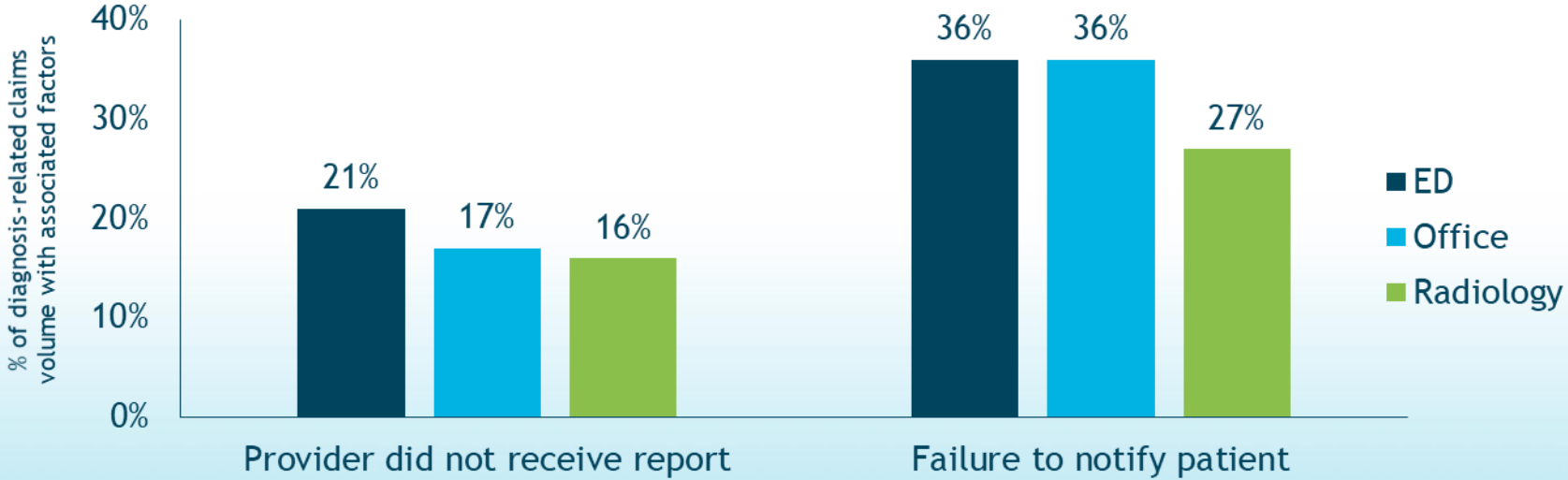
Case example: Lapses in communication and care coordination between providers (incidental finding)

Patient	60-year-old male presented for inguinal hernia surgery.
Summary	Preoperative X-rays revealed right lobe lung nodule.
	Surgeon and internal medicine (IM) physician both received the radiology report, which included a recommendation for a CT scan.
	X-ray report was included in the IM office's new 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: Testing and follow-up

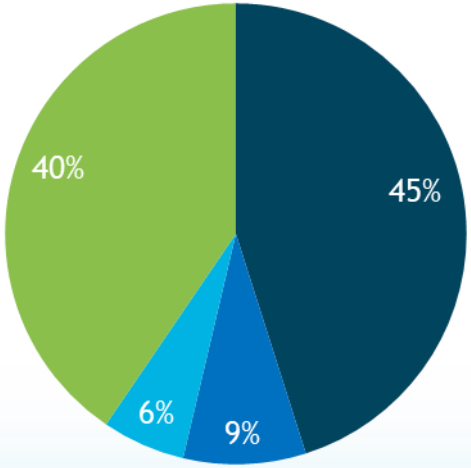
"The ordering [providers] and patients rely on the proper performance, interpretation, and transmittal of the [diagnostic testing] results to reach diagnostic certainty."

— CRICO Strategies, *2014 Annual Benchmarking Report Malpractice Risks in the Diagnostic Process*

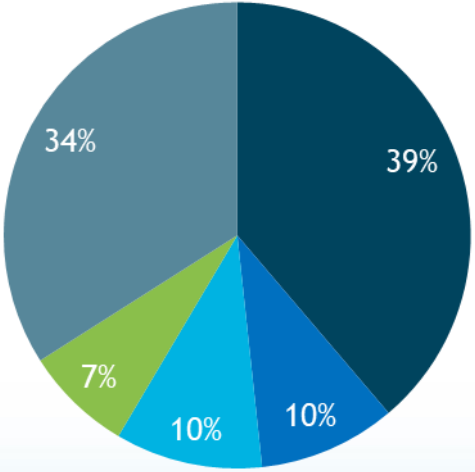


Test result failures by diagnostic category and specialty

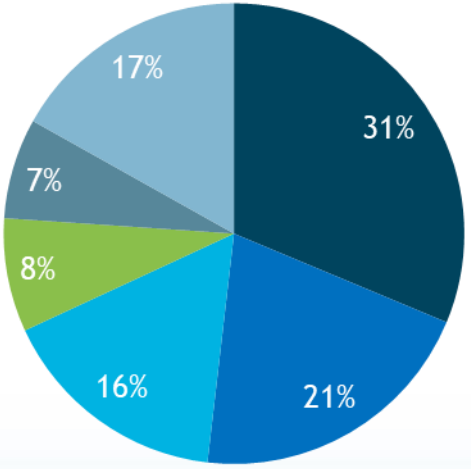
Categories



Cancer breakdown

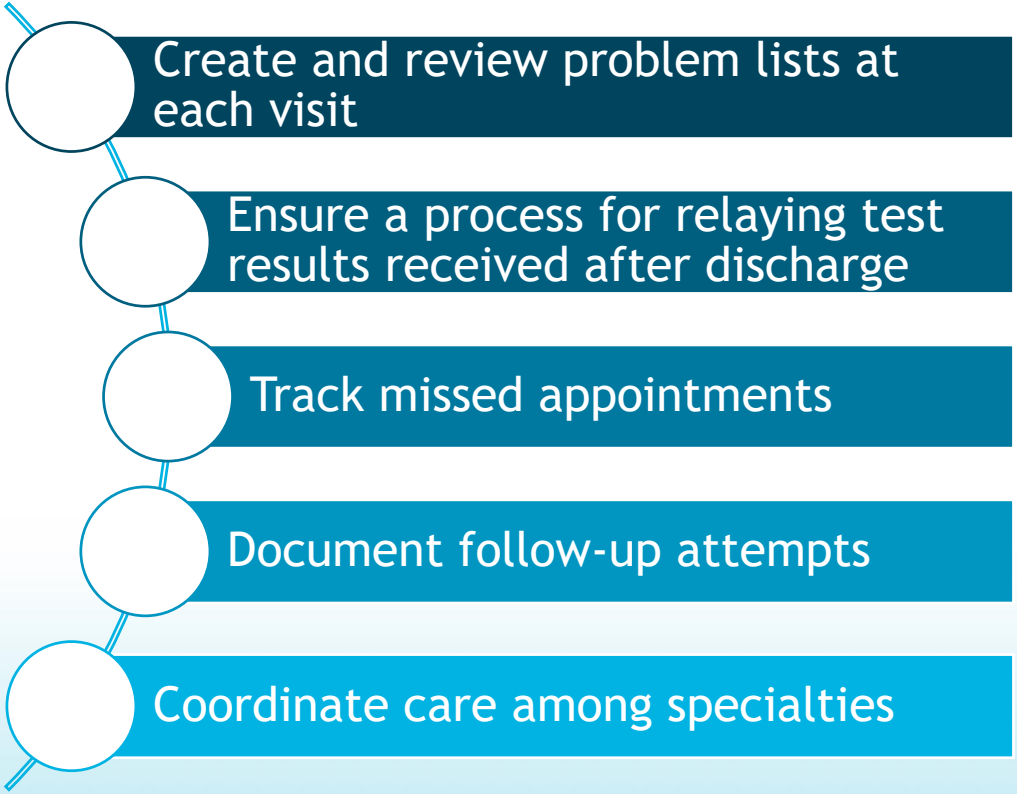


Specialty



Note: GI = gastrointestinal

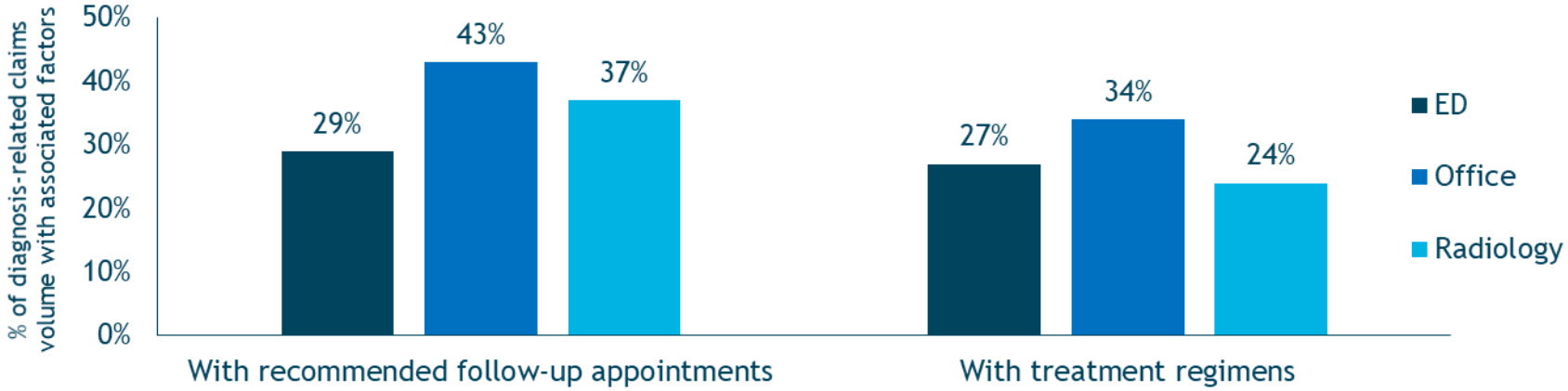
Strategies to address clinical systems factors



Key point

- Do not use a “no news is good news” approach (i.e., “If you don’t hear from us, you can assume your results are normal.”)

Patient behavior (nonadherence)



Patient behavior trends over time

Strategies to address patient nonadherence 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.

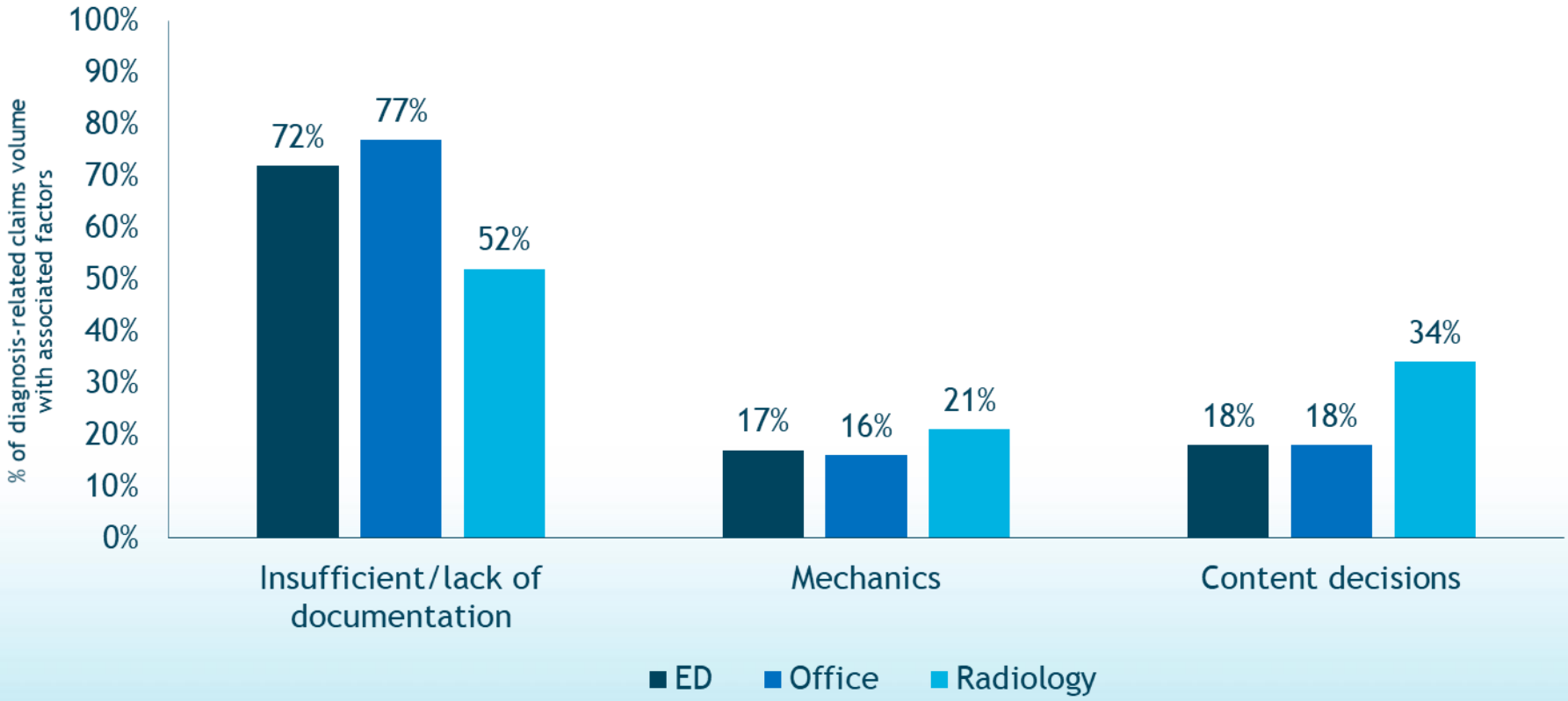
Addressing low health literacy

Clear communication can improve a patient's comprehension.

- Speak slowly and clearly.
- Focus on and repeat "need to know" concepts and information.
- Avoid medical and jargon.
- Use illustrations to explain important concepts.
- Use plain language educational materials.
- Encourage interactive dialogue.
- Use the "teach-back" technique to gauge comprehension.
- Provide treatment and follow-up care instructions verbally and in writing.

Retrieved from https://www.npsf.org/page/healthliteracy

Documentation



Electronic documentation risks

Documentation gaps/errors in transition from paper records to electronic records

New error pathways, particularly when trying to force old habits on a new system

Inconsistencies in use and following policies

Flow of information not intuitive

Copy/paste errors

Failure to use system capabilities (e.g., alerts and reports)

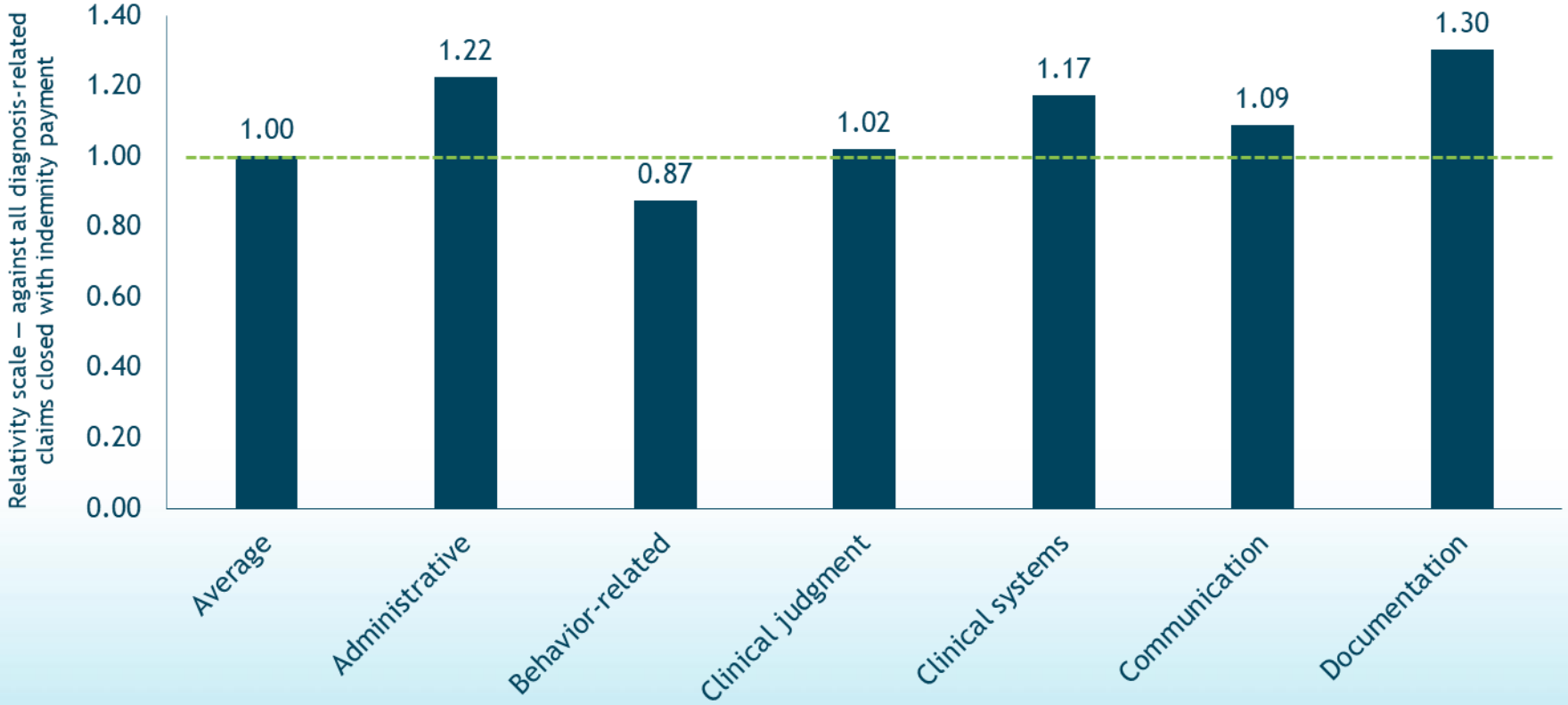
Hybrid systems — paper and electronic

First year of use — experience and training

Case example: Inaccurate transcription of lab test order

Patient	Male patient in his mid-eighties was admitted to the hospital for shortness of breath after knee surgery.
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 shortly thereafter passed away.

Diagnosis-related claims closed with indemnity payment



Note: Average = all diagnosis-related claims closed with an indemnity payment

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Wrap-up

Risk efforts require time

Listening/ patient history/ assessment	Understand patient complaint and concerns.
	Update and review medical and family history.
Awareness/ suspicion	Be alert to high-risk diagnoses, such as cancer, MI, PE, stroke, and certain infections (specialty oriented).
	Maintain problem lists.
Reconsideration	Consider cognitive aids, such as metacognition, bias awareness, and salient distracting features; 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.

Summary

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

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

Diagnosis-related claims often involve multiple contributing factors and more than one provider. Strategies to address the issues from which the claims arose should target their common contributing factors.

Resources: MedPro Group

- Clinical Judgment in Diagnostic Errors: Let's Think About Thinking
  https://www.medpro.com/documents/10502/2820774/Article_Clinical+Judgment.pdf
- Communication in the Diagnostic Process
  https://www.medpro.com/documents/10502/2820774/Communication+in+the+Diagnostic+Process.pdf
- Test Result Communication Failures
  https://www.medpro.com/documents/10502/5086245/Communication+of+Test+Results.pdf
- Strategies to Support Patient Comprehension
  https://www.medpro.com/documents/10502/2899801/Checklist_Patient+Comprehension.pdf
- Documentation Essentials
  https://www.medpro.com/documents/10502/2899801/Checklist_Documentation+Essentials.pdf
- Electronic Documentation
  https://www.medpro.com/documents/10502/2899801/Checklist_Electronic+Documentation.pdf

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

Other valuable resources

- **Agency for Healthcare Research and Quality**
  - Patient Safety Primer: Diagnostic Errors (https://psnet.ahrq.gov/primers/primer/12/Diagnostic-Errors)
- **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/)
- **National Academies of Science, Engineering, and Medicine**
  - Improving Diagnosis in Health Care (www.nap.edu/catalog/21794/improving-diagnosis-in-health-care)

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