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INSIDE

RELIAS MEDIA

Analysis of Closed Malpractice Cases Reveals Lost Chances to Avoid Problems

A recent analysis of several dozen closed ED malpractice claims revealed failed opportunities to avert diagnostic errors and bad outcomes.[1]

"We wanted to obtain deeper insights from claims data to identify opportunities for improvement in the ED and then translate these opportunities into action," says **Hardeep Singh**, MD, MPH, study co-author. "We used a multidisciplinary and collaborative lens, [and] a well-established diagnostic safety framework, to analyze ED cases with an aim of reducing risk."

This approach made it possible to gain deeper aggregate insights than studying individual cases in silos. "Findings can then be useful to informing ED clinical practice," Singh adds.

Emergency physicians (EPs), risk managers, and patient safety professionals analyzed 62 claims that closed between 2008 and 2015 at a large malpractice insurer. The following are some of the final diagnoses in the cases in which errors were made:

- **Epiglottis.** Radiology did not communicate to ED providers a significantly abnormal neck X-ray finding. Additionally, a CT scan of the neck was canceled because the patient was unable to lie flat;
- **Aortic dissection.** Staff incorrectly interpreted a widened mediastinum on chest X-ray as "technique-related." Another factor was that the patient's pain improved with hydromorphone. This resulted in the ED provider canceling a CT scan;
- **Testicular torsion.** Several young males who complained of abdominal discomfort did not undergo genital exams. These patients were discharged with an incorrect diagnosis of gastroenteritis;
- **Cauda equina syndrome.** An MRI was ordered immediately after the EP evaluated the patient, but there was a seven-hour delay;
- **Respiratory arrest.** A premature diagnosis of anxiety led to poor outcomes in two patients who complained of shortness of breath and/or chest pain.

Other key findings:

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• There were consultation process issues in 14 cases;

• Diagnostic tests were a problem in 40% of cases. Of the 25 diagnostic testing errors identified, 14 involved a treating provider misinterpreting clinical data. In six of those 25 cases, irregular findings were not communicated or were delayed;

• Breakdowns in the patient-provider encounter occurred in two-thirds of cases, most of which involved history-taking or test-ordering. "This is important in the ED context, where both cognitive and systems issues affect diagnosis," Singh notes.

High-risk Presentations

Abdominal pain, trauma, and neurological conditions were the top clinical presentations involving diagnostic error. "Abdominal pain presentations are of particular risk of missed diagnosis," Singh emphasizes.

Testicular torsion and bowel perforation were the most frequently missed diagnoses concerning abdominal pain complaints. Two patients with testicular torsion presented with vomiting and left or right lower quadrant pain — but not testicular pain.

"Testicular torsion appears to be a very important missed condition where patients are often younger and may not present with typical testicular pain," Singh says. It is important for EPs to perform testicular exams in cases of abdominal pain presentation in males, the researchers recommended.

Of the 46 cases that were discharged home initially, 34 returned to the ED later. Almost half of these return patients reported abdominal symptoms at some point prior to seeking care on the first ED visit.

This study's findings mirror a 2016 analysis of 100 high-risk abdominal patients in the ED. The authors of that analysis found diagnostic errors occurred in 35 of those cases.[2] There were breakdowns in the patient-provider encounters in more than two-thirds of this group. History-taking, ordering additional tests, and/or follow-up/tracking diagnostic information were common breakdowns.

The most frequently missed diagnoses were gallbladder pathology (10 cases) and urinary infections (five cases). "All ED personnel should consider these findings as signals for additional improvement," Singh offers.

QI Activities

"It's essential to focus on improving systems and processes in the ED with systematic safety data collection that leads to quality improvement activities in areas identified as high risk," Singh says.

The authors of another 2016 study analyzed the use of a voluntary incident reporting system implemented at two large EDs.[3] Of the 509 incidents reported by EPs, 209 were related to diagnosis. The authors identified 214 diagnostic errors.

Voluntary reporting allows reviewers to focus "on the appropriate things, rather than what was most evident," says **Nnaemeka Okafor**, MD, MS, the study's lead author. Since reviewers have more context, they are less likely to simply blame an individual EP for a mistake. For instance, it might be that at the time of the error, a surge of critically ill patients presented. Previously, the ED used a typical peer review process.

"If an error occurred, we'd try to figure out what the causes were. But it didn't go into granular detail," Okafor explains. Waiting for the typical "triggers" of peer review, such as return ED visits, took too long and usually involved only egregious errors. In the

analysis, only 16% of the reported events resulted in significant harm.

"A good number of the errors that were reported were minor and would have otherwise been swept under the rug or hardly noticed," Okafor reports.

The voluntary reporting system allows the ED to closely track errors that result in no harm. "Even though they are minor, the next time they come around, it could be a major adverse event that happens," Okafor says.

A core group of physicians led the voluntary reporting effort. Both new residents and existing faculty were wary of reporting mistakes, whether their own or a colleague's. "That took some time to overcome," Okafor notes. The physicians continually reiterated that there would be no negative repercussions from reporting mistakes. They emphasized that the goal was to learn from errors to avoid repeating them. The voluntary error reports shed light on appropriate topics for didactic lectures.

"There were some mistakes that we saw repeated over and over again," Okafor says. "We knew what behaviors we needed to focus on changing."

By creating a separate incident reporting system for the ED, reviewers better understand the environmental factors that may have contributed to errors. They are less likely to focus solely on cognitive factors. This makes ED providers more comfortable with the process. "You are getting reviewed by your peers," Okafor explains.

Asking EPs to review every ED case is difficult at the system level. "We found it was more useful to have the folks who work in the ED review all the ED cases and then feed that into the hospital's incident reporting system," Okafor says.

Voluntary reporting in the ED requires buy-in from hospital leaders, the ED medical director, and a core group of physicians.

"Without that, it's a non-starter," Okafor advises.

Chandresh Shelat, MD, associate director of the department of emergency medicine at Sinai Hospital in Baltimore, notes that abdominal pain is one of the most common complaints seen in the ED. When abdominal pain is misdiagnosed, in his experience, it is usually because EPs relied too much on a particular test result.

"In the litigation I've seen, clinicians tend to rely on just lab values and not the whole clinical picture," Shelat says. A patient presenting with right lower quadrant pain and a normal white blood cell count is one example. Shelat notes some EPs believe a normal white blood cell count excludes appendicitis, "which is absolutely untrue, but is still common practice."

Rather than leaning too heavily on any one finding, Shelat says it is important for EPs to ask themselves if everything makes sense. "Even if you don't come up with a diagnosis, have you at least ruled out serious pathology?"

The authors of the 2018 study are taking these three actions based on their findings:

• **An ED diagnosis collaborative effort is implementing chief complaint-driven interventions at five academic medical centers.** For instance, the group will develop a clinical guideline for abdominal pain. Then, researchers will review medical records of certain ED patients to determine the quality of the documentation, history, testing, physical exam, and diagnostic imaging.

• **The group is targeting several system failures with standardized transition-of-care processes.** ED providers will be made aware of the process breakdowns inherent at each phase of patient care.

• **Researchers are developing institution-specific simulation programs to address the cognitive, system, and process issues that were identified.** One ED designed a program to improve abdominal pain assessment starting at triage.

"All EDs should build dedicated infrastructures and teams to gather, analyze, learn from, and act upon error-related data," Singh advises. ■

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In Missed Appendicitis Cases, Presentations Are Early, Atypical

The authors of a recent study discovered that a triage chief complaint that was less indicative of appendicitis correlated with a higher rate of missed appendicitis in one pediatric ED.[1]

"The motivation for this study was encountering several patients who were near misses after they had atypical presentations for appendicitis," says **Zachary Drapkin**, MD, the study's lead author. The researchers wanted to investigate whether EPs are biased by the chief complaint that is assigned to a patient on a tracking board as part of the triage process. Further, they tried to determine whether certain triage chief complaints are associated with missed cases of appendicitis.

Researchers retrospectively reviewed charts of 1,680 patients who presented to a pediatric ED and were diagnosed with appendicitis over a five-year period. The authors found 67 patients visited the ED at least one more time in the week before receiving their diagnosis. Triage complaints were classified as "suggestive of appendicitis" (abdominal pain, right lower quadrant pain, or patients sent to the ED by another physician to rule out appendicitis) or "nonspecific" (fever, vomiting, dehydration, or other symptoms). Of patients with a triage chief complaint that was suggestive of appendicitis, 3.8% were missed on their initial ED visit, compared to 8.8% of those with a nonspecific triage chief complaint.

The researchers concluded that these findings suggest the potential impact of anchoring bias by a triage chief complaint when trying to diagnose appendicitis. However, Drapkin says the results should be interpreted with caution because the study authors did not look for the denominator of chief complaints.

"For example, while some patients who are diagnosed with appendicitis present with diarrhea, among all patients who present to the ED with a chief complaint of diarrhea, very few are ultimately diagnosed with appendicitis," Drapkin explains. Ordering labs and conducting imaging studies on all children who present with diarrhea likely would cause more harm than good. Instead, Drapkin advises EPs to "always consider appendicitis, and discuss good return precautions in atypical cases."

Typically, missed appendicitis cases in the ED feature early presentations that do not meet the EP's threshold to order an imaging test or atypical appearances, according to **David Talan**, MD, FACEP, FIDSA. Initially, it sometimes appears that the pain is located in the middle or right upper quadrant of the abdomen. The EP might perform an ultrasound on the right upper quadrant, suspecting cholecystitis or a liver problem. Still, the tests return negative.

"It's not unusual to go back and examine the patient, who is still in pain, and find out that the pain now appears to be more toward the lower part of the abdomen," Talan says.

At this point, the doctor orders a CT scan, which reveals appendicitis. This common scenario points to the importance of re-evaluating the ED patient. "Once you get negative results from testing your initial hypothesis, maybe you should consider another disease process," Talan offers.

Appendicitis remains high risk for missed or delayed diagnosis in the ED setting, says **Mark F. Olivier**, MD, FACEP, FAAFP. EPs are less likely to miss patients with a classical presentation of appendicitis or an obvious surgical abdomen. "However, classic presentations are not the standard," Olivier says. To avoid missing atypical presentations of appendicitis, Olivier says EPs should bear in mind that:

- fever may not be present, especially in the elderly. ("The temperature is helpful only if febrile," Olivier notes.);
- depending on the location of the appendix, the patient may not report right lower quadrant abdominal pain;
- early in the disease process, the patient may not demonstrate any rebound or guarding;
- a normal white blood cell count does not exclude appendicitis since it may be normal early in the disease process. ("The white blood cell count is significant only if elevated," Olivier offers.);
- pyuria and/or hematuria may occur if the appendix location is near the ureter. ("Be careful not to incorrectly diagnose the patient with a urinary tract infection, especially if it was a contaminated specimen," Olivier warns.);
- atypical presentations, which carry a higher risk for perforation, occur in children, the elderly, pregnant patients, and immunocompromised patients;
- be aware that false-negative CT scans can occur.

Olivier says there are legally protective practices for EPs, such as documenting abdominal reevaluations while in the ED. This is especially important at the time of discharge. "Disease progression may become evident if the patient is there for a prolonged period of time," Olivier explains. If the patient is discharged

with nonspecific abdominal pain, Olivier says staff should explain the disease process to the patient. Be specific on signs and symptoms to watch out for. "Explain uncertainty in the diagnosis," Olivier adds.

To see if there is disease progression, Oliver recommends re-evaluating the patient within 12-24 hours. "In patients with complaints of abdominal pain, unless they had a previous appendectomy, don't tell the patient they have no risk for appendicitis," he stresses.

After evaluation, if the EP believes a patient has nonspecific abdominal pain, Olivier says the EP should not feel pressure to provide a definitive diagnosis. Early in the course, the disease may not have presented itself yet. "Therefore, it may be too early to diagnose appendicitis," Olivier explains.

Offering a benign diagnosis such as gastroenteritis or cystitis can give patients a false sense of security.

"When the patient later is diagnosed with appendicitis, they are upset with the initial evaluation — and more likely to seek litigation," Olivier warns.

Missed appendicitis cases have decreased in emergency medicine over the last decade. "This is likely due to increased availability of CT scans," says **Susan Martin**, Esq., a former ED nurse manager who now works for a medical professional liability insurer. She explains that missed appendicitis cases against EPs typically involve whether appendicitis was considered on the EP's differential, if CT with contrast should have been considered, and surgical consultation.

One such case involved a 26-year-old female who visited her OB/GYN over concerns about a right ovarian cyst. The patient presented with a history of a cyst on the left ovary and reported similar pain. Concerned that the cyst may have ruptured, the OB/GYN sent the patient to the ED. Upon arrival, the patient registered no fever but reported severe pain.

"The history is given to the ED physician, and the physician travels down the ovarian cyst pathway," Martin notes.

The EP ordered labs and a CT scan of the pelvis, which showed some fluid in the right lower quadrant. Labs showed an elevated white blood cell count. "But the EP reasons that could be due to pain and inflammation in her pelvis," Martin says.

The EP called the OB/GYN, who agreed to admit the patient for overnight evaluation and repeat labs in the morning. The patient waited several hours in the ED for an inpatient bed to become available. The next afternoon, the OB/GYN arrived and confirmed that hemoglobin and hematocrit dropped. Likely, the cyst had ruptured and started bleeding. The patient is brought to the OR. After a short time, a surgeon is emergently notified to the OR.

"The surgeon found a large abscess and purulent material in her right quadrant and concluded the patient had a ruptured appendix with abscess," Martin reports.

After surgery, the patient underwent a complicated treatment course and remained in the hospital for several weeks. She later sued the EP. "Upon reviewing the ED records, the defense counsel saw some problems with this case," Martin says. The ED defense team was concerned about these questions:

• **Did the EP ever consider acute appendicitis?** The answer was no. "It was not part of his differential," Martin says.

• **Was the EP misled by the patient's history and conversation with her OB/GYN?** It appeared as though the EP had "anchored" on the diagnosis given by the OB/GYN. "The EP believed that since the OB/GYN had referred and seen her recently, the diagnosis of the cyst was appropriate," Martin says.

• **Did the radiologist notate in his dictated report the possibilities or causes of the fluid?** The radiologist noted that there could be abscess formation and that he could not visualize the appendix.

The ED defense team was unable to overcome these challenges.

"The case was eventually settled in the mid six-figure range," Martin says. ■

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ED Protocols Might Add to Liability Exposure of Low-risk Chest Pain

The authors of a recent study found EPs considered any probability greater than 1% for acute coronary syndrome (ACS) enough of a risk to warrant admission.[1]

The researchers set out to understand how EPs determine risk and decide to admit patients with low-risk chest pain. They surveyed 208 emergency medicine residents and faculty about their perceived risk of various scenarios and an admission decision. Physicians used qualitative terms in ways that are different from how those terms are used in typical conversation. This can lead to miscommunication during shared decision-making processes.

"Probability or utility models are inadequate to describe physician decision-making for patients with chest pain," the researchers concluded.

Kathleen M. Ryan, JD, has found some ED chest pain protocols to be "incredibly problematic" in terms of malpractice defense. "The policies I'm seeing really do not permit physician discretion," she explains.

Many EDs use the HEART (History, Electrocardiogram, Age, Risk factors, and initial Troponin) score to determine patients' short-term risk for major adverse cardiac events. Some ED policies indicate that even if the chest pain patient's score returns as low risk, the EP still must determine an initial cardiac troponin level and an initial ECG.

On top of that, the EP may have to determine a second troponin level and another ECG, with repeat ECG tests if the patient reports continued pain.

"To me, that does away with any medical judgment the EP should be able to offer," says Ryan, an attorney at Albany, NY-based Thorn Gershon Tymann and Bonanni.

Two recent ED malpractice lawsuits share almost identical fact patterns. In both cases, the EP defendants potentially will be found negligent because they did not follow the chest pain protocol. "I've seen too many of those cases recently," Ryan laments. "I think everyone needs to look at their protocols to make sure there is sufficient room for medical judgment." In both malpractice lawsuits:

- the initial troponin and ECG were negative;
- the patient reported recent physical activity that would have caused muscle strain, which would serve as a noncardiac explanation for the chest pain;
- the patient improved while in the ED;
- the patient was in no pain at the point of discharge from the ED;
- the patient was referred to a cardiologist and instructed to return to the ED if pain returned or worsened.

In both cases, the patient returned in a few hours with full-blown cardiac arrest. In the EP's medical judgment, the patients were not experiencing a cardiac event at the time of the ED visit. Additionally, both patients received excellent care when they returned to the ED, a fact the plaintiffs do not dispute. Regardless, the EP still can be held liable for not following the chest pain protocol.

"Even if it's not medical malpractice, there is arguably negligence in failing to follow the hospital protocol," Ryan explains.

Ryan M. Shuirman, JD, defended an EP in malpractice litigation involving a 52-year-old male smoker with new-onset chest pain. The patient demonstrated negative cardiac troponin levels and nonspecific ECG changes.

"His chest pain resolved with nitroglycerin, though it was resolving before it was given, and he was already trending toward discharge," says Shuirman, an attorney at Yates, McLamb & Weyher in Raleigh, NC.

The EP called the patient's primary care physician (PCP), who agreed the patient could follow up as an outpatient. At the time of discharge, the EP thought the presentation was inconsistent with ACS. But she also expected the PCP to initiate a full cardiac workup, including a stress test, when the patient presented within the following week.

The patient saw the PCP several times over the next few months but never underwent a cardiac workup. This was because the PCP had concluded the patient's acute presentation in the ED was consistent with costochondritis. The patient died approximately four months after his ED visit. Autopsy revealed significant blockages in his coronary arteries.

In the subsequent malpractice litigation, Shuirman recalls struggling to define "low risk." The defense team's experts used tools such as the Thrombolysis in Myocardial Infarction (TIMI) Risk Score to demonstrate that the patient was low risk at the time of the ED visit. "But a patient who is 'low risk,' with a 2% or 3% chance of chest pain being ACS, is still 1/50 or 1/33, which might be difficult for a jury to reconcile," Shuirman says.

Then, the plaintiff attorney asks the jury, *"Would you want your mother to be the one out of 33 patients who actually is experiencing an MI but who is discharged home?"*

"'Low risk' is a relative term, and the risk may be low except to the patients who have the disease," Shuirman notes. The case resulted in a hung jury and resolved without payment on behalf of the provider. The PCP also was a defendant, but settled before trial.

"The communication between the EP and the PCP was definitely an issue," Shuirman laments. The PCP testified that he was persuaded by the EP's description of the patient's chest pain as musculoskeletal or costochondritis. The EP testified that she knew she did not say "costochondritis" because it is not a term she used in her practice.

"This was troubling," Shuirman says. It supported the plaintiff's argument that the EP had an obligation to specifically recommend that the PCP order a stress test, rather than just leave it to the PCP's judgment. Shuirman says discharging the low-risk chest pain patient requires:

- good documentation of the evidence gathered by the EP and the decision-making that led to the conclusion that discharge is safe and appropriate;
- documentation of the discussion with the patient or family about what has or has not been ruled out through the test results.

In cases in which the EP has consulted a PCP, hospitalist, or cardiologist about the propriety of discharge or whether admission is indicated, Shuirman says documenting all information conveyed and responses is vital.

"This will be most important in defending the position that 'I could not get anyone to admit this low-risk patient,' should a plaintiff's expert in litigation be second-guessing the decision-making," Shuirman adds. ■

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Procedure-related Complication? Expect Supervising EP to Be Named

ED residents perform thousands of procedures every day, most of which are uneventful. A very small percentage of patients end up with a procedure-related complication. Even the vast majority of these cases do not end up in litigation.

"Of those that do end up in litigation, lack of adequate supervision and not being proficient in a procedure are the two most common allegations made by the plaintiff," says **Adnan Sabic**, MD, an emergency medicine attending at St. John Hospital & Medical Center in Detroit.

If there is a procedure-related adverse outcome, EPs can expect to be named in the lawsuit. "Proving that the EP was negligent is a difficult but not an impossible task," Sabic says. If the resident testifies that the attending EP was not present for the critical portions of the procedure, that could be problematic. "It is imperative that the EP is at bedside for the critical portions of the procedure," Sabic advises.

It is as important for the resident and EP to discuss with the patient or whoever is making the decision the most common complications associated with the procedure. "Plaintiffs will allege that the risks and alternatives were not discussed with them," Sabic reports.

This should be documented, and a written consent should be obtained from the patient or family. "Sometimes, that is not feasible because of clinical presentation," Sabic notes. "That's when we rely on implied consent."

Procedure-related complications always will occur, Sabic says. "The best way to defend these is for the EP to be at bedside for the entirety of the procedure and to document appropriately."

Generally, residents are protected in the hospital learning environment. The attending physician is the one who is responsible in any legal case involving a resident, says **Patricia P. Nouhan**, MD, residency program director in the department of emergency medicine at Ascension St. John Hospital in Detroit.

"In the ED, the attending faculty needs to supervise procedures," Nouhan says. For small procedures, such as a simple laceration repair or an IV start, attending faculty discuss the procedure but do not need to be

present bedside. Still, the supervising EP must be available for consultation.

"Retrospectively, the documentation that clarifies that the EP was available for supervision and consultation is the resident attestation note," Nouhan says. This note should exist on every chart dictated by the resident, which the faculty physician reads, amends (if necessary), and signs.

"The attestation note indicates that the patient was seen and examined by the faculty member as well as the resident," Nouhan explains. It also delineates that the attending physician supervised the critical part of any procedure the resident performed.

For major procedures, such as intubation or inserting a chest tube, the supervising EP must be present for the significant parts of the procedure. "If there is any error in that situation, the faculty is responsible and could be found to be lacking in supervision of that resident," Nouhan warns.

Most, if not all, residents are hospital or graduate medical education employees. Thus, most plaintiffs also name the hospital in the lawsuit. "Hospitals can be held liable if the resident or EP have a history of negligence, especially if there was a settlement or judgment against either one," Sabic notes. Cases in which residents are named are more likely to concern certain technical skills, according to a recent study.[1] These include vascular access and spinal procedures. Researchers analyzed 845 open and closed emergency medicine cases using data from the Controlled Risk Insurance Company Strategies' Comparative Benchmarking System. They compared cases naming residents (113) to those that did not involve a resident (732). Some findings:

- The most frequent allegation categories in both cohorts were failure or delay in diagnosis/misdiagnosis and medical treatment;
- On average, resident cases incurred lower payments ($51,163 vs. $156,212 per case);
- Sixty-six percent of resident vs. 57% of nonresident cases were high-severity claims that resulted in permanent, grave disability or death;
- In resident cases, the final diagnoses were more often cardiac-related;
- Nonresident cases featured more orthopedic-related final diagnoses;
- In all cases, documentation, communication, and clinical judgment were the top contributing factors;
- Technical skills contributed to 20% of resident cases vs. 13% of nonresident cases;
- There were more vascular access and spinal procedures in resident cases.

However, residents are not necessarily less skilled in procedures than faculty. Residents are more experienced, generally speaking, in ultrasound than most older faculty, Nouhan notes.

"It will be interesting to see if that skill set comes into play legally in future cases." ■

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Anaphylaxis-related Lawsuits Allege Exposures to Known Triggers

Researchers collected jury verdicts, settlements, and court opinions regarding alleged malpractice involving anaphylaxis from May 2011 through May 2016. Of 30 anaphylaxis-related malpractice lawsuits identified by researchers, two named EPs.[1]

To reduce the likelihood of anaphylaxis-related litigation, researchers recommended additional anaphylaxis education, provision of epinephrine auto injectors or other alternatives to reduce dosing errors, and stronger safeguards to prevent administration of known allergens.

Previous studies have revealed that anaphylaxis is underdiagnosed and undertreated frequently.[2] "Therefore, we wanted to characterize legal outcomes of cases in malpractice suits related to the management of patients with anaphylaxis," says **Ronna L. Campbell**, MD, PhD, a study co-author.

The most common cause of the lawsuits? Exposure to a known trigger. This is followed by delayed recognition or treatment of anaphylaxis and inappropriate use of IV epinephrine. Cases included both over- and underdosing errors. Seventy-seven percent of cases resulted in death or permanent neurologic

or cardiac dysfunction. Healthcare providers named in the lawsuits worked in multiple specialties and settings, including the ED.

"ED providers need to rapidly recognize and appropriately manage anaphylaxis," Campbell advises. Epinephrine auto injectors can mitigate the risk of inappropriate epinephrine dosing. "It is important to have ED systems in place that prevent exposures to known triggers," Campbell adds.

One of the ED malpractice lawsuits involved IV contrast. The other concerned nonsteroidal anti-inflammatory drugs (NSAIDs). "Both the ED cases were about exposure to known allergens and bad reactions after those exposures, with subsequent morbidity for both patients," says **Rachel A. Lindor**, MD, the study's lead author.

Another case resulted in a $3.6 million verdict against the EP defendant.[3] The plaintiff was a 52-year-old woman who underwent a CT scan with IV contrast at a New Jersey ED. She reportedly suffered life-threatening anaphylactic shock and an allergic reaction. This caused stroke, subarachnoid bleeding, hemorrhaging, and neurologic challenges. The lawsuit against the EP alleged failure to take an appropriate history, appreciate the significance of the clinical exam and laboratory tests (which caused contra-indicated tests to be performed), and follow hospital policy.

In the other case, the plaintiff was admitted from the ED with shortness of breath, pain, and chest tightness.[4] The plaintiff reported a prior history of NSAID-sensitive asthma, which caused shortness of breath, loss of consciousness, and vomiting. Despite reporting the allergy, the plaintiff received ibuprofen. As a result, he required intubation and mechanical ventilation for acute, hypercapnic respiratory failure. Over the next four days, the plaintiff required cardioversion after extubation for atrial fibrillation. The ED providers were not found negligent, "but this was actually based on a technicality," Lindor notes.

The courts in Connecticut require that malpractice lawsuits be supported by a "similar healthcare provider" to the person named in the suit. The plaintiff's expert was a pulmonologist. "The court determined that it was not similar enough to an emergency medicine physician, so the case was thrown out," Lindor says. ■

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Report: Liability Fears of Discharging Low-risk Pulmonary Embolism Patients Unfounded

Discharging ED patients with acute pulmonary embolism (PE) was not common and varied widely between facilities, according to the authors of a recent study.[1]

"The evidence that select ED patients with acute PE can be safely treated without hospitalization has continued to mount since 2000," says **David R. Vinson**, MD, an EP with Kaiser Permanente and the study's lead author.

Guidelines began recommending home management as early as 2003. "Yet, the practice has been slow to catch on, both here in the United States and abroad," Vinson notes.

Of 2,387 patients with acute PE in 21 community EDs, 179 were discharged home. Patients selected for outpatient management demonstrated a low incidence of adverse outcomes. Of this group, 13 experienced a five-day PE-related return visit. All-cause, 30-day mortality was lower among home discharge patients compared with hospitalized patients (1.1% vs. 4.4%).

"We wanted ... to demonstrate the safety and effectiveness of outpatient care in a community setting and contribute to the shift in tide that we see coming in the next five to 10 years," Vinson says.

Previously, researchers studied outpatient management of deep vein thrombosis and home care of PE.[2,3] "EDs who send home a higher percentage of their PE population generally have two systemic processes in place," Vinson notes. These EDs help physicians identify PE patients who may be eligible for outpatient management and facilitate timely follow-up after discharge. The 21 community

hospitals in the new study are part of an integrated healthcare delivery system through which timely follow-up after ED discharge is possible. Most ED patients who are discharged home with acute PE receive follow-up in the outpatient setting within one week.[4] "But we had no mechanism in place to help physicians identify low-risk PE patients who could safely forego hospitalization," Vinson reports.

Despite the lack of evidence-based decision support, EPs sent home 7.5% of ED patients with acute PE. "The outcomes of these discharged patients were reassuring," Vinson adds.

The researchers were surprised at how many admitted patients were categorized as low-risk (30-day, all-cause mortality = 0.3%).[5] Vinson says many of these low-risk, low-mortality patients may have been fitting candidates for outpatient care.

The low percentage of home discharges suggests emergency clinicians may default to hospitalization for PE patients. One reason is that EPs generally are risk-averse, Vinson offers. Knowing that some PE patients perform poorly has made physicians overly cautious with the whole population.

"But overcoming such caution may require nothing more than resetting the ED culture," Vinson says.

Vinson notes that liability exposure can be reduced by establishing a clinical practice pathway that provides evidence-based guidance, carefully selecting low-risk patients eligible for home management, and informing patients about the indications for return visits.

"Ottawa University Hospital has demonstrated how even a simple set of exclusion criteria can transform PE site-of-care practice patterns," Vinson says.[6] In a not-yet-published trial, EPs were provided with electronic clinical decision support with risk stratification. "This increased our outpatient management by 60%," Vinson reports. Other investigators recently assessed PE testing rates among 3,024 pulmonary embolism rule-out criteria- (PERC) negative patients who presented to an urban, academic ED.[7] Many of these patients underwent testing for PE, including CT or ventilation-perfusion scan without D-dimer risk stratification.

"Our primary motivation for doing this study was our anecdotal observation that many patients undergo testing for PE even when they are PERC-negative," says **Troy Madsen**, MD, one of the study's authors. The original PERC study was performed in 2004 and validated in 2008.

"The idea behind PERC is to reduce the amount of testing performed," Madsen explains. The researchers wondered how many patients who were PERC-negative continued to undergo testing for PE, because several studies have demonstrated that testing in this group is unnecessary.

"The greatest surprise for us ... was that 25% of patients who came to the ED with chest pain and/or shortness of breath, and who were PERC-negative, had testing for PE," Madsen reports. This was compared to 35% of those who were not PERC-negative and in whom PE testing potentially would be indicated if the physician was concerned for PE.

"Our study took place at an academic medical center, where you would assume physicians would be more willing to adopt evidence-based practices," Madsen says. The researchers did not expect to find 100% compliance with the PERC. But to find so many patients underwent PE testing was a surprise.

"Sometimes, I think we try to avoid liability in the ED by performing more testing than is necessary," Madsen says. It may have been a fear of litigation that drove the EPs to continue to perform testing for PE on patients in whom that testing was not recommended. However, unnecessary testing also carries legal risks.

"If someone had a bad outcome associated with testing, and it was determined that this testing was unnecessary, there would seem to be liability for the physician who ordered this testing," Madsen offers.

Additionally, the diagnosis of PE carries with it the need for long-term anticoagulation and the potential for adverse events associated with this. If the testing that led to that diagnosis was unnecessary, and the patient suffered an adverse outcome from the anticoagulation, there is potential liability, Madsen says.

"We are seeing more recommendations that physicians not perform testing, whether this be in the ED or in primary care screening practices," Madsen notes. ■

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Can Plaintiff Prove Documented ED Evaluation Never Happened?

A man with severe leg pain was diagnosed with sciatica and discharged from an ED. Unfortunately, this occurred without a thorough evaluation that would have revealed the correct diagnosis.

"Six hours later, he presented to another ED with total femoral artery occlusion," says **John Davenport**, MD, JD, physician risk manager of a California-based HMO. The patient lost his leg and later died due to surgical complications.

The initial ED chart documented a full physical, including normal and full leg pulses. The patient's wife, a nurse, was present at the evaluation. She stated at deposition that most of the evaluation never happened. The jury agreed.

"Expert testimony convinced the jury that, given the severe arterial occlusion, the finding of full and equal pulses was impossible, and that the note had been 'templated' into the chart," Davenport says. The parties settled the case for $550,000.

The evaluation note was entered close in time to the ED visit, although not necessarily concurrently. "The bigger issue was the credibility of the note documenting items that were not actually done," Davenport says. "This is a huge risk of a template note." This surprisingly common scenario greatly complicates the defense of any ED malpractice claim. "First, it puts the EP's veracity at issue. Secondly, it calls into question how careful the EP is," says **Frederick M. Cummings**, JD, an attorney in the Phoenix office of Dickinson Wright.

Inadvertent checking of items is one of the legal risks of EMRs. "Even though it was meant to be a time-saving device for practitioners to include more information, practitioners often get lulled into a false sense of security and don't always pay as much attention as they should," Cummings offers.

This complicates defense of ED claims in several ways. One common scenario: Someone checks a box stating that the patient's current medications were reviewed. It turns out the patient was taking a medication that was contraindicated to something that was administered in the ED.

"Now, you're in a he said/she said situation. The patient will say, 'I told them all the medications I was on,' but there's no evidence of it," Cummings says.

Cummings sees a related problem frequently: The EP fails to check off a box he or she should have. "You want to make sure the record indicates you've done everything according to what the patient's condition requires," he advises. If the EMR dropdown box says the EP should check specific systems, and the EP does not do so, that EP is now in a difficult position. This sometimes happens with patients who present with a possible infection. If the box indicating temperature is not checked, the Systemic Inflammatory Response Syndrome protocol is not pulled up. This means all the required interventions are not necessarily performed.

"Now, you have a case of missed sepsis," Cummings notes. "I have seen that too often."

The best, and possibly only, response, at that point? Admit it was overlooked but that the EP's "usual and customary" practice was to always perform the task.

"You can, in most jurisdictions, testify as to what you customarily would have done, even though you might not have a specific recollection of doing it," Cummings says. ■

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ED LEGAL LETTER™

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CME/CE QUESTIONS

1. Which is *true* of the missed testicular torsion cases included in a recent analysis of malpractice claims?

a. All the cases presented with testicular pain, but this was not reported to the EP.
b. The missed cases occurred only in adult patients.
c. Testicular examinations were performed even for patients with atypical symptoms, but no one acted on the findings.
d. Several patients presented with vomiting and abdominal pain, but without testicular pain.

2. Which is important for EPs to consider to avoid diagnostic errors involving appendicitis?

a. Fever is always present.
b. Pyuria and/or hematuria may occur if the appendix location is near the ureter.
c. Patients will have rebound or guarding even early in the disease process.
d. A normal white blood cell count excludes appendicitis.

3. Which is *true* regarding legal exposure for missed chest pain cases?

a. Discharging the "low-risk" chest pain patient requires good documentation of the decision-making that led to the conclusion that discharge is safe and appropriate.
b. EPs should not discuss specifics on what has or has not been ruled out with the patient or family, since they cannot weigh these factors appropriately.
c. Evidence of consultation with a primary care physician, hospitalist, or cardiologist on the admission decision is problematic because it shows the EP was undecided about the safety of discharge.
d. Documentation showing that no one would admit the patient is protective to the defendant EP since the EP's legal obligation ends when admission is not possible.

4. Which is true regarding liability risks of home management of PE?

a. Home discharge of ED patients with PE is common.
b. Growing evidence suggests that select ED patients with acute PE can be treated safely without hospitalization.
c. More than half of PE patients discharged home returned for a PE-related ED visit within five days.
d. Thirty-day mortality was higher in the home discharge group than in those hospitalized.