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CLINICAL **cme**

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with re-emerging viruses

ALSO IN THIS ISSUE

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23 Case Report

Cat Scratch Disease—
the Eyes Have It

30 Health Law and Compliance

Don't Fall Victim to 'Spear Phishing'

40 Revenue Cycle Management

Miss These Updated Codes, and
You're Missing Revenue



Practice Management

Keeping Your Staff on
Track When Merger
Fever Strikes

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LETTER FROM THE EDITOR-IN-CHIEF

Advanced Practitioners Help Advance the Urgent Care Cause



By 2030, the expected shortfall of primary care physicians ranges between 14,800 and 49,300.¹ Under the influence of a growing and aging population, the next decade promises to put extraordinary pressure on the physician workforce. To make

matters worse, physician reimbursement remains stagnant or in decline. Demand for physicians is outpacing supply, and the gap between primary care and specialty care growth is widening. Independent practices are already confronted with unsustainable business economics, and soon, only subsidized primary care will be able to survive. While most urgent care models already rely on advanced practice providers (APPs), the limited supply of physicians and the upside-down business case we expect over the next decade will require us to do so even more heavily.

Nurse practitioners and physician assistants have widely been viewed as a potential stop-gap for the growing shortage. This has fueled an unprecedented expansion of APP training programs and a reinforced provider work-force when it is most desperately needed. What's more, APPs choose primary care as their practice interest more often than physicians. In fact, 78% of NPs choose a primary care discipline vs only 33% of physicians.² With more schools, shorter training requirements, and more primary care interest, NPs practicing in primary care are slated to increase by 47% in the next 6 years, with primary care PAs increasing by 38%.² Yet, scope of practice laws are an obstacle to independent practice for NPs and PAs, and most states require some level of physician supervision. These practice restrictions also have unintended consequences, including the potential of medical liability for the practices that rely heavily on advanced practitioner staffing models. Such is the case for many urgent care centers. In an effort to reduce risk, ensure quality, and provide the necessary support for APPs, a well-structured supervision policy and oversight are critical. Here are a few suggestions:

- Scope of practice, prescriptive authority, supervision, and chart sign-off requirements vary considerably by state. Make sure you understand your state's statutes.
- Internal credentialing and privileging are critical when integrating APPs into urgent care. Some are more prepared than others for the urgent care scope of practice. Experience in a family practice, urgent care, and/or emer-

gency department setting along with a core competency assessment is a good way to narrow the candidate pool.

- Supervision policy is as much a matter of quality as risk management. Improper and/or inconsistent supervision exposes the practice and the providers to liability if there is a bad outcome. These policies should be clear, easy to understand, and signed off on by the APPs and their physician supervisors.
- Given the increased risk and challenge of high-risk presentations, it is highly recommended that the urgent care define what they are and require some level of oversight and consultation with a supervising physician. Examples include chest pain, confusion, shortness of breath, abnormal vital signs, and patients at the extremes of age.

An organized and disciplined approach to supervision can help reduce the risk and exposure caused by training and experience gaps that are inherent to an APP staffing model. However, be aware that a written policy not followed is perhaps worse than no policy at all. Thus, it is critical to enforce and audit your supervision program for appropriate and consistent application. This protects the practice, the practitioners, and the patients alike.

Clearly, the primary care workforce is changing, and urgent care is already at the cutting edge for models utilizing APPs. With sustained attention to credentialing, oversight, and supervision, urgent care can maintain quality and manage risk while expanding the provider workforce in the face of declining physician availability.

References

1. Dall T, West T, Chakrabarti R, et al. The complexities of physician supply and demand: projections from 2016 to 2030. American Association of Medical Colleges. March 2018.
2. UnitedHealthGroup. Addressing the nation's primary care shortage: advanced practice clinicians and innovative care delivery models. September 2018.

Lee A. Resnick, MD, FFAFP
Editor-in-Chief, *JUCM, The Journal of Urgent Care Medicine*

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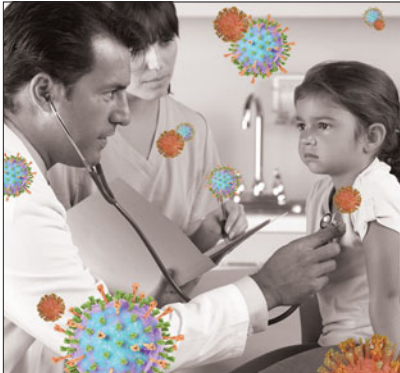
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CLINICAL

11 Unexpected Viral Illness in an Urgent Care Setting: The Re-Emergence of Mumps, Measles, and Varicella

Urgent care centers may be the first stop for patients experiencing symptoms of viruses that had been waning but are now making a comeback. Taking the proper steps can help avert a public health crisis.

Carmen N. Burrell, DO, Melinda J. Sharon, MPH, and Megan Kessell, BA

PRACTICE MANAGEMENT

17 Dealing with the Emotional Impact of a Merger or Acquisition



Mergers and acquisitions have become commonplace in urgent care—and the resulting anxiety and panic among workers might be higher than ever. Learn how to quell concerns and keep things running smoothly.

Alan A. Ayers, MBA, MAcc

CASE REPORT

23 Cat Scratch Disease Presenting as Parinaud's Oculoglandular Syndrome



Oculoglandular symptoms can make for a complicated presentation in some patients. Consider cat scratch disease in the differential diagnosis.

Joseph V.M. Kelly, MD, MBA, Nicholas Baltera OMS-II, and Ronald Dvorkin, MD, FACEP

HEALTH LAW AND COMPLIANCE

30 Education is Key to Avoiding Increasingly Sophisticated Cyber Crime



Digital communication has made confidential medical information more accessible than ever—and not just for trustworthy parties. Being able to recognize the latest scams can keep that information secure and out of the hands of criminals.

Alan A. Ayers, MBA, MAcc

IN THE NEXT ISSUE OF JUCM

Urgent care clinicians may not perform intricate surgical procedures, but if a post-op patient is experiencing complications there's a good chance they'll present to an urgent care center. Sometimes, they just need reassurance that all is well—and sometimes they need immediate, lifesaving care. Being able to recognize the difference quickly and confidently should be in the urgent care provider's skill set. Read all about it in the February issue of JUCM.

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David E. Stern, MD, CPC

ART DIRECTOR

Tom DePrenda

tdeprenda@jucm.com



185 State Route 17, Mahwah, NJ 07430

PUBLISHER AND ADVERTISING SALES

Stuart Williams

swilliams@jucm.com • (201) 529-4004

CLASSIFIED AND RECRUITMENT ADVERTISING

Joseph Petit

Joseph.petit@communitybrands.com • (727) 497-6565 x3706

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JUCM The Journal of Urgent Care Medicine (ISSN 19380011) supports the evolution of urgent care medicine by creating content that addresses both the clinical practice of urgent care medicine and the practice management challenges of keeping pace with an ever-changing healthcare marketplace. As the Official Publication of the Urgent Care Association and the College of Urgent Care Medicine, JUCM seeks to provide a forum for the exchange of ideas regarding the clinical and business best-practices for running an urgent care center.

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Everything old is new again typically has a cheery connotation. But not when the subject is re-emerging viral infections. Measles, mumps, and varicella were once widespread; then, thanks to breakthroughs in immunization, fewer and fewer patients became infected.

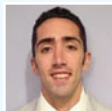
Now, unfortunately, cases are on the rise. Health officials blame increasing travel exposure and decreasing vaccination compliance, chiefly. No matter the cause, urgent care centers are likely to be the first line of defense against widespread infection.

So, our cover article comes at an opportune time. Unexpected Viral Illness in an Urgent Care Setting: The Re-Emergence of Mumps, Measles, and Varicella (page 11), by **Carmen N. Burrell, DO**, **Melinda J. Sharon, MPH**, and **Megan Kessell, BA** dives into the science behind these viruses, and appropriate testing and treatment options.

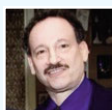


Dr. Burrell is division chief of Ambulatory Operations; medical director of Urgent Care, Student Health Services & International Travel Clinic, and assistant professor in the Department of Emergency Medicine at the West Virginia University School of Medicine. Ms. Sharon is director of research and scholarship and adjunct professor in the West Virginia University School of Medicine Department of Emergency Medicine. Ms. Kessell is a phlebotomist with Octapharma Plasma, and formerly lead scribe at West Virginia University Medicine.

This month's Case Report (page 23), leaves little doubt as to the cause of the patient's complaint, but reflects another less-common presentation. Cat Scratch Disease Presenting as Parinaud's Oculoglandular Syndrome tells the tale of a patient who presents with fever, chills, fatigue, and a variety of ocular complaints. If you guessed this all started after a particular encounter



with his own cat, go to the head of the class. The remaining question is, what would you do about it?



To find out what happened in the case relayed by authors **Nicholas Baltera, OMS II**, **Joseph V.M. Kelly, MD, MBA**, and **Ronald Dvorkin, MD**, go to page 23. **Mr. Baltera** is a second-year student at Nova Southeastern College of Osteopathic Medicine; **Dr. Kelly** works for DaVita; and **Dr. Dvorkin** is with CityMD Urgent Care.

Wide spread panic is likely to be a bigger concern when an urgent care operation merges with or is outright acquired by another company. That's happening a lot these days—often causing worry, frustration, and uncertainty. At the same time, staff need to keep the operation running smoothly. Good lead-

ership and a sound strategy can help. You'll get a good idea of what it will take in Dealing with the Emotional Impact of a Merger of Acquisition (page 17), by **Alan A. Ayers, MBA, MAcc**. Mr. Ayers is the chief executive officer of Velocity Urgent Care, LLC as well as the practice management editor of JUCM.



He also offers insight into protecting the treasure trove of medical, personal, and financial information warehoused in your operation's systems. You're probably at least aware of what the term *phishing* means, but how about *spear phishing*, or a ploy called the *CEO fraud*? Read Education is Key to Avoiding Increasingly Sophisticated Cyber Crime on page 30 and you will—and you'll also be prepared to safeguard against them.

As we welcome in the New Year, JUCM also welcomes a new contributor. **Joshua Russell, MD, MSc, FAAEM, FACEP**, who heads up Quality and Provider Education for Legacy/GoHealth Urgent Care, is stepping in to mine current and recent literature with implications for urgent care. He brings with him some fresh ideas on how we can bridge the gap between the explosive growth of the urgent care marketplace and the more methodical accumulation of scholarly research. This month, he looks at one way patients tend to make snap judgments on you, the clinician; the link between hydration and urinary tract infections; emerging information about acute flaccid myelitis; and other up-to-the minute articles. Abstracts in Urgent Care starts on page 26.



Speaking of the New Year, every January brings changes in CPT codes. And every January we're proud to share the expertise of David Stern, MD, CPC on which new or revised codes will have the greatest effect on urgent care medicine. His Revenue Cycle Management column appears on page 40.

Thanks to Our Peer Reviewers

We're able to bring you relevant content thanks to the generous support of authors and editors who are urgent care veterans. We also rely on urgent care professionals who have volunteered to serve as peer reviewers, helping us ensure what we publish is relevant, without bias, and overall on point. This month, we thank:

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1. To provide best practice recommendations for the diagnosis and treatment of common conditions seen in urgent care
2. To review clinical guidelines wherever applicable and discuss their relevancy and utility in the urgent care setting
3. To provide unbiased, expert advice regarding the management and operational success of urgent care practices
4. To support content and recommendations with evidence and literature references rather than personal opinion

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CONTINUING MEDICAL EDUCATION

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Unexpected Viral Illness in an Urgent Care Setting: The Re-Emergence of Mumps, Measles, and Varicella (p. 11)

1. Which of the following has *not* been shown to contribute to outbreaks of mumps, measles, and varicella?
 - a. Increasing travel exposures
 - b. Decreasing vaccine compliance
 - c. Inappropriate prescribing of antibiotics
 - d. Varying effectiveness of vaccine response
2. Which of the following characterize the prodromal phase of mumps infection?
 - a. May last 1-2 days
 - b. May include headache
 - c. May include rhinorrhea
 - d. May include sore throat and cough
 - e. All of the above
3. Airborne and droplet precautions must both be exercised in order to lower the risk for spreading infection with:
 - a. Varicella
 - b. Measles
 - c. Mumps
 - d. All of the above
 - e. None of the above

Cat Scratch Disease Presenting as Parinaud's Oculoglandular Syndrome (p. 23)

1. Differential diagnoses of cat scratch disease include:
 - a. Orbital cellulitis
 - b. Bacterial conjunctivitis
 - c. Acute angle closure glaucoma
 - d. Uveitis
 - e. All of the above
 - f. All of the above except c
2. Symptoms of periorbital cellulitis, also known as preseptal cellulitis, include:
 - a. Eyelid swelling and erythema
 - b. Bilateral ocular pain
 - c. Fever
 - d. A visual halo effect

3. Which of the following bacteria cause cat scratch disease?

- a. *Bartonella henselae*
- b. *Staphylococcus aureus*
- c. *Streptococcus pneumoniae*
- d. *Haemophilus influenza*
- e. *Klebsiella*

Dealing with the Emotional Impact of a Merger or Acquisition (p. 17)

1. After-effects of mergers that can cause turmoil for companies involved include which of the following?
 - a. Reorganizing of upper management
 - b. Reduction in the workforce
 - c. Cutting salary and benefits
 - d. All of the above
 - e. All except "a"
2. Worker mistrust of their employer during or after a merger/acquisition may result from:
 - a. A belief that decision makers know more than they are willing to share
 - b. Post-traumatic stress disorder
 - c. Dishonesty on the part of management
 - d. Concern that the company will not honor existing agreements
 - e. Distaste for the "other" partner in the deal
3. Which of the following is not among the organization problems management should be prepared to expect in connection with a merger/acquisition?
 - a. Communication tangles
 - b. Productivity problems
 - c. Loss of team play
 - d. Mass requests for vacation days as workers interview for new jobs
 - e. All of the above except "d"
 - f. None of the above



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The Gateway2Better Network— A Member Benefit Coming in 2019

■ LAUREL STOIMENOFF, PT, CHC

Urgent care started as a healthcare disruptor. Let's shake things up again. In late November, the \$69 billion merger of Aetna and CVS Health officially closed with the goal of transforming the delivery of healthcare. Whether they will be successful remains an unknown, but there is little doubt that change is coming, and it will be disruptive. The founders of our industry were innovators and disruptors alike, and on-demand medicine brought consumers previously unimaginable access to convenient, high-value healthcare. An article in *Forbes* distinguished between the two: "Disruptors are innovators, but not all innovators are disruptors—in the same way that a square is a rectangle but not all rectangles are squares."¹

So, as change takes place around us, we must be vigilant and seek disruptive opportunities. Despite industry consolidation and in contrast to the retail clinic market, urgent care remains relatively fragmented. While there has been some industry consolidation, the top 15 multisite urgent care organizations account for less than 20% of the entire industry. Consequently, the Urgent Care Association (UCA) is often approached by entities seeking access to urgent care services, either regionally or nationally. This ask occurs so frequently that it's time to seize the opportunity while also enhancing the benefits of being a UCA member. I've quoted industry leaders who see the value in collaboration citing the aphorism, "a rising tide raises all boats." UCA can consolidate the industry via an urgent care network and bring new opportunities to your door.

An Alternative to the Commercial Payer

The 2018 edition of *Competition in Health Insurance: A Comprehensive Study of U.S. Markets*, published by the American Medical Association (AMA), identified that more than half of all states' commercial health insurance markets were less competitive

than the prior year, concluding that "the majority of health insurance markets in the United States are highly concentrated. Coupled with evidence on their anticompetitive behavior, this strongly suggests that health insurers are exercising market power in many parts of the country and, in turn, *causing competitive harm to consumers and providers of care.*" Year after year, the UCA Benchmarking Report has demonstrated that the lion's share of urgent care center revenue is in the commercial payer bucket. And while a solid payer relations strategy is imperative for the urgent care owner/operator (as well as the UCA), it is also a good strategy to reduce dependence on any dominant part of an industry lifeline. The Gateway2Better Network will provide a vehicle for accessing new revenue streams including, but not limited to, *direct-to-consumer* and *direct-to-employer* strategies.

Low Risk. High Reward. The Gateway2Better Network Vision

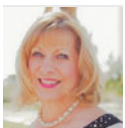
UCA organizational members will be able to join the network via a simple contracting process. The network will notify centers in the network when there are new business opportunities. At that point the member center may opt in or opt out of that particular opportunity. Little to lose. Lots to gain.

Clayton Christenson of the Harvard Business School coined the term "disruptive innovation." He said, "Disruptive innovations are not breakthrough technologies that make good products better; rather they are innovations that make products and services more accessible and affordable, thereby making them available to a much larger population."² Sounds like urgent care.

Learn much more about the Gateway2Better Network at UCA's Annual Convention & Expo, April 7-10 in beautiful West Palm Beach, Florida. Let's come together, rise up, and disrupt again! ■

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Laurel Stoimenoff, PT, CHC is Chief Executive Officer of the Urgent Care Association.

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Unexpected Viral Illness in an Urgent Care Setting: The Re-Emergence of Mumps, Measles, and Varicella

Urgent message: Urgent care providers often see acute public health emergencies due to easy patient accessibility. It is important to identify communicable disease rapidly to control any risk of a community outbreak. This article will focus on mumps, measles, and varicella (chickenpox).

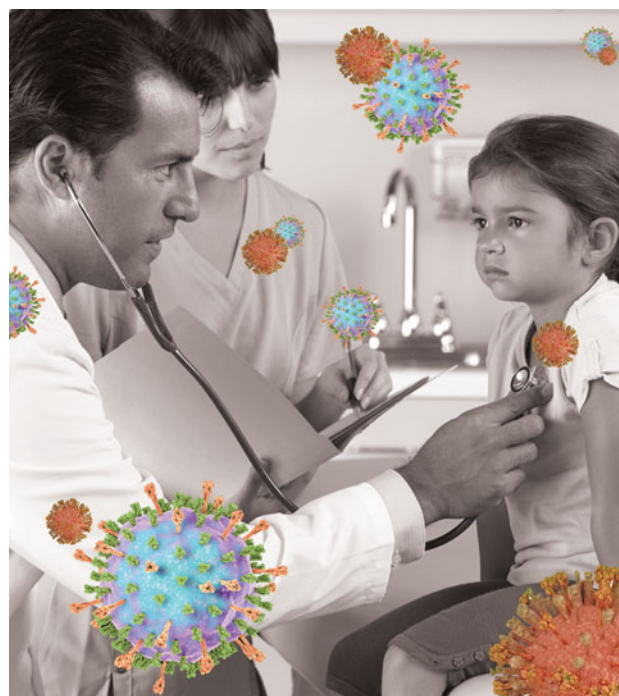
CARMEN N. BURRELL, DO, MELINDA J. SHARON, MPH, and MEGAN KESSELL, BA

In recent years, outbreaks of uncommon infectious diseases have occurred in schools and communities, due to increasing travel exposures, decreasing vaccination compliance, and varying effectiveness of vaccination response. In 2016, over 6,000 cases of mumps were reported to the Centers for Disease Control and Prevention.¹ The following year, 118 people were reported to have measles (rubeola), occurring even after the apparent elimination of measles was documented in the United States in 2000.² Rubella (German measles), is still declared eliminated in the U.S., citing less than 10 cases per year, while data on varicella outbreaks are limited.^{2,3}

A mild and nonspecific prodromal phase including fever, rhinorrhea, cough, sore throat, malaise, headache and decreased appetite occurs with many communicable infections, making diagnosis difficult, but within 1-2 days a rash or swelling may develop, which can help distinguish the diagnosis.

Outbreaks

Mumps outbreaks have become increasingly common, most recently occurring at Syracuse University in October 2017.⁴ From 2009 to 2010, there were 3,502 outbreaks between Canada and the East Coast. Interestingly, 90% of those individuals had received at least one dose



of the MMR vaccine.⁵ In the last 8 years, there have been a total of 1,597 cases. This suggests waning vaccination

Carmen N. Burrell, DO is the Division Chief of Ambulatory Operations; Medical Director of Urgent Care, Student Health Services & International Travel Clinic; and an Assistant Professor in the Department of Emergency Medicine at West Virginia University School of Medicine. **Melinda J. Sharon, MPH** is the Director of Research and Scholarship, and adjunct instructor, in the Department of Emergency Medicine at West Virginia University School of Medicine. **Megan Kessell, BA** is a phlebotomist with Octapharma Plasma, and formerly lead scribe at West Virginia University Medicine. The authors have no relevant financial relationships with any commercial interest.

immunity, due to differences in antigens between the vaccine strain and outbreak strains. Inadequate vaccine coverage or use of the Rubini vaccine strain are also major leading causes of recent mumps outbreaks.⁶ Although the vaccination offers protection in most cases, during periods of an outbreak, a third vaccination is often recommended to close contacts and may offer increased protection.⁷

The CDC recommends the following measles immunization regimen for all patients planning international travel, before departing the United States:⁸

- Infants 6 months through 11 months of age should receive one dose of MMR vaccine; infants who get one dose of MMR vaccine before their first birthday should get two more doses (one dose at 12 through 15 months of age, and another dose at least 28 days later)
- Children 12 months of age and older should receive two doses of MMR vaccine, separated by at least 28 days
- Teenagers and adults who do not have evidence of immunity against measles should receive two doses of MMR vaccine separated by at least 28 days

Similar to measles and mumps, chickenpox outbreaks are most common in close contact settings, such as schools and childcare centers. However, since the introduction of two recommended doses for vaccination in 2006, outbreaks and hospitalizations have significantly decreased. Outbreaks were reported in six states between 2005 and 2012.⁹

Urgent care providers should also be aware of cultural differences, as some communities may resist immunization as seen in recent outbreaks.

History and Physical Examination

Historical clues to the diagnosis should include questions to identify sick contacts, a possible immunocompromised state, any recent travel, and vaccination status. Historical questions should explore timing and duration of prodromal symptoms such as fever, rhinorrhea, cough, sore throat, malaise, headache, and decreased appetite as well as presence and duration of rash and neck or testicular swelling. More serious symptoms such as altered level of consciousness, hearing loss, respiratory distress, or abdominal pain should also be defined. With presence of rash, inquire as to noninfectious etiologies such as exposure to new soaps, medicines, clothes, detergents, or foods.

Vital signs and the general appearance of the patient should be assessed, including any signs of pallor,

diaphoresis, respiratory distress, or confusion. Tachycardia, arrhythmias, increased respirations, wheezing, rales, and rhonchi would all indicate a worsening patient status. Upon HEENT exam, the conjunctiva should be examined for any injection or discharge, as conjunctivitis is a common symptom of measles but may also be present in other serious diagnoses such as Kawasaki disease. The mucosa membranes should be assessed for hydration status and lesions, and the oropharynx for erythema and exudates. Any glandular swelling, as can occur with mumps, should be noted. With a measles infection, the identifying feature is Koplik spots, clustered white lesions on the buccal mucosa, accompanied by a maculopapular rash progressing from the face to the body. This is distinguished from the rash in chickenpox, which has a teardrop vesicular appearance (umbilicated center) that originates on the trunk. The hallmark of mumps is swelling and tenderness of the parotid glands but can also involve testicular swelling.

Example Case: Mumps

H&P: A 59-year-old woman presented to the urgent care with 4 days of night sweats and chills, rhinorrhea and postnasal drainage, a dry cough, and sneezing which then progressed to swelling and pain of her left face and around her left ear. Patient noted that her left-sided jaw pain was exacerbated with chewing and swallowing. She was using symptomatic medications including a nasal spray and an antihistamine. Her past history revealed that her immunizations were up to date, and she denied any recent travel or known sick contacts. Upon physical examination, vitals were normal and she was afebrile. Soft tissue swelling was present over the left parotid gland with associated tenderness. No discrete mass or bony tenderness was noted, and no rashes were present on her exposed skin. Her ENT exam revealed serous fluid behind the left tympanic membrane and a mildly erythematous oropharynx with postnasal drainage. Lymphadenopathy was present on the left anterior cervical chain.

Differential diagnosis

The differential diagnoses included inflammatory and infectious causes of parotitis, including sialadenitis, Epstein-Barr virus (EBV), cytomegalovirus (CMV), influenza, human immunodeficiency virus (HIV), paramyxovirus mumps, and a bacterial etiology. While measles, mumps, and varicella have similar prodromal phases, there are distinguishing characteristics; the most notable symptom is parotid gland swelling, which is

caused by mumps. Chickenpox and measles each have distinctive rashes that begin 1-3 days after initial prodromal symptoms.⁵

Testing and results

Laboratory tests included serum mumps IGM and IGG antibodies, CBC with differential, EBV serology, CMV IGM antibodies, and serum HIV testing. The results returned with a positive serum mumps IgM antibody. Her mumps IgG antibody was also positive, indicating past exposure or vaccination. Additional testing was negative.

Patient outcome

The patient was instructed to use sialogogues and hydration, and to avoid close contact with others until complete resolution. The local health department was notified of the positive testing. On follow-up 5 days after the urgent care visit, her symptoms were almost completely resolved.

Testing

Mumps

The recommended test for mumps is a buccal and oral swab for RT-PCR.^{10,11} If positive with a suggestive clinical picture, a diagnosis of mumps can be made unless the patient has been vaccinated within the last 45 days. A negative test does not exclude mumps, however.¹¹ Serum laboratory tests often fail to confirm if a previously vaccinated patient has an active infection. Elevated Ig-M results can be false positives in vaccinated individuals, and these tests are often negative in persons with acute mumps infections.¹⁰ Acute phase reactants may take up to 5 days to test positive, during which a patient should be isolated. Urine samples may also be collected for diagnosis of mumps; however, viral levels are often too low to detect an active infection successfully.¹⁰

Measles

Laboratory recommendations for measles are often guided by the local health departments, although the World Health Organization advocates serum IgM antibody as the standard test for confirmation. As with mumps, many false positive and false negatives can occur with IgM testing. In general, the diagnosis can be made by one of the following tests: serum measles IgM antibody, noting a significant rise in IgG antibody between acute and convalescent titers; isolation of measles by culture; or detection of measles virus RNA by RT-PCR.¹²

For patients with a concerning rash or possible Koplik

spots, seen in 50%-70% of measles cases, measles IGM antibody or measles RNA by RT-PCR must be performed to rule out the communicable disease. A throat or nasopharyngeal swab and urine sample can also detect the virus.²

Varicella

In varicella, the most sensitive method for confirming diagnosis is the use of PCR to identify the virus in skin lesions. IgM antibody testing is considered less sensitive.¹³ IgG antibodies can also be followed for a rise between the acute and convalescent periods, which has good specificity but less sensitivity than PCR testing.¹⁴

Complications of Infection

Complications from mumps are especially prevalent in adults. Of these, epididymo-orchitis is the most common in 15%-30% of cases.¹⁵ Oophoritis (5%) and mastitis ($\leq 1\%$) can also occur in women.^{1,15} On the other hand, complications of measles are most prevalent in children under 5-years-old, adults over 20-years-old, pregnant women, and immunocompromised individuals and include otitis media sometimes progressing to permanent hearing loss, and subacute sclerosing panencephalitis (measles encephalitis).^{1,15}

Discussion and Differentiation of Mumps, Measles, and Varicella

Overview

Mumps is a viral illness caused by a paramyxovirus, with an average incubation period of 16-18 days. Common features of the presenting illness include pain, tenderness, and swelling of the parotid glands. Additional salivary glands may also have associated swelling. Prodromal symptoms are typically present for several days prior, and may include fever, myalgia, fatigue, loss of appetite, malaise and headache, which may be difficult to distinguish from other viral illnesses.¹ Similarly, the virus may also only present with respiratory symptoms, making the diagnosis more challenging. The mumps virus is asymptomatic in nearly 33% of affected individuals, proposing yet another challenge in diagnosis.¹

Measles, another highly contagious paramyxovirus, spreads through contact with infectious droplets or by air with an incubation period of 7-14 days.² It is particularly challenging since the virus can live up to 120 minutes in the air after an infected person breaths, coughs, or sneezes.² Similar to mumps, measles often starts with prodromal symptoms such as a high fever and malaise, in addition to cough, coryza, and conjunctivitis (known as the three Cs). In contrast to mumps, measles will

often cause Koplik spots to develop within 2 to 3 days after initial symptoms. Within 3 to 5 days of initial symptoms and 14 days from initial exposure, a maculopapular rash starts on the individual's face or hairline and spreads to their body. The rash quickly subsides, making it imperative to form a quick diagnosis. Individuals are infectious from 4 days prior to development of the rash, until 4 days after the rash appears.²

Chickenpox is a herpesvirus¹³ spread by touch or airborne virus particles from an infected individual with an incubation period of 10-21 days.³ Similar to measles and mumps, chickenpox starts with prodromal symptoms of fatigue, malaise, loss of appetite, headache, and fever. However, the most notable symptom of chickenpox is the rash, which develops 1-2 days after onset of the prodromal phase and causes 250-500 pruritic blisters to develop on the individual's face, torso, and extremities.³ Chickenpox poses a challenge as the individual is infectious 1-2 days before the rash starts, but it presents similarly to many other common viruses seen in urgent care settings. Once the rash develops, individuals are infectious until the blisters scab, which usually takes 5-7 days. Many children will miss over a week of school due to chickenpox infections.³ Most healthy individuals who get infected with chickenpox do not experience complications. However, chickenpox is most concerning in babies, adults, pregnant women, and those with weakened immune systems; hospitalizations were common prior to vaccination.¹

Pregnancy complications

Illnesses with pregnancy present their own complications for both the mother and child. Measles, mumps, and varicella infections can all lead to birth defects and possible fetal demise. When a varicella infection occurs close to delivery, the infant can develop congenital varicella, which can have lasting effects on the infant.¹⁵ With any of these complications, close follow-up would be necessary. Treatment for viral illnesses is supportive to help alleviate discomfort or to address complications that may develop. In severe cases of hospitalized pediatric patients with measles, vitamin A is administered.² In high-risk pediatric patients with chickenpox, acyclovir can be administered.¹⁶

Public Health Considerations

Isolation and prevention

Patients should be isolated until the risk of transmission is low. With all three of these viral processes, airborne and droplet precautions must be exercised. Healthcare

staff with close contact should use appropriate respiratory precautions available in case of vaccine failure, and an airborne isolation room is preferred when available. With a mumps infection, the individual must be isolated for at least 5 days following onset of symptoms. Measles patients must be isolated 4 days after developing a rash, and anyone without immunity should avoid possible contact for 21 days after the rash onset.² Concern for chickenpox transmission lasts until the rash is completely scabbed over, usually up to 7 days.^{1,3}

Postexposure vaccinations

The MMR vaccine can be offered to anyone without previous immunity within 72 hours of measles exposure, or immunoglobulin administered within 6 days of exposure may provide some protection. Postexposure prophylaxis with IVIG should be administered to immunocompromised patients, including patients with HIV infection and CD4 percentage <15% and pregnant women without evidence of immunity.¹⁷ There is some evidence to support that due to possible waning immunity, an additional MMR booster vaccination can aid with improving immunity in the setting of a current outbreak. Although there is no current postexposure recommendation for mumps, one study found that the attack rate of mumps was lower when receiving three doses of MMR compared with two, and there was increased risk if the second MMR dose was received 13 years or more before the outbreak.⁷ An additional study found a third dose of MMR reduced the risk by 78.1% when compared to two doses.⁷ Similar recommendations apply to chickenpox exposure. For individuals exposed to varicella who cannot receive the vaccine, immune globulin is recommended within 10 days of exposure.¹⁸

Vaccinations

The measles, mumps, and rubella (MMR) vaccination provides protection from the diseases and further complications of the illnesses. The vaccination is a mixture of live attenuated viruses that became available in 1967, and has decreased the occurrence of mumps and measles cases by 99% in the United States.¹ The current recommendation for the pediatric vaccination is two doses: one between 12-15 months of age and the second between 4-6 years of age.¹ Two doses of the MMR vaccine are, on average, 88% effective against the mumps virus, with a range of 66% to 95% efficacy.¹ With regard to measles, two doses of the MMR vaccine are 97% effective and one dose is 93% effective.² Anyone who has received the vaccination should be at lower risk for transmission; this

could influence the provider's decision making to overlook any less prevalent disease process.

To prevent chickenpox, the varicella vaccination was developed in 1995 and decreased the occurrence of chickenpox by 97% between 1995 and 2010.⁹ As with the MMR vaccine, individuals are recommended two doses: one between 12 and 15 months of age and the second between 4 and 6 years of age. In addition, a combination vaccine with MMR and varicella, known as MMRV, has been created and is available to select children 12 months to 12 years of age.⁹ It has been shown that two doses of the chickenpox vaccine are 94% effective at preventing the disease.⁹ In addition, the varicella vaccine has a range of 70%-90% efficacy against any varicella infection, and 90%-100% efficacy against severe disease. In 2001-2005, populations with high frequency of individuals with only one dose of the varicella vaccine led to many outbreaks which proved that one dose was not efficient in prevention of chickenpox. This led to the recommendation of two doses starting in 2006. Fortunately, chickenpox immunity has since been shown to be long-lasting, and breakthroughs tend to be much less severe and without presence of a fever.⁹

Since both vaccinations are live attenuated viruses, the vaccination may be contraindicated in severely immunocompromised individuals. HIV-infected patients without severe immunosuppression may receive the single antigen varicella vaccine, while patients with CD4 counts >15% may still receive MMR.¹⁹

Treatment

Supportive care is recommended including antipyretics, analgesics, and application of cold packs.

Conclusion

Mumps, measles, and chickenpox often present with vague, prodromal symptoms which may make a diagnosis difficult. However, with an increase in recent outbreaks, these diagnoses should be considered, as a timely diagnosis may prevent spread. ■

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Summary: Complications and Isolation

- **Complications**
 - Mumps: Especially prevalent in adults; epididymo-orchitis is the most common in 15%-30% of cases; oophoritis (5%) and mastitis (≤1%) can also occur in women.
 - Measles: Most prevalent in children under 5-years-old, adults over 20-years-old, pregnant women, and immunocompromised individuals and include otitis media sometimes progressing to permanent hearing loss and subacute sclerosing panencephalitis.
 - Chickenpox: Most healthy individuals who get infected with chickenpox do not experience complications. However, chickenpox is most concerning in babies, adults, pregnant women, and those with weakened immune systems.
- **Isolation**
 - Patients with a mumps infection must be isolated for at least 5 days following onset of symptoms.
 - Measles patients must be isolated 4 days after developing a rash; anyone without immunity should avoid possible contact for 21 days after rash onset.
 - Concern for chickenpox transmission lasts until the rash is completely scabbed over, usually up to 7 days.

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Dealing with the Emotional Impact of a Merger or Acquisition

Urgent message: Urgent care has seen significant merger and acquisition activity in recent years, which is certain to cause worries, frustrations, and stresses for employees. Understanding the problems—as well as the opportunities—associated with a change in ownership better positions employees to assure both the company and their career interests are well served.

ALAN A. AYERS, MBA, MACC

The robust growth of the urgent care business model continues to attract the interest of the private equity sector, making the industry a hotbed of merger and acquisition (M&A). In urgent care, private equity investors have identified and seized upon an opportunity to combine formerly local, physician-entrepreneurial businesses into regional and super-regional platforms. This allows the larger platforms to realize scale and expertise in operations, real estate, and marketing—while gaining negotiating leverage with payers and insurers. Additionally, the fact that urgent care is highly fragmented, consisting of many independent and local physician-run businesses, and that it's a retail-oriented, scalable business model, has spurred tremendous M&A activity.

When private equity executes urgent care mergers and acquisitions, though, they do so with a definitive exit strategy: selling via arbitrage, which is an academic way of saying “buy low, sell high.” Thus, the business case for M&A in urgent care has been realizing “price-earnings multiple expansion” or an “arbitrage on the multiple.” For example, private equity buys an independent practice for a price of, say, four times earnings, merges it with other urgent care acquisitions, and then sells the larger, scaled platform for up to 16-20 times earnings. This is due to the way arbitrage typically works; the larger company will sell at a higher multiple of earnings before interest, tax, depreciation, and amortization (EBITDA) simply because of its scale economies.



This is the vehicle private equity investors leverage to realize a profit with urgent care M&A.

How Mergers/Acquisitions Impact Urgent Care Employees

While profits and dividends are usually a good thing, there's an often-overlooked human element to mergers and acquisitions. In the wake of the “rightsizing” that occurs during a merger or acquisition, employees often

Alan A. Ayers, MBA, MAcc is Chief Executive Officer of Velocity Urgent Care and is Practice Management Editor of *The Journal of Urgent Care Medicine*. The author has no relevant financial relationships with any commercial interests.

experience a total upheaval of their professional lives. Indeed, there may be a complete restructuring of either the acquired company or the newly formed urgent care organization, forever transforming employees' once-familiar place of work. There could be a reorganizing of upper management, a reduction of the workforce, and/or across-the-board cost-cutting (including salaries and benefits), for instance. In other words, considerable workplace turmoil.

This turmoil is felt across every level of the urgent care organization. While corporate functions such as accounting, HR, marketing, and IT would seem the most obvious to be affected, the clinical function is impacted equally. While the clinical staff of nurses, medical assistants, technicians, and providers is vital to delivering patient care regardless of ownership, and thus would seem to be somewhat insulated from the upheaval happening all around them, all employees will have to cope with new pay and compensation policies, changes in culture, new leadership and management styles, and unfamiliar systems and processes—not to mention the emotional impact of seeing their past working relationships change or end.

What Urgent Care Employees Can Expect from M&A

In his insightful handbook, *The Employee Guide to Mergers and Acquisitions*, author Price Pritchett lays out in plain but compelling language the psychological consequences of a merger/acquisition for employees, and what they can expect to experience through a tumultuous transition period. Here we'll summarize Pritchett's work as it pertains to an urgent care merger/acquisition, as well as review the practical tips to surviving and thriving during a destabilizing merger or acquisition situation.

Three Psychological Shockwaves of a Merger/Acquisition

Upon initial news of the merger or acquisition being imminent, Pritchett characterizes three distinct "psychological shockwaves" that ripple through the company:

- Uncertainty and ambiguity
- Mistrust
- Self-preservation

Uncertainty and ambiguity. Employees are on edge and bracing for unpleasant surprises. Who is being let go? Who is changing departments? How is my role going to change? Who might quit? Everything is murky and uncertain.

At this stage, there are far more questions than

answers. Executives and upper management tend to be discreet with the information they do have and offer very few details, promises, and assurances. There's a lot of improvising going on.

While everyone will find this period challenging, the uncertainty has a decidedly negative effect on employees who are not well-adapted to such a work environment. As their job and roles are blurred by changes and become less well-defined and organized, many employees will grow concerned, confused, and frustrated over what's taking place.

Mistrust. The second shockwave is a dramatic drop in trust throughout the company. Employees are wary that a merger/acquisition is taking place, hence their level of suspicion rises. And they feel like the leaders and decision makers always know more than they are willing to divulge. People feel like they must watch their back and can no longer take anyone at their word.

Self-preservation. Given the lack of trust amid the uncertainty of a merger, employees begin adopting strategies to protect themselves. Feeling that they cannot rely on the company, they start acting in ways that serve their best interest. This is manifested in some employees becoming aggressive and jockeying for position, with others lying low to avoid stirring the pot.

Taken together, these three shockwaves will typically result in a major decrease in the company's operating efficiency. The business is undergoing dramatic changes, and a whole new set of problems is soon to appear over the horizon.

New Organizational Problems

As they are a natural consequence of mergers and acquisitions, management cannot prevent the three psychological shockwaves. Management can try to do their best to minimize and control them, but they can't be avoided entirely.

According to Pritchett, the three initial psychological shockwaves typically result in various organizational problems that management must be ready to navigate and cope with. They are as follows:

■ Communication Tangles

During a merger situation, the information flow between departments and business units is one of the first things to suffer. As all-around trust drops, employees will be reluctant to share information. People mince their words and refuse to make definite statements.

Also, employees will be less honest and forthcoming with management regarding their opinion on certain topics. And as there is little-to-no accurate information being circulated, the rumor mill tends to crank up. This dearth of quality, productive workplace communication can lead to genuine problems within a company.

■ **Productivity Problems**

Naturally, once the communication channels are stymied, productivity nosedives. Few individuals and departments are willing to make firm decisions, so work stalls. Rather than doing their jobs, employees grouse, complain, and worry about the merger. This wastes many hours of productivity.

And since most employees have shifted into self-preservation mode, few are willing to go out on a limb and make a decision or take a risk. Everyone is playing it safe and would rather do nothing than inadvertently do the wrong thing.

■ **Loss of Team Play**

Teamwork is another key factor that drops off during a merger/acquisition. As the merger itself is a major distraction, employees tend to go into their own little silos and simply not work well together, or at all. Sure, they protect their own little group or business unit, but this can cause the larger organizational wheels to grind to a halt. Projects that require collaboration from several departments often become a casualty of organizational politics.

Additionally, people leave and join new teams, which further hinders team play. People must learn to work together, often in new roles, which can be challenging in the initial stages.

■ **Power Struggles**

In a merger, traditional power networks inevitably change. Some managers gain sway and authority, while others lose it. Meaning, the way things used to get done through the usual channels may not be effective anymore.

Also, corporate games and organizational politics ramp up during this period. Infighting can see a dramatic rise, with projects being abandoned or sabotaged due to people losing their former power and influence.

■ **Low Morale, Weak Commitment**

As frustration mounts, many demoralized employ-

ees may simply quit trying. They feel the circumstances are too formidable an obstacle to overcome, and they eventually burn out from trying too hard to be a “good soldier” and perform their job the way they used to.

Also, shifting departmental and corporate objectives can lead to confusion and a lack of firm direction for employees. Add to that the fact that when leaders leave the company or transfer to different business units, loyalties that had been forged over time are now absent, which affects motivation.

■ **Bailing Out**

Every merger or acquisition results in employees who will simply refuse to be part of the new company and leave. Whether it's due to sheer frustration, or a fear that they would soon be demoted or fired, they decide to take their fate into their own hands and bail out preemptively.

And while there will always be a few employees who leave for a better opportunity elsewhere, many of those who bail out do so from a sense of ill-advised panic. They refuse to stick it out through the merger when it might have been in their best interest to stay on board during the transition.

■ **Grief and Mourning**

When there is change, tumult, and upheaval in a person's life, they experience a natural and predictable emotional pattern. A workplace merger is no different, as this can be felt as a significant change or loss. The sense of security and familiarity employees used to enjoy at work may now be gone, which includes the camaraderie they shared with their coworkers and colleagues.

Overall, this can be a very stressful experience. Negative emotions during this period run the gamut, including anger, fear, worry, and sorrow. These are natural consequences of mergers though and are to be expected. During the grieving and mourning period, Pritchett identifies three distinct stages that leaders should anticipate their employees going through:

Stage 1: Shock and Numbness

When news of the merger comes down, many employees are stunned. While some people become numb, others panic—or vacillate back and forth between the two extremes. Notably, genuine emotional pain is largely absent at this stage. This is because people are still so

shocked at the news that they haven't fully processed it. Still, some people will display anger and lash out at the most safe and convenient target.

Stage 2: Suffering

At this stage the full impact of the merger has sunken in, and true emotional pain is experienced. Fear of change is at its height during this stage, and people's true feelings become much more conspicuous and apparent.

Everyone is worried about the specifics, even if they're still fuzzy, of what is about to be lost or given up in the merger. There is a great deal of discussion regarding aspects of the merger that threaten to impact employees the most.

Management must understand that employees experiencing and expressing this range of emotions is all part of the healing process. Hence, management would do well to not attempt to scuttle or suppress these displays of emotion, as long as employees don't go overboard. This venting is cathartic and therapeutic.

There is a need, however, to distinguish between those who are grieving earnestly, and those who are simply insurgents who are actively trying to disrupt the organization. These people can cause real damage and must be dealt with accordingly. For the former group though, they're simply trying to cope with the new situation.

Many employees will become resigned, apathetic, and moody, given that their prevailing feelings are hopelessness and impotence. This can lead to a lack of investment in performing their job to their usual standard, and mentally checking out. Again, management must show understanding during this time, and allow employees the space to express themselves within reason.

One of the best ways to navigate this stage is for employees to have someone they trust to confide in. If the employees don't feel they can trust company leadership or management, then they should look to their spouse or friends to vent. One of the most common ways employees vent is to lapse into moments of nostalgia, idealizing the way things used to be while reminiscing about old times.

This is also a time where many employees are at a heightened risk of throwing up their hands and quitting. Emotions are raw and at full throat, which can lead to irrational decision making. Organizations must brace themselves for the onslaught and do their best to maintain their organizational cohesiveness.

Stage 3: Resolution

At this point, employees have accepted the reality of

their new situation and can begin taking meaningful action toward becoming productive employees again. Much of the negative emotions will have dissipated, and people can look at the circumstances of the merger more objectively.

In fact, during this stage, employees are more hopeful and willing to give the merger a chance. They become proactive and start seeking out information on the potential positive benefits of the change. People shake off their doldrums and become more action-oriented.

In short, people accept what's happening, and resolve to get down to the business of doing their jobs to the best of their ability under the new conditions. There might even be a renewed sense of enthusiasm that accompanies this emotional shift. And while there may be short relapses into suffering from time to time, most employees are truly ready to move on.

Putting Things Into Perspective

As Pritchett lays out, this three-stage process is simply what employees go through in a merger situation. Harboring negative feelings during the merger doesn't make an employee a malcontent. On the contrary, these emotions are to be expected in the wake of a dramatic change that involves a sense of change and loss.

No one is to blame, although mourning employees will often view managers and executives as convenient targets. But this is short-sighted, as the company leaders may not have had much choice in the merger and are trying their hardest to make it work for everyone. Regardless, at this point the focus must turn to what the employee can do to survive, and even thrive during the merger. To that end, Pritchett offers 10 essential steps employees can take to minimize potential problems for themselves, and even become a more valuable member of the new organization.

Survival Step 1: Control your attitude. When there's not much you can do about the circumstances around you, you still are in total control of your attitude. In the end, the merger is underway, and you have the choice of what kind of attitude you're going to have. Will you choose to focus and fixate on everything that you feel is wrong about the merger, or be a change agent and figure out how you can offer solutions? Will you view the merger as a career setback, or a prime opportunity to grow professionally?

This is not to say that there won't be frustrations, or moments of fear, depression, and professional inadequacy; there very well may be. The key is to seek out

opportunities to get on board with the direction and vision of the new company and embrace—rather than shirk—the challenges ahead of you. Once you finally accept the merger and commit to having a positive attitude, it is likely that the positives will become more apparent and attractive.

Survival Step 2: Be tolerant of management mistakes.

During a merger, there can be a lowered tolerance for management mistakes, resulting in overly disgruntled employees. After all, people are going to be sensitive during this transition. But it's key to remember that management made mistakes before the merger, as well.

Another thing to keep in mind is that management is likely privy to more information than you, so what seems like a mistake from your perspective may in fact be the move that was necessary at the time. Perhaps the move you disagree with was actually the lesser of two potential evils, and management simply chose the best option.

Additionally, management may be doing a lot of improvising, and faced with a number of tradeoffs. They won't be able to please everyone, so it's best to recognize that they have a tough job, too, and give them the benefit of the doubt wherever possible. Resist the urge to unfairly blame and criticize without knowing all the facts.

Survival Step 3: Expect changes and be a change agent.

In a merger or acquisition, change is inevitable and expected. Amid change, employees will assume the stance of either resisting the change or going with the flow. Don't be one of the employees who fights change at every turn and suffers as a result. Rather, be a change agent, and maintain your flexibility toward adapting to the new workplace landscape.

You will likely have to deal with new bosses and coworkers. Your department or job function may be altered. Different processes may be installed and implemented. And there may be new performance expectations placed upon you.

Even if you thought things were running just fine before, the new leaders may see room for improvement and want to implement new systems. So, don't balk at every change that comes your way. Be as resourceful and proactive as you can, demonstrate initiative, and give things a chance. You may be pleasantly surprised at how they turn out.

Survival Step 4: Don't blame everything you don't like on the merger.

During a merger, employees tend to romanticize the past and harken back to how won-

derful things used to be. But the reality is there were problems before, so resist the urge to blame every little thing on the merger.

Companies change all the time, even in the absence of a merger. But the merger affects practically everyone, so it's an easy target to aim your frustrations at when changes you don't like are implemented. The better attitude to take here is to just accept that there will be things you don't like about any company. Besides, the merger may result in some the issues you had with the old company finally being resolved.

Survival Step 5: Be prepared for psychological soreness.

Probably the most unpalatable thing about mergers for employees is that they involve considerable change. People are creatures of habit and routine, and change means breaking those habits and routines. And since people are naturally resistant to change, you can expect some "psychological soreness" to result.

Since psychological soreness is unpleasant, you'll see a lot of overt and covert resistance to the new changes. This resistance can come in the form of complaining, substandard performance, and procrastination. However, the sooner you can come to grips with the new routine, the sooner you can begin to develop new habits that will help you avoid problems and meet the new performance expectations.

Survival Step 6: Get to know the other company.

People often analogize mergers to marriages. If this is the case, then it's a good idea to learn a few things about your marriage partner. And if the merger is with a company that was a former competitor, you will have to dispel any negative feelings you may be harboring toward them and learn to work together.

Indeed, you should embrace the new company wholeheartedly to facilitate the transition. A great place to start in familiarizing yourself with your new partner is by reviewing their marketing materials, such as websites, social media channels, brochures, and newsletters. You can also talk with employees of the new company and seek out opportunities to connect both socially and professionally. Don't remain on the sidelines. Rather, extend yourself, and demonstrate that you are part of the new team.

Survival Step 7: Use the merger as an opportunity for growth.

A merger is a true wake-up call for many employees. If you've grown stale in your job, a merger can be a real shock to the system. It can cause you to reevaluate

yourself and take a critical look at not only your job performance, but your career prospects. It can also reveal to you whether you're living up to your potential, or just coasting.

This is the perfect time to stretch yourself professionally and set some new career goals. No matter what changes comes down the pike—a new boss, a new department, or new responsibilities—embrace them and seize the opportunity to grow. In fact, actively seek them out, if you can handle them. The last thing you want to do is add more stress to your professional life by taking on too much additional responsibility too soon. Still, it's a good idea to view the merger as a fresh start and take aim at some new professional and career targets.

Survival Step 8: Keep your sense of humor. Sometimes, the best way to approach a professional adversity is with a sense of humor. It can help lighten your mood and keep things in their proper perspective. Don't take things too seriously and look for the humor in the situation.

This principle goes back to the first survival step, controlling your attitude. Ultimately, you have the choice on how you will deal with the merger situation. Laugh or cry, the choice is up to you. Why not have a laugh? If something funny arises, and it's appropriate to, why not chuckle about it with your coworkers? They say laughter is indeed the best medicine, and it's a great stress reliever. So, have a sense of humor when you can, as it will help uplift those around you.

Survival Step 9: Practice good stress management techniques. No matter the flavor of a merger or acquisition—friendly or hostile—employee anecdotes consistently shows that the most prevalent reaction is stress.

This is to be expected, especially if your professional identity—not to mention your paycheck—is threatened. Work relationships may be altered or dissolved, and new demands may have to be met. Stress is a normal response to a threat, real or perceived, and often in a merger situation, it's not entirely clear which is which.

Hence, stress management is critical, and can be approached in a variety of ways. Some people look to physical activity like exercise, golf, yoga, swimming, gar-

“Amid all the distractions that a merger situation brings, the best way to stay grounded is to keep doing your job to the best of your abilities.”

dening, or long walks to relieve stress. Others prefer deep breathing exercises and meditation to relieve stress. Still others take comfort in spending time with friends and family. Regardless, having an outlet to manage your stress will keep you mentally and emotionally healthy during the merger, and shield you from burnout.

Lastly, you can control your own mind as a form of stress management. You accomplish this by ignoring rumors and gossip and refusing to take things personally. Remain calm and look at every situation as objectively as possible.

Don't make anything personal or allow it to affect your self-worth.

Survival Step 10: Keep doing your job. Amid all the myriad distractions that a merger situation brings, the best way to stay grounded is to keep doing your job to the best of your abilities. Even when management is dragging their feet on important decisions and companywide communication has slowed, resolve to continue working hard. Don't give in to the tendency to just throw your hands up in frustration.

Don't succumb to peer pressure if those around you have decided to mail it in and slack off. Instead, look for ways that you can positively impact your coworkers, the company, and yourself by taking your responsibilities seriously. No matter what, don't give away your power and leave your professional fate in the hands of others by being a substandard employee. By remaining diligent and continuing to work hard, management will likely notice, which can only benefit you in the long run.

Conclusion

As urgent care sees increased M&A activity, companies will have to deal with the psychological shockwaves that accompany the dramatic loss and change a merger brings—as well the secondary problems that result for employees across every level of the organization. By understanding, accepting, and developing strategies to navigate the emotional processes that employees and the company as a whole has to go through, urgent care leaders are better equipped to steer the company through this tumultuous time—so it can emerge on the other side a greater overall organization. ■



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Cat Scratch Disease Presenting as Parinaud's Oculoglandular Syndrome

Urgent message: Cat scratch disease caused by the bacteria *Bartonella henselae* typically presents as isolated lymphadenopathy in the region draining the inoculation site (cat scratch or saliva), as well as systemic symptoms such as a fever and malaise. In otherwise healthy people, oculoglandular symptoms are occasionally seen as a complicated presentation. CSD should be included in the differential diagnosis of these symptoms.

NICHOLAS BALTERA OMS II, JOSEPH V.M. KELLY, MD, MBA, and RONALD DVORKIN, MD, FACEP

Case Presentation

History

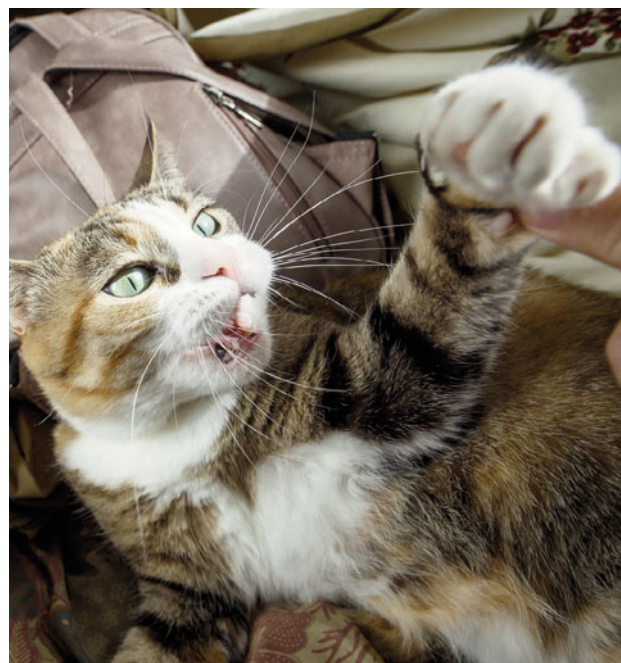
A 46-year-old man complained of a 5-day history of fever, chills, fatigue, left eye pain, eye redness, eye tearing, and photophobia. The patient stated he was taking over-the-counter cold medicine for his symptoms with no relief. The patient had no significant past medical or surgical history.

Physical examination

Vital signs were normal except for a temperature of 101.6° F. Upon physical examination, neck was supple but there was severe left preauricular tenderness with approximately 5 cm of swelling. The left conjunctiva was injected and erythematous. Pupils were equal, round, and reactive to light. There was no proptosis, extraocular movements were intact, and there were no painful eye movements. Visual acuity was 20/40 bilaterally. Healing scratches to the right forearm (contralateral) were observed. There was no axillary lymphadenopathy.

Additional history

When questioned about the scratches to the right fore-



arm, the patient stated they were caused by his kitten. The patient stated he had allowed his kitten to lick his

Nicholas Baltera, OMS II is a second-year medical student at Nova Southeastern College of Osteopathic Medicine. Joseph V.M. Kelly, MD, MBA is a physician with CityMD Urgent Care. Ronald Dvorkin, MD, FACEP is a physician with CityMD Urgent Care. The authors have no relevant financial relationships with any commercial interests.

Figure 1.



Image of a patient with Parinaud oculoglandular syndrome.¹⁰ (© 2018 American Academy of Ophthalmology)

“It is important to identify the etiology of isolated eye pain, eye redness, photophobia, fever, and facial swelling/lymphadenopathy as there are different treatments and disease progression.”

face while playing about a week ago. His symptoms started 2 days after the licking incident. The patient was sent to the emergency department to confirm the initial diagnostic impression of cat scratch disease (CSD). There, he was started on intravenous antibiotics and discharged with a prescription for azithromycin (500 mg PO QD on Day 1, then 250 mg PO QD for Days 2-5). Follow-up with an ophthalmologist a week later showed improvement in physical examination and reduced preauricular lymphadenopathy. One-month follow-up confirmed resolution of all symptoms.

Discussion

CSD is caused by the gram-negative intracellular bacteria *Bartonella henselae*. Cats are the major reservoir for the bacteria, with transmission between cats occurring via the arthropod vector *Ctenocephalides felis* (cat flea). The bacteria can be transmitted to humans via a cat scratch or cat saliva. CSD typically presents as isolated lymphadenopathy in the region draining the inoculation site with systemic symptoms such as a fever and malaise.

Atypical presentation of CSD occurs in approximately 5% to 14% of cases, with Parinaud oculoglandular syndrome (POS) being a major complication.¹ Typical symptoms of POS include foreign body sensation in the eye, unilateral eye redness, increased tear production, and regional lymphadenopathy which affect either the preauricular, submandibular, or cervical lymph nodes.² (See Figure 1.)

The definitive diagnosis of CSD remains difficult and is usually made on a clinical presentation. Serological testing with enzyme immunoassay or indirect fluorescence assay can be used in efforts to confirm clinical symptoms²; however, there are shortcomings with these tests, as several studies revealed poor sensitivities and specificities.^{3,4} CSD is often self-limiting, and symptoms typically resolve in 2-4 weeks. However, there's evidence that suggests azithromycin helps the rate of decreasing lymph node size.¹ In complicated cases of CSD with central nervous system involvement, a combination therapy of doxycycline (100 mg PO or IV twice daily) with rifampin (300 mg PO twice daily) for 4-6 weeks has been successful.^{5,6} The immunocompromised population needs even more attention with ocular involvement with CSD; there is evidence of disease progression if diagnosis and treatment are delayed.^{7,8}

Although there was no serological testing to confirm diagnosis in this case, the history of present illness, clinical symptoms, and improvement with azithromycin as the antibiotic therapy are suggestive of POS as atypical presentation of cat scratch disease. We postulate that the symptoms were caused by direct saliva contact with the patient's face rather than as a hematogenous spread of the cat scratch on his contralateral arm.

Differential Diagnosis

It is important to identify the etiology of isolated eye pain, eye redness, photophobia, fever, and facial swelling/lymphadenopathy as there are different treatments and disease progression.

The differential diagnoses include the following:

- Orbital cellulitis
- Periorbital cellulitis (preseptal cellulitis)
- Bacterial conjunctivitis
- Acute angle closure glaucoma
- Uveitis

Orbital cellulitis is an infection of orbital contents, posterior to the orbital septum, which can cause loss of vision and loss of life in extreme cases.^{11,12} Symptoms may include ocular pain, eyelid swelling and erythema, chemosis, ophthalmoplegia, pain with eye movements,

and proptosis. Typically, orbital cellulitis is associated with a preceding sinusitis that spreads from perforations of the adjacent ethmoid sinuses. The most common bacterial agents are *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Streptococcus anginosus*, and *Streptococcus pyogenes*.¹³⁻¹⁵ Bacterial cultures are especially hard to obtain unless surgical intervention is indicated. Imaging modalities such as a CT scan can be utilized to identify the source of the inflammation. Antibiotic treatment for orbital cellulitis includes vancomycin plus ceftriaxone or cefotaxime.

Periorbital cellulitis (often called preseptal cellulitis) is an infection of the eyelid and contents anterior to the orbital septum. Symptoms include unilateral ocular pain, eyelid swelling and erythema, and, occasionally, chemosis; it is often confused with orbital cellulitis, though there is usually no associated ophthalmoplegia, pain with eye movement, or proptosis. Causes include spread from a surrounding sinusitis or local trauma to the eyelids.^{13,16} The identification of the bacteria causing the infection is difficult because blood cultures are usually negative, and cultures are not possible unless there is a lesion.¹⁷ Recommended treatment includes a combination of trimethoprim-sulfamethoxazole or clindamycin plus amoxicillin or amoxicillin-clavulanic acid or cefpodoxime, or cefdinir.

Other causes of a unilateral red eye include bacterial conjunctivitis, which may infrequently spread to the surrounding tissue. Bacterial conjunctivitis typically presents with unilateral eye injection, purulent discharge throughout the day, possible morning crusting, and exposure to infected individuals.¹⁸ The most common bacteria that cause bacterial conjunctivitis are *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Moraxella catarrhalis*.¹⁹ Treatment for bacterial conjunctivitis should include an antibiotic ointment or solution such as erythromycin or trimethoprim-polymyxin B.

Acute angle glaucoma, uveitis, and corneal abrasions will present with an isolated red eye and ocular pain as well, but usually do not affect surrounding tissue.

The features that made the diagnosis of CSD more likely were the presence of prominent regional lymphadenopathy and a history of exposure to cats in conjunction with a unilateral red eye.

“The presence of prominent regional lymphadenopathy and a history of exposure to cats in conjunction with a unilateral red eye made diagnosis of CSD more likely.”

Summary

- Cat scratch disease is caused by *Bartonella henselae*
- Parinaud oculoglandular syndrome can occur in about 5% of presentations
- Bartonella infections can be serious in immunocompromised patients
- Azithromycin has been shown to reduce duration of symptoms

Conclusion

In patients presenting with unilateral oculoglandular symptoms, clinicians should have a high suspicion of a *Bartonella henselae* infection. ■

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ABSTRACTS IN URGENT CARE

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■ JOSHUA RUSSELL, MD, MSc, FAAEM, FACEP

A Brief Introduction

Happy New Year! 2018 is now behind us and it was another great year for urgent care. We are fortunate to work in one of the most dynamic and rapidly growing fields in medicine. I find it thrilling that the future of urgent care is ours to define and design.

According to data from the UCA, last year nearly 150 million patients received care in U.S. urgent care centers. These patients deserve quality, evidence-based care; however, the rapid growth of urgent care has outpaced scholarly research in the field. As always, Abstracts in Urgent Care represents our efforts to fill this gap. Similarly, your readership of *JUCM* demonstrates your commitment to continuing self-education and safe delivery of care to your patients.

After Glenn Harnett, MD stepped down as the author of Abstracts in Urgent Care last fall, I was honored to be asked to take over the role of curating this department. In recent years, I have spent a lot of time thinking about clinical quality in urgent care. I've peer-reviewed thousands of urgent care charts as part of quality improvement initiatives and participated in the education and training of hundreds of urgent care providers across the country. Through this experience, one truth has emerged most prominently: practicing in urgent care is a tough job. As curator of Abstracts in Urgent Care, my goal is to provide content that makes the job a bit easier for each of you.

There are some challenges to urgent care practice that are immutable—the demanding pace and long hours, for example. Unfortunately, reading Abstracts in Urgent Care won't change

these aspects of the work. However, through this space, I am committed to presenting the most relevant peer-reviewed literature to enhance your clinical effectiveness.

Keeping current with a wide array of medical knowledge is certainly a critical aspect of urgent care practice, and Abstracts in Urgent Care will continue to deliver important updates in evidence-based acute care. But it doesn't take much time in urgent care to realize that proficiency in this job consists of much more than knowing the best antibiotic to treat otitis media and cellulitis. It is the cognitive and behavioral aspects of our work—such as communicating with patients, recognizing risks of diagnostic error, and mitigating decision fatigue—which arguably play a larger role in clinical effectiveness, especially in this digital era where reference materials are easily and constantly at our fingertips. This reality is the motivation for the addition of the Urgent Care Practice section in Abstracts in Urgent Care. In coming months, you'll find practice-changing entries located here, addressing the psychological and metacognitive aspects of urgent care work in addition to the summaries of current and pertinent medical literature you've come to expect from Abstracts in Urgent Care.

In urgent care, how you think about the job is often just as important as what you know. I'm excited to make Abstracts in Urgent Care your source for the most relevant research summaries to keep you at the top of your game in urgent care in 2019 and beyond. Happy learning!

URGENT CARE PRACTICE What You Wear Matters

Key point: Provider attire has a meaningful effect on patient experience. Patients ascribe more positive characteristics to clinicians wearing white coats regardless of provider gender and the type of attire worn underneath the white coat.

Citation: Petrilli CM, Saint S, Jennings JJ, et al. Understanding



Joshua Russell, MD, MSc, FAAEM, FACEP practices emergency and urgent care medicine, and manages quality and provider education for Legacy/GoHealth Urgent Care.

patient preference for physician attire: a cross-sectional observational study of 10 academic medical centres in the USA. *BMJ Open*. 2018;8(5):e021239.

Urgent care providers are tasked with quickly establishing rapport and gaining the trust of numerous new patients each shift. Positive patient experience has been shown to be associated with better adherence to treatment plans and improved outcomes. In this large, national survey, researchers administered a questionnaire to over 4,000 patients at 10 different hospitals across the U.S. The investigators asked the participants for their preferences in physician attire after showing them photos of seven male and female models dressed in either scrubs, business casual, or formal clothing—with or without a white coat—or a business suit. Participants were asked for their opinions about the clinician's character across five domains: knowledgeability, trustworthiness, caringness, approachability, and comfort. Fifty-three percent of respondents expressed that the "physician's attire was important to them during care." In general, formal attire with a white coat was the most preferred attire by study participants, and adding a white coat to each type of dress improved the patients' perceptions of the clinician. Interestingly, a subanalysis looking at patient opinions for attire based on the gender of the provider showed a much stronger preference toward wearing a white coat for female compared to male providers. Based on the results of this study, wearing a white coat seems to be an effective, simple, and low-effort strategy for improving patients' perception of your competence. But remember, white coats are a proven fomite as well, so keep them clean! ■

Advise Women with UTIs: Drink Plenty of Water

Key point: *Ensuring adequate water intake is a simple, safe, and inexpensive way to reduce the risk of UTI in women.*

Citation: Hooton TM, Vecchio M, Iroz A, et al. Effect of increased daily water intake in premenopausal women with recurrent urinary tract infections: a randomized clinical trial. *JAMA Intern Med*. 2018;178(11):1509-1515.

We commonly tell patients presenting with urinary tract infections and other urinary complaints to "drink more water" to speed their recovery and reduce the risk of recurrence. While this recommendation may have intuitive logic, few studies have examined the truth behind such axiomatic advice. Additionally, virtually all prior research on this topic has involved only observational studies and, therefore, has been unable to demonstrate a causal relationship between dehydration and UTI risk. In this study, investigators performed an open-label, randomized controlled trial comparing the risk of recurrent cystitis among 140 healthy young women with low baseline reported water intake (<1.5L/day). Participants were randomized either to continue

with their regular amount of water consumption or to increase their water intake by 1.5L/day. The results were both highly statistically and clinically significant. Participants drinking more water had 53% fewer episodes of cystitis on average during the 12-month follow-up period. Subjects drinking more water required 1.9 antibiotic prescriptions vs 3.6 prescriptions in the standard hydration group. You can feel confident recommending better hydration as a proven strategy to reduce risk of UTI recurrence, especially in women who admit to not drinking enough water or provide urine samples with high specific gravity. ■

Not Familiar with Acute Flaccid Myelitis? Your Patients' Parents Will Be

Key point: *Acute flaccid myelitis (AFM) is a rare but serious polio-like condition, generally affecting children, that UC providers should be familiar with. It is commonly associated with typical viral syndromes and occurs most often during the late summer and early fall.*

Citation: Van Haren K, Ayscue P, Waubant E, et al. Acute flaccid myelitis of unknown etiology in California, 2012-2015. *JAMA*. 2015;314(24):2663-2671.

It was September 2014 when CDC researchers began learning of clusters of cases of a polio-like illness affecting pediatric patients across the U.S. Most were previously healthy, school-aged children with a precedent upper respiratory infection or gastrointestinal-type illness. Needless to say, the popular press ran with the story, invoking fear in the minds of parents nationwide. The illness was acute flaccid myelitis (AFM). The cause of AFM remains unknown; however, there is some association with types of enterovirus and adenovirus. It occurs sporadically as well as seasonally. Most patients have only partial recovery and remain permanently disabled. There is no effective treatment for the condition, though neurologists may recommend trials of plasmapheresis, IVIG, and/or corticosteroids.

The urgent care provider should be familiar with this condition because parents may bring their child in with concerns for AFM in the setting of a viral illness, especially during times of higher media coverage. Subtle, early findings suggesting AFM include ptosis or other cranial nerve palsy, difficulty swallowing, and/or objective limb weakness. As urgent care is a likely care destination for parents with concerns for AFM, it is important for providers to feel comfortable assessing for these findings and reassuring parents (when appropriate) or referring patients for a higher level care if neurologic deficits are present. These rare cases will require evaluation by a pediatric neurologist and should be referred, ideally, to an ED where this is available. ■

Trich is Getting Trich-ier

Key point: *While single-dose metronidazole (2 g PO) has long been considered standard therapy for trichomoniasis in healthy*

“While keeping up-to-date on current research relevant to urgent care is highly valuable, it is equally important to be familiar with the landmark studies of recent decades.”

women, a 7-day course (500 mg PO BID) resulted in significantly fewer treatment failures in this study. The number needed to treat (NNT) with a 7-day course to prevent one treatment failure was 12. Single-dose metronidazole therapy is still not recommended in women with HIV.

Citation: Kissinger P, Muzny CA, Mena LA, et al. Single-dose versus 7-day-dose metronidazole for the treatment of trichomoniasis in women: an open-label, randomised controlled trial. *Lancet Infect Dis*. 2018;18(11):1251-1259.

Forgive the pun, but *Trichomonas vaginalis* is indeed among the trickiest STIs. Testing is unreliable and symptoms are often subtle or nonexistent, especially in males. Consequently, trich is commonly passed between partners multiple times prior to eradication. Untreated *Trichomonas* infections can lead to serious reproductive system pathology and poor birth outcomes in pregnant women. The recommended mainstay of treatment for *Trichomonas* has long been a single dose of 2 g of metronidazole in healthy patients. However, in this recent multicenter, RCT of over 1,000 women, single-dose metronidazole was compared with BID dosing for 7 days. The researchers found significantly fewer treatment failures in the women receiving 1 week of therapy (11% vs 19%). The longer course of metronidazole was similarly well tolerated. While “one-and-done” therapies for STI treatment are appealing for providers and patients, it is worth strongly considering a longer course of therapy when treating women with *Trichomonas* infections. ■

Another Strike Against the Quinolones

Key point: There is mounting evidence that even short courses of fluoroquinolones can predispose patients to significant increases in the short-term risk for aortic catastrophes.

Citation: Lee CC, Lee MG, Hsieh R, et al. Oral fluoroquinolone and the risk of aortic dissection. *J Am Coll Cardiol*. 2018;72(12):1369-1378.

It wasn't long after the development of the fluoroquinolone class of antibiotics that the FDA took note of a disproportionately large number of patients who developed musculoskeletal symptoms, most commonly in the Achilles tendons, after a course of these novel drugs. Initially, however, additional side effects were felt to be relatively rare and during the 1990s and early 2000s, pharmaceutical companies developed a

number of quinolones, marketing them for a wide array of bacterial diseases. For a time, quinolones seemed to be something of a Holy Grail for clinicians and patients alike—a broadly effective class of oral antibiotics with convenient dosing schedules. In the last decade, however, we have begun learning of a variety of more severe adverse reactions associated with quinolone use. Despite numerous black box warnings, quinolones remain among the most widely prescribed antibiotics in the outpatient setting. Further concerns continue to emerge regarding the safety of quinolones (beyond the black box warnings) and their toxicity to various systems.

In this retrospective case-crossover study, researchers identified over 1,000 cases of aortic aneurysm and dissection and compared the odds of being exposed to a systemic quinolone antibiotic in the 60 days before their aortic event to a different, random, earlier 60-day period. They found that the odds of having symptomatic/ruptured aortic aneurysm or dissection to be 270% greater in the months following quinolone use. Longer courses of quinolones (>14 days) seemed to confer an even higher short-term risk of aortic disaster. While this is observational data, it is worth taking note of. Fluoroquinolones are known to disrupt collagen synthesis, which could predispose to acute aortic pathology. The researchers estimated that the number needed to harm (NNH) with aneurysm or dissection for individuals over 65 who are prescribed a quinolone is only about 500. ■

THE GREATEST HITS

While keeping up-to-date on the most recent research relevant to urgent care medicine is highly valuable, it is equally important to be familiar with the landmark studies of recent decades that have defined sound, evidence-based acute care practice. In this section, we will regularly highlight such studies worth knowing about and discuss their impact for our field. To begin, our first “greatest hit” study will be the original trial by Dr. Nate Kuppermann and his colleagues from the Pediatric Emergency Care Applied Research Network (PECARN).

Which Pediatric Head Injuries Can Be Safely Sent Home from Urgent Care?

Key point: Clinical decision rules for head injury are highly valuable to the urgent provider given the low availability of advanced imaging. The PECARN pediatric head CT rules are among the most useful in urgent care. Clinically important traumatic brain injury is, thankfully, very rare in children. Using a defined list of clinical criteria for children ages 0-2 and >2 years, the vast majority of pediatric patients presenting with acute head injury can be reliably cleared without need for CT imaging.

Citation: Kuppermann N, Holms JF, Dayan PS, et al. Identification of children at very low risk of clinically important brain injuries after head trauma: a prospective cohort study. *Lancet*. 2009;374(9696):1160-1170.

Pediatric head injury is among the most common trauma presentations to urgent care. Kids have large heads and they tend to hit them often. There's a lot at stake, too, so parents who bring their child in after a head injury are understandably anxious. Mounting evidence exists to suggest the potential for adverse effects of diagnostic ionizing radiation, especially in younger patients. However, despite this, CT use in the U.S. doubled from 1995-2005. With this backdrop, Kuppermann, et al sought to find a set of clinical criteria that could reliably exclude TBI requiring intervention (eg, subdural, epidural hematoma, skull fracture, etc.) in pediatric patients, thereby offering parents the reassurance they seek without exposing their children to dangerous (and unnecessary) radiation.

In this prospective cohort study, investigators followed over 40,000 children presenting to more than 25 EDs across the county for evaluation of acute head injury. Patients were followed for 90 days after their initial presentation by phone follow-up. Among this large group of children presenting to an ED for head injury, only 60 (0.1%) required neurosurgery.

Using the defined criteria for each age group, the PECARN Pediatric Head CT Rule was found to be 100% sensitive for excluding clinically important TBI (ciTBI) in children <2 years and 96.8% sensitive in those older than 2 years. The slightly lower sensitivity of the decision rule in the older children is due to two missed cases of ciTBI identified on phone follow-up, neither of which required surgery.

Since the development of the PECARN rule, several other clinical decision rules (CDRs) for ciTBI in children have been developed, namely CATCH and CHALICE. In a 2014 study, however, the PECARN head CT rule outperformed these other CDRs in identifying children at very low risk of ciTBI who could safely forgo CT imaging. To minimize unnecessary ED referrals, parent anxiety, and pediatric radiation exposure, the urgent care clinician should be intimately familiar with the PECARN Head CT Rule—or at least remember to go to MDCalc and look it up—when caring for children with minor head injuries. ■

Call for Authors

JUCM, The Journal of Urgent Care Medicine has built a reputation as the voice of the urgent care community by engaging urgent care professionals at every level.

In fact, we thrive on contributions from the urgent care community. The process tends to work out pretty well for our authors at times, too. For example:

- **January 2017:** Ralph Mohty, MD, MPH and Michael Esmay, MD submit an article on a real-life patient for consideration in our Case Report department
- **May 2018:** Drs. Mohty and Esmay are bestowed with a Silver Award in the American Society of Healthcare Publication Editors 2018 Awards Competition—the 15th time *JUCM* has taken home a prize in our history

Might you be next?

If you have an idea, or even a completed article, email it to us at editor@jucm.com.

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Education is Key to Avoiding Sophisticated Cyber Crime

Urgent message: As digital communication becomes more integral to our daily lives and job functions, cybercriminals are increasingly employing nefarious social engineering tactics like “phishing” to steal valuable information. Urgent care employees must be trained to recognize phishing scams, and how to effectively safeguard themselves and their organizations from attack.

■ ALAN A. AYERS, MBA, MAcc

As society becomes more 24/7 connected, most of our personal and professional lives reside online. The tools we use to work and play—not to mention our financial accounts—have become increasingly digital, directly accessible from the palm of our hands through our internet-enabled devices.

This of course opens us up to more online scams and fraud than ever before, as opportunistic cybercriminals continue to utilize tried-and-true methods to gain access to our information. And when these cybercrooks fail to steal our data through their brute-force hacking methods, they’re now employing a more indirect and sophisticated method: social engineering.

What is Social Engineering?

Social engineering foregoes the use of typical digital hacking tools, and instead relies on the manipulation and exploitation of human psychology to gain access to personal information, financial data, computer networks, and online platforms. So rather than using, say, a computer program to scan for network and software vulnerabilities, scammers will simply assume the guise of a trusted business entity or individual, and deceive their target. Whether it be passwords, bank and credit card numbers,

account information, login credentials, or other sensitive data, cybercriminals continue to develop social engineering ruses—some simple, others sophisticated—to prey upon unsuspecting businesses and individuals. Here, we’ll briefly look at social engineering tactics and examine how they’re carried out, as well as protective measures to avoid falling victim.

Phishing

Phishing is any attempt to manipulate a target into sharing sensitive information such as user names and passwords, bank routing numbers, Social Security numbers, account PINs and credit card details. Phishing attacks work when the attacker assumes the identity of a trusted entity like a bank, well-known company, or other trustworthy source.

Phishing attacks are typically impersonal and sent to millions of random email addresses. They generally employ a “spoofed” or forged email address that appears to have originated from the purported source, when in fact it’s from the scammer. Text messages and IM accounts can also be vehicles for phishing scams. The sender will often implore the target to click a link within the message, which is where the trouble begins. Clicking the link can trigger the installation of malware on the device (used to capture account information, monitor network traffic, or remotely control the PC) or send the target to a fraudulent URL to enter sensitive data. The hope is that by sending out mass mailings to millions of potential targets, a small percentage will take the bait and fall into the trap.

So how exactly do phishing targets get fooled? First, the



Alan A. Ayers, MBA, MAcc is Chief Executive Officer of Velocity Urgent Care and is Practice Management Editor of *The Journal of Urgent Care Medicine*.

messages typically contain trusted logos, familiar-looking brand color schemes, and links to familiar websites. Additionally, the phony messages play off the human emotions of greed, fear, loss, gain, and urgency: "Click this link to claim your requested funds now" or "Urgent, your account has been compromised and you must change your password immediately." And even though many mass-mailed phishing messages feature mistakes and grammatical errors, most people don't catch on until it's too late. It's our natural inclination to trust, avoid loss, and receive gains that cybercriminals bank on. And it works, to the tune of billions of dollars in losses each year.

Spear Phishing

Unlike phishing, which is a random and impersonal attack sent to millions of potential targets, spear phishing is aimed at specific individuals or groups. Spear phishing requires scammers to spend time and effort to research their targets in order to gain access to personal details. And as much of our information these days resides online, sites such as Facebook, Twitter, and LinkedIn can provide cybercriminals a treasure trove of information. Once the scammer knows the victim's location, place of employment, friends and colleagues, social networks, and recent online purchases, they set their trap in motion.

Originating from what appears to be a trusted individual or company the target does business with, the spear phishing attack appears legitimate and authentic. These messages contain details that a random scammer couldn't possibly know, making them very convincing. Hence, the target is more likely to click the embedded link or open the attachment. The messages also rely on urgency, offering compelling, personalized explanations as to why passwords, account numbers, and PINs are needed immediately.

Once the information is stolen, the scammers can access and empty bank accounts or open credit accounts in the victim's name. They can apply for loans or use the victim's Social Security number to create a new identity. And since most people use a single password (or some variation of it) for all their accounts, a compromised password essentially gives a cybercriminal the keys to the kingdom.

CEO Fraud

CEO fraud, also known as business email compromise (BEC) or whaling, is similar to spear phishing, but with a critical difference: Rather than posing as a trusted friend or business, the scammer assumes the identity of a high-ranking or influential member of a person's business organization. The aim is to acquire sensitive information or trick the target into completing a wire transfer at the behest of the "CEO."

First, social engineering tactics are employed to compromise a company email address, allowing the scammer to send a phony message from a bigwig, to lower-ranking employees—typically those with access to company finances. In this case,

the scammer is still relying on personal details common to spear phishing attacks, but with the added knowledge that the employee will be reluctant to not carry out the boss's orders.

To pull off a fraud of this magnitude, the scammer will research and gather publicly available information about the company: its corporate structure, job titles, and employees in key positions. Then the scammer will craft a convincing email from the "boss"—complete with company logos and a perfectly replicated corporate signature—with just enough detail to sound convincing, but not enough to reveal themselves to be frauds. The "boss" will, for example, need a wire transfer completed outside of normal business hours, and outside of normal channels and procedures. The boss will also be busy, unavailable by phone, and need the request handled urgently. And if the boss's email is convincing enough, the recipient will be hesitant to question their instructions; the FBI reports that over \$12 billion was lost between October 2013 and May 2018 due to BEC scams, attesting to how compelling these attacks are.

Awareness and Education

Defending against these attacks begins with awareness and education. Consider the following strategies for protecting yourself and your organization.

Defense Against Phishing and Spear Phishing

- **Be skeptical and suspicious.** Be wary of any unsolicited messages, regardless of the source. Rather than clicking on a link, launch your browser and go to the URL directly to investigate if it's a legitimate message. Also, hover your mouse over a link to check the URL destination. The URL should match the link's anchor text; if it doesn't, it's likely a fraudulent or malicious transmission.
- **Think first, act second.** Scammers bank on you acting impulsively. So when encountering a message that purports to be urgent, time-sensitive, or high-pressure, slow down and assess the entire context of the request before acting.
- **Watch for email hacking.** Even if an email appears to come from a friend, family member, or colleague, that doesn't guarantee that their account wasn't hacked. So, regard odd-looking messages that contain links, downloads, and attachments with suspicion, and double-check with the sender before clicking.
- **Ignore foreign offers.** These are almost always fake. Any legitimate organization who claims you've won a sweepstakes or lottery would contact you directly by phone.

Defense Against CEO Fraud

- **Implement company-wide training and awareness campaigns.** Everyone in your organization, particularly those in sales, IT, HR, and finance should be trained on how to guard against CEO fraud. Training should include examples of real-

Table 1. Examples of Spear Phishing and CEO Fraud Messages

- “I’m in a meeting, but I have something urgent I need you to take care of for me....”
- “This invoice needs to be paid immediately so the contractor can start work today. Please see the attached wiring instructions.”
- “I’m on a call with the insurance provider rep now. Can you please reply immediately with a copy of Mary Smith’s ID and insurance card?”
- “Your credit card at the hotel for tomorrow night was declined. Can you verify the number or provide a new card to use?”

life CEO fraud cases, how to spot spoofed email addresses, strict protocols pertaining to financial transactions and sensitive data, who to turn to when in doubt, and proper procedures for handling downloads, attachments, and links.

- **Consider two-factor authentication (2FA) for highly sensitive and restricted accounts.** 2FA requires not only the

correct login credentials, but a physical device, such as smart-phone or security token to complete the login process. This way, even if a password is compromised, the scammer is dead in the water without the accompanying physical device.

- **Robust password management.** All employees should be required to use passwords that include letters, numbers, and symbols; these should also be changed every few months.

Conclusion

Phishing, spear phishing, and CEO fraud are on the rise, with successful attacks costing companies their money and reputations, while leaving ruined careers in its wake. Hence, the onus is on company leaders to educate their workforces about how cybercriminals exploit social engineering to steal sensitive information. Combine this awareness and education with a robust training program on how employees can detect and thwart these scams, and you can operate with the piece of mind and security that your organization is well-protected from a very real threat. ■

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In each issue, *JUCM* will challenge your diagnostic acumen with a glimpse of x-rays, electrocardiograms, and photographs of conditions that real urgent care patients have presented with.

If you would like to submit a case for consideration, please email the relevant materials and presenting information to editor@jucm.com.

An 11-Year-Old Boy with Forearm and Wrist Pain After a Fall



Case

The patient is an 11-year-old boy who presents complaining of pain in his left and right forearm and wrist after falling from a height of approximately 5 feet. His parents report that he was attempting to hang upside down by his knees from a chin-up bar in his school's gymnasium when he slipped.

View the images taken and consider what the diagnosis and next steps would be. Resolutions of the case is described on the next page.

THE RESOLUTION

**Differential Diagnosis**

- Bowing fracture of the radius
- Buckle fracture
- Greenstick fracture
- Physiologic bowing
- Stress fracture

Diagnosis

This patient sustained a bowing fracture of the radius. The x-ray shows abnormal gentle bowing of the radial shaft without any definite fracture line or cortical break, as well as soft tissue swelling.

Learnings/What to Look for

- Bowing fractures of the long bones occur exclusively in children and adolescents
- Radius and ulna are the most common sites, followed by the fibula
- Because they're softer, more elastic, and have thinner cortex, pediatric bones tend to bend under angulated longitudinal

force/stress. With low force, the bones bend and return to normal shape and position upon release of the force. If the force is greater than the mechanical strength of the bone, the bone undergoes a plastic deformation and remains deformed and bowed upon release of the force. Pathologically these bowed bones have multiple micro fractures along the concave border of the bone which are not visible on radiographs

- Fractures typically occur following a fall from a height on outstretched hands from furniture, climbing equipment, and monkey bars
- Typical symptoms are painful swelling and deformity

Pearls for Urgent Care Management and Considerations for Transfer

- Bowed fractures with $<20^{\circ}$ angulation are managed conservatively, without manipulation
- Fractures with $\geq 20^{\circ}$ angulation are treated with reduction/manipulation

Acknowledgment: Images courtesy of Teleradiology Associates.



A 57-Year-Old Man with 3 Days of Lightheadedness

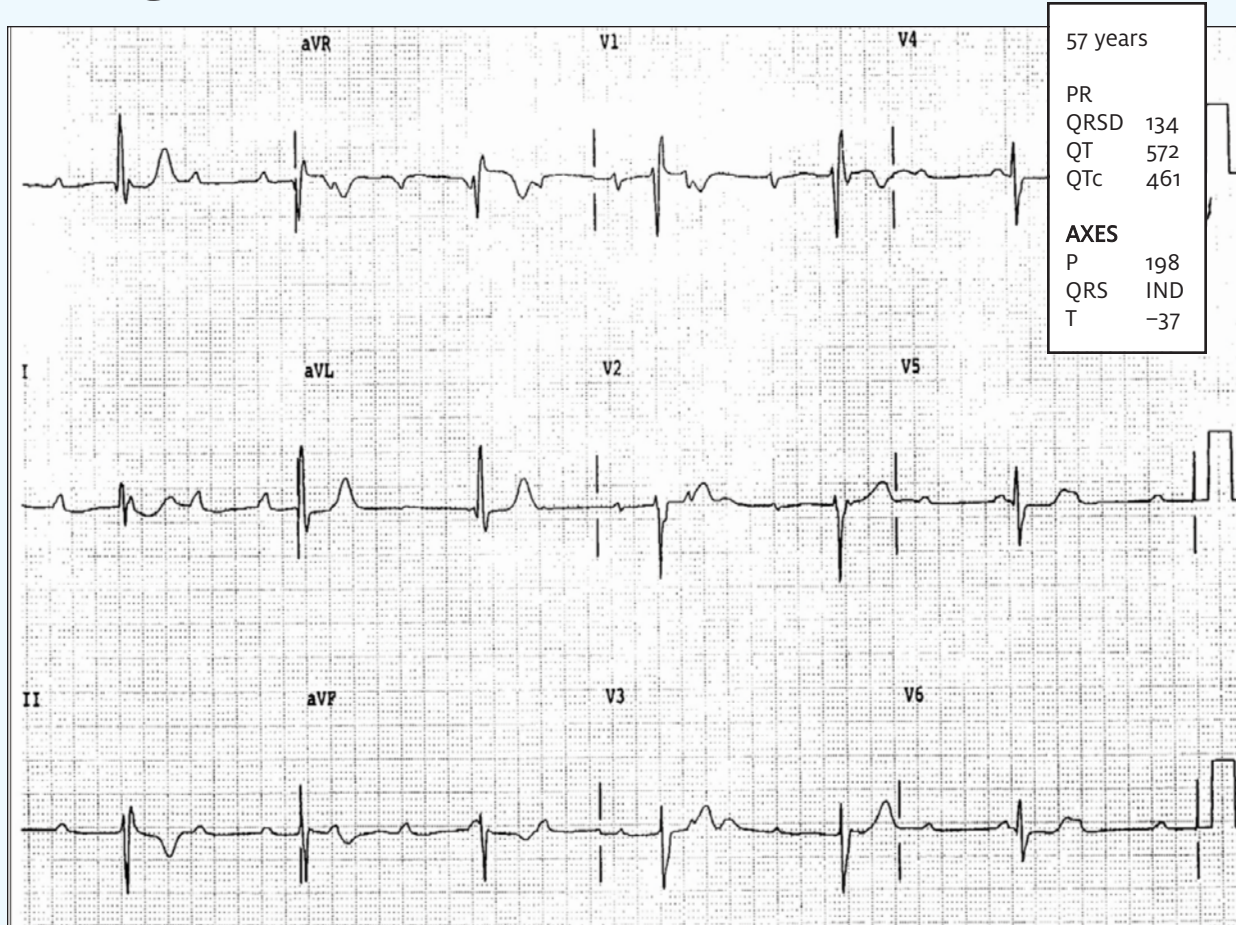


Figure 1.

Case

The patient is a 57-year-old man who complains of lightheadedness for the last 3 days. He has a history of a heart stent placed 4 years ago and has been asymptomatic since that time. He denies vomiting, diarrhea, chest pain, shortness of breath, abdominal pain, or paresthesias. No recent travel. He takes metoprolol and clopidogrel. There is a family history of hypertension.

Upon examination, you find:

- **General:** Sitting comfortably in a chair, alert, breathing comfortably

- **Lungs:** Clear bilaterally
- **Cardiovascular:** Regular rhythm, without m,r,g
- **Abdomen:** Soft and NT, no distention, without r/r/g, no pulsatile mass
- **Ext:** No peripheral edema, pulses are 2+ and equal in all extremities, no LE pain with palpation or asymmetry

View the ECG and consider what the next steps and diagnosis would be. Resolution of the case is described on the following page.

THE RESOLUTION

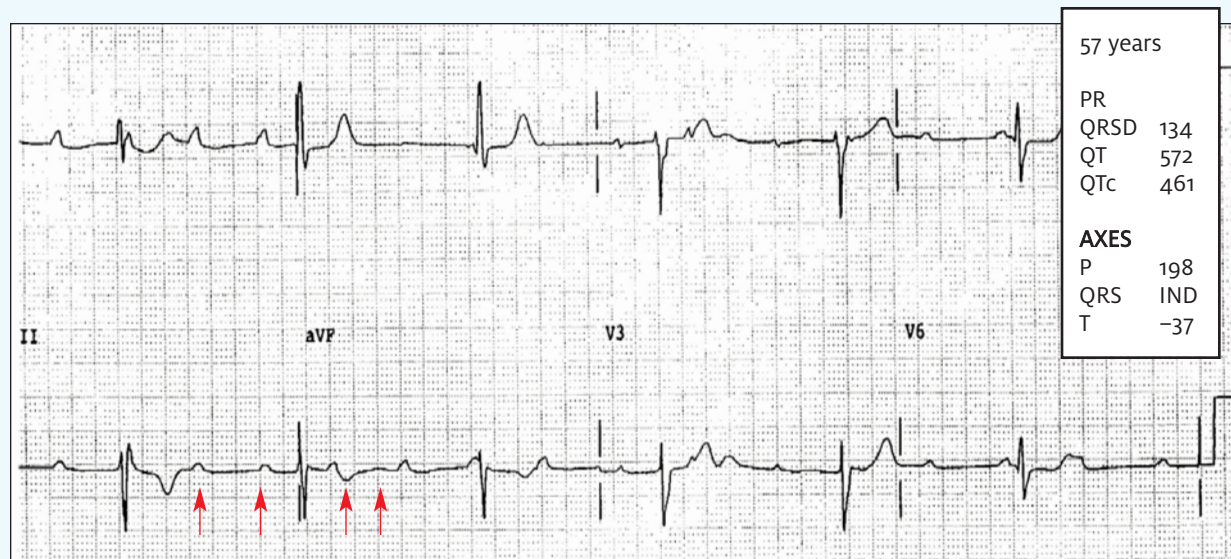


Figure 2. P waves (arrows)

Differential Diagnosis

- First-degree AV block
- Multifocal atrial tachycardia
- Wolff-Parkinson-White syndrome (WPW)
- Sinus bradycardia
- Third-degree heart block

Diagnosis

This patient has a third-degree AV block. The first lesson in ECG interpretation is always to make sure there is a p wave preceding each QRS. This may not often be helpful, but when it is helpful, it is really helpful! This ECG reveals p waves and QRS complexes, but there is not a p preceding each QRS. Curiously, the p waves present are regular (see arrows below the ECG), as are the QRS complexes; they are just not related. This is third-degree heart block. Another clue is the rate, in the high 30s—an unusually slow bradycardia, even in a fit athlete.

The normal PR interval is 120–200 ms, with first-degree AV block a duration longer than 200 ms, but as there is not a defined PR interval, this is not first-degree AV block. Multifocal atrial tachycardia (MAT) is a tachycardia with a rate >100 beats per minute, and secondly is “multifocal” with differing P wave morphology; however, there is a p wave before each QRS, not present in this ECG. The ECG of WPW reveals a gradual upsloping of the initial reflection of the QRS complex (the delta wave usually seen in the lateral precordial leads), as well as a shortened PR interval (<120 ms), a widened QRS complex, and ST/T wave changes—not present on this ECG. Sinus bradycardia is a sinus rhythm <60 beats per minute. This rate is bradycardic, but

is not sinus; this ECG shows third-degree AV block.

Learnings/What to Look for

- Third-degree AV block has complete absence of AV conduction. There is no relation of the p waves and the QRS complexes
- The rate of the atrial depolarization (p waves) is different than the ventricular rate
- The ventricular rate is often in the mid to high 30s
- Third-degree block may degenerate into cardiac arrest and death
- Potential causes include AV blocking medications such as beta blockers, calcium channel blockers, digoxin and amiodarone, electrolyte abnormalities, degeneration of the conducting system, or ischemia

Pearls for Urgent Care Management and Considerations for Transfer

- All patients presenting to the urgent care in third-degree heart block will need emergent transfer per EMS to the emergency department
- If symptomatic in the urgent care, atropine may be tried, but is not commonly successful
- Do not give atropine while awaiting transfer if the patient is asymptomatic
- If the patient is hemodynamically unstable place an IV and monitor, inform EMS for emergent transfer, and speak with the receiving facility



A 27-Year-Old Man with a Lesion on One Hand

Figure 1.



Case

A 27-year-old man presents complaining of a single skin lesion on his hand. He reports that it first appeared as a smooth nodule that ulcerated and spread in a lymphangitic fashion. He grew worried when he started to have a fever. The only unusual activity he'd done in the last few weeks was clean out one of his large saltwater aquariums to prepare for purchasing new fish.

View the photo and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

THE RESOLUTION

Figure 2.

**Differential Diagnosis**

- Bacterial abscess
- Cutaneous anthrax
- Granuloma annulare
- *Mycobacterium marinum* infection
- Vasculitis

Diagnosis

This patient was diagnosed with *Mycobacterium marinum* infection, an atypical mycobacterial skin infection often contracted from contaminated fish tanks, swimming pools, and, occasionally, ocean or lake water.

Learnings

- The typical skin lesion consists of a pustule or nodule and develops on the exposed extremity 2–3 weeks after exposure
- Constitutional symptoms are rare; fever, if present, is typically low-grade

Pearls for Urgent Care Management and Considerations for Transfer

- The disease is usually self-limited, and lesions tend to heal over a period of 1–2 years if left untreated
- Patients with AIDS, organ transplant recipients, and patients on chronic steroids may occasionally develop disseminated infections to the skin, bone marrow, and joints, leading to synovitis and arthritis

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2019 Current Procedural Terminology (CPT) Code Changes

■ DAVID E. STERN, MD, CPC

The American Medical Association (AMA) has finalized CPT code changes for 2019. There are 335 code changes this year, updating codes for telemedicine, fine needle aspiration, skin biopsies, and many in the surgery section. You will also find updates to some ultrasound and MRI procedures, a new flu vaccination code, and numerous updates in the medicine section. We will review pertinent updates by section:

Evaluation and Management

Interprofessional telephone/internet/electronic health record consultations

In an effort to keep up with today's technology, the term "electronic health record" has been added to the descriptions for codes 99446 through 99452, to be billed by the consultant whom the patient's treating physician is seeking the advice of, and who has specific specialty expertise, in the diagnosis or management of the patient's problem without patient face-to-face contact with the consultant. The codes are based on time, with a minimum time of 5 minutes of consultation by telephone, internet, or electronic health record contact required in order to bill for the service. Two new codes in this area were also introduced:

- 99451, "Interprofessional telephone/internet/electronic health record assessment and management service provided by a consultative physician, including a written report to the patient's treating/requesting physician or other qualified health care professional, 5 minutes or more of medical consultative time"
- 99452, "Interprofessional telephone/internet/electronic health record referral service(s) provided by a treating/requesting physician or other qualified health care professional, 30 minutes"



David E. Stern, MD, CPC, is a certified professional coder and is board-certified in internal medicine. He was a director on the founding board of UCAOA and has received the organization's Lifetime Membership Award. He is CEO of Practice Velocity, LLC (www.practicevelocity.com), NMN Consultants (www.urgentcareconsultants.com), and PV Billing (www.practicevelocity.com/urgent-care-billing/), providers of software, billing, and urgent care consulting services. Dr. Stern welcomes your questions about urgent care in general and about coding issues in particular.

"Skin biopsy guidelines were updated, with new codes based on the method of removal and number of lesions: tangential (shave, scoop, saucerize, and curette), punch, and incisional."

Codes 99453 and 99454 were added to report physiologic monitoring services during a 30-day period, and 99457, "remote physiologic monitoring treatment management services, 20 minutes or more of clinical staff/physician/other qualified health care professional time in a calendar month requiring interactive communication with the patient/caregiver during the month" was added to be reported with chronic care management services (99487, 99489, 99490), transitional care management services (99495, 99496), and behavioral health services (99484, 99492, 99493, 99494).

Surgery/Integumentary System

Skin biopsy guidelines were updated, and codes 11100 and 11101 for biopsies of single and each additional lesion were deleted. In their place are codes 11102 through 11107, which include three primary codes and three add-on codes, based on the method of removal and number of lesions: tangential (shave, scoop, saucerize, and curette), punch, and incisional.

Radiology

Code 76001, representing fluoroscopy for more than an hour was deleted due to low-volume reporting.

Several new codes were added to represent MRI and ultrasound procedures. CPT code 76391 will be used to report magnetic resonance (vibration) elastography, and codes 77046 through 77049 are new breast MRI procedures. Codes 76978 and 76979 will be used to report ultrasound procedures using dynamic microbubble sonographic contrast characterization, per the number of lesions. New codes 76981 through 76983 represent ultrasound elastography per organ, first target lesion, and each additional target lesion, respectively.

“Updated codes for cognitive, developmental/behavioral, psychological/neuropsychological screening, testing, and assessment services are based on time.”

Medicine/Vaccines, Toxoids

New code 90689, “influenza virus vaccine, quadrivalent (IIV4); inactivated, adjuvanted, preservative free, 0.25 mL dosage, for intramuscular use” is pending Federal Drug Administration (FDA) approval.

Medicine/Neurology and Neuromuscular Procedures

Neurostimulator codes 95974, 95975, 95978, and 95979 were deleted and replaced with new codes 95976 for simple cranial nerve neurostimulator pulse generator/transmitter programming, 95977 for complex programming, 95983 for the first 15

minutes of brain neurostimulator pulse generator programming, and add-on code 95984 for each additional 15 minutes of brain neurostimulator pulse generator programming.

Medicine/Central Nervous System Assessments/Tests

Guidelines and codes were updated in this section to detail cognitive, developmental/behavioral, psychological/neuropsychological screening, testing, and assessment services. The new codes are based on time. Use codes 96112 and 96113 for developmental test administration, 96116 and new add-on code 96121 for psychological/neuropsychological testing, codes 96130 through 96133 for testing evaluation services, and codes 96136 through 96139 for test administration and scoring.

Medicine/Adaptive Behavior Services

A new section for adaptive behavior assessment and treatment was added, introducing codes 97151 through 97158.

There were also a number of pathology and laboratory codes, as well as category III codes added. ■

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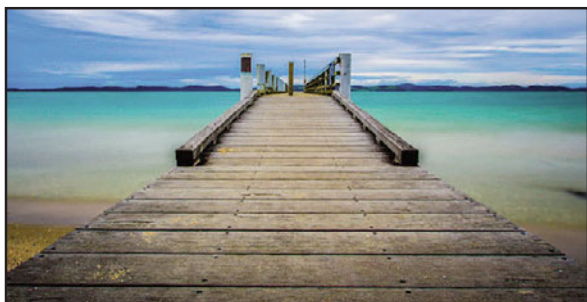


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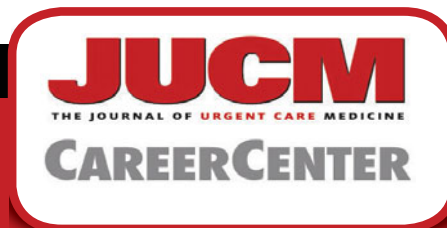
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The Connection Between Age and Choosing a Healthcare Setting

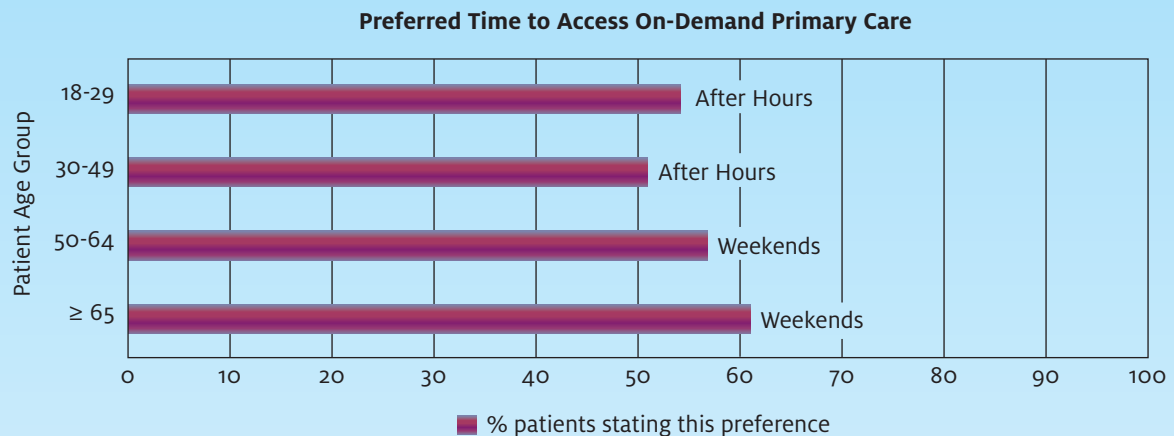
If you've worked in more than one setting—say, a traditional primary care office and an urgent care center—you've probably noticed differing patient preferences. It's self-evident, for example, that patients who go to urgent care centers prioritize being able to see a provider *today* over waiting a few days to see their "regular" doctor.

You may have been too busy treating those patients to notice that certain preferences can be age-specific, however. Advisory Board conducted a survey of thousands of U.S. healthcare consumers to get a sense of that dynamic, and the results could

be invaluable in helping you target the patients who are most likely to become regulars. You might also gain some insights into how to appeal to potential patients who may be less inclined to think "urgent care" first, but could see the value (including intrinsic value, at times) of visiting an urgent care center.

Please note that the survey included "on-demand primary care," primary care physicians, specialty care, surgical care, and virtual visits. We're highlighting the data for on-demand primary care here because it's most applicable to urgent care. ■

THE WHO, WHEN, AND WHY OF PATIENT ACCESS PREFERENCES



Adapted from: Advisory Board. How Consumers' Health Care Preferences Vary by Age.

Highest Priorities for On-Demand Primary Care	
Age group	Prioritizes...
18-29	No-cost visits
30-49	No-cost visits
50-64	Shorter wait; availability of ancillary services
≥65	Provider continuity and credentials

Adapted from: Advisory Board. How Consumers' Health Care Preferences Vary by Age.

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— Cam, Software Engineer



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