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URGENT CARE ASSOCIATION

COLLEGE OF URGENT CARE MEDICINE

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The Official Publication of the UCA and CUCM

ORIGINAL REASEARCH cme

Breaking Urgent Care Research: What Can Chest X-Rays Tell Us About COVID-19?

ALSO IN THIS ISSUE

This crisis is unlike anything any of us have ever experienced. Your dedication, your courage and your never-wavering commitment to caring is what will carry us through. Thank you for your tireless effort on this fight of our lives – **you are our heroes of healthcare!**

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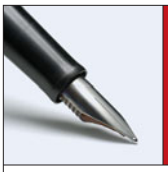


This Was Their Finest Hour

1940 was a particularly hopeless year in Great Britain. Having easily conquered France and signed a temporary treaty with the USSR, Adolf Hitler turned his full attention towards the conquest of the United Kingdom. As the Battle of Britain commenced, Prime Minister Winston Churchill, against this bleak backdrop, memorably addressed his people, and the world:

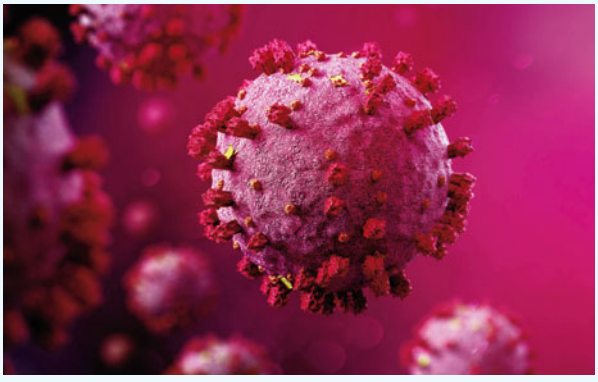
> *"...if we fail, then the whole world...including all that we have known and cared for, will sink into the abyss of a new dark age.... Let us therefore brace ourselves to our duties, and so bear ourselves, that if the British Empire...last for a thousand years, men will still say, '**This was their finest hour.**'"*

Many metaphors have been put forth to help us wrap our minds around the scope and implications of the COVID-19 pandemic, however the analogy of a world war is the most illuminating and appropriate. For we face a common enemy which will not be vanquished easily nor rapidly, and certainly not without collective and unified focus.

Much like World War II (WWII), everyone, regardless of age or profession, has been and will continue to be affected by this crisis for years to come. For some, it is suffering from the infection itself, for others grief over the loss of a loved one, and for all, financial hardship and austerity. To continue with this metaphor, healthcare workers (HCW), especially those who deal with acute illness, can be thought of as the soldiers deployed to the frontlines.

The duty of soldiers is to bravely risk their personal well-being for the common good when the time of need arises. Those who support the troops, as well as the soldiers themselves, always hope that the most necessary equipment will be available in abundant supply when heading into battle. However, this is never the case. The infantry must be deployed when the circumstances demand their service rather than when they are ideally equipped to perform the task that is asked of them.

We, the soldiers waging this battle against the SARS-CoV-2 virus, face similar circumstances of imperfect preparedness, especially regarding shortages of personal protective equipment (PPE) and testing supplies. And knowingly or unknowingly, this *is* the job we signed up for when we chose the profession of medicine. For many of us, it is easy to have lost sight of this, as such public health disasters have not occurred for many generations. Much like members of the army reserves during peacetime, we've not considered that our work could demand us to put our own safety on the line in tangible ways for some time.



I too was lulled into this false sense or perpetual stability; thinking that the status quo state of clinical practice would continue indefinitely. Frankly, I was actually quite comfortable with medicine changing at glacial pace. It made it easier to keep up-to-date and to have a life outside of work. But like the soldiers drafted into WWII, we clinicians have largely lost the luxury of a pleasant work-life balance.

Despite this reality, I've been tremendously impressed with how my colleagues have unflinchingly accepted this (hopefully temporary) new norm without complaint—everyone's definition of triumph and defeat recalibrates somewhat during wartime. And while it is certain that the global and, more specifically, the U.S. preparation and response to the COVID-19 pandemic have been frustratingly inadequate, we have not used this as an excuse to fail to show up when needed. There has been a universal and implicit understanding among HCWs that bemoaning the shortsightedness of our leaders, despite ample warnings from infectious disease experts, is counterproductive to our mission of protecting the lives of our patients and communities.

Yet as we persevere in our mission, we must simultaneously demand appropriate assistance on the home front. While the

outpouring of moral support from the public for HCWs has been encouraging, the provision of more tangible support from our nation's leaders has been disappointing.

"We must ensure that those among us who fall into higher risk categories, either by age or health history, are sheltered from the most dangerous roles. A successful war effort requires much more than just combat boots on the ground. We must find support roles...which allow our most at-risk comrades to participate in the fight without unnecessary exposure to the heat of battle."

During WWII, President Roosevelt rapidly pushed the War Powers Act through congress, which compelled factories to shift from producing commercial goods to manufacturing supplies needed for the war. Despite having slow and minimally automated means of production by modern standards, these facilities quickly and willingly pivoted from manufacturing radios and cars to making planes, guns, and tanks. Therefore, in 2020, there is simply no valid excuse for this shortfall in the production of the comparatively basic and necessary PPE supplies for this war at hand.

Consequently, all HCWs should speak up and demand support from organizational and governmental leadership to take immediate steps to remedy this situation. This should be done both by directly asking for necessary PPE from our administrators, if facing a shortage, and by supporting the work of advocacy groups towards ensuring sufficient PPE supplies for all HCWs (for example, a simple first step is signing the petition at getusppe.org/advocacy).

Yet such solutions will take time, and we must realize this. When responsible soldiers face a "mission critical" task, deserting is not an option. Rather, they accept that they must hold off the enemy, often through unproven and unorthodox methods, while awaiting reinforcements. Similarly, we are forced to dutifully show up and creatively find ways to care for patients until this problem of inadequate PPE resolves. However, even though duty calls, we must still exercise caution. Even without maximal PPE, we can take reasonable steps to avoid becoming casualties ourselves—both for our sake and for the sake of our families and future patients.

Thankfully, the imperative for sophisticated PPE may be less than initially believed. While respirators, such as the N95 mask, are in critically low supply in many places most affected by COVID-19, we do not have abundant evidence to suggest that such masks are required in most UC settings. For example, Singapore and Hong Kong were able to keep nearly all of their HCWs safe through the use of only surgical masks (except when performing highly aerosolizing procedures) in conjunction with good hand hygiene, social distancing, and increased use of telemedicine services.

Another story of hope comes from the Korean experience. South Korea experienced an early surge in cases, but was able to "flatten the curve" quite effectively by rapidly expanding the amount of drive-thru, point-of-care (POC), PCR testing available to the general public. We should feel hopeful that we will experience similar diminution of spread if our leaders take steps to make POC PCR testing more easily accessible for patients.

Expanding serology/IgG testing is also crucial as we press further into the pandemic. Identifying previously infected HCWs who've developed protective antibodies will prove extremely valuable in allowing us to determine who can serve on the frontlines with the least risk to personal safety.

Finally, we in the healthcare community must look after one another by ensuring those among us who fall into higher risk categories, either by age or health history, are sheltered from the most dangerous roles. A successful war effort requires much more than just combat boots on the ground. The engineers, medics, and communications specialists of WWII played an integral role in the allied victory without coming directly under enemy fire. Similarly, we must find support roles, largely through the use of telemedicine, which allow our most at-risk comrades to participate in the fight without unnecessary exposure to the heat of battle.

I have been encouraged by the valor and commitment my fellow HCWs have shown during these fearful times and I pray that their sacrifices will not have been in vain. Rather, it is my hope that COVID-19 will force many of society's new behaviors to become habitual and normalized in perpetuity to reduce the likelihood of a pandemic of this scale from happening again. I hope that the lessons we are all learning about our preparedness and our vulnerabilities as a nation and species will endure long after this crisis resolves. And if we in the healthcare community are able to bravely persevere as we have thus far (and I believe we will), those who look back at our service during these uncertain times will rightfully say: "This was their finest hour." ■

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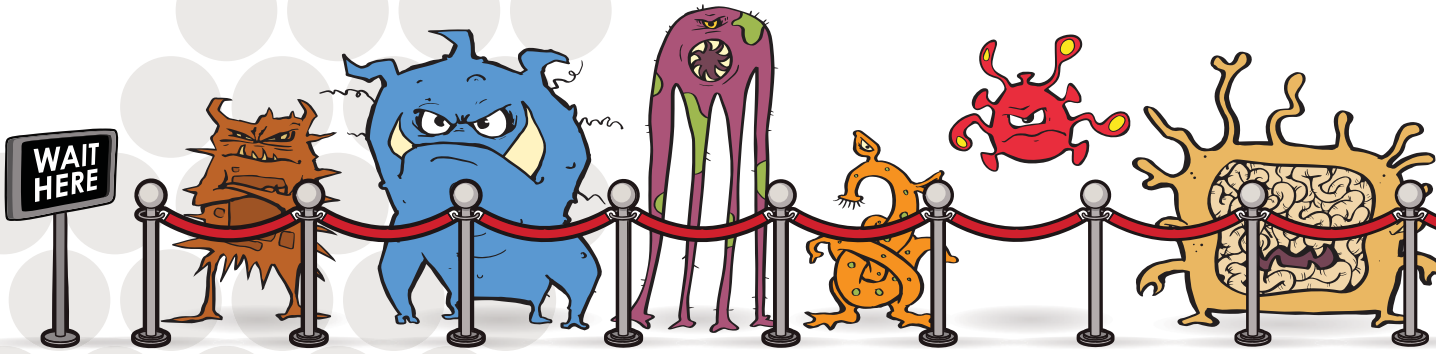

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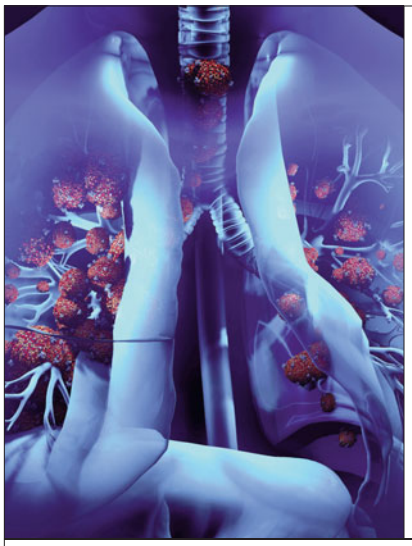

ORIGINAL RESEARCH

AHEAD IN *JUCM*

COVID-19 continues to consume the mainstream media's attention, as well as that of the general public. Urgent care centers and other healthcare facilities are where the rubber meets the road, however. In the June issue of *JUCM*, we will continue to take a close look at how the pandemic affects life in the urgent care center, specifically—and how our collective ability to stay the course in spite of current challenges is more essential than ever.

DEPARTMENTS

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Mission Statement
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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COVID-19 hit the U.S. like a summer storm. We heard the thunder, saw the approaching clouds, and hoped it would weaken or change course before it made landfall. Well, it didn't and when it did hit we learned that as a country and a healthcare system we were not prepared. Assigning blame is pointless, because now we're all in the thick of a fight to save lives and urgent care operations that have been providing care to their communities for decades.

This issue of *JUCM* has been crafted accordingly, thanks to very timely and very hard work by the individuals named on this page.

First off, *JUCM* is fortunate to be in a position to publish a groundbreaking original research study based on hundreds of patients with SARS-CoV-2 PCR tests who presented to CityMD urgent care centers in New York City. The resultant article, Chest X-Ray Findings in 636 Ambulatory Patients with COVID-19 Presenting to an Urgent Care Center: A Normal Chest X-Ray Is no Guarantee, starts on page 13. We're indebted to a team of researchers and authors that include**s Michael B. Weinstock, MD; Ana Echenique, MD, DABR; Joshua W. Russell, MD, MSc, FACEP; Ari Leib, MD; Jordan A. Miller, DO; David J. Cohen, MD; Stephen Waite, MD, FACEP**; **Allen Frye, NP; and Frank A. Illuzzi, MD.**

Dr. Weinstock is professor of emergency medicine, adjunct in the Department of Emergency Medicine, Wexner Medical Center at The Ohio State University; and senior editor, clinical, *JUCM*. Dr. Echenique is clinical director, quality management, Experity Teleradiology. Dr. Russell is supervising physician, Legacy-GoHealth Urgent Care; emergency medicine staff, PeaceHealth Health System; associate editor, Urgent Care RAP; and editor-in-chief of *JUCM*. Dr. Leib is adjunct clinical assistant professor, emergency medicine at the Ohio University Heritage College of Osteopathic Medicine. Dr. Miller is junior chief emergency medicine resident. Dr. Cohen is medical director, Experity Teleradiology. Dr. Waite is clinical associate professor of radiology, SUNY Downstate Medical Center, Brooklyn, NY. Dr. Illuzzi is executive vice president, Quality & Education, CityMD. Mr. Frye is a practicing nurse practitioner.

One of the practical challenges of the COVID-19 pandemic is that urgent care coders have had no established guidelines to ensure the business is reimbursed appropriately for providing related care. **Monte Sandler's** Revenue Cycle Management column should help in that regard. Read it on page 47.

Not surprisingly, half of the articles summarized by **Yijung Russell, MD** in Abstracts in Urgent Care (page 31) this month relate to the pandemic. However, she also dug deep to share relevant details of journal articles concerning nonpurulent infections, oral ulcers in children, and the relative merits of a walking boot vs a hard cast for Achilles tendon rupture.

And if you missed them before getting to this page, thumb back to the first few pages of this issue and read the thoughtful insights expressed in the Letter from the Editor-in-Chief (page 1), by Dr. Russell and a guest Urgent Perspectives editorial (page 22) from **Lindsey E. Fish, MD** and **Sarah Gardiner, RN, MSN**. Amid the hard data and clinical and financial challenges inherent in COVID-19 we need to remember the personal factors, which are explored eloquently from decidedly different perspectives in those two essays.

While COVID-19 is likely to be top-of-mind for most of us, the practice of urgent care medicine still includes treating patients with completely unrelated complaints. So, too, does this issue. Take this month's case report, for example. In Management of Lisfranc Dislocation in the Urgent Care Center (page 19), authors **John Shufeldt, MD, JD, MBA, FACEP** and **Madelaine Khosti, OMS** cover a presentation that ultimately led to a diagnosis of Lisfranc dislocation—a relatively rare occurrence, but one that should be on the urgent care provider's radar in certain patients (like the one described in the article).

Dr. Shufeldt is principal at Shufeldt Consulting in Scottsdale, AZ. Ms. Khosti is a student at Rocky Vista University's College of Osteopathic Medicine in Ivins, UT.

Another rare occurrence is when a medical practice feels the need to "fire" a patient—effectively cutting them off from whatever care they'd been receiving. And when such a move is made to protect staff or the integrity of the practice, it's a necessary one. But that doesn't mean there aren't legal risks involved, as noted in When Can an Urgent Care Legally 'Fire' a Patient? (page 35), by **Alan A. Ayers, MBA, MAcc.**

Mr. Ayers, who is CEO of Velocity Urgent Care, LLC and senior editor, practice management for *JUCM*, also uses his vast urgent care experience to analyze the prospects for Walmart to become a legitimate player in the U.S. healthcare landscape—and thereby pose a threat to urgent care centers. That article starts on page 25. (Spoiler: You probably don't need to be too concerned.)

Finally, one thing many of us will look forward to when "normal" life returns is pursuing group activities. Certainly young athletes will be teething at the bit to get back on the field. Before they do, though, they'll need to be checked out by a healthcare provider to be sure they're good to go. And why shouldn't they visit your urgent care center to get cleared for competition? **Benjamin Silverberg, MD, MSc, FAAFP** provides an overview of the right process to follow in Conducting Preparticipation Sports Physicals in the Urgent Care Center (page 39). Dr. Silverberg is an assistant professor in the departments of Emergency Medicine and Family Medicine at West Virginia University, and the medical director of the Division of Physician Assistant Studies in the Department of Human Performance at West Virginia University. ■

CONTINUING MEDICAL EDUCATION

Release Date: May 1, 2020
Expiration Date: April 30, 2021

Target Audience
This continuing medical education (CME) program is intended for urgent care physicians, primary-care physicians, resident physicians, nurse-practitioners, and physician assistants currently practicing, or seeking proficiency in, urgent care medicine.

Learning Objectives
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

Accreditation Statement
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the Urgent Care Association and the Institute of Urgent Care Medicine. The Urgent Care Association is accredited by the ACCME to provide continuing medical education for physicians.

The Urgent Care Association designates this journal-based CME activity for a maximum of 3 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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  Member reported no financial interest relevant to this activity.
- **Michael B. Weinstock, MD**
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- **Alan A. Ayers, MBA, MAcc**
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CONTINUING MEDICAL EDUCATION

***JUCM* CME subscribers can submit responses for CME credit at www.jucm.com/cme/. Quiz questions are featured below for your convenience. This issue is approved for up to *3 AMA PRA Category 1 Credits*™. Credits may be claimed for 1 year from the date of this issue.**

Chest X-Ray Findings in 636 Ambulatory Patients with COVID-19 Presenting to an Urgent Care Center: A Normal Chest X-Ray Is no Guarantee (page 13)

1. **Chest x-rays from confirmed and symptomatic COVID-19 patients were normal in:**
   a. 18% of patients
   b. 22% of patients
   c. 58% of patients
   d. 90% of patients

2. **Among patients with "abnormal" chest x-rays, those abnormalities occurred most frequently:**
   a. In the lower lobe
   b. Bilaterally
   c. Multifocally
   d. Distribution of abnormalities was not significant

3. **In studies by Wong and Li, imaging changes peaked in which of the following timeframes?**
   a. On days 5–7 of illness
   b. On days 10–12 of illness
   c. 48–72 hours after onset of symptoms
   d. None of the above

Management of Lisfranc Dislocation in the Urgent Care Center (page 19)

1. **Lisfranc fracture dislocations make up what percentage of all fractures?**
   a. <0.2%
   b. 2%
   c. 3%
   d. 7%

2. **Though rare, Lisfranc fracture dislocations should be suspected in patients who exhibit which of the following signs and symptoms after an acute trauma causing hyperplantarflexion of the foot?**
   a. Refusal to bear weight
   b. Significant midfoot pain
   c. Swelling in the midfoot region
   d. Any one of the above
   e. All of the signs noted above

3. **TMT joint complex injuries can result from which of the following mechanisms?**
   a. Direct force
   b. Indirect force
   c. Crush injuries
   d. Immobilization of the fore- and midfoot in conjunction with a varus or valgus force
   e. All of the above

Is Four Times a Charm for Walmart (or, Could Walmart Be a Threat to Urgent Care)? (page 25)

1. **How is Walmart's current campaign to offer retail health services different from its previous efforts?**
   a. Current plans call for a standalone primary care clinic
   b. Clinics would be managed and staffed by a national healthcare operator and only "branded" with the Walmart name
   c. Walmart pledges to have a physician on site at all times
   d. All of the above

2. **As conceived, Walmart health centers would include which of the following?**
   a. Dental care
   b. Vision services
   c. Mental health counseling
   d. All of the above
   e. None of the above

3. **Barriers to Walmart's efforts to become a viable healthcare provider include all but which of the following?**
   a. Healthcare diversifies revenue away from its strengths, such as merchandising
   b. People who are not ill may balk at visiting a big-box store that attracts sick, contagious people
   c. There is no existing connectivity between Walmart and community health resources
   d. Some states in which Walmart does business prohibit providing automotive and healthcare services on the same property

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Overwhelmed

LAUREL STOIMENOFF, PT, CHC

As the COVID-19 pandemic raged on, a physician at the end of his emergency department shift at a New York City hospital was being interviewed. He kept repeating, "We are overwhelmed." And while our work at the Urgent Care Association (UCA) pales in comparison to what the frontline healthcare workers are experiencing, we too are *overwhelmed* in every context of the word.

This month, UCA was planning to host what we knew would be our best, and best attended, convention in the history of the association. Canceling it was overwhelming and disappointing. We knew the decision not only meant a lost opportunity to network with exhibitors and attendees, but it would also create substantial financial challenges for UCA going forward. We subsequently heard from so many members who were (and are) struggling due to patients sheltering in place, a scarcity of personal protective equipment (PPE), lack of testing supplies, a need to rework processes in response to a never-before-encountered pathogen, and dealing with quarantined or, worse yet, infected employees.

But being overwhelmed comes in different forms, and though not a comprehensive list, we at UCA are also *overwhelmed* by:

- The members who are sharing and collaborating in unprecedented ways on the UCA COVID-19 Listserv—policies, signage, and best practices. The community has united and former competitors are now allied in pursuit of the greater good.
- The exhibitors who had intended on supporting us at UCA2020 but are now repurposing those dollars to the new virtual event and other UCA campaigns. We will never forget you.
- Vendors who stepped up to contribute services or products and those who are working diligently to meet unmet needs, including PPE.
- The enthusiasm we are experiencing from members and speakers for our first virtual, on-demand convention. Without space barriers, we are excited to offer even more CME, CUCMP credit, education, and fun.
- An anonymous donor who is doubling the College of Urgent Care Medicine's (CUCM) contribution to the *My Very Own Blanket* charity, which they had intended to support at UCA2020's live convention. Twice the number of blankets will now be provided to vulnerable children who find themselves *overwhelmed* as they enter the uncertainty of life as a foster child.
- The bridges being built between UCA and other organizations. UCA, CUCM, and the American College of Emergency Physicians released their first-ever collaborative statement on triage and ED transfers for suspected or confirmed COVID-19 patients. Similarly, the American Academy of Family Physicians has also generously shared resources and welcomed UCA's collaboration.
- The tremendous support we are feeling from our Boards, Committees and members who have reached out to offer assistance. While we are seeking ways to lift up our industry, they are letting us know we are not in this alone.
- The resiliency of our members as they repurpose downtime to implement new services, including telemedicine, ramp up training, innovate marketing techniques, and redeploy resources.

"It is a tough time in urgent care, but we are confident patients will return to your centers with a renewed appreciation for the frontliners in this crisis."

It is a tough time in urgent care, but we are confident patients will return to your centers with a renewed appreciation for the front liners in this crisis. UCA will not cease to relentlessly advocate on behalf of our healthcare heroes. We intend to be there for you and deliver grateful patients to your door. Above all, we hope you, your family, and your colleagues are healthy and safe.

Together, we are #UrgentCareStrong.

With gratitude,
Team UCA ■

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

Ticks don't know the meaning of "Social Distancing."

Sofia 2 Lyme FIA: **CLIA-waived** **Results in minutes,** at your **point-of-care**

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Chest X-Ray Findings in 636 Ambulatory Patients with COVID-19 Presenting to an Urgent Care Center: A Normal Chest X-Ray Is no Guarantee

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Abstract

Background/Objective: Patients with COVID-19 commonly present to Urgent Care (UC) centers. Our primary objective was to determine what percentage of UC patients with confirmed COVID-19 had normal vs abnormal chest x-rays (CXR). Secondarily, we aim to describe specific imaging characteristics and the frequency of each abnormal findings on plain film radiography (CXR).

Methods: A database of a large UC company in the greater New York City (NYC) area was reviewed for patients with positive SARS-CoV-2 PCR tests who also underwent CXR in UC between March 9 and March 24, 2020. Eleven board-certified radiologists, with knowledge that they were only reading imaging studies of COVID-19 patients, were each given a subset of the CXRs with oral and written instructions to re-read the films while disregarding the initial reading. Their readings were classified as *normal*, *mild*, *moderate*, or *severe* disease. They subsequently characterized specific findings. Lastly, overreads were compared with the initial CXR reading.

Results: Of the 636 CXRs reviewed among patients with confirmed COVID-19, 363 were male (57.1%) and 273 were female (42.9%). Patient ages ranged from 18 to 90 years of age, with most (493 patients, or 77.5%) being 30–70 years old. There were 371 CXRs read as normal (58.3%). Of the 265 abnormal cases (41.7%), 195 demonstrated mild disease, 65 demonstrated moderate disease, and five demonstrated severe disease. Interstitial changes and ground glass opacities (GGO) were the predominant descriptive findings in 151 (23.7%) and 120 (18.9%) of the total, respectively. Location of the abnormalities were in the lower lobe in 215 (33.8%), bilateral in 133 (20.9%), and multifocal in 154 (24.2%). Effusions and lymphadenopathy were uncommon.

Discussion: This is the first study to specifically explore CXR findings of patients with confirmed COVID-19 evaluated in a UC setting. The vast majority of patients (566/636) had either normal or only mildly abnormal CXRs (89%), despite being symptomatic enough to warrant imaging as determined by the treating UC provider.

Conclusion: CXRs obtained from confirmed and symptomatic COVID-19 patients presenting to the UC were normal in 58.3% of cases, and normal or only mildly abnormal in 89% of patients. When abnormal, the most common findings were present in the lower lobes and the pattern was interstitial and/or multifocal. Pleural effusions and lymphadenopathy were uncommon.

Introduction

COVID-19, a novel disease caused by the SARS-CoV-2 virus, rapidly became a pandemic in early 2020, resulting in considerable worldwide morbidity and mortality.[1,2] During this outbreak, acute care clinicians have been striving to accurately diagnose and define its clinical features in order to provide the best care for afflicted patients and limit the spread of the disease.

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Figure 1: Flowchart of All Confirmed COVID-19 Patients Seen in the UC Centers from March 9 to 24, 2020 Who Also Underwent CXR

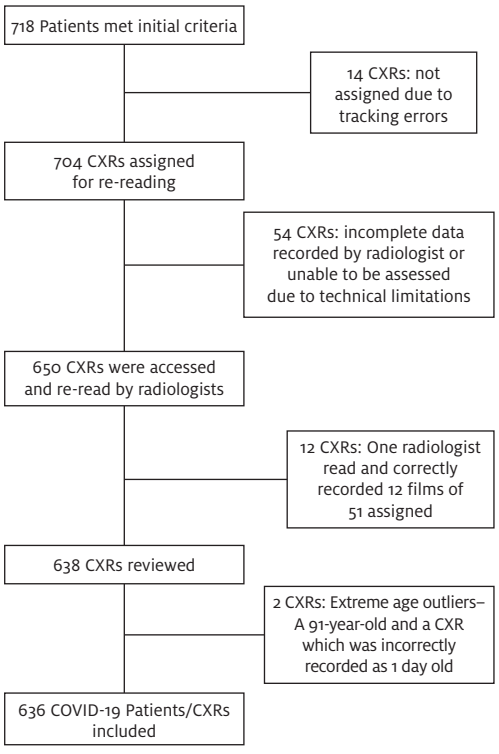
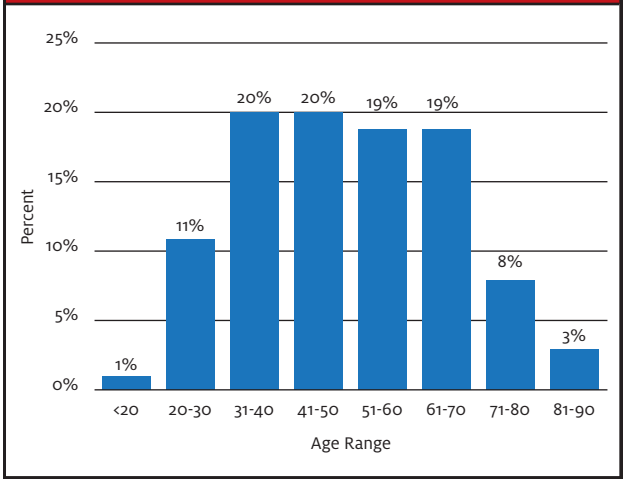


Table 1. Demographics of UC Patients with COVID-19 Whose CXRs Were Re-Read by the 11 Radiologists (n=636)

Gender	n (%)
Male	363 (57.1%)
Female	273 (42.9%)

Figure 2. Age Distribution (N=636)



Plain film radiography of the chest (CXR) is a relatively inexpensive and widely available diagnostic modality in urgent care (UC) centers. However, to date, there is little evidence describing the utility of CXR in identifying patients with suspected COVID-19. Early observational studies discussing characteristic patterns of radiographic findings have focused predominantly on the use of computed tomography (CT) imaging. While CT has demonstrated good-to-excellent sensitivity (56%-91%) for COVID-19 lung pathology, depending on the interval between symptoms and imaging, cost and practical considerations (eg, sterilization after use) limit its utility, especially for use among ambulatory patients.[3-6]

As most patients with COVID-19 seem to have a mild course of respiratory illness, evaluations are most likely to take place in nonemergency department and nonhospital settings, such as UC centers.[1] In such settings, CXR is by far the most widely available imaging modality.[7] However, to date all published studies of thoracic imaging findings in patients with COVID-19 have focused on hospitalized patients.[8] Among such patients, Wong, et al found that the initial CXR had a sensitivity of only 69% for any abnormality.[3] One would expect because UC patients typically have less severe disease, that CXRs among such patients would have even lower sensitivity compared with hospitalized patients.

In the Wong, et al study, the most common radiographic features in confirmed COVID-19 patients were peripheral rounded consolidations, ground glass opacities, (GGO), and pulmonary nodules. Distribution of the lung changes were more common in the lower zones and bilateral.[3] Even in asymptomatic patients, radiographic progression of disease, from focal unilateral changes to diffuse GGO and consolidations, was observed.[8] Pleural effusions were rare and were associated with an increased risk of poor outcome.[3] Overall, the imaging changes reported peaked on days 10-12 of illness.[3,8]

Our primary objective in this study was to determine what percentage of ambulatory patients with confirmed COVID-19 had normal vs abnormal CXRs. Secondarily, we aimed to describe the frequency of each specific type of abnormal finding on plain film radiography (CXR).

Methods

The electronic medical record (EMR) database of a large UC network with over 100 centers in greater New York City (NYC) and New Jersey (NJ) was queried, and 718 patients who had tested positive for SARS-CoV-2 by PCR between March 9 and March 24, 2020 (during the time that greater NYC was the epicenter for COVID-19) were identified. The CXRs for these patients were initially divided among 14 board-certified radiologists. However, due to willingness and ability to participate due to difficulty with remote access, only 12 agreed to participate in the study. These individuals were assigned approximately 50 CXRs each, except for two of the radiologists who reviewed an additional 50 CXRs each to make up for the two radiologists who were not able to participate, giving these two radiologists a total of approximately 100.

"Interstitial changes and GGO were the predominant descriptive findings in 23.7% and 18.9% of the total, respectively. Location of the abnormalities were in the lower lobe in 33.8% of patients, bilateral in 20.9%, and multifocal in 24.2%. Effusions and lymphadenopathy were uncommon."

Most participants re-read and correctly resulted 47 to 100 films. However, one radiologist only read 12 films; these readings were excluded from this report because the number of cases was far below the contributions of the other participants, providing a total analyzed sample of 636 CXRs (**Figure 1**).

Participating radiologists were given oral and written instructions to first categorize films as *normal*, *mild*, *moderate*, or *severe* disease; for those classified as abnormal, they were asked to describe the specific findings. Initial CXR readings were part of these patients' medical records, but the radiologists were instructed to ignore the initial reading when they re-read the images. Participating radiologists were informed that the CXRs were from patients with confirmed COVID-19.

Table 2. Characteristics of the Radiographic Findings Reported by the Panel of 11 Radiologists Who Re-Read CXRs of COVID-19 Patients Seen in Greater NYC UC Centers from March 9 to 24, 2020. (N=636)

Radiologic properties	Categories	n (% of total)
Severity	Normal	371 (58.3%)
	Mild	195 (30.7%)
	Moderate	65 (10.2%)
	Severe	5 (0.8%)
Type of infiltrate	Interstitial	151 (23.7%)
	Ground glass opacities (GGO)	120 (18.9%)
	Consolidation	34 (5.3%)
Location	Lower	215 (33.8%)
	Upper	128 (20.1%)
	Diffuse	6 (0.9%)
Focality	Multifocal	154 (24.2%)
	Focal	71 (11.2%)
Laterality	Bilateral	133 (20.9%)
Centrality	Peripheral	225 (35.4%)
	Central	45 (7.1%)
Other	Effusions	2 (0.3%)
	Lymphadenopathy	2 (0.3%)

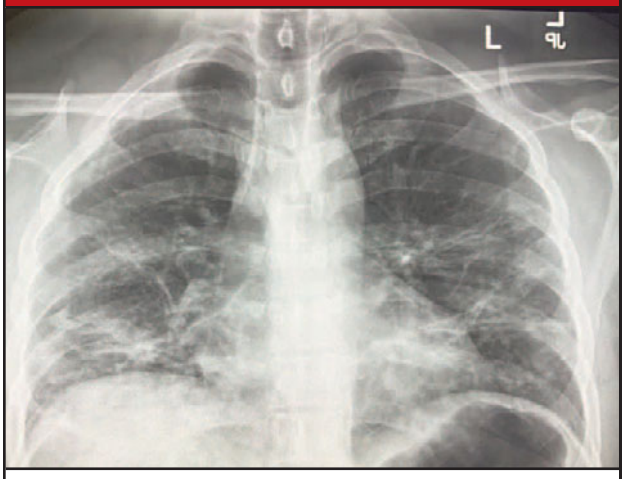
Note: Numbers do not add to 100% as some patients had more than one finding.

Results

Eleven board-certified radiologists re-read CXRs of patients with PCR-confirmed COVID-19 from multiple UC centers in the greater NYC area. Most participants re-read from 47 to 100 films, providing a total sample of 636 CXRs. Of these, 363 were male (57.1%) and 273 female (42.9%). Patient ages ranged from 18 to 90 years of age, with 493 patients (77.5%) being in the age range of 30–70 years old (see **Table 1** and **Figure 2**).

Of the 636 CXRs included in this report, 371 were re-read as normal (58.3%). Of the 265 abnormal cases (41.7%), 195 were classified as mild disease, 65 were classified as moderate disease, and five were classified as severe disease. Interstitial changes and GGO were the predominant descriptive findings in 151 (23.7%) and 120 (18.9%) of the total, respectively. Location of the abnormalities were in the lower lobe in 215 (33.8%), bilateral in 133 (20.9%), and multifocal in 154 (24.2%). Effusions and lymphadenopathy were uncommon (see **Table 2**).

Figure 3: Multifocal mixed central and peripheral linear infiltrates extending out to lung periphery with superimposed ill-defined patchy opacities at the bilateral lung bases. Lung apices spared. Overall low volume, study concerning for hypoventilation.



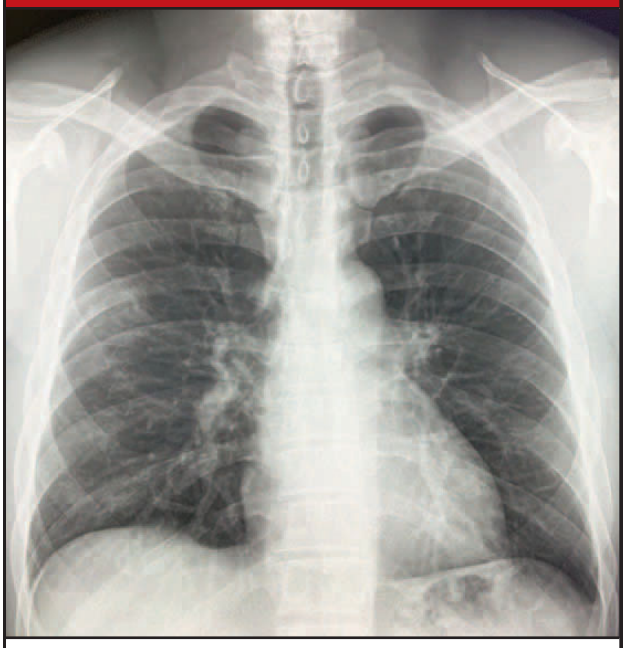
X-ray courtesy of Experity Teleradiology (www.experityhealth.com/teleradiology.)

"This report is the largest observational study to date examining plain film radiographic findings among patients with COVID-19 in an ambulatory care setting. The majority of COVID-19 patients who present in the urgent care setting show no identifiable abnormalities on standard CXR assessment."

The original readings from the medical records classified 468/636 (73.6%) CXRs as normal. When the CXRs were re-read for this study with the knowledge that the patients had COVID-19, 97 of these initial readings were changed to abnormal and two patients who had an initial finding of "possible pneumonia" were changed to "normal."

Classification as normal or abnormal varied across the 11 radiologists who did the re-reads for this study. On the lower end, one participant classified 14% of CXRs as normal, while at the upper end another participant classified 86% of CXRs as normal. Most participants classified between 51% and 80% as normal.

Figure 4: Subtle unilateral ground glass opacity at inferior margin of peripheral right upper lobe abutting the minor fissure. This patient has subtle unilateral involvement.



X-ray courtesy of Experity Teleradiology (www.experityhealth.com/teleradiology.)

Specific examples of CXR images are presented in **Figures 3-6**.

Limitations

Studies of this type are inherently limited due to their retrospective and observational nature. Additionally, only a single CXR series was obtained for each patient. Because patients presented at various phases of illness, it is impossible to know whether patients with normal CXRs at time of presentation developed radiographic findings later during their illness.

We did not have access to data regarding patients' underlying health histories nor baseline CXRs, therefore it is unclear to what extent abnormalities identified may have reflected chronic pulmonary conditions. However, most patients (454, or 71.4%) were <60 years of age and healthy enough to present in an ambulatory care setting and, therefore, would be expected, with infrequent exception, to have normal baseline CXRs.

Regarding CXR interpretation, although the radiologists were instructed not to let the initial CXR read, or knowledge of COVID-19 diagnosis, influence their interpretation, they were not blinded to this information and we cannot rule out that it might have had an impact on their classi-

Figure 5: Severe bilateral involvement with ill-defined patchy consolidation at periphery of right upper lobe, ground glass opacity at peripheral left upper lobe and central infiltrates extending to the lung bases from the pulmonary hila. Small rounded patchy infiltrate also noted at right lung base.

X-ray courtesy of Experity Teleradiology (www.experityhealth.com/teleradiology.)

Figure 6: Hazy ill-defined opacity at lower aspect of right upper lobe as well as rounded patchy infiltrates in right lung base and periphery of left lung base.

X-ray courtesy of Experity Teleradiology (www.experityhealth.com/teleradiology.)

fications. The shift to classify more CXRs as abnormal during the re-read suggest that this might be so.

We also did not have any assessment of inter-rater reliability between radiologists on the re-reads. The difference in percentage of normal classification across participants suggests that clear individual differences do exist among radiologists. However, as our purpose was to show what findings would be reported for COVID-19 patients in a clinical setting, the variability in CXR classification serves to highlight the challenges in real-time assessment in such patients.

The initial CXRs were obtained at the clinical discretion of the treating provider. It is likely that variations in medical decision-making and CXR utilization among providers influenced the availability of CXRs available for analysis among patients confirmed to have COVID-19. The direction of any associated bias is difficult to predict because many factors (eg, number of patients waiting to be seen, patient expectations etc.) influence providers' decisions about imaging in UC patients with respiratory complaints.

Finally, the radiologists re-read the available CXRs looking for known varieties of abnormalities. It is possible that there are indications of disease on CXRs related to COVID-19 that are not yet defined (as this is a novel illness) and, therefore, the radiologists might not be expected to identify them.

"In patients with mild clinical features, imaging is indicated after a positive viral test if the patient has risk factors for disease progression. In a patient with moderate to severe clinical features, imaging is indicated after a positive viral test if the patient is at risk for worsening of pulmonary status."

Discussion

This report is the largest observational study to date examining plain film radiographic findings among patients with COVID-19 in an ambulatory care setting. The majority of COVID-19 patients who present in this setting show no identifiable abnormalities on standard CXR assessment.

Though chest CT has been shown to be more sensitive than CXR, CT is generally not available in ambulatory care settings. Additionally, after scanning a patient with suspected COVID-19, extensive cleaning and decontamination of a CT scanner is required, making

routine use of CT impractical. The CXR, on the other hand, is a widely available assessment tool in UC centers and allows relatively rapid cleaning and turn-over between patients.

"Patterns of abnormal findings were similar to those reported in other series of hospitalized patients with COVID-19 with peripheral, multifocal, and lower lobe involvement and interstitial or ground glass appearance being the most common."

Recently, thoracic imaging consensus guidelines in COVID-19 have been published by the Fleischner Society.[9] In patients with mild clinical features, imaging is indicated after a positive viral test if the patient has risk factors for disease progression. In a patient with moderate to severe clinical features, imaging is indicated after a positive viral test if the patient is at risk for worsening of pulmonary status. If testing for COVID-19 is unavailable, imaging can determine if an alternative diagnosis is present (eg, lobar pneumonia) or, if findings suspicious for COVID-19 are revealed, can guide further workup.[10]

When present, the patterns of abnormal findings were similar to those reported in other series of hospitalized patients with COVID-19[3,8] with peripheral, multifocal, and lower lobe involvement and interstitial or ground glass appearance being the most common. Additionally, pleural effusions and lymphadenopathy were relatively rare findings, which is also consistent with existing studies of chest radiography in COVID-19 patients.[8] Interestingly, alveolar disease was only bilateral in 133 (20.9%) of the total 636 CXRs, much less than reported in the CT literature where it is seen in 82% of cases.[10] This may be due to the difficulty of perceiving early ground glass opacities on plain radiography and/or ambulatory patients presenting earlier in the course of illness.

In future reports we hope to examine what clinical signs, medical history, and demographic characteristics are associated with normal and abnormal CXR readings in patients with COVID-19.

Conclusion

CXRs obtained from confirmed and symptomatic patients with COVID-19 presenting to UC centers were normal in 58.3% of the patients, and normal or only mildly abnormal in 89% of patients. When abnormal, the most common findings involved the lower lobes and presented with an interstitial and/or multifocal pattern. Pleural effusions and lymphadenopathy were uncommon. ■

(This study was IRB approved and granted waiver of consent and full waiver of HIPAA authorization. No funding was obtained for this study.

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Management of Lisfranc Dislocation in the Urgent Care Center

Urgent message: Lisfranc dislocations are relatively rare, but should be on the urgent care provider's radar in patients who refuse to bear weight and who have significant midfoot pain and swelling after an acute trauma causing hyperplantarflexion of the foot.

JOHN SHUFELDT, MD, JD, MBA, FACEP and MADELAINE KHOSTI, OMS-I

Introduction

The tarsometatarsal (TMT), or Lisfranc, joint complex is the attachment between the forefoot and midfoot. This joint is the keystone to normal foot function and is thus critical for normal gait.[1] Jacques L. Lisfranc was a French surgeon during the Napoleonic wars who described an injury to the midfoot that resulted when men fell from their horses while their feet were still stuck within the stirrup.[1]

In modern times, these injuries are caused by direct trauma (eg, a from heavy object) or indirect trauma (eg, in a high-energy motor vehicle accident) mechanisms. TMT joint complex injuries constitute <0.5% of all fractures and dislocations.[2]

Here, we describe the relatively rare Lisfranc fracture and dislocation in a young, otherwise healthy, individual.

Case Presentation

A 44-year-old female with a history of hypertension presented to the urgent care with right foot and ankle pain which began after a motor vehicle collision earlier that day. The patient was the restrained driver travelling 40 mph when another vehicle pulled out in front of her. The airbags did not deploy. The patient was ambulatory on scene but found it increasingly painful to bear weight. She denied head injury or loss of consciousness.

Physical Examination

Heart rate: 72 bpm
Blood pressure: 157/99 mmHg
Respiratory rate: 18

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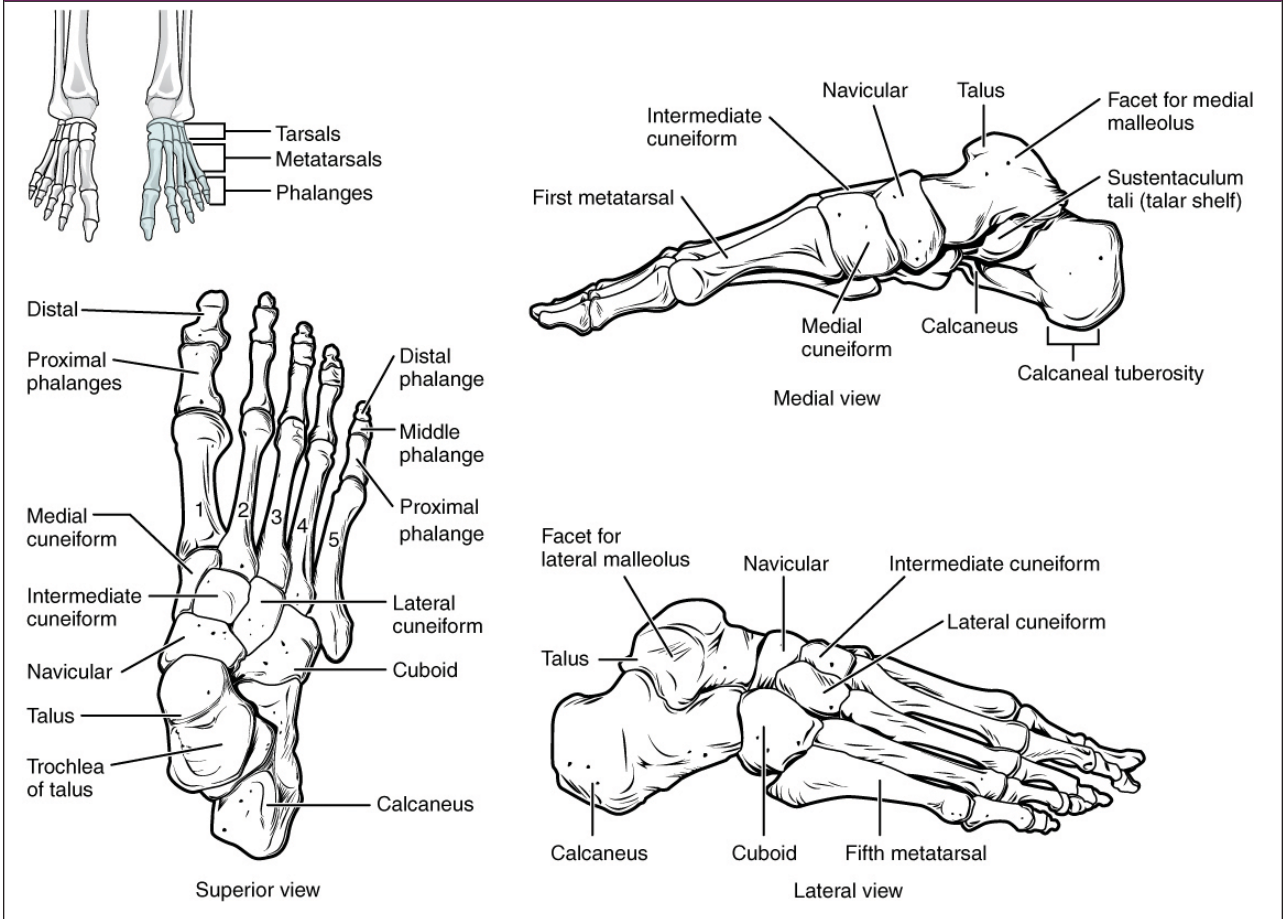
SPO_2: 96%
Temperature PO: 37.0° C
The patient's general exam was normal.

Examination of the right foot revealed moderate tenderness to palpation with soft tissue swelling and obvious deformity to the lateral aspect of the foot and ankle. Her foot was neurovascularly intact with normal dorsalis pedis pulses and a capillary refill of 2 seconds.

John Shufeldt, MD, JD, MBA, FACEP is principal at Shufeldt Consulting in Scottsdale, AZ. **Madelaine Khosti, OMS-I** is an osteopathic medical student at Rocky Vista University's College of Osteopathic Medicine in Ivins, UT. The authors have no relevant financial relationships with any commercial interests.

Figure 1. Foot diagrams showing metatarsals.



Source: File:812 Bones of the Foot.jpg. (2017, November 25). *Wikimedia Commons, the free media repository.* Retrieved 18:16, April 2, 2020. Available at: https://commons.wikimedia.org/w/index.php?title=File:812_Bones_of_the_Foot.jpg&oldid=269243263.

Diagnostic Results

Radiographs revealed Lisfranc fracture dislocation with homolateral and dorsal dislocation of the first through fifth metatarsals, widening of the joint, and severe regional soft tissue swelling and edema. Punctate osseous fragments were noted in the region of the middle and lateral cuneiform, noted to likely relate to underlying fractures. No acute fracture or dislocation was found at the level of the right ankle. Ankle mortise alignment was anatomic.

Diagnosis

Lisfranc dislocation.

Course and Treatment

The patient was transferred to the emergency department where she underwent closed reduction and percutaneous pinning. The patient was discharged home in a splint and with a walker and with postoperative orthopedic follow-up instructions.

Discussion

Lisfranc fracture dislocations make up <0.2% of all fractures and are recognized to be more prevalent in males than females, though this is thought to be due to a greater tendency to be involved in high-energy sports.[3] TMT joint complex injuries can result from direct and indirect forces including crush injuries and motor vehicle collisions.

Most cases involve an individual whose foot is plantar-flexed and is subsequently bent forward, rotated, or crushed. In athletes, the mechanism often involves

"In Lisfranc dislocations, weightbearing is typically painful and difficult initially, with limited range of motion secondary to pain (especially with passive pronation and supination of the foot). Definitive diagnosis is made with imaging studies."

immobilization of the fore- and midfoot in conjunction with a varus or valgus force.[4]

The anatomy of the TMT joint complex includes the five metatarsals and their articulation with the cuboid and the medial, middle, and lateral cuneiforms.[5] The "Lisfranc ligament" is composed of the dorsal, plantar, and interosseous ligaments. There is no transverse ligament interconnecting the first and second metatarsals; thus, the first metatarsal is prone to displacement when the TMT joint complex is injured. Additionally, the dorsal ligaments of the joint are weak and thus dorsal displacement is more common.[5]

While these injuries are rare, they should be suspected in patients refusing to bear weight and with significant midfoot pain and swelling after an acute trauma causing hyperplantarflexion of the foot.[4] Examination may reveal tenderness to palpation, swelling, and plantar ecchymosis in addition to other confirmatory tests. Weightbearing is typically painful and difficult initially, with limited range of motion secondary to pain especially with passive pronation and supination of the foot.[4,5] Definitive diagnosis is made with imaging studies.

Malalignment of the medial borders of the intermediate cuneiform and second metatarsal on AP film, as well as of the medial borders of the fourth metatarsal and the cuboid on oblique film >2 mm are indicative of a Lisfranc injury.[5] Radiographs may also reveal avulsion fracture, known as a "fleck-sign," at insertion of the Lisfranc ligament, involving the medial cuneiform and second metatarsal.[5] In some cases, non-weightbearing radiographs appear normal and weightbearing radiographs may be obtained.[4] If the patient's presentation and examination are consistent with TMT injury despite negative radiographs, computed tomography and magnetic resonance imaging should be performed.[3]

Lisfranc fractures and dislocations can lead to chronic pain and disability if diagnosed late or left untreated[4] and require emergent ED referral or evaluation and consultation with an orthopedic specialist. ■

Figure 2. Representative traumatic Lisfranc fracture, with fractures of the second to fourth distal metatarsals.

Source: James Heilman, MD. Wikimedia Commons, the free media repository. Available at: https://commons.wikimedia.org/w/index.php?title=File:Lisfranc_fracture.jpg&oldid=205193600. Accessed April 15, 2020.

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COVID-19 Considerations in the Urgent Care Clinic

LINDSEY E. FISH, MD and SARAH GARDINER, RN, MSN

COVID-19 (SARS-CoV-2) has swept the country and world in rapid and unprecedented fashion. While much of the news coverage and scientific studies have focused on hospital needs and demands, as well as patient care in hospital settings, urgent care (UC) clinics remain on the frontlines, too. In fact, many UC clinics are seeing an increase in demand from patients with COVID-19 symptoms.

Additional patient volume increases may come from changes in operations at other medical settings such as primary care clinics and outpatient specialty clinics, many of whom have changed to telemedicine or closed their doors for patients with respiratory symptoms or entirely. As a result, it is important that UC clinics have clear processes in place to manage patients in this new and ever-changing environment.

Consider the following:

- **Patient flow and physical distancing.** SARS-CoV-2 is believed to be transmitted primarily by droplets.[1] As such, immediate identification followed by isolation of possible COVID-19 patients is of utmost priority. The waiting room of a UC clinic can be very full with patients near each other. As such, if possible, immediately room a patient with possible COVID-19 symptoms into an exam room. If space or operations do not allow that, consider separating the waiting room chairs with 6 feet distance between patients. Another option is to place spots on the floor to identify where patients should stand while in line waiting to check in. Encourage all visitors to wait in the car in order to minimize extra people in the clinic. Limit pediatric patients to only one adult to accompany them.
- **Personal protective equipment (PPE) usage.** The use of PPE and recommendations for it have been variable and changing rapidly in response to growing information about the illness and its spread. Additionally, there are supply limitations which may affect many decisions. It is believed that the coronavirus causing COVID-19 is spread in multiple methods including droplet, airborne, contact, fecal-oral[2] and possibly fomite transmission. As such, protection against all forms of transmission is important in keeping staff healthy, especially in high-risk encounters. Patient-facing staff should wear a surgical mask at all times and consider eye protection. Staff who will be in close proximity to the patient and examining the patient should additionally wear gloves and a gown. Lastly, N95 masks are thought to be more protective and should be used when possible, and in particular when performing an aerosolizing procedure (nasal wash/swab, throat swab, suction, nebulizer treatments, etc.)[3] Additionally, having symptomatic patients wear a surgical mask is important as this minimizes spread.
- **Clinical evaluation of patients.** While many people infected with COVID-19 are asymptomatic, these are unlikely to present to a UC clinic. One common exception is that many employers have requested that their employee be evaluated and obtain a "return to work" note indicating that they are asymptomatic. COVID-19 can present with a variety of signs and symptoms.[4] These include fever, conjunctivitis, loss of smell (anosmia), loss of taste (dysgeusia), sore throat, cough, shortness of breath, chest pain, abdominal pain, nausea, vomiting and diarrhea. Cases may be mild, moderate, or severe in nature.

In the UC clinic, especially during this time of limited resources, it is important to identify those who are experiencing severe COVID-19 infection. Most commonly, this is an evaluation of respiratory status as a result of the viral pneumonia from infection. Tachypnea, hypoxia at rest, and hypoxia with ambulation are very important clinical indicators of severe disease. If

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indicated, a chest x-ray (CXR) can help identify pneumonia. Additionally, chest pain is a common complaint in patients with COVID-19 and may reflect associated cardiac injury.[5] Evaluation using an EKG (and troponin, if available) can be utilized when clinically indicated.

"COVID-19 will be with us for an undetermined and likely prolonged period of time. Having processes in place for the management of this pandemic will facilitate patient care and keep your staff as healthy as possible."

If a patient is determined to have mild or moderate illness, they can likely be discharged home with education on self-care, symptom monitoring, and home quarantine. Discontinuation of quarantine may occur when the patient has experienced 72 hours without fevers (without use of antipyretics), complete resolution of respiratory symptoms (cough and shortness of breath), and at least 7 days have passed since the symptoms began.[6]

It is important to advise patients that the illness commonly lasts up to 14 days (and occasionally more). It appears that if the patient is going to progress to severe illness, this occurs around days 7–10 after symptom onset. However, if the patient presents with severe illness, transport to the nearest emergency department for further evaluation and treatment is indicated.

An initial work-up in the UC clinic should include a CXR, predominantly. While abnormalities can often be detected with complete blood count (CBC), basic metabolic panel, liver function testing (LFT), d-dimer, ferritin, lactate dehydrogenase (LDH), procalcitonin (PCT), troponin, and viral studies (influenza, RSV, etc.), the prognostic value of any of these tests in COVID-19, if abnormal, remains highly uncertain and, therefore, they are generally not indicated in ambulatory patients.

- **COVID-19 testing.** Access to testing has been limited by many factors, including the development of the test itself in the United States, testing supplies including nasal and oropharyngeal swabs and viral media, and laboratory ability to perform the test. Initially, all tests were performed at

the Centers for Disease Control and Prevention, and from there spread to state public health departments and finally to private and hospital laboratories. While the capacity to test has improved, there are still limitations in this area. At this time, testing is still largely reserved for patients with severe disease who are hospitalized, as well as high-risk patients (age>65, heart disease, immunocompromised, diabetes, chronic lung disease, chronic kidney disease, etc.), however, this is changing rapidly. It is recommended that you work with your local laboratory and state public health department to determine capacity and resources.

While testing for patients with mild symptoms is limited, they should be presumed positive and advised to self-quarantine until symptoms resolve as discussed above. As the point-of-care, CLIA-waived PCR test becomes more widely available, criteria for who can be tested will appropriately expand.[7]

- **Extra cleaning and disinfectant processes.** There are mounting data that COVID-19 can live on various surfaces for a period of time. It is unclear if it remains infective during that time. However, ensuring that the UC clinic remains clean is exceptionally important. Additional measure should be taken to wipe high-contact surfaces (check-in counters, workstations, etc.) throughout the day. Rooms and equipment used on patients (vital sign machines, otoscopes, handles on doors and cabinets, etc.) should be wiped after each patient use.
- **Contingency planning.** It is important that contingency planning begin for UC clinics. Various situations and scenarios should be included in the contingency plan. This should include plans for managing increased patient volume and decreased staff availability due to illness. Clinics should increase oxygen supply and equipment for the administration of oxygen. Clinics should implement plans for caring for patients for an extended period of time if Emergency Medical Services are delayed in arriving for a patient call.
- **Diagnosis codes and billing.** ICD-10 codes have been updated to include multiple diagnoses related to COVID-19. Common diagnoses include Exposure to COVID-19 Virus (Z20.828), Suspected COVID-19 Viral Infection (R68.89), and COVID-19 Virus Infection (U07.1). Level-of-visit billing in the UC clinic may continue using regular E/M coding; however, specific COVID-19 circumstances may result in different billing. The American Medical Association has published some guidance for these circumstances.[8] Please note that the Centers for Medicare and Medicaid Services has relaxed deadlines for reporting to let physicians and their staff focus on the clinical management of COVID-19 patients.[9]
- **Staff support.** This is an incredibly trying time. There are additional concerns for staff working the frontlines, especially regarding their safety and that of their family members, which poses significant mental health effects.[10] This involves all staff members in the clinic, including clerical staff, medical support staff (medical assistants and nurses), providers, and additional staff (cleaning crews, laboratory staff, etc.). One approach to this is to reduce as many of the unknowns as possible in the clinical setting. Clear, consistent communication, potentially in a forum such as a daily (socially distanced) huddle, can help address this. Reassuring staff that they already have much of the knowledge and skills necessary to address COVID-19 illness (as they can manage other infectious conditions such as measles, influenza, *C diff*, etc.) can serve as a powerful reminder. It is also imperative that UC clinics find ways to support their staff and provide them with additional resources. Options include employee assistance programs, community organizations, state committee/boards, and local hospital/university resources.

COVID-19 will be with us for an undetermined and likely prolonged period of time. Having UC processes in place for the management of this pandemic will facilitate patient care and keep your staff as healthy as possible. During this time, stay safe. ■

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Is Four Times a Charm for Walmart (or, Could Walmart Be a Threat to Urgent Care)?

Urgent message: It's important for urgent care to watch and learn from Walmart, which has engaged leading retail and strategic consultants to develop "Walmart Health." However, based on Walmart's three previous failures to penetrate any significant share of even its own stores with a retail clinic model, skepticism over Walmart's ability to execute as a healthcare provider is warranted.

ALAN A. AYERS, MBA, MAcc

If Walmart has its way, America's burgeoning healthcare marketplace is about to get a lot more crowded. The Bentonville, AR-based retail giant, in an ambitious attempt to grab a share of the $1.3 trillion U.S. healthcare market, has recently opened two pilot Walmart Health clinics in the state of Georgia. And unlike its three previous unsuccessful forays into delivering a viable retail clinic product, this latest iteration features a full-fledged, standalone primary care clinic alongside an array of additional health and wellness offerings.

So given Walmart's deeply entrenched branding, vast financial resources, and formidable retail might, should urgent care be concerned about Walmart as a competitor?

Walmart Health

The launch of Walmart Health is the retail chain's fourth iteration of its retail clinic model spanning the past 12-15 years. This latest version offers an all-in-one health center that includes the following services:

- Primary care
- Dental
- Vision services
- Hearing services
- Labs (onsite)
- Imaging (onsite)
- Mental health counseling

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Each week, over 275 million customers visit Walmart's more than 11,300 stores under 58 banners in 27 countries and eCommerce websites. With fiscal year 2019 revenue of $514.4 billion, Walmart employs over 2.2 million associates worldwide.

Source: Walmart.com.

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- Pharmacy

Walmart Health touts its pilot health centers as state-of-the-art facilities, with the appearance of a freestanding building and a separate entrance from the adjacent supercenter. With its array of services under one roof, Walmart Health is advertising itself, according to press releases, as "a supercenter for basic health services." The new clinics promise transparent, affordable pricing regardless of insurance coverage: a $40 flat fee for a primary care visit, $45 for an appointment with an optometrist, $50 for an adult dental visit, and $1 a minute to see a therapist. Additional health professionals, as well as onsite health insurance educators, will be available to assist patients. Through partnering with local providers, Walmart Health clinics will be staffed with physicians, nurse practitioners, optometrists, dentists, and mental health professionals. In effect, Walmart Health aims to bring a one-stop-shop approach to community healthcare, and leverage its retail expertise towards providing an affordable, accessible, and convenient healthcare experience in a retail setting.

The national media has jumped on Walmart's announcement, reporting that Walmart would be "disrupting" the nation's $3.6 trillion in healthcare spending—as well as introducing Walmart's "always low prices." While Walmart hasn't said how many such clinics it plans on building, experts point to Walmart's sheer scale in retail with 150 million weekly shoppers in its 4,756 locations. Anything Walmart does is bound to get attention.

Walmart's Latest Foray Into Retail Healthcare

Walmart currently operates 19 clinics across Texas, Georgia, and South Carolina, but those are limited in scope as to the services they provide. Walmart Health, on the other hand, with its full-service offering, signals that the retailer is attempting to make a deeper dive into the healthcare business and preparing to employ its considerable resources to do so. Walmart already operates one of the largest pharmacy chains in America, and with the introduction of its two pilot health centers in Dallas and Calhoun, GA, respectively, looks to position itself as a major player in the healthcare game over time.

With an eye on potential profits and the chance to grab a bigger slice of America's trillion dollar healthcare pie, Walmart figures it can merge its powerful branding with the inherent trust that people place in their doctors, and make Walmart Health a preferred access point with consumers.

Although ambitious, this latest venture will stick to providing basic health services to the 80% or so of people who account for 20% of healthcare expenditures; Walmart Health is not designed to provide longitudinal care for patients who require specialist care or have chronic conditions.

Ultimately, Walmart is banking on its retail know-how to develop a consumer-friendly access point that makes seeking healthcare as simple and straightforward as heading down to the local supercenter to grab a gallon of milk or a loaf of bread. Walmart spokespeople admit that although this latest retail clinic foray is a gamble, it's a serious strategy to which the company is fully committed. The inherent risks, they reason, are well worth the potential rewards for Walmart's customers, the communities where Walmart operates, and of course the retailer's stockholders.

Should Urgent Care Be Concerned?

Urgent care is already facing stiff competition for patients from retail clinics operated by the likes of CVS and Walgreens, freestanding ERs, telemedicine providers, and niche players like ortho and pediatric urgent care. Is Walmart, with its 5,300 U.S. stores and prebuilt infrastructure, now another looming threat? After all, this is its fourth retail clinic iteration, indicating that the world's largest brick-and-mortar retailer is determined to stake a claim in America's crowded healthcare space. Walmart already does $36 billion annually in health and wellness sales, and clearly sees the opportunity to increase that revenue.

The very fact that Walmart Health is the fourth retail clinic attempt, however, may in and of itself provide important clues as to why Walmart has not been successful thus far, as well as forecast its future prospects of gaining traction in the retail healthcare game. None of the in-store clinic models Walmart has tried over the past 15 years has gained traction in more than a hundred or so locations. Given that Walmart has over 4,700 U.S. stores, a clinic in 2% 3% of locations—between 94 and 141 sites—can hardly be considered a "game changer." But each time a new model was introduced, the press seemingly forgot about the previous iteration and reported that Walmart was on-course to "change the way healthcare is delivered."

So the obvious question is: What went wrong with the first three attemps? We'll briefly examine each iteration in the following sections, along with the primary reasons why they never broadly appealed to consumers.

Iteration 1: Rent Space to Third-Party Clinic Operators

Over a decade ago, Walmart announced that it would be opening health clinics in its stores, which at the time was considered innovative and revolutionary. This first iteration entailed Walmart contracting with independent third parties to operate the clinic in the Walmart store—essentially leasing retail space from Walmart. This model is a pure landlord/tenant relationship which requires the clinic operator to be profitable as a standalone business, while Walmart would also gain from increased foot traffic in its stores and sales of prescriptions and OTC meds. Because these third-party clinics in Walmart never attained break-even volumes, and because the clinic itself didn't benefit from "downstream" retail sales that were going to Walmart…this first iteration quickly failed as the initial entrepreneurs pulled out and/or leases expired.

Walmart managed to open around 100 or so of these clinics, but the iteration was short-lived. After about 2 years when the initial leases on the Walmart retail space began to expire, the third-party operators closed their in-store clinics. Why? Because with the third-party independent operator model, they had to be able to turn a profit at the point of service to be a viable offering. And these clinics never achieved profitable patient volume. This issue was compounded by the fact that all of the "downstream" revenue the clinic generated—for example, the sale of the over-the-counter medication like the $20 Mucinex or the $18 Robitussin, or the filled prescriptions from the pharmacy—was all going to Walmart, and not the independent clinic operator. So as it turned out, this first iteration was not a sustainable model.

Iteration 2: Engage Hospitals and Health Systems

The second iteration had the same economic model as the first—a tenant/landlord relationship with Walmart—but this time the tenant would be hospitals and health systems rather than entrepreneurs. The difference is that a hospital can make a business case for a clinic that loses money at the point of service, so long as either greater costs are avoided elsewhere (eg, in shifting low-acuity Medicaid patients out of the emergency room) or "downstream" revenues are realized in primary care, specialty and facility-based practices through the capture and processing of medical referrals.

The hospitals and health systems were more concerned with building their brand than realizing point-of-sale profits. They would attract patients into the clinic, and then refer those patients to the hospital's facilities, specialists, and primary care providers—in other words, downstream revenue. The clinics would also serve to ease the burden placed on the hospital's emergency department by Medicaid patients who were crowding the ED. And again, the Walmart store would benefit from all the OTC and pharmacy sales generated by the clinic.

With this second clinic iteration, a couple of the more successful health systems with Walmart tenancy created consulting businesses to help other health systems replicate their Walmart "success," although in the end, no more than a hundred or so locations opened. Even when a health system creates a business case for a physical "brand presence" in Walmart—one in which margin will be realized elsewhere—long-term, hospitals still have little tolerance for low patient volumes.

After a couple of years of this model, which never got to more than 100 or so locations, the clinics again began to close. The culprit was a lack of patient volume in the Walmart store, same as before.

A helpful anecdote underscores the root issue: we know of a couple of hospitals that desired a walk-in clinic in a retail area, opened up in Walmart under the second iteration clinic model, and when the Walmart lease was up, opened a full-service urgent care basically in the parking lot. Interestingly, this turned out to be a more viable and appropriate model than the Walmart in-store clinic.

Some hospitals who wanted a retail location or a walk-in location in an area started inside Walmart and then when their Walmart lease expired, moved out to the parking lot and opened a full-service urgent care, which turned out to be the more appropriate operating model.

Perhaps one problem is that Iterations 1 and 2 were both "retail clinics" from the standpoint they were staffed by nurse practitioners with a predefined set of services and prices, limitations in the scope of care due to the clinic's physical set-up and capabilities, and also limitations on the nurse practitioner's scope of licensure. Retail clinics diagnose and treat the most basic of medical concerns like pink eye and sore throat, lack x-ray and any substantive laboratory testing required for diagnosing more complex conditions including pneumonia, and also lack a sanitary table and lighting to perform procedures like laceration repair and abscess drainage. The clinics also could not treat workers' compensation injuries. Mostly retail clinics are effective at administer-

ing vaccines including flu shots, which can also be done directly from the pharmacy. The issue with limited services is that retail clinics address only a very small portion of the total market, compared with the full scope of services offered in more conventional urgent care settings.

Retail clinics are also a very seasonal business and "flu epidemics" are unpredictable. Treating low-level conditions—like those associated with seasonal cold, flu or allergy symptoms—results in a more extreme seasonality of patient visits than a full-service urgent care that can treat a range of patient conditions year-round. The seasonal nature of limited scope care leads to complications in recruiting and staffing the clinic, which is exacerbated by high turnover of nurse practitioners who can become bored working by themselves and within only a very narrow range of their training.

When the services of a retail clinic are too limited to be practical, that clinic becomes an excellent *referral source* to urgent care as opposed to being urgent care's direct competition.

Iteration 3: Walmart Would Operate the Clinic Itself

Even after two previous unsuccessful forays, Walmart's determination to have some form of in-store retail clinic never wavered. So for its third iteration Walmart itself would own and operate the clinics. Only this time, the clinics would primarily serve Walmart employees.

The third iteration saw some major operational improvements such as greater square footage, an exterior entrance into the clinic from the parking lot, and an expanded scope of services including primary care, immunizations, and lab testing. Most significant is that Walmart, rather than an entrepreneurial or hospital operator, would operate the clinic itself, including employing the providers. The strategy behind the way this iteration would be executed can be illustrated by examining the Dallas/Ft. Worth, TX market, where Walmart opened its initial third iteration clinic.

In North Dallas, there are over 20 Walmart supercenters, with each store having 350-500 employees. The pilot third iteration clinic was opened in Carrollton, TX. Based on the 20 or so centers in this market, Walmart would have around 10,000 employees within a 15–20-minute drive. By opening a clinic that would primarily serve Walmart employees, the retailer had in effect created an employee near-site, or an onsite clinic that would also serve the general public by offering $40 cash paid visits. Once again, though, this clinic iteration stalled out, having never even reached 20 locations. And judging by the fact that the only insurance accepted by the clinic is the Walmart health plan, United HealthCare, and Medicare, the major insurance payers were never really onboard with the concept.

While Walmart is undisputedly the most successful retailer in history, its track record of developing and scaling an in-store clinic model is poor. None of the first four iterations of in-store clinic never attained more than a hundred or so locations, or less than 2% of Walmart's U.S. locations.

Walmart's Foray as an EMR Vendor

So, three total launches over a 12-year period, all receiving "game-changing" media coverage, and not one gained significant traction. Also noteworthy is the fact that Walmart retail health clinics have not been the retailer's only unsuccessful attempt at carving out a real niche in the healthcare market. Back in 2009, Walmart-owned Sam's Club, eClinicalWorks and Dell announced that they would be partnering to develop a turnkey electronic medical record and practice management solution geared toward small physician practices. As cost and complexity had remained a significant barrier to entry for small practices with limited capital, this cost-effective EMR package was touted as a game-changer that would have a profound effect on the market. Based on press releases at the time, this package was guaranteed to increase adoption rates which would improve patient care.

Not all the press this Walmart-spearheaded collaboration received was positive. Many prominent industry voices sounded warning alarms, as there was widespread concern and skepticism about whether Walmart had the expertise and competence to develop a product that would securely safeguard patient privacy, and whether a retailer could properly handle having access to such sensitive medical information and patient data. These questions went unanswered, as the entire venture abruptly went away, with no warning or real explanation as to why.

Few people probably remember the headlines (and ensuing controversy) in 2009 when Walmart announced it would become a leading vendor of electronic medical records, through a small practice version of eClinicalWorks that would be bundled with desktop applications and sold at Sam's Club.

Walmart's Strength Is in Procurement and Logistics—Not Operating Healthcare Facilities

Walmart's strength has always been in its procurement

and logistics. In order to fulfill its promise of "always low prices" to consumers, Walmart scours the globe for the best prices, which it brings to its stores through the industry's most sophisticated logistics and transportation system. In fact, Walmart has been called a "logistics company" not a retailer and its long-term value (in rural America especially) is to be an outlet for any product that can be procured on the internet. Walmart has been called the "Amazon of rural America" for this reason.

Walmart's strength in procurement applies not only to the products it sells, but also to services for its 1.5-million-plus U.S. employees. Walmart is the largest private sector employer that is also self-insured for its employee health plans. To assure high-quality medical outcomes for the lowest price, Walmart has created relationships with leading academic medical centers like the Cleveland Clinic (for cardiac care), Mayo Clinic (for cancer care and transplants), Johns Hopkins (for joint replacements) and Geisinger (for weight loss surgery). Walmart procures excess capacity from, or assures a minimum level of revenue to, these medical centers and in exchange gets significant discounts for treating its employees. By picking the "best of the best," Walmart also assures strong clinical outcomes—supported by data—which saves money over time by avoiding complications and re-admissions. Walmart employees who take advantage of these "Centers of Excellence" do so with company-paid travel and all out-of-pocket responsibility waived.

Likewise, on a local level, Walmart steers employees to prescreened physicians in specialties like primary care, cardiology, and obstetrics, whom its data say deliver the highest quality for the lowest price. Primary care copays are capped at $35 to assure employees seek care early, before a minor problem evolves into something more serious (and costly) to treat. Walmart has even added healthcare "concierges" to help its employees navigate their community's health resources. Employees with more complicated histories may also be assigned to a "personal online doctor" who helps manage chronic conditions and coordinates specialty care when needed.

Using hard data to negotiate the best prices and clinical outcomes for its employees at the most reputable medical centers nationally seems far more in-line with Walmart's retail procurement and logistics excellence. But despite this success in procurement and logistics, Walmart has never demonstrated its success as a healthcare *operator* (or provider of any other service, for that matter).

Walmart Health Faces Obstacles

Can Walmart's fourth retail clinic iteration succeed where the first three failed? Based on their enthusiastic pronouncements, the retailer's execs and spokespeople firmly believe so. Although innovation in healthcare is risky and difficult to pull off generally, Walmart is aiming to prove that their brand of retail healthcare specifically—infused with their retail expertise and infrastructure—will appeal to consumers in a big way. And while this latest launch has been accompanied by the same ample media coverage as the first three iterations, it's being regarded with an equally healthy dose of skepticism from healthcare academies and other experts in the field. While they loved Walmart's ambition, there seems to be a general consensus that Walmart Health will have to overcome the following obstacles to really take off:

- **Branding.** Walmart's store slogan is, "Low prices. Always." And they're synonymous with that guarantee. Research shows, however, that when it comes to healthcare, people are more interested in quality than rock bottom prices. So where Walmart's low price mantra helps them sell consumer goods, if people associated Walmart Health with ideas like "bargain" and "discount" it may lend to the perception that Walmart Health services are of inferior quality compared with their healthcare-focused competitors.
- **Trust.** Trust in this case overlaps with branding that has worked in healthcare with established health systems. The Mayo Clinic, for example, is renowned nationwide and associated with the best doctors, specialists, and facilities. So the experts rightly wonder aloud whether a big-box retailer can even achieve that level of trust with consumers. This may have been the downfall of the first three Walmart clinic iterations, and remains a significant obstacle for Walmart Health.

Beyond the brand, trust goes to much more than the name on the front of the building. People place implicit trust in their personal physicians first, and the facility second. For most patients, their relationship with their doctor matters more than the medication or the procedure. So if a Walmart physician leaves the store, will the patients follow? And, while mental health counseling likely won't account for a significant amount of patient volume, will people really trust what they regard as a Walmart employee with their most intimate mental health issues?

Can Walmart Change Consumer Behavior?

Perhaps the greatest elephant in the room when discussing Walmart and healthcare is whether it's "consumer behavior" to seek care in a Walmart store. Ask some consumers and they will say that Walmart is cluttered, dirty, crowded, or simply too large to comfortably navigate. In many communities, Walmart is the epicenter of the area's crime rate. If Walmart is going to be in the healthcare business, there's also concern when not ill about frequenting a store that attracts sick and contagious people.

The public is used to getting healthcare in traditional ways—going to a hospital or related facility, doctor's office or urgent care center—so to be successful, Walmart must change the entire way people view and receive healthcare. This acceptance factor of Walmart as a healthcare brand creates a significant barrier out of the gate that isn't necessarily present with more traditional healthcare delivery channels.

Healthcare diversifies Walmart's revenue away from merchandising, especially as Walmart now competes online, where internet retailers aren't burdened with Walmart's brick-and-mortar costs. The ability to drive revenue in the winter months when (post-Christmas) retail sales are typically their slowest, could complement Walmart's total corporate cash flow. Healthcare is also historically exempt from recession and other economic pressures that adversely affect retail sales. So, not only does healthcare represent a multibillion revenue growth opportunity for Walmart, it can also have a "smoothing effect" on Walmart's financial performance.

And last, a big problem is there is little to no connectivity of Walmart Health with the community's health resources (vs, say, an urgent care that is affiliated with and shares the same electronic medical record with a local or regional hospital or health system). Many of Walmart's employees and customers suffer from comorbidities like diabetes, hypertension, and COPD that need to be managed in a primary care medical home, where the patient can be referred to various specialists as needed. By contrast, Walmart's approach is more transactional, focused on selling single visits and one-off services from a "menu," than on providing a continuum of care.

Walmart Is Not a Threat to Urgent Care

Walmart has embarked upon four iterations of its retail clinic model over the past 12-15 years. Given that Walmart has over 5,300 stores, and not one of these iterations has reached more that 100 or so locations, the logical conclusion is that consumers simply don't seek urgent care in Walmart. The retailer has undoubtedly learned valuable lessons from its first three iterations that it can apply to Walmart Health. But people are accustomed to receiving healthcare from traditional providers in traditional settings. For Walmart to be successful, they would have to change the entire way people view and receive healthcare, which has proven a tall task so far.

What Walmart has proven highly successful at is global procurement. They expertly and efficiently build scale in purchasing to secure the lowest prices, which includes, ironically, innovative approaches to purchasing healthcare for its own 1.5 million employees. But the retail powerhouse has yet to demonstrate competency as a healthcare operator or in delivering healthcare services.

Reportedly, Walmart Realty, which manages over 775,000,000 square feet of retail space, is no longer allowing healthcare-related uses in the outlot parcels of its stores. In rural areas, especially, Walmart has been considered a "magnet" for retail so this significant change signals that Walmart has deeper intentions to expand its own healthcare brand.

Conclusion

Walmart is undisputedly the world's most successful retailer, driven by its deep expertise in procurement and logistics. When this expertise is applied to healthcare, Walmart has created an innovative and cost-efficient benefits program for its own employees producing remarkable clinical outcomes. But as a "merchandiser" of goods—and specifically a provider of services—Walmart has a dismal track record in scaling a viable clinic concept. Urgent care should therefore watch this newest iteration of "Walmart Health" with skepticism while also learning what it can from the world-class expertise Walmart has put behind the project. ■

Take-Home Points

- Walmart's expertise in merchandising and logistics has not translated to success in the healthcare marketplace previously.
- Healthcare consumers may not be comfortable seeking healthcare in a big-box store environment; conversely, big-box store consumers may be uncomfortable shopping for home goods in a location where sick or injured patients are seeking care.
- Walmart locations lack connectivity with existing community health resources.

ABSTRACTS IN URGENT CARE

- General Statistics of COVID-19
- Clinical Characteristics of COVID-19
- Characteristics of Healthcare Workers Infected with COVID-19
- A Simple Algorithm for Treatment of Nonpurulent Infections
- Topical Lidocaine for Oral Ulcers in Children
- Walking Boot vs Rigid Cast in Achilles Tendon Rupture

YIJUNG RUSSELL, MD

General Statistics of COVID-19

Key Point: The majority of patients with COVID-19 have mild symptoms; however, those with critical disease have a mortality rate of 49%.

Citation: Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: Summary of a report of 72,314 cases from the Chinese Center for Disease Control and Prevention. *JAMA*. [Epub ahead of print February 4, 2020.]

Relevance: Mainstream media reports on mortality figures and the severity of COVID-19 are accurate in a "big picture" sense but are misleading and may be fueling panic among the public. Breaking down the data may be useful for clinicians in assessing risk and in educating patients.

Study Summary: Consideration of 72,314 cases shows that:

- Patients between 30 and 79 years of age make up 87% of cases
- Patients age 20-29 and >80 years make up 8% and 3% of cases, respectively
- Mortality rate overall is 2.3%
- 81% of patients with COVID-19 experience mild disease
- 14% experience severe disease
- 5% experience critical disease, with a 49% mortality rate ■

Clinical Characterization of COVID-19

Key Point: COVID-19 is a novel disease with associated clinical, laboratory, and imaging characteristics.

Yijung Russell, MD practices in the Department of Emergency Medicine at Amita Health Resurrection Medical Center in Chicago.

Citation: Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*. 2020;395(10223):497-506.

Relevance: The rate of infection with COVID-19 has outpaced data collection regarding the most relevant characteristics of infected patients. Early insights from Wuhan, China may inform patient assessment and diagnostic procedures.

Study Summary: The authors characterize clinical aspects of COVID-19 in 41 patients. Here are the most pertinent insights:

- The most common symptoms were fever, cough, and myalgia/fatigue
- Upper respiratory symptoms such as rhinorrhea, sneezing, and sore throat were not common
- Bilateral involvement on chest CT was seen on 98% of patients
- Lab findings include lymphopenia, elevated AST, D-dimer, troponin, and cytokines
- Median 7 days from symptom onset to hospital admission
- Median 10.5 days from symptom onset to mechanical ventilation ■

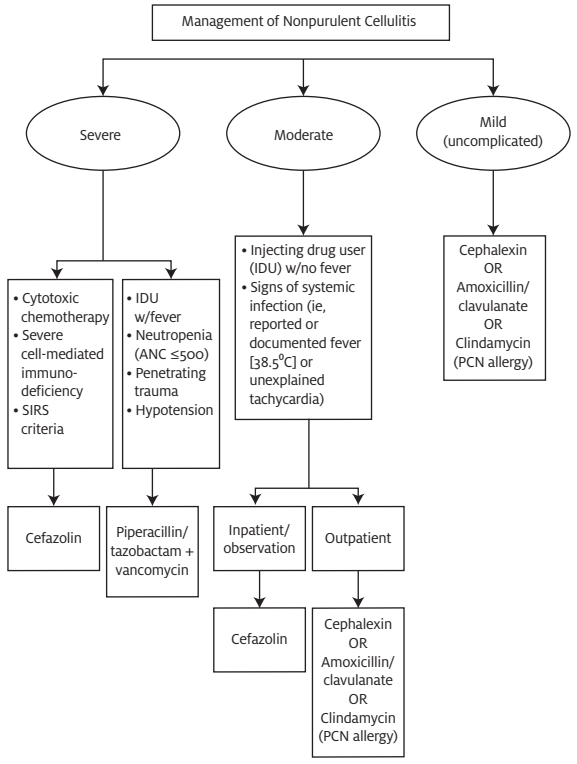
Clinical Characteristics of Medical Staff Infected with COVID-19

Key Point: The majority of medical staff infected with COVID-19 were not front-line workers, which include emergency providers.

Citation: Chu J, Yang N, Wei Y, et al. Clinical characteristics of 54 medical staff with COVID-19: a retrospective study in a single center in Wuhan, China. *J Med Virol*. [Epub ahead of print March 29, 2020.]

Relevance: Healthcare workers in general are at increased risk

Figure 1: Management of Nonpurulent Cellulitis



for infection with coronavirus. Identifying departments in which staff are at the greatest risk may provide rationale for allocating or adapting protective resources.

Study Summary: The authors characterize COVID-19 in 54 infected medical staff. Here is the most pertinent info:

- 4% of infected staff worked in first-line departments (emergency department, fever clinic, fever ward, respiratory and critical care department, and infection department)
- The majority (72%) of infected staff were from other clinical departments
- 19% of infected staff were from medical technology dept (examination and testing)
- 20% had "common type" symptoms
- 74% had "severe type" symptoms
- 6% had "critical type" symptoms ■

Improving Antibiotic Stewardship via Algorithm Implementation

Key Point: Implementation of an algorithm for treatment of nonpurulent skin and soft tissue infection led to decrease in hospital admission and treatment failure

Table 1. Oral Antibiotic Dosing Recommendation*
Recommended duration = 5 days

	60 – 120 kg	>120 kg
Cephalexin	500 mg every 6 hours or 1 g every 8 hours	1 g every 6 hours
Dicloxacillin	500 mg every 8 hours	500 mg every 8 hours
Clindamycin	300 mg every 8 hours	450 mg every 8 hours
Amoxicillin/ clavulanate	500/125 mg every 12 hours	500/125 mg every 8 hours

*Consult pharmacy for renal adjustment

Table 2. Recommendations for Patient Re-Evaluation

Patient on oral antibiotics and not improving for ≤48 hours:
1. Evaluate oral antibiotic dose
2. Consider alternative antibiotic
3. Allow time for further improvement

Algorithm and tables adapted from: Smith C. Resurrecting lowly cephalexin for non-purulent SSTI. *JournalFeed*. Available at: https://journalfeed.org/article-a-day/2020/resurrecting-lowly-cephalexin-for-non-purulent-ssti. Accessed April 9, 2020.

Citation: Haran JP, Goulding M, Campion M, et al. Reduction of inappropriate antibiotic use and improved outcomes by implementation of an algorithm-based clinical guideline for nonpurulent skin and soft tissue infections. *Ann Emerg Med*. [Epub ahead of print February 13, 2020.]

Relevance: Antibiotic stewardship is a critical component of good clinical practice that can prevent over- or unnecessary exposure for patients, as well as growth of resistant organisms. This study looks at the effects of implementation of an algorithm that follows Infectious Disease Society of America guidelines in practice and outcomes. (See **Figure 1** and **Tables 1** and **2**.)

Study Summary: In this year-long cohort study, 1,360 patients diagnosed with nonpurulent skin or soft tissue infection in two emergency departments were followed. Intervention included a pocket card summarizing a simple treatment algorithm that featured cephalexin as the recommended treatment option for uncomplicated infections. After implementation of a treatment algorithm, hospital admissions were reduced by 26% while risk of treatment failure was reduced by 46%. In addition, risk of readmission was reduced by 45%. ■

Topical Lidocaine Improves Pain in Children with Oral Ulcers

Key Point: Topical lidocaine improved pain in children with oral ulcers; however, it did not show increase in oral intake.

Citation: Daniel RMD, Jason SDO, Jeffrey SJ. BET 2: Does topical lidocaine improve oral intake in children with painful mouth ulcers? *Emerg Med J*. 2020;37(2):113-114.

Relevance: Clinicians often use topical lidocaine for symptom relief in children with oral ulcers. However, it is unclear whether this treatment modality offers meaningful relief, such as improving their intake of food.

Study Summary: This was a review of two randomized controlled trials; one trial showed that topical lidocaine led to improved pain scores and the other found that there was no difference in oral intake after topical lidocaine was applied. When using topical lidocaine for symptom relief, it is important to bear in mind that the maximum dose should not be over 4.5 mg/kg/dose to prevent systemic toxicity. ■

Walking Boot vs Rigid Cast in Achilles Tendon Rupture

Key Point: Treatment of Achilles tendon rupture with walking boot or rigid cast resulted in similar outcomes and adverse events.

Citation: Costa ML, Achten J, Marian IR, et al; UKSTAR trial collaborators. Plaster cast versus functional brace for non-surgical treatment of Achilles tendon rupture (UKSTAR): a multicentre randomised controlled trial and economic evaluation. *Lancet*. 2020;395(10222):441-448.

Relevance: Patients with Achilles tendon rupture are typically treated with a cast for weeks. While casts offer maximum protection, this practice can lead to muscle atrophy and ankle stiffness, as well as the added burden of being non-weightbearing for the patient.

Study Summary: In this multicenter, randomized, controlled trial, patients were randomly assigned to receive a plaster cast or functional brace for 8 weeks. The authors found that there was no difference between patient-reported Achilles tendon rupture scores at 9 months. In addition, there was no difference in rate of tendon re-rupture (6% vs 5%, p = 0.40). Finally, the total cost for the plaster cast vs functional brace group was $1,465 vs $1,337. ■

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When Can an Urgent Care Legally 'Fire' a Patient?

Urgent message: In light of increasingly frequent reports of urgent care centers "firing" patients for various reasons, clarity is needed as to whether and when it may be legal and appropriate for urgent care to "ban" a patient.

ALAN A. AYERS, MBA, MAcc

The customer is always right. We've all heard that saying and perhaps even invoked it in a contentious business situation. But exactly how does this apply to providers and staff in an urgent care?

Background

A patient at an urgent care facility loses his temper after being declined a prescription refill. He yells and threatens the staff, then storms out of the office. The staff calls the police but before they arrive, the patient leaves. The urgent care facility sends a letter to the patient informing him that he cannot be seen at the center again due to this intimidating behavior.

Can the Urgent Care Center Do This?

The American Medical Association Code of Medical Ethics Opinion 1.1.5 states that the "[p]hysicians' fiduciary responsibility to patients entails an obligation to support continuity of care for their patients. At the beginning of the patient-physician relationship, the physician should alert the patient to any foreseeable impediments to continuity of care."[1]

Further, Opinion 1.1.5 states that "[w]hen considering withdrawing from a case, physicians must:

a. Notify the patient (or authorized decision maker) long enough in advance to permit the patient to secure another physician; and
b. Facilitate transfer of care when appropriate.[1]"

Alan A. Ayers, MBA, MAcc is Chief Executive Officer of Velocity Urgent Care, LLC.

"Numerous states have enacted patient abandonment laws, the violation of which can result in penalties ranging from fines to license revocation for ending the patient relationship, depending on the jurisdiction."

Guidelines from the AMA also stipulate that the reasons a physician may dismiss a patient include the following:

- Patient noncompliance
- Failure to keep appointments
- Rude or threatening behavior
- Nonpayment of fees
- The closing of the medical practice[2,3]

Likewise, the American College of Physicians requires that the physician-patient relationship be discontinued only under "exceptional circumstances."[4]

Thus, it is likely that an urgent care physician would be permitted to dismiss a patient with rude or threatening behavior or in certain specific circumstances. Nonetheless, physicians need to use caution when dismissing patients from their care.

Situations When You Shouldn't Fire a Patient

Physicians are not legally or ethically permitted to fire a patient based on discrimination for race, color, religion, national origin, HIV-status, sexual orientation, gender identity, or other attributes

"The AMA's Code of Medical Ethics states that physicians who are considering withdrawing from a case must notify the patient well in advance to allow the patient enough time to find another physician and to facilitate transfer of care."

that are federally accepted as discrimination. Also, a physician cannot withdraw during a patient's ongoing acute medical care.[2] Patient termination must wait until the treatment is finished.

Patients who are members of prepaid health plans can't be discharged until the physician has spoken with the third-party payer to request their transfer to another practitioner. Also, a patient's disability cannot be the rationale for withdrawal by a physician unless the treatment of that disability is beyond the scope of the practitioner's expertise.

Beyond this, urgent care facilities must be aware of liability for patient abandonment.

Patient Abandonment and Unprofessional Conduct

The only legal requirement physicians must meet when terminating a relationship with a patient is that they avoid abandonment. This may result in civil liability for the physician.[5]

Numerous states have enacted patient abandonment laws, the violation of which can result in penalties ranging from fines to license revocation for ending the patient relationship, depending on the jurisdiction.[6-10] For example, Pennsylvania law states that pursuant to the regulations of the State Board of Medicine, a practitioner can be subject to disciplinary action for abandonment of a patient.

In Pennsylvania, abandonment occurs "when a physician withdraws his services after a physician-patient relationship has been established, by failing to give notice to the patient of the physician's intention to withdraw in sufficient time to allow the patient to obtain necessary medical care."[11-14]

Patient Discrimination

While a restaurant or retail store can post a sign saying, "we reserve the right to refuse service to anyone," states have antidiscrimination laws that apply to all businesses, prohibiting discrimination of "protected classes." In addition, there are states, such as California,[15] that have recognized additional protected classes in addition to those enumerated in the federal statutes and regulations.[16]

For example, federal laws such as the Public Health Service Act[17] prohibit discrimination on the basis of age, race, color, national origin, disability, sex (gender), or religion in programs, services, and activities where facilities receive federal funding.[18] This includes programs such as Medicare and Medicaid.[19]

There is also no relief from caselaw, such as the decision of *Masterpiece Cakeshop,* where a Colorado baker declined to decorate a wedding cake for a same-sex marriage on the basis that he had to use his *artistic skills* to make an *expressive statement* inconsistent with his religious beliefs. In that case, the U.S. Supreme Court held that the state civil rights commission violated the First Amendment's Free Exercise Clause by ruling that the baker violated a state antidiscrimination act, opining that the commission's treatment of the baker's case displayed a clear and impermissible hostility toward his sincere religious beliefs.[20,21] Urgent care center physicians are not dealing with artistic skills and expressive statements. Rather, healthcare is a personal service provided by an individual.

However, there are some "provider conscience" laws that offer healthcare providers some protection if they refuse to perform, accommodate, or assist with certain healthcare services on religious or moral grounds.[22]

Other Real-Life Scenarios

The following "real-life" scenarios should be viewed with respect to the AMA guidelines for dismissing a patient (patient noncompliance: a patient's inability to keep appointments; a patient's rude or threatening behavior; the nonpayment of fees; and the closing of the medical practice), in addition to applicable state law. Again, one statute stipulates that "[a]bandonment occurs when a physician withdraws his services after a physician patient relationship has been established, by *failing to give notice* to the patient of the physician's intention to withdraw in *sufficient time* to allow the patient to obtain necessary medical care."[6]

It's important to note that urgent cares are generally private and considered to be akin to a "doctor's office." As such, unlike emergency rooms and hospitals, they are not subject to the Emergency Medical Treatment and Active Labor Act (EMTALA).[23]

Negative reviews

A patient is "treated" at urgent care, doesn't get well, and then goes to the ED where she's told that the urgent care made an incorrect diagnosis. The patient posts several negative online reviews. The urgent care claims that the patient has "defamed" it and subsequently bans the patient from returning. Here, it is clear that a physician-patient relationship has been established; however, the "firing" of this patient may be legal if notice to the patient of the physician's intention to withdraw is given with sufficient time to allow the patient to obtain necessary medical care.

Competitive intelligence

An urgent care bans an employee of a competing urgent care

who didn't want to be treated by his fellow employees on a confidential health issue because the urgent care believes that this patient is "secret shopping." The analysis is the same as above. Appropriate notice by the urgent care would most likely absolve it of further liability in banning this patient.

Overcapacity

An urgent care posts a sign stating that it can turn away patients prior to closing if the capacity of the center has already been reached with waiting patients. While this policy may be acceptable, states usually require urgent care facilities to see patients who arrive with a life-threatening emergency, even if the physician must work beyond her normal work hours. The urgent care may be liable in an emergency situation if it fails to stabilize the patient and call for an ambulance to transport the patient to an emergency facility.

Insurance coverage

Insurance contracts require that the urgent care provide services to all members of the health plan for which the urgent care is "in network." If there is an issue, it most likely would come down to the patient's ability to pay. Again, urgent care centers are not bound by the EMTALA and typically require payment at the time of service.

Notice Is Essential in Firing a Patient

The AMA's Code of Medical Ethics states that physicians who are considering withdrawing from a case must notify the patient well in advance to allow the patient enough time to find another physician and to facilitate transfer of care when appropriate.[2] And again, state laws may address specifics as to patient abandonment. The firing or termination of a patient should necessitate formal written notice informing the patient that he should find another healthcare provider. A copy of the letter and any other correspondence should be made part of the patient's medical record.[2]

Written notices should include an effective date and an offer to provide the patient with a copy of their medical records. Be sure to provide medication refills only up to the date of the patient termination. Don't include a specific reason or details, but instead use a vague and generic reason for termination such as an "inability to achieve or maintain rapport."[2,24]

"Your urgent care center should have policies and procedures to help physicians and staff avoid difficult behavior and noncompliance; these expectations should be laid out in a patient's first visit, ideally in a form that the patient must read and sign."

Takeaway

As one attorney said, "It's time to dismiss (the patient) when the doctor-patient relationship doesn't work."[25]

Your urgent care center should have well thought-out policies and procedures to help physicians and staff avoid difficult behavior and noncompliance. And these expectations should be laid out in a patient's first visit, ideally in a form that the patient must read and sign. ■

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Conducting Preparticipation Sports Physicals in the Urgent Care Center

Urgent message: Youth athletic programs are ubiquitous in the United States, with leagues requiring players to have a physical exam before they're allowed to take part. Ensuring your urgent care center is ready to be a "go to" resource for a thorough work-up increases young athletes' chances for a safe experience and bolsters your position as a valued community health resource.

BENJAMIN SILVERBERG, MD, MSc, FAAFP

Introduction

Millions of juveniles participate in organized athletics the world over every year. In the United States, preparticipation exams are required, though specific policies and forms vary significantly in various localities. There is controversy, for example, as to whether an EKG or other cardiac testing is necessary. Ultimately, it is usually up to the examiner's discretion whether a candidate "passes" the exam or not, so it is essential to remain current on recommendations from professional societies and be consistent within your own practice as to what findings warrant further workup.

Background

Preparticipation exams began in the 1970s, though early efforts amounted to little more than checking for heart murmurs and inguinal hernias. A collaborative effort among various specialty organizations has given birth to more comprehensive history and physical examination guidelines[1] starting in the 1990s, however.

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Discussion

Recent Updates

The 2019 iteration of the preparticipation evaluation—a joint effort among the AAFP, AAP, ACSM, AMSSM, AOSSM, and AOASM—includes anticipated medical history elements such as current and past medical conditions, surgical history, medications and supplements (including over-the-counter medicines), and allergies, but also the PHQ-4, a brief screen for psychiatric morbidity. Today's form differentiates between sex assigned at birth and gender identity. Also, the stratification of the athlete's outcome (ie, "cleared," "not cleared," or "cleared with restriction") has moved to a medical eligibility form that further breaks down possible outcomes of the evaluation and replaces the concept of "clearance" with "eligibility," a subtle but important distinction.

Benjamin Silverberg, MD MSc FAAFP, FCUCM is an Assistant Professor in the Departments of Emergency Medicine and Family Medicine at West Virginia University, and the Medical Director of the Division of Physician Assistant Studies in the Department of Human Performance at West Virginia University.

General Principles

Preparticipation evaluation forms typically carry a validity period of 1 year. It is recommended these exams be conducted at least 6 weeks prior to the first (preseason) practice to allow time to further evaluate and treat any conditions that may preclude full clearance and participation. Realistically, though, many families will come in hours before the season's first practice, treating the visit as a formality, rather than an important risk assessment tool.

Evaluations should be performed by licensed, qualified medical professionals (ie, MD, DO, MBBS, NP, PA), though some elements (eg, blood pressure, vision screening) may be performed by other staff members. While the actual location of the assessment (eg, a medical office versus a repurposed gymnasium space) depends on community resources, the athlete should be given at least a modicum of privacy.

Unless otherwise noted, a sports physical/medical eligibility form that deems a candidate "eligible" for sports permits them to engage in *any* sport, not just the one or ones mentioned at the outset of the encounter. Consequently, it is important to explicitly limit athletes from inappropriate activities, even if they were not mentioned previously. A patient with history of seizures (epilepsy), for instance, should avoid SCUBA diving, or one with hemophilia should avoid boxing and other "collision sports." Though sports can be classified by physical intensity (static and dynamic components), activities within the same grouping may have dramatically different risks. For example, archery, auto racing, and diving all share the same classification, but the types of injuries a person could suffer in each are quite dissimilar.

The History Form

The young athlete should complete the medical history form—with parental help, if needed—prior to the medical provider's evaluation. Any "yes" responses to questions should be explored further and explained. Key elements to review include personal history of asthma and/or concussions, use of vision and/or dental correction (eg, eyeglasses, contact lenses, dental braces), and family history of sudden death. Symptoms such as dyspnea, chest pain, and syncope or near-syncope also warrant exploration, as do recent history of mononucleosis (or other illnesses causing splenomegaly and/or hepatomegaly), seizure disorder, sickle cell disease, Marfan syndrome, hemophilia, long QT syndrome, cardiomyopathy, myocarditis/pericarditis, and/or eating disorders. Whether the candidate has participated in previous seasons (and whether they encountered difficulties during it) is also relevant to your assessment. Though it is not usually mentioned explicitly on the sports physical form, recent infection with mononucleosis may also impact upcoming involvement in sport.

Concussions

The number and context of past concussions may impact the athlete's eligibility for sports. There is significant debate in the medical community about whether recurrent or severe concussions should disqualify athlete. Candidates currently experiencing postconcussive syndrome, however, should not be permitted to return to full play until their symptoms have resolved. Candid conversation with the student's parents/caregivers is usually beneficial. Though theoretically some student athletes' collegiate and athletic future may hinge on high school sports, most caregivers do not want to put their child at undue risk. With the first concussion, you should assess why it happened: Did the athlete make a mistake, did someone else hit them illegally, was the equipment poorly fit, etc.? With the second concussion, you may wish to discuss restriction from particular sports, as three concussions may suggest a pattern of injury that should not be continued.

Catastrophic injury

Because kidney injury from participation in sports is rare, professional society recommendations regarding athletes with a single functioning kidney have been vague, historically, if they existed at all. To be sure, severe brain, spinal cord, and cardiac injury are more common. Surprisingly, cycling and skiing are more likely to result in renal injury than football.[2] As such, the routine, seemingly reflexive response of restricting athletes with a single kidney from contact sports is viewed as unnecessary.[3,4]

The Physical Form

Blood pressure and vision

Vital signs and a vision screen were likely obtained prior to you even seeing the patient. Unfortunately, most forms do not specify cutoffs for abnormal values. Resting blood oxygen saturation should be ≥90% on room air. Though 160/100 mmHg has been mentioned in the literature, this does not take age, gender, or height percentile into account (or, for that matter, the intended sports). Additionally, there is something to be said for those with hypertension needing exercise. As a rule of thumb, candidates with a blood pressure in the 95th percentile per the National Heart, Lung, and Blood Institute's *Blood*

Pressure Levels for Boys by Age and Height Percentile chart[5] should receive further attention.

Neither body mass index (BMI) or body fat percentage are routinely asked on preparticipation evaluation forms.

Satisfactory vision, as tested via a Snellen chart, is necessary to avoid risk of injury to self and others. Again there is some controversy here, as it has been argued that 20/20 vision should be the minimum standard. Practically speaking, though, 20/40 (ie, seeing at 20 feet what a person with "normal" vision can see at 40 feet) may be sufficient for high school athletics and below. When performing the vision screen, it is advisable to have candidates remove their eyeglasses or, if possible, contact lenses. Thus, if they have a satisfactory score, they need not worry about appropriate lenses for sport. If their score is >20/40, replace their vision correction and retest. If they again do not have an appropriate score, they should be referred to an optometrist. If, however, their vision is now satisfactory, you should confirm that their vision correction is appropriate for that sport. For example, wire-frame glasses *might* be sufficient for bowling or cross-country running, but would not be for swimming or wrestling. High-velocity sports like hockey require a protective face-shield, regardless. This holds true for monocular athletes; they should wear appropriate corrective lenses if their functional eye has an uncorrected visual acuity <20/40. Given their reduced visual field, it would be unwise to allow a monocular athlete to participate in full-contact sports like wrestling, football, boxing, and judo. (One additional comment about the eyes: Do not forget to comment on whether the pupils are equal. Physiological anisocoria, in which the pupils are unequal in size, between 0.4 and 1 mm is benign. However, certain causes can belie mechanical trauma, infection, neurologic disease, and exposure to toxins. In the context of head trauma on the athletic field, this is likely to precipitate a head CT scan for the affected student. If physiological anisocoria has already been documented, this may avoid unnecessary radiation exposure and cost.)

Visual assessment

Stigmata of Marfan's syndrome (eg, kyphoscoliosis, pectus excavatum, joint hyperlaxity) and evidence of communicable dermatologic conditions (eg, herpes gladiatorum, tinea corporis) warrant further evaluation. Evidence of eating disorders, injection drug use and/or anabolic steroids, or other substances (eg, odor of tobacco and/or alcohol), though not specifically listed on most evaluation forms, should also be explored.

Table 1. Testing for Murmurs

Maneuver/ technique	Immediate effect	Change in murmur
Hand grip	↑ afterload	↑ strength of AR, MR, and VSD; ↓ intensity of HOCM and MVP
Squatting	↑ preload	↑ intensity of AS, MS, AR, and MR; ↓ strength of HOCM and MVP
Valsalva	↓ preload	↑ strength of HOCM and MVP; ↓ intensity of AS, MS, AR, MR, and VSD
Standing abruptly	↓ preload	↑ intensity of HOCM and MVP; ↓ strength of AS, MS, AR, MR, and VSD
Amyl nitrate	↓ afterload	↑ intensity of AS, HOCM, and MVP; ↓ severity of AR, MR, and VSD

AR, aortic regurgitation; MR, mitral regurgitation; VSD, ventricular septal defect; HOCM, hypertrophic obstructive cardiomyopathy; MVP, mitral valve prolapse; AS, aortic stenosis; MS, mitral stenosis. Adapted from Thomas SL, Makaryus AN. Physiology, cardiovascular murmurs. StatPearls. Available at: https://www.ncbi.nlm.nih.gov/books/NBK525958/. Accessed January 18, 2020.

Auscultation and palpation

The would-be athlete's examination should include evaluation of all joints (including the neck and back) for deformity, pain, and range of motion; sensation and strength in the extremities; gait; cervical, axillary, and inguinal lymph nodes; heart sounds (specifically murmurs, with repeat auscultation during the Valsalva maneuver); lung sounds and effort; abdomen; and skin. As noted previously, the urogenital exam, once specifically listed for males (ostensibly with the purpose of identifying hernias, but later also used to further evaluate Tanner staging), has been removed from the current iteration, likely to the relief of many adolescent boys.

Murmurs

Heart murmurs are very common, and can last through adolescence and into adulthood or resolve over time. Benign cardiac murmurs include systolic ejection murmurs (eg, Stills murmur, innocent pulmonary flow murmur, peripheral pulmonary artery stenosis, and arterial supraclavicular murmur) and benign continuous murmurs (eg, venous hum, mammary souffle). Innocent murmurs tend to be soft, short, and systolic (ie, not holosystolic), and "sweet." They do not radiate and are not associated with clicks or gallops. **Table 1** lists specific testing for murmurs.

Role of the EKG

Electrocardiography, echocardiography, and/or referral to a cardiologist may be considered if abnormalities are uncovered in the patient's personal or family history and/or physical exam. Though EKGs seem to be the standard of care for similar young athletes in Europe, they have not been shown to be cost-effective for identification of previously unknown conditions during routine screening. In fact, the AAFP specifically advises against cardiac screening tests for asymptomatic, low-risk patients.[6]

Athletes with disabilities

Discuss with the would-be athlete (as appropriate) and caregivers if there are any conditions that may require special accommodations and/or result in restrictions in participation. As in other contexts, not all disabilities are visible. Autism, cerebral palsy, fetal alcohol syndrome, fragile X syndrome, and spina bifida, for example, all have a wide variety of presentations. Down syndrome and cognitive impairment do not necessarily preclude involvement in sport. Assistive devices and durable medical equipment (eg, hearing aid, removable prosthetic, insulin pump, colostomy bag) should be noted and considered in the context of which sport the child plans to engage in. During the physical examination, providers should look for evidence of spinal cord compression and atlanto-axial instability, which can arise from congenital conditions such as osteogenesis imperfect and Down syndrome, or acquired causes like degenerative changes from rheumatoid arthritis. Other considerations include dietary restrictions (both religious and medical), epilepsy, paralysis (which can lead to difficulties with thermoregulation), hemophilia, and certain mood disorders.

Billing and coding

Some practices charge a flat-fee for preparticipation evaluations and do not bill insurance. If you do use an ICD-10 code, Z02.5 (routine sports physical exam) should be sufficient. In the event that this evaluation is part of a longer well-child exam, the codes Z00.129 and Z00.121 (without and with abnormal findings) may be appropriate, potentially with the additional code Z02.9 (administrative encounter) to indicate work above and beyond the well-child exam. ■

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Adapted from the American Academy of Family Physicians' *Practice Management Handbook* (2020).

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INSIGHTS IN IMAGES

CLINICAL CHALLENGE: CASE 1

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*.

A Young Woman with Worsening Abdominal Pain

Figure 1.

Case

A 35-year-old woman presents with a 5-day history of worsening abdominal pain and several days of "constipation."

Review the image taken and consider what the diagnosis and next steps would be. Resolution of the case is described on the next page.

THE RESOLUTION

Differential Diagnosis

- Constipation
- Renal colic
- Staghorn calculus
- Urolithiasis

Diagnosis

The patient was diagnosed with constipation and left staghorn calculus. The x-ray shows the obvious diagnosis of constipation as well as the incidental finding of a large calcification shaped like the left renal collecting system.

Learnings/What to Look for

- Staghorn calculi are the result of recurrent urinary tract infections and thus occur more in women and patients with renal collecting system anomalies, urinary reflux, spinal cord injuries/neurogenic bladder, and ideal conduits
- Most are symptomatic, presenting with fever, hematuria, and flank pain and occasionally sepsis
- Staghorn calculi are composed of struvite (magnesium ammonium phosphate) and usually occur with urease-producing bacterial infections (*Proteus*, *Klebsiella*, *Pseudomonas*, and *Enterobacter*)
- Remember to review the entire radiograph rather than simply the structures of concern, as significant incidental findings can be missed

Pearls for Urgent Care Management and Considerations for Transfer

- Staghorn calculi are treated surgically. Untreated, staghorn calculi can cause chronic infection and may progress to xanthogranulomatous pyelonephritis
- Urgent referral to a urologist is warranted for stable patients. Patients with fever should be referred to an emergency department immediately

Acknowledgment: *Images and case provided by Experity Teleradiology (www.experityhealth.com/teleradiology).*

CLINICAL CHALLENGE: CASE 2

A 22-Year-Old Female with Frequent Nosebleeds and Abnormalities on Her Lips and Tongue

Figure 1.

Figure 1.

Case

The patient is a 22-year-old woman who presents complaining of frequent nosebleeds. On exam, you note bright red macules and spider veins on her lips and tongue. They disappear briefly when you press on them.

Review the image above 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

- Lobular capillary hemangioma
- Rosacea
- Hereditary hemorrhagic telangiectasia
- CREST syndrome

Diagnosis

This patient was diagnosed with hereditary hemorrhagic telangiectasia (HHT), also known as Osler-Weber-Rendu disease.

Learnings/What to Look for

- HHT is an autosomal dominant hereditary condition (though occasional cases are sporadic) causing mucocutaneous and visceral telangiectasias and arteriovenous malformations
- Telangiectasias of HHT are similar to those seen in CREST syndrome; however, recurring nosebleeds and mucosal hemorrhage are not features of CREST

Pearls for Urgent Care Management and Considerations for Transfer

- Medications containing estrogen can be helpful in treating HHT
- Bevacizumab, pazopanib, and pomalidomide, all of which block blood vessel growth, are promising treatments for HHT
- Drugs that slow the disintegration of clots, such as tranexamic acid, can help stop extreme bleeding in emergencies and may be useful if taken regularly to prevent bleeding

Acknowledgment: *Images and case courtesy of VisualDx (www.VisualDx.com/JUCM).*

The Impact of a Public Health Emergency on Revenue Cycle Management

MONTE SANDLER

March and April were challenging months for all of us, and the revenue cycle management arena is no exception. A few months ago, we never would have imagined that our everyday lives would grind to such a halt—from schools, sports, concerts, and events canceled to self-quarantines and stay-in-place mandates. The financial markets have lost tremendous value and many people have lost or will likely lose their jobs. In all of this craze, we have seen our urgent care customers rise to the occasion to support their communities and show amazing human ingenuity. Telehealth has been thrust into the forefront along with curbside visits, telephone visits, and patients being examined in their cars or portable tents.

State and federal regulations have been eased to allow providers to more easily deliver these services and many payers have relaxed billing rules to ensure providers are reimbursed for the care they provide. Because so much is happening all at once, clinics are finding it increasingly difficult to stay on top of it all.

This month, I want to highlight some of the relaxed restrictions that we've encountered:

- Telehealth has exploded, with CMS adding 80 services to the list of eligible codes, including critical care consults.
- Modalities that are not considered HIPAA-compliant, like FaceTime and Skype, are being allowed temporarily.
- Originating site requirements have been revised so patients can access telehealth services from wherever they are located, including home.
- Telehealth services are being paid at the same rate that a practice would receive if the patient was seen in the office.
- Some licensing requirements have been waived so patients out-of-state have access to care.
- Telephone calls are an option for those patients who may not be able to use a computer.
- Most major commercial payers are waiving copays and deductibles for participating providers for COVID-19 testing and treatment. Some are waiving the patient's portion regardless of the diagnosis for telehealth.
- Some local legislation related to surprise billing has been enacted to protect patients.

While all of these changes are temporary, they pose serious challenges to clinics' efforts to bill the claims correctly, so the patient does not receive a bill in error. Rules do vary by payer, and you need a team to ensure your clean claims.

For COVID-19 testing and treatment, it is imperative that the diagnosis be correct for proper claim adjudication.

The Centers for Disease Control and Prevention approved a new ICD-10 for COVID-19, U07.1, which became effective on April 1, 2020 for billing purposes. This should be the primary diagnosis when a patient tests positive for COVID-19. An additional ICD code may be used to identify pneumonia or other manifestations (eg, J21.81, Pneumonia due to SARS-associated coronavirus).

When a patient tests negative for COVID-19, code signs and symptoms for each presenting problem (eg, RO6.02, Shortness of Breath). It is important to report Z03.18 (possible exposure) or Z20.828 (actual exposure) in addition to the symptoms so it is clear the services are related to COVID-19.

For services provided prior to April 1, 2020, multiple codes may be required to accurately report the final diagnosis when confirmed as due to COVID-19. The most important code to have on these older claims is B97.29 (Other coronavirus as the cause of diseases classified elsewhere).

Experity has a coding blog that is updated regularly to keep all providers up to date on this evolving situation. It can be found at https://www.experityhealth.com/resources/em-coding-for-coronavirus-covid-19/. ■

Monte Sandler is Executive Vice President, Revenue Cycle Management of Experity (formerly DocuTAP and Practice Velocity).

PHYSICIANS WANTED

DEVELOPING DATA

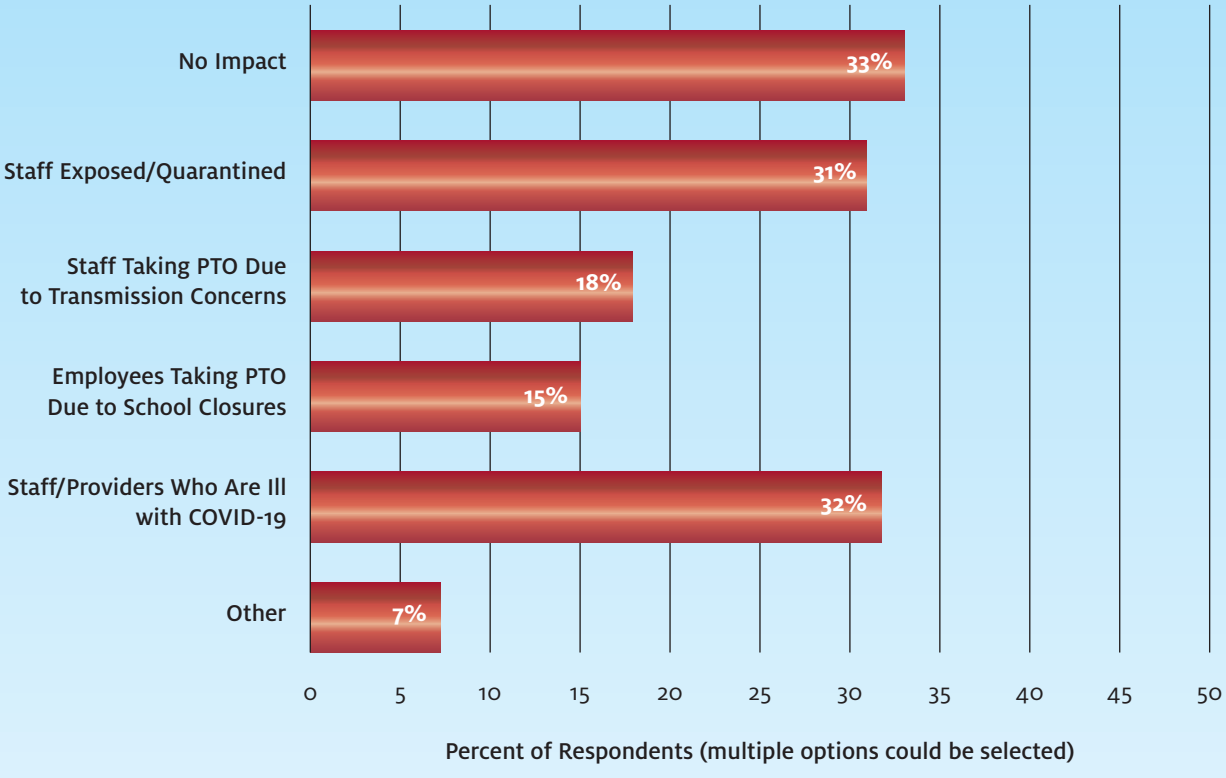
Whether by Strain or Drain, COVID-19 Is Hitting Urgent Care Hard

Paradoxically, some urgent care centers are struggling due to low patient volumes during the COVID-19 crisis; patients who aren't feeling that bad are afraid to venture out to a healthcare facility, while others who fear they could have the virus are heading to the hospital (hopefully, after calling first as recommended). Some operators have chosen to close for a while or consolidate locations.

On the other hand, urgent care operators in urban, heavily affected areas like New York City are slammed with symptomatic patients and those who may not be symptomatic but are concerned because they've been exposed.

Either way, the pandemic is having a serious affect on day-to-day operations at urgent care centers across the country. The Urgent Care Association took a snapshot-like survey to quantify what that means to the industry as a whole; see the graph below for some interesting insights. (Bear in mind that the situation at a given urgent care center can change from day to day; these data represent the landscape on just one such day.) ■

HOW IS COVID-19 IMPACTING YOUR ABILITY TO KEEP CENTERS OPEN?



Adapted from COVID-19 Survey Results. Urgent Care Association.

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