

Urgent Caring Second Quarter, 2022 Volume 6 Issue 9

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FROM THE PRESIDENT OF THE COLLEGE OF URGENT CARE MEDICINE (CUCM®)

Chris Chao, MD, President, CUCM Board of Directors



Welcome to my first message to you as your newly elected CUCM President. It is an honor to represent the interests of MD's, DO's, PA's, and NP's in Urgent Care Medicine. It was a pleasure meeting many of you at the UCA/CUCM Annual Convention in Las Vegas. The energy and enthusiasm of our members is inspiring and critical to our mission and continued success.

At the time I am writing this column, we are experiencing yet another surge of COVID-19 cases across the world. But infectious disease threats are not limited to COVID-19. While monkeypox may be making headlines, other significant threats exist. There is an ongoing avian influenza outbreak in the United States with human cases reported and confirmed. Seasonal influenza cases have not followed "seasonal" trends nor has RSV. Hepatitis of a yet-to-be-verified cause in children is in the news. Emerging diseases are becoming more of a concern worldwide.

Urgent Care providers have been at the forefront of these challenges. We are the providers that see patients without a primary care provider and those who are unable to be seen elsewhere. We console anxious patients, provide treatment, fight misinformation, and educate. Patients come to Urgent Care centers because they know we will always be there. But we are tired. Burnout is real. In our efforts to serve our patients and communities, we often forget about our own well-being, as well as that of our families and colleagues.

So how can the College help?

- The College works closely with the Urgent Care Association and the Clinical Response Committee to monitor clinical issues pertinent to our industry and make timely recommendations to help Urgent Care providers deal with these challenging situations.
- The College supports a Listserv that allows members to communicate with other members, including asking tough questions to gain perspective and obtain support in real time. This is monitored by CUCM and UCA to add a more national perspective when needed, with input from experts in the industry
- The College publishes this newsletter which includes best practice guidelines on common topics, interesting case reviews, pearls and tricks of the trade, and more.

These activities help members sort through changing guidelines and conflicting information and perspectives, thereby keeping us informed and up to date.

For myself, during the pandemic it became ever important to stay in contact with colleagues on a regular basis. Hearing, "How are you doing?" from a colleague on the other side of the continent was therapeutic and meaningful. You realize no matter where you are practicing, whether it is Florida, New York, California, or Texas, we all face the same struggles and challenges. Despite our busy schedules, I encourage everyone not to forget to reach out to your friends and colleagues. This support will help us mentally and physically continue to provide high quality care to our patients. It will also provide a sense of well-being and combat the burnout and loneliness so many of us are feeling right now.

Lastly, I would like to personally acknowledge the hard work and dedication of Jasmeet Bhogal, MD and Tracey Davidoff, MD, FCUCM. Dr. Bhogal is the outgoing President and Dr. Davidoff is the outgoing Vice President of CUCM. Rest assured, neither are going anywhere and will continue to serve CUCM. Dr. Bhogal will continue to serve on the Board as the Immediate Past-President as well as the Chair of the Clinical Response Committee. Dr. Davidoff will continue to act as the Co-Editor-in-Chief of this newsletter, and the Chair of the Fellowship Committee.

Please join me in welcoming new board members Patrick O'Malley, MD, Erin Topf Loo PA-C, and Michael Weinstock, MD, as well as the new officers, Vice President Chrysa Charno, PA-C, MBA, FCUCM and Treasurer Cesar Mora Jaramillo, MD FAAFP FCUCM. And finally, we are pleased to report that Seema Awatramani, MD, FCUCM and Timbo Taylor, MD will serve second terms on the Board. The full board can be found here.

"We are Urgent Care clinicians inspiring excellence in patient care and advancing the specialty through education, advocacy, and research." – College of Urgent Care Medicine mission statement

Please do not hesitate to contact me at cchao73@yahoo.com. We look forward to serving you.

FROM THE EDITORS

This edition of Urgent Caring lands right on the heels of the 2022 Annual Urgent Care Convention. If you were there, you saw great educational content, a lot of new vendors, heard some great music -- both classical violin and blues -- did some networking, and had an all-around good time. The Foundation Celebration and After Party did not disappoint. It was exhilarating to finally do something in person and not on a video screen or podcast!



The College of Urgent Care Medicine (CUCM) also had a lot of exposure. Many UCA members had no idea they were also College members and finally joined in the activities. We got the word out there: If you are a doc, NP, or PA member of UCA, you are ALSO a College member. There was a member meeting, a lunch, and a band. [See insert of Michael Weinstock, MD, CUCM Board Director, with his Big Rockin' Blues Band, finishing off our CUCM Member Lunch. We really did get the band back together!] It was amazing, by the way.

The educational activities proudly showed double branding with both UCA and CUCM. Behind the scenes, committees met, and the executive board met in person (finally after 2 years!). We had quite a few members recognized as Fellows (FCUCM) for their commitment to the College and Urgent Care. There were even poster presentations with original research.

There was a lot of talk about the future of Urgent Care. Advancing the specialty of Urgent Care Medicine through advocacy, quality improvement, practicing at the highest level, and reducing specialty and ER referrals. Health concerns of climate change were also discussed and opened a lot of eyes.

We want to keep the momentum going. For Urgent Care to remain a strong and recognized entity in the health care continuum, we need to band together, focus on what works, eliminate what doesn't work, and provide quality, up to date, evidence-based care all while working at the top of our licenses. This will only happen through hard work, education, and teamwork. They say it takes a village to raise a child. Urgent Care is still in its infancy as a specialty in medicine. We need to be that village and band together to make it all it can be for both our professional growth and our patients' best interests. We can do this by working together as a team.

Don't know what you can do? Get involved with CUCM. Listen to a webinar, start a thread or comment on the Listserv, join a committee like the Clinical Response Committee or the Advancing the Specialty Committee, or contribute a review article, interesting case, or image to Urgent Caring. The point is: We are a team, and we are so much better together. Oh, and if you missed this year's convention, we will see you next year at Caesar's Forum in Las Vegas, April 1-5, 2023!

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CAUSE FOR APPLAUSE #2 RECOGNIZING SEAN MCNEELEY, MD, FCUCM



In this edition of Urgent Caring's Cause for Applause, we would like to recognize a member who has gone above and beyond for years for both The College of Urgent Care Medicine (CUCM) and the Urgent Care Association. Sean McNeeley, MD, FCUCM was one of the founding members of CUCM, the founding editor Urgent Caring, and a Past

President of the Urgent Care Association. Recently, at the 2022 Urgent Care Convention, Dr. McNeeley was recognized for his service by receiving the 2021 Lifetime Membership Award, as well as the first ever namesake award: The Sean M. McNeeley, MD, FCUCM Award for Advancing the Specialty of Urgent Care Medicine. This award will be given annually to a deserving member of CUCM who embodies Dr. McNeeley's passion for Urgent Care medicine, dedication to improving the quality of Urgent Care, education, and ongoing contributions to CUCM. Congratulations Dr. McNeeley!

WELCOME NEW BOARD MEMBERS

The UCA/CUCM conference in Las Vegas meant it was time for change in the Board of Directors of CUCM. Tracey Davidoff, MD, FCUCM, former Vice-President rotated off the board and Jasmeet Bhogal, MD, MBA is now Immediate Past-President. Chris Chao, MD, became President, Chrysa Charno, RPA-C, MBA, FCUCM advanced to Vice-President, and Cesar Mora Jaramillo, MD, FAAFP, FCUCM was elected Treasurer.

Remaining to serve you include Seema Awatramani, MD, FAAP, FCUCM, Tim "Timbo" Taylor, MD, Joseph Toscano, MD, FCUCM, and Max Lebow, MD.

We would like to welcome three new board members: Patrick O'Malley, MD, Erin Topf, RPA-C, and Michael Weinstock, MD. Here's what makes them passionate about Urgent Care and a little bit of what they bring to the Board:

Patrick O'Malley, MD



"I am a board-certified emergency physician in South Carolina. My main clinical interest lies in managing lacerations and clinical education. I joined the Board to help improve clinician engagement in the specialty and to improve Urgent Care education and research."

Erin Topf, RPA-C



"I graduated from UTSW in 2001 and have been practicing in Urgent Care since 2007 at Brazos Valley Urgent Care in College Station, TX. I specifically enjoy procedures including laceration repairs and I&Ds, and the hands-on aspect of Urgent Care. I joined the board to represent independently owned smaller Urgent Care practices and to advocate for the role of APPs in Urgent Care."

Michael Weinstock, MD



"Τ am an emergency medicine physician as well as the Director of Research and CME at the Adena Medical Center and of Emergency Professor Medicine, Adjunct at the Wexner Medical Center at The Ohio State University. I have been very active in Urgent Care education as the Associate Editor for clinical content for the Journal of Urgent Care Medicine as well as editor of

the new Urgent Care Podcast; UC MAX (part of the EM RAP family of products). I have spoken at many of the UCA conferences and was honored to join the CUCM board to further UC education and *Excellence in Care*. I have been the principal investigator for original research published in JAMA IM and Annals of Emergency Medicine. I am the author of the *Bouncebacks!* Series of books. I have practiced medicine nationally and internationally including volunteer work in Papua New Guinea, Nepal, and the West Indies. Research interests include ED evaluation and management of chest pain, patient safety, EM medical education, and of course, Bouncebacks!"

OVERCOMING PRESCRIBING HESITANCY OF RITONAVIR-BOOSTED NIRMATRELVIR (PAXLOVID)

CHRIS CHAO, MD

Important disclaimers and disclosures:

The management of COVID-19 is rapidly evolving, and guidelines change based on newly released evidence. It is highly important for clinicians to stay up to date on the latest recommendations and guidelines.

While generic names are preferred to avoid commercial bias, ritonavir-boosted nirmatrelvir may be referred to Paxlovid as it is the more commonly known name.

The author of this article does not have any financial relationships with any manufacturer or distributor of any COVID-19 related treatments.

As of May 2022, there are 4 therapeutics authorized or approved for outpatient management of mild to moderate COVID-19: ritonavir-boosted nirvatrelvir (Paxlovid), molnupiravir (Lagevrio), bebtelovimab and remdesivir (Veklury).

NIH guidelines <u>Clinical Management Summary | COVID-19 Treatment Guidelines</u> <u>(nih.gov)</u> list ritonavir-boosted nirmatrelvir (Paxlovid) and remdesivir (Veklury) as preferred therapies with bebtelovimab and molnupiravir (Lagevrio) as alternative therapies only when neither of the preferred therapies are available, feasible to use or clinically appropriate. Remdesivir (Veklury) is impractical for most Urgent Care centers because it requires intravenous infusion for 3 days.

Even though CDC and NIH have recommended that Paxlovid be used first line in the outpatient management of mild to moderate COVID-19 in high-risk patients, providers have been hesitant to prescribe Paxlovid. An informal survey of local providers suggests multiple reasons including unfamiliarity with the medication, concern about prescribing a new medication that is not FDA-approved, concern about patient renal function, concern about drug-drug interactions and patient hesitancy.

Paxlovid is a combination medication consisting of nirmatrelvir and ritonavir. Nirmatrelvir is a viral protease inhibitor that has anti-viral activity against SARS-CoV-2 by interfering with replication. Ritonavir does not have anti-SARS-CoV-2 activity and acts solely to block the metabolism of nirmatrevir thus maintaining therapeutic levels of nirmatrevir. Because ritonavir is a potent Cy450 3A4 inhibitor any therapeutics that relies on Cy450 3A4 for metabolism may be adversely affected.

Paxlovid should be considered in the outpatient setting in adults and children 12 years and older and weigh 40 kgs or more who present within 5 days of onset and have mild to moderate COVID-19 infection. Paxlovid is not authorized for prophylaxis or post-exposure prophylaxis. Paxlovid is also contraindicated in patients with a creatinine clearance less than 30mL/min, end-stage liver disease, or patients who are on medications with a significant drug-drug interaction.

A step-by step flowchart may help ease provider hesitancy and provide an approach for providers

Step 1: Is the patient eligible under the emergency use authorization (EUA)?

Date of onset of symptoms

Confirmation of positive COVID-19 test

Patient has mild to moderate disease

Patient is at high risk for progression to severe disease

Paxlovid must be started within 5 days of symptom onset. If symptom duration is over 5 days but within 7 days, MAB infusion/bebtelovimab may be considered. A positive COVID-19 test needs to be documented. A patient-attested positive home test is acceptable and will meet this requirement. Common risk factors include

obesity, age, smoking, and concurrent chronic illness. <u>Underlying Medical Conditions</u>
<u>Associated with Higher Risk for Severe COVID-19: Information for Healthcare</u>
Professionals | CDC

Does being overweight (BMI \geq 25 kg/m2, but <30 kg/m2) qualify? Overweight is associated as suggestive of higher risk for severe COVID, thus a patient who is overweight is at increased risk for serious disease

Step 2: Document and review the risks and benefits of Paxlovid

Does the patient consent to treatment?

If patient opts to proceed with Paxlovid then print out and give the fact-sheet to the patient <u>PAXLOVID Fact Sheet for Patients and Caregivers (pfizer.com)</u>

Step 3: Assess for renal impairment

Paxlovid is contraindicated if the CrCl is < 30mL/min. Paxlovid is prescribed at a reduced dose if CrCl is between 30-60mL/min and a "renal dose" pack is available. The reduced renal dose is 150mg of nirmatrelvir versus 300mg of nirmatrelvir.

Serum creatinine is advised within 1 year if patient is at risk for chronic kidney disease (CKD) or has a history of chronic kidney disease.

Step 4: Assess for severe hepatic disease

Paxlovid is contraindicated in Child-Pugh score class C.

Step 5: Update patient medication list

Review drug-drug interactions

This is the potentially the most time-consuming step. Unfortunately, patients who are at the highest risk of progression to severe disease are also likely to be on multiple medications. There are several drug-drug interaction checkers on the internet. A helpful strategy is to familiarize yourself with a list of common contraindicated medications (i.e., phenytoin, amiodarone, apixaban (Eliquis), etc.) versus medications that have interactions and need only to be held while on Paxlovid (e.g., statin class medications)

Online resources include: <u>Liverpool COVID-19 Interactions (covid19-druginteractions.org)</u>, <u>Paxlovid Drug-Drug Interactions | COVID-19 Treatment Guidelines (nih.gov)</u>

Step 6: Find an authorized pharmacy

Initially, Paxlovid was only available at limited pharmacies and health care centers. More recently, Paxlovid availability has become more widespread. Nevertheless, do not assume the patient's regular pharmacy is a distributor of Paxlovid. ASPR has an excellent website that provides updated availability of COVID-19 therapeutics COVID-19 Therapeutics Locator (arcgis.com)

Step 7: Discharge instructions

Counsel patient on recommended CDC isolation and stay-at-home protocols

Counsel patient on the limitations of Paxlovid

Counsel patient on red flag signs that warrant return to clinic or going to the Emergency Department

While Paxlovid use reduces risk of progression to severe disease in high-risk patients, Paxlovid is not a cure. Paxlovid treatment does not shorten the recommended isolation and stay-at-home guidelines. Providers should also be aware of Paxlovid rebound, which is a phenomenon where a patient initially reports improvement after starting Paxlovid only to have recurrent symptoms after the Paxlovid is completed. Retreatment with Paxlovid or other therapy for Covid is not recommended or required for outpatients with rebound symptoms.

Not every COVID-19 patient will benefit from Paxlovid treatment. Always consider the individual patient situation, weigh the benefit versus risk, and utilize shared decision-making process.

URGENT CARE CASE STUDIES

CASE STUDY #1: JAUNDICE IN AN ADULT FEMALE

Cesar Mora Jaramillo MD, FAAFP, FCUCM



HISTORY: The patient is a 55-year-old female with past medical history of GERD and HTN, who presents to Urgent Care with 3 days of generalized pruritus without rash. She mentioned that her urine was dark for the past 1 week but denies any other urinary symptoms. In addition, the patient reports epigastric pain with radiation to the back for one week which resolved without intervention one day before her UC visit. She only takes omeprazole and lisinopril but has been taking acetaminophen 1-gram TID PRN for pain over the past week. She denies taking any herbal medicines, alcohol consumption, or recent travel.

REVIEW OF SYSTEMS: no nausea, vomiting, diarrhea, constipation, fatigue, fevers, chills, headaches, chest pain, shortness of breath.

PHYSICAL EXAM:

On physical exam vital signs are normal. No acute distress. No lymphadenopathy. Cardiovascular and respiratory exam were normal. Abdominal exam: no guarding,



mild epigastric tenderness, no rebound, no hepatomegaly or splenomegaly. Skin: diffuse jaundice. Sclera icteric.

Urine dip: showed bilirubin large +++, normal urobilinogen, hemolyzed trace occult blood, negative leukocyte esterase and nitrates.

DIFFERENTIAL DIAGNOSIS

- Cholecystitis
- Choledocholithiasis
- Viral hepatitis
- Nonalcoholic steatohepatitis
- Primary biliary cholangitis
- Drugs and toxins
- Ischemic hepatopathy

Patient was transferred to the ER for further evaluation and treatment. CT abdomen/pelvis with contrast showed choledocholithiasis with mild intrahepatic biliary dilation (5 mm stone in the CBD at ampulla) and incidental 11.2 cm complex cystic right ovarian mass suspicious for an ovarian neoplasm. Ultrasound right upper quadrant confirmed cholelithiasis but no evidence of cholecystitis. Elevated LFTs. Surgical team recommended medical admission for ERCP and treatment.

DISCUSSION

Evaluation of adult patients with jaundice should consist of detailed history, physical examination, and laboratory studies. The results will assist clinicians to formulate a differential diagnosis and to guide the value of additional testing to narrow the diagnostic possibilities.

Furthermore, the evaluation of jaundice in adults is usually not urgent, but providers should recognize conditions that need immediate care. Hence, clinicians should familiarize themselves with these conditions.

Specific findings can be present during physical examination including Courvoisier sign (a palpable gallbladder, caused by obstruction distal to the takeoff of the cystic duct by malignancy) or signs of chronic liver failure/portal hypertension such as ascites, splenomegaly, spider angiomata, and gynecomastia; hyperpigmentation in hemochromatosis, Kayser-Fleischer rings in Wilson disease, and xanthomas in primary biliary cholangitis.

Initial laboratory evaluation should include fractionated bilirubin, a complete blood count, alanine transaminase, aspartate transaminase, γ -glutamyltransferase, alkaline phosphatase, prothrombin time and/or international normalized ratio, albumin, and protein. The presence or absence of abnormalities should assist

clinicians distinguishing causes of jaundice. If the jaundice etiology is unknown after the initial laboratory evaluation, it is necessary to perform additional tests including hepatitis panels and autoimmune panels.

If there is evidence of biliary obstruction or intrahepatic cholestasis, then imaging should be obtained (e.g., ultrasound, magnetic resonance cholangiopancreatography, endoscopic retrograde cholangiopancreatography). If imaging is negative, the evaluation typically will also include obtaining an antimitochondrial antibody to evaluate for primary biliary cholangitis.

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- 2. https://www.aafp.org/afp/2017/0201/p164.html#:~:text=Jaundice%20in%20adults%20 can%20be,the%20history%20and%20physical%20examination.

CASE STUDY #2

RASH IN A YOUNG FEMALE

TRACEY DAVIDOFF, MD, FCUCM

Dermadilemma# 2: What caused this rash in a 10-year-old girl? Tracey Q. Davidoff, MD, FCUCM

A 10-year-old female presents to the clinic with complaints of an itchy rash on her buttocks for 2 days. Hydrocortisone cream and oral diphenhydramine have been ineffective. She denies a history of allergies, using new soaps, or detergents, but does note that she

purchased a new bathing suit which she wore for the first time just prior to onset of the rash. There is no fever, chills or systemic symptoms, and the rash is only present on the buttocks. She has been vaccinated for Varicella virus. What is your diagnosis?



- A. Contact dermatitis
- B. Sea bather's eruption
- C. Hot tub folliculitis
- D. Scabies
- E. Herpes Zoster virus

Answer: C. Hot tub folliculitis. Hot tub folliculitis is generally a benign, self-limited condition caused by bathing in underchlorinated pools and hot tubs contaminated with *Pseudomonas aeruginosa*. Papules, nodules, or pustules may occur and are generally itchy. Some patients will have a low-grade fever and malaise. Lesions may be anywhere on the body. Most cases will improve without treatment. Severe cases that are highly symptomatic or persistent may be treated with ciprofloxacin. Upon further questioning the girl had worn her new bathing

suit in a hot tub the evening before the rash occurred. It was unknown if others in the hot tub had similar rashes.

Sea bather's eruption has a very similar appearance to hot tub folliculitis but requires a history of swimming in the ocean. Lesions occur strictly under a bathing suit, wet suit, or even watch band. This condition occurs when larvae of the Cnidaria phylum (jellyfish) release nematocysts and inject toxins. This condition is self-limited and should be treated by removing swim garments and rinsing the skin, topical steroids, and oral antihistamines.

The appearance of this rash is dissimilar to scabies, as is the location. HZV would be unlikely in a 10-year-old and would not be on both buttocks.

Hot tub folliculitis can be prevented by maintaining proper levels of chlorine and pH in bathing tubs and pools.

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- 1. https://www.poison.org/articles/seabathers-eruption-symptoms-and-treatment
- 2. https://www.cdc.gov/healthywater/swimming/swimmers/rwi/rashes.html

EXPERT INSIGHTS

ARE YOU USING PROFESSIONAL INTERPRETERS IN YOUR URGENT CARE? IF THE ANSWER IS NO, YOU SHOULD BE

Victoria Pittman, MPAP, PA-C

When was the last time you had to visit an Urgent Care as a patient? Perhaps it was for a COVID test or wrist pain following a trip and fall. Most likely you were a little stressed. Scared about the potential outcome ("What if this COVID test is positive...what does that mean for my young kids at home?" or "If my wrist is broken, how will I do my job if I'm in a splint for weeks?") Now imagine you speak a different language than the clinic staff. Visiting an Urgent Care can be anxiety provoking on its own; add the stress of not feeling confident in your ability to communicate your reason for seeking care or your understanding of the diagnosis or plan and the experience is overwhelming. This common scenario is ripe for bad patient care and poor patient satisfaction.

We don't want to provide subpar care just because a patient speaks a different language than us. And, in fact, it's against the law to do that. Title VI prohibits discrimination on the basis of race, color, or national origin in any program or activity that receives Federal funds or other Federal financial assistance1. Persons with limited English proficiency must be afforded a meaningful opportunity to participate in programs that receive Federal funds (such as Medicare and Medicaid).

Studies show that patients who speak a different language actually get much worse care. They are subject to 20% more labs, 66% less analgesia, 50% less patient satisfaction, and 50% less understanding of discharge diagnosis, treatment, and plan2. The legal standard and impacts on patient care make a clear case for the use of an interpreter for those who speak a different language. How should you implement this into your practice?

Best Practices for Using an Interpreter

· Use a professional interpreter service and avoid using ad-hoc interpreters, such as a family member or clinic staff.

¹ Civil Rights Requirements: Title VI of The Civil Rights Act.

² PMID: 15894705, PMID: 27789567, PMID: 11054199

The use of a trained interpreter helps you be a better diagnostician. The subtleties of the history are often lost when using a family member or ad hoc interpreter. Studies comparing ad hoc interpreters to formal interpreters have demonstrated that ad hoc interpreters are twice as likely to make significant clinical errors. False fluency errors are a common error in interpretation when people are not actually skilled interpreters. Importantly, the use of a professional interpreter increases patient satisfaction, which leads to better comprehension and compliance with a treatment plan.

· Professional video-based or in-person translation services are best practice when available.

Patients remember their discharge diagnosis and their discharge plan better if a video interpreter is used. Realistically, professional phone translator services are readily available and sufficient when video or in-person is not available. Do <u>not</u> use Google Translate which has been demonstrated to misinterpret_half of discharge instructions³.

• Ensure that your discharge instructions are in the patient's primary language.

In addition to using a professional translator, providing after-care instructions in the patient's preferred language will facilitate better understanding about the diagnosis, treatment, and follow-up plan.

Introducing a professional interpreter helps close the equity gap between patients who speak different languages and patients who speak English. Put yourself in their shoes. Recognize that your patient is scared, unwell, deserves to be spoken to in their own language, and the numerous benefits of utilizing these services.

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³ PMID: 25512386

KidBits: Closed Head Injury in Pediatric Patients

Decisions related to neuroimaging for children with mild closed head injury (CHI) are complicated by the potential need for sedation and the inherent risk of radiation exposure. Depending on their age, children can be up to 10 times more radiosensitive than adults, and the risk of subsequent cancer deaths can be as high as 1:1000.¹ In children aged <2 years, up to 20% of traumatic brain injuries are caused by child abuse,² but as children advance in age, the mechanisms of injury parallel those of adults with traumatic brain injury.³

The highest incidence of intracranial injury (ICI) in apparently mild CHI is found in infants aged <12 months.⁴⁻⁶ The overall rate of ICI and the ultimate need for neurosurgical intervention in children with mild CHI is about the same as in adults,⁴ although pediatric guidelines have historically included observation as an approach in the management of children with mild CHI.⁷

Infants with CHI are challenging to evaluate because they often have little or no clinical findings, even in the setting of ICI. Loss of consciousness is not present in almost 50% of infants with ICI, and many infants have little more than a scalp hematoma on physical examination.^{8,9} In general, the younger the child, the lower the threshold for obtaining imaging studies should be. The greater the severity and number of signs and symptoms, the stronger the consideration should be for emergency department transfer and imaging studies.

A number of clinical decision rules for the management of CHI in children have been published over the past 2 decades. Applied Research Network (PECARN) Pediatric Head CT Rule, developed in the United States (see Table); the Children's Head Injury Algorithm for the Prediction of Important Clinical Events (CHALICE), developed in the United Kingdom; and the Canadian Assessment of Tomography for Childhood Head Injury (CATCH). Among these 3 clinical decision rules, only PECARN has a separate algorithm for children aged <2 years. In PECARN, the decision tree directs immediate CT in the presence of any of the high-risk variables (4% risk of ICI) and offers the options of observation or CT in the presence of the lower-risk variables (1% risk of ICI). Because prolonged observation periods are not typically feasible in the Urgent Care setting, children who are at any risk according to the PECARN rule should be transferred to the emergency department.

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Table, PECARN Pediatric Head CT Decision Rule⁸

High-Risk Variables: CT Recommended if Any Are Present

- GCS score <15
- Altered mental status: agitation, somnolence, repetitive questioning, verbally slow to respond.
- Palpable skull fracture if aged <2 years
- Suspected basilar skull fracture

Lower-Risk Variables: Transfer to ED for Observation or CT if Any Are Present

LOC (≥5 sec if aged <2 years)

Severe headache

Vomiting

Nonfrontal scalp hematoma if aged <2 years

Abnormal behavior (per parent) if aged <2 years

Severe mechanism of injury: MVC with ejection, death of passenger, rollover, being struck by vehicle, fall >5 ft (1.5 m) (or >3 ft [0.9 m] if aged <2 years), head struck by high-impact object

Abbreviations: CT, computed tomography; ED, emergency department; GCS, Glasgow Coma Scale; LOC, loss of consciousness; MVC, motor vehicle crash; PECARN, Pediatric Emergency Care Applied Research Network. © 2022 EB Medicine

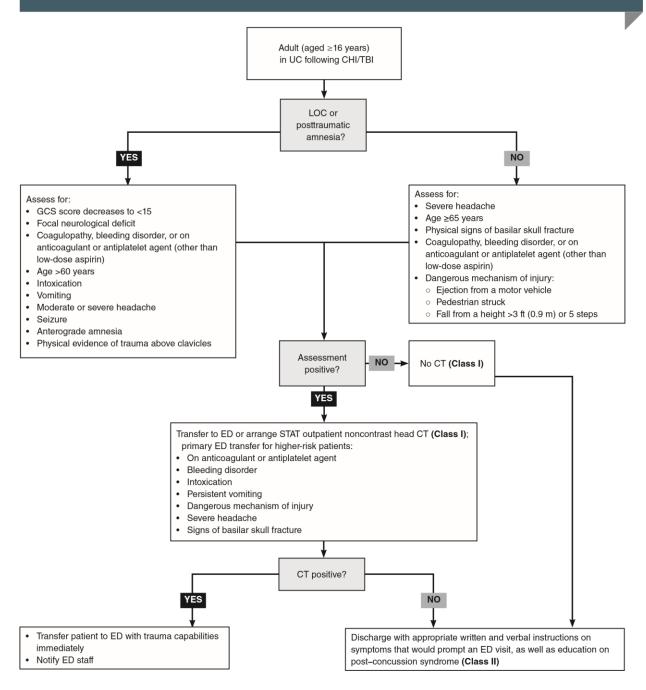
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Excerpted from Pochick K., Management of closed head Injuries in Urgent Care. *Evidence-Based Urgent Care*. 2022 May 1;1(2)

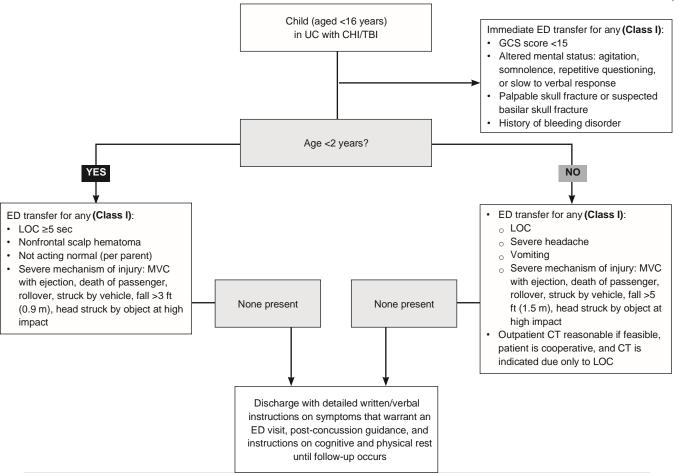
Clinical Pathway for Evaluating the Adult Patient With Closed Head Injury/Traumatic Brain Injury



Abbreviations: CHI, closed head injury; CT, computed tomography; ED, emergency department; GCS, Glasgow Coma Scale; LOC, loss of consciousness; TBI, traumatic brain injury; UC, Urgent Care.

Please see the Clinical Pathway for Evaluating the Pediatric Patient With Closed Head Injury/Traumatic Brain Injury for class of evidence definitions

Clinical Pathway for Evaluating the Pediatric Patient With Closed Head Injury/Traumatic Brain Injury



This clinical pathway is intended to supplement, rather than substitute for, professional judgment and may be changed depending upon a patient's individual needs. Failure to comply with this pathway does not represent a breach of the standard of care.

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Abbreviations: CHI, closed head injury; CT, computed tomography; ED, emergency department; GCS, Glasgow Coma Scale; LOC, loss of consciousness; MVC, motor vehicle crash; TBI, traumatic brain injury; UC, Urgent Care.

Class of Evidence Definitions

Each action in the clinical pathways section of Evidence-Based Urgent Care receives a score based on the following definitions.

Class I

- · Always acceptable, safe
- Definitely useful
- · Proven in both efficacy and effectiveness

Level of Evidence:

- One or more large prospective studies are present (with rare exceptions)
- High-quality meta-analyses
- Study results consistently positive controlled trials and compelling

Class II

- · Safe, acceptable
- Probably useful
- Level of Evidence:
- · Generally higher levels of evidence
- studies: historic, cohort, or case control studies
- · Less robust randomized
- · Results consistently positive

- · May be acceptable Possibly useful
- · Considered optional or alternative further research treatments
- Level of Evidence:
- Non-randomized or retrospective Generally lower or intermediate levels of evidence
 - · Case series, animal studies, consensus panels
 - · Occasionally positive results

Indeterminate

- Continuing area of research
- No recommendations until
- Level of Evidence:
- Evidence not available Higher studies in progress
- · Results inconsistent. contradictory
- · Results not compelling

This clinical pathway is intended to supplement, rather than substitute for, professional judgment and may be changed depending upon a patient's individual needs. Failure to comply with this pathway does not represent a breach of the standard of care.

BEST PRACTICE SUMMARY FROM THE COLLEGE OF URGENT CARE MEDICINE

Antibiotic Stewardship

Date	May 20 th , 2022
Reviewed	Astibistic Characteristic Back Backins
Subject	Antibiotic Stewardship Best Practices
Patient	Adults and children
Population	Autiliatio stavandalia in passassus and insertent to made a
Rationale	Antibiotic stewardship is necessary and important to reduce antimicrobial resistance rates, minimize potential side effects and improve patient outcomes. The focus is to measure and promote appropriate use of antibiotics by clinicians. It is critical to treat infections effectively, adequately and in a timely manner.
Introduction	Antibiotic resistance is one of the greatest public health challenges of all times. More than 2.8 million antibiotic resistant infections occur in the U.S. each year and more than 35,000 people die of these infections. Additionally, <i>Clostridioides difficile</i> infections are associated with antibiotic use and represent 48,000 deaths yearly. Moreover, antibiotic resistant infections that require the use of second- and third-line treatments can cause serious side effects, such as organ failure and prolong care and recovery. Approximately 85%–95% of antibiotic prescription is attributed to the outpatient setting, and at least 30% of prescriptions are unnecessary.
Evidence based guideline with strength of evidence	Effective communication, making a commitment to prescribe antibiotics appropriately (selection of antibiotic based on diagnoses, dosage and duration) and using delayed antibiotic prescribing (watchful waiting) are evidence-based interventions. Clinicians should carefully weigh the risks and benefits when prescribing these drugs.
Discussion	Antibiotic stewardship means protecting patients and the public from antibiotic resistance and adverse events by prescribing antibiotics judiciously (only when needed), in addition to prescribing the right drug, dosage and duration. There is a link between antibiotic use during childhood and increased risks of autoimmune diseases and obesity (likely mediated via disruptions in the microbiome). Major drivers for inappropriate/overprescribing antibiotics are pressure from patients, customer satisfaction and misdiagnoses.
	Strategies to assist clinicians with antibiotic stewardship:

symptoms are not improving or worsening within a certain timeframe. Another alternative is close follow up and advise the patient to return for an antibiotic prescription if the condition is not improving (contingency plan).

- Patient education and effective communication is paramount when assessing the need of antibiotic treatment.
 - Educational resources should be provided to patients emphasizing the appropriate use of antibiotics and the risk of unnecessary use. Explain risks and benefits (harms can exceed benefits).
 - Use positive statements when offering symptomatic treatment.
 - Choose your words carefully when describing the patient's clinical condition, as it may impact on a patient's understanding, perception, and satisfaction. Practicing with difficult scenarios will increase your comfort level regarding how to address patient expectations by practicing with difficult scenarios.
- Appropriate use of antibiotics can be achieved by leveraging clinical decision support applications (health IT) and utilizing standardized order sets.
- Use point-of-care applications and consult clinical guidelines.
- Clinicians must remain current with best practices, national clinical guidelines, etc.
- Adopt point-of-care testing (POCT) in your practice.
- Follow local antibiograms when antibiotic prescription is necessary. Antibiograms assess the local susceptibility and resistance of pathogens.

Summary

Everyone has a role to play in improving antibiotic use. Appropriate antibiotic use helps fight antibiotic resistance and ensures these lifesaving drugs will be available for future generations. Evidence-based tools can help clinicians during the decision making of antibiotic prescription and to leverage antibiotic stewardship. The goal is not simply to avoid antibiotics but to use them in a judicious manner. Clinicians should carefully weigh the risks and benefits when prescribing these drugs

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Reviewers

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Important links

https://www.cdc.gov/antibiotic-use/antibiotic-resistance.html

https://www.aafp.org/fpm/2021/1100/p15.html

https://www.cdc.gov/drugresistance/about.html

https://www.cdc.gov/antibiotic-use/core-elements/outpatient.html

https://www.aafp.org/afp/2016/0801/p200.html

https://www.aafp.org/fpm/2021/1100/p10.html

https://aspe.hhs.gov/sites/default/files/documents/d5d01eb69710588247eb2

aef3a46c118/HHS ASPE CARB Report Year5.pdf

https://academic.oup.com/ofid/article/7/Supplement 1/S9/6057513

https://www.sanfordguide.com/stewardship-

assist/?gclid=CjwKCAjw7cGUBhA9EiwArBAvortxeUXyhYlN6OmyXiY1apKtxek

1Vn5ki5RbJJ6i81skbIIaQdvJBoCw-sQAvD BwE

https://www.aaem.org/resources/key-issues/antibiotic-stewardship

IN THE NEWS--MONKEYPOX

CHRIS CHAO, MD

What is monkeypox?

Monkeypox is an infectious disease in human beings that is caused by the monkeypox virus. The monkeypox virus is closely related to the smallpox and cowpox virus. It was first identified in 1958 during an outbreak among monkeys in research laboratories and recognized as a human pathogen in the 1970s. It has recently made headlines due to unexplained case clusters in Europe and North America. Historically, monkeypox cases in the United States have been related to international travel or exposure to infected mammals.

The largest outbreak in the United States occurred in 2003 when a child became infected from a prairie dog bite that was purchased at a swap meet in Wisconsin. Investigators determined that the source of the monkeypox was imported rodents from Gambia that were housed with prairie dogs prior to shipping for sale. In the 2003 outbreak, a total of 71 cases were reported, no human-to-human transmission was documented, and all infected individuals recovered.

Symptoms of monkeypox

Initial symptoms of monkeypox infection are non-specific and include fever, chills, headache, body aches, lymphadenopathy, and fatigue. Within 1 to 3 days, a rash develops, commonly on the face, which will then spread to the entire body. Lesions will progress in different stages - macules, papules, vesicles, pustules, and scabs over the next 2-4 weeks. Lesions typically will develop simultaneously and evolve together on any given part of the body. Lesions are contagious until scabs have fallen off.

Key Characteristics for Identifying Monkeypox









- Lesions are well circumscribed, deep seated, and often develop umbilication (resembles a dot on the top
 of the lesion)
- Lesions are relatively the same size and same stage of development on a single site of the body (ex: pustules on face or vesicles on legs)
- · Fever before rash
- · Lymphadenopathy common
- Disseminated rash is centrifugal (more lesions on extremities, face)
- Lesions on palms, soles
- Lesions are often described as painful until the healing phase when they become itchy (crusts)

Figure 1. Source: Clinical Recognition | Monkeypox | Poxvirus | CDC

Transmission

Transmission of monkeypox is from direct contact with the virus through broken skin, mucosa membranes or the respiratory tract. There is epidemiological evidence that respiratory droplets may play a role in human-to-human transmission though primary transmission is thought to be close contact with an infected subject.

Treatment

There is currently no approved treatment for monkeypox infection. Investigational treatment includes varicella immunoglobulin (VIG) as well as antiviral agents. Monkeypox is generally a self-limited disease with case fatality rates of 1 to 10% depending on the specific strain.

Recommendations for Urgent Care providers

Stay informed. Urgent Care providers are on the front-line for emerging infectious disease. Familiarize yourself with the rash associated with monkeypox and maintain an index of suspicion when patients present with febrile illness with rash if there is recent travel to areas with reported monkeypox cases. Become familiar with the characteristics which define a monkeypox "Person Under Investigation" (PUI) and ask about these risk factors if patients present with nonspecific infectious symptoms. Become familiar with the criteria and procedure for testing. Counsel patients with nonspecific infectious illnesses, regardless of PUI status, to seek care if a typical rash develops after discharge.

If monkeypox is suspected, contact your local or state health department or the CDC Emergency Operations Center at 770-488-7100.

Person Under Investigation

Persons under investigation (PUI) are individuals who are reported as suspicious but have not been tested in an LRN
laboratory. This includes cases that health departments have been consulted on because of clinician concern.

Possible Case

 Meets one of the epidemiologic criteria AND has fever or new rash AND at least one other sign or symptom with onset 21 days after last exposure meeting epidemiologic criteria

Probable Case

- Meets one of the epidemiologic criteria AND has new rash with or without fever AND at least one other sign or symptom with onset 21 days after last exposure meeting epidemiologic criteria AND
- Demonstration of detectable levels of anti-orthopoxvirus IgM antibody during the period of 4 to 56 days after rash onset

Confirmed Orthopoxvirus Case

- · Meets possible case definition AND
- Demonstration of orthopoxvirus DNA by polymerase chain reaction testing of a clinical specimen OR demonstration
 of presence of orthopoxvirus using immunohistochemical or electron microscopy testing methods

Confirmed Monkeypox Case

- Meets possible case definition AND
- Demonstration of presence of monkeypox virus DNA by polymerase chain reaction testing or Next-Generation sequencing of a clinical specimen OR isolation of monkeypox virus in culture from a clinical specimen

Clinical Criteria

- · New rash (any of the following)
 - Macular
 - o Papular
 - Vesicular
 - o Pustular
 - o Generalized or localized
 - Discrete or confluent
- · Fever (either of the following)
 - Subjective
 - o Measured temperature of ≥100.4° F [>38° C]
- Other signs and symptoms:
 - Chills and/or sweats
 - New lymphadenopathy (periauricular, axillary, cervical, or inguinal)

Epidemiologic Criteria

Within 21 days of illness onset:

- Report having had contact with a person or people who have a similar appearing rash or received a diagnosis of confirmed or probable monkeypox OR
- Is a man who regularly has close or intimate in-person contact with other men, including through an online website, digital application ("app"), or social event (e.g., a bar or party) OR
- Traveled to a country with confirmed cases of monkeypox AND at least one of the above criteria OR
- Traveled to country where MPXV is endemic OR
- Contact with a dead or live wild animal or exotic pet that is an African endemic species or used a product derived such animals (e.g., game meat, creams, lotions, powders, etc.)

Exclusion Criteria

A case may be excluded as a possible, probable, or confirmed monkeypox case if:

- An alternative diagnosis* can fully explain the illness OR
- An individual with symptoms consistent with monkeypox but who does not develop a rash within 5 days of illness onset OR
- A case where specimens do not demonstrate the presence of orthopoxvirus or monkeypox virus or antibodies to orthopoxvirus as describe in the laboratory criteria

 † Categorization may change as the investigation continues (e.g., a patient may go from PUI to probable)

* The rash associated with monkeypox can be confused with other diseases that are more commonly encountered in clinical practice (e.g., secondary syphilis, herpes, chancroid, and varicella zoster). Historically, sporadic reports of patients co-infected with monkeypox virus and other infectious agents (e.g., varicella zoster, syphilis).

Source: 2022 United States Monkeypox Case | Monkeypox | Poxvirus | CDC

WOUND CARE UPDATE

MYTHS ABOUT WOUND IRRIGATION & HOW TO IMPROVE YOUR PRACTICE PATRICK O'MALLEY, MD



Irrigation of wounds is probably the most important thing we can do to prevent infection, so we must have a good understanding of this often overlooked and underappreciated component of laceration management. There are three components to consider - water type, volume, and pressure. Let's look at all these components and some associated misbeliefs.

"The solution to pollution is dilution!" Water is the key hereand lots of it! Interestingly, the type of water is less important than one may think. It is perfectly fine to use sterile water or saline, but you don't HAVE to. Potable water,

yes; water from the tap is just as safe and effective in reducing the risk of infection in a laceration repair. Numerous studies have shown us that we can safely use tap water for wound irrigation. (1,2,3) As an added benefit, this may lead to a small cost savings. A liter of saline may be several dollars per bottle.

Next is the VOLUME of water needed for irrigation. Many sources recommend using 50-100ml of water per centimeter of laceration. (4) A 5 cm laceration therefore should be irrigated with 250-500 ml of water! Using a syringe and splash guard is the most common method to achieve this. If the location of the wound is amenable, you can also place the laceration directly under the tap and let the water run over it for a few minutes. Probably not feasible for grandma's scalp laceration, but a large number of lacerations can be irrigated this way. This allows for a copious amount of water to come into contact with the wound, remove gross contamination, and bacteria. This will greatly exceed the 50-100 ml/cm guideline and reduce the risk of infection even further.

Lastly is pressure. Sources as far back as the 1970's recommend anywhere from 8-15 psi at the wound surface to properly irrigate a traumatic skin injury. (4) The goal here is to overcome the adhesive forces of bacteria and biofilm formation that accumulates shortly after a wound occurs. These studies used a 19-gauge needle and 35 cc syringe, both products I have never seen before. It is accepted that moderate pressure onto the plunger of a 20 cc syringe, combined with a splash guard, is enough to generate pressure within the 12-15 psi range. Even though every sink tap is different, it is accepted that the pressure generated by a common tap in a hospital or clinic room is enough to achieve this goal. What is NOT acceptable is using a bulb

syringe or a plain syringe without a splash guard or punching holes in the cap of a saline bottle and squeezing it. These do NOT generate enough pressure and are practices that should be abandoned.

Paying closer attention to these elements of wound irrigation will give your patients a better chance at healing better without infection!

Resources:

- 1. https://pubmed.ncbi.nlm.nih.gov/17456554/
- 2. https://pubmed.ncbi.nlm.nih.gov/12216046/
- 3. https://ebn.bmj.com/content/10/4/113.long
- 4. https://pubmed.ncbi.nlm.nih.gov/21373312/

URGENT UPDATES—MAY/ JUNE 2022

MORE ON RELAPSES AFTER PAXLOVID TREATMENT FOR COVID-19

Some people treated for COVID-19 with Paxlovid experience a relapse in illness shortly after stopping treatment - a recurrence of symptoms and a positive antigen test - sometimes after the test became negative. Relapses vary in severity, from very mild and brief to worse than the initial illness. Pfizer offered additional details from their EPIC-HR study, citing that late viral rebounds occurred in roughly the same proportion of treated and untreated participants in their trial — around 2%. Additionally, FDA and Pfizer have made it clear that the people who relapse are in fact eligible for re-treatment under the Emergency Use Authorization (EUA). **Full Access:** NJEM

ABBOTT OBTAINS FDA CLEARANCE FOR FIRST TEST THAT SIMULTANEOUSLY DETECTS FOUR COMMON SEXUALLY TRANSMITTED INFECTIONS (STIS) AS CASES ARE ON THE RISE

The Alinity m STI test for Chlamydia trachomatis (CT), Neisseria gonorrhoeae (NG), Trichomonas vaginalis (TV), and Mycoplasma genitalium (MG) requires one swab sample or a urine sample collected in a healthcare setting by either a clinician or by the patient. The test runs on Abbott's Alinity m system — the company's most advanced high-volume laboratory molecular instrument. Alinity m uses polymerase chain reaction (PCR) technology, with high sensitivity in detecting infectious diseases. This test can help healthcare providers save time, increase efficiency and better serve patients. **Full Access:** Abbott

RISK OF INFECTION AND HOSPITALIZATION AMONG VACCINATED AND UNVACCINATED CHILDREN AND ADOLESCENTS IN NEW YORK AFTER THE EMERGENCE OF THE OMICRON VARIANT

Linking 4 New York state databases for COVID-19 vaccinations, cases, and admissions, this analysis compared 2 outcomes among fully vaccinated (≥ 14 days after primary series completion) vs unvaccinated youth (partially vaccinated

excluded) in the age groups 5 to 11 and 12 to 17 years. The risks of infection and hospitalization were elevated for unvaccinated vs vaccinated children aged 5 to 11 and 12 to 17 years, although the risk declined as Omicron became more prevalent.

Full Access: JAMA

WEEK 4 (05/27)

HOW REPEATED INFLUENZA VACCINATION EFFECTS MIGHT APPLY TO COVID-19 VACCINES

If repeated COVID-19 vaccination leads to blunted vaccine effectiveness or a reduction in protection relative to people who are unvaccinated, findings from new studies comparing different influenza vaccine types and vaccine strategies point to at least four lessons to be learned including, vaccine effectiveness studies might need to stratify their estimates by those with and without documented previous infection and by the differences in previous vaccination status to disentangle changes in vaccine effectiveness versus changes in population susceptibility over time. **Full Access:** Lancet

ANTITHROMBOTIC THERAPY FOR VENOUS THROMBOEMBOLISM

Antithrombotic Therapy for VTE Disease: Second Update of the CHEST Guideline and Expert Panel Report Patients with low-risk pulmonary embolism should receive outpatient treatment.

Direct-acting oral anticoagulants (DOACs) should be used to treat acute VTE for the 3-month treatment phase. Oral Xa inhibitors should be used to treat acute VTE in a patient with cancer for both the initial and extended treatment phases. In patients with acute VTE, treat with full dose DOACs for 3 months followed by reduced dose DOACs for extended therapy if indicated.

Extended anticoagulation therapy beyond 3 months is not routinely recommended in patients with major or minor transient risk factors. **Full Access:** <u>JAMA</u>

ACUTE AND PERSISTENT EFFECTS OF COMMONLY USED ANTIBIOTICS ON THE GUT MICROBIOME AND RESISTOME IN HEALTHY ADULTS

To understand acute and persistent effects of antibiotics on the gut microbiota, researchers quantify microbiome dynamics before, during, and 6 months after exposure to 4 commonly used antibiotic regimens. Findings include an acute decrease in species richness and culturable bacteria after antibiotics, with most healthy adult microbiomes returning to pre-treatment species richness after 2 months, but with an altered taxonomy, resistome, and metabolic output, as well as an increased antibiotic resistance burden. Azithromycin delays the recovery of species richness, resulting in greater compositional distance. A subset of patients had a persistent reduction in microbiome diversity after antibiotics. These results improve our quantitative understanding of the impact of antibiotics on commensal microbiome dynamics, resilience, and recovery. **Full Access:** Cell

CONTINUING MEDICAL EDUCATION (CME)

Target Audience

This CME activity is intended for medical professionals who practice medicine in the on-demand space including Urgent Care, retail medicine and other similar venues. These providers may include physicians, nurse practitioners, and physician assistants.

Designation Statement

The Urgent Care Association (UCA) designates this enduring material activity for a maximum of 3 AMA PRA Category 1 Credit(s) $^{\text{TM}}$. Physicians should claim credits only commensurate with the extent of their participation in the activity. Credits may be claimed for one year from the date of release of this issue.

CME Objectives

- 1. Provide updates on the diagnosis and treatment of clinical conditions commonly managed by on-demand providers
- 2. Alert on-demand providers to potential unusual cases that may present to them
- 3. Utilize tips and tricks to improve patient care in the on-demand space

Accreditation Statement

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

CME Credit Instructions

Once you have read the article, please log into your UCA profile. Once you are logged in go to Learn-> CME->Request CME. Complete the survey with the requested information for Urgent Caring. Your certificate will then be emailed to you within 3-5 business days. Please email learning@ucaoa.org with questions.

CUCM CME Planning Committee

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Reports no financial interest relevant to this newsletter

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Cesar Mora Jaramillo, MD

Reports no financial interest relevant to this newsletter

Patrick O'Malley, MD

Reports no financial interest relevant to this newsletter

Keith Pochick, MD

Reports no financial interest relevant to this newsletter

Disclaimer

Medical practice and knowledge are constantly evolving and changing. This information is peer-reviewed but should not be your only source. Providers of care should use discretion when applying knowledge to any individual patient.

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