A Newsletter for the Members of the North Dakota Chapter - Summer 2022

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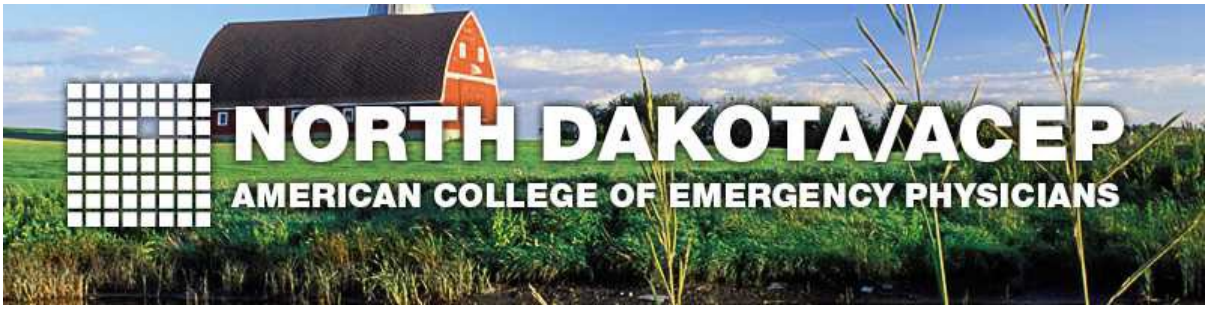


In this Edition

President's Message

I'm Dr. Leah Gustafson Ista, and I am excited to be your next North Dakota ACEP Chapter President. I was born and raised in rural North Dakota, growing up near the Canadian border in Langdon.

I studied microbiology at North Dakota State before moving to Washington, D.C., where I earned a Master's degree in Public Health Microbiology and Emerging Infectious, a medical degree, and completed my emergency medicine residency all at The George Washington University.

I became active in ACEP early in my medical career. During residency I participated in ACEP's Leadership Training Academy and legislative advocacy days. Since graduating, I have served on the National ACEP Disaster Committee. After moving back to our state, I have enjoyed participating in the North Dakota ACEP chapter. Like many of you, I also have taken advantage of ACEP's continuing education programs and recourses throughout my training and career. Additionally, I value ACEP's advocacy and built-in support for doctors in our field.

As ACEP Chapter President, I will work to continue growing our small but dedicated band of members. I am particularly excited to partner with the University of North Dakota's new Emergency Medicine Department and its leader, Dr. Jon Solberg. Dr. Solberg has been involved in North Dakota ACEP, and I have recruited Dr. Solberg to serve on our ND ACEP board to foster a partnership between practicing ND ACEP members and medical students who may aspire to a career in our specialty. Through this collaboration, I hope to encourage more students to enter the field of emergency medicine and ultimately return to North Dakota to practice.

But growing involvement in our ACEP chapter, expanding interest in our field, and advocating for our specialty's unique needs is a group effort. If anyone is interested in discussing these and other issues facing North Dakota emergency medicine physicians, please reach out to me directly via email or by phone at (701) 370-0056.

I look forward to serving North Dakota, ACEP, and the practice of emergency medicine.

Update: University of North Dakota Department of Emergency Medicine

The UND Dept of Emergency Medicine has published it's Virtual Journal Club schedule for the 2022-2023 Academic Year. The Journal Club utilizes the Annals of Emergency Medicine's Journal Club series and includes 4th year medical students, Dept of EM Faculty, and Family Medicine residents from across the state.

You are invited to participate in our monthly online journal club, featuring a recent article from Annals of Emergency Medicine. See the schedule here.

NEW ELECTIVES

Emergency Medical Services

4th year students complete online FEMA training in the Incident Command System, Fundamentals of Emergency Management, Continuity of Operations Planning for Pandemic Influenzas, and the National Incident Management System. Course Textbook: Handbook for EMS Medical Directors, March 2012. One week field experience in Bismarck at the Emergency Operations Center, with Bismarck Fire, Police, and Metro EMS.

Point of Care Ultrasound

The new elective has been approved and we are recruiting our first students for this spring. Course Director: David Collins MD

Wilderness Medicine

30-students and faculty met for three days in April at Turtle River State Park to earn certification in Advanced Wilderness Life Support (AWLS). Faculty: David Collins MD, Andrew Bakke MD, Benjamin Axtman MD, James Miles, MD, Kyle O'Boyle MD, Jim Schmidt MD, Patrick Carr PhD. Course Directors: Justin Reisenauer, MD FACEP and Jon Solberg, MD FACEP

Fall Faculty Social

September 28, 2022. 7-10PM Porter Creek Grill, Fargo, ND. In conjunction with the North Dakota statewide trauma conference. If you are attending the evening workshop, please feel free to come to our social afterwards! RSVP to Sue Warner.

Publications

Solberg, J., & Saravana, K. (2022). Omental Prolapse Through Vaginal Cuff Dehiscence. *Clinical Practice and Cases in Emergency Medicine*. July 27, 2022.

Seen an interesting case with a student? Each student on an elective EM rotation is required to give a 15-minute presentation on an interesting patient. Encourage them to publish this case report through the department.

Photos from the Wilderness Medicine Course

Cannabinoid Hyperemesis Syndrome

Andrew M. Pasek, MD

Cannabinoid Hyperemesis Syndrome (CHS), first described in 2004, is characterized by cyclical episodes of vomiting every few weeks to months while using cannabis, preceded by years of cannabis usage, with resolution of symptoms upon cessation.

There are three proposed phases of CHS:

1) Prodromal/pre-emetic phase
2) Hyper-emetic phase
3) Recovery phase

Treatment with conventional antiemetic treatment is largely ineffective, however, relief is often found with hot showers or baths. Patients will often be seen multiple times, in multiple care settings, prior to receiving a diagnosis.

The exact mechanism is unknown; however, the leading hypothesis is that extended cannabis usage leads to chronic overstimulation of endocannabinoid receptors resulting in impairment of the body's regulation of nausea and vomiting.

The endocannabinoid system found in the human body plays a role in the regulation of appetite, sleep, pain, emotion, and movement. At low doses, THC has an anti-emetic effect, however with chronic and heavy use it causes a pro-emetic effect. THC is thought to act upon cannabinoid 1 (CB1) receptors in the enteric nervous system, leading to reduced gastric motility and increasing the risk of nausea and vomiting. It has also been proposed that THC affects CB1 receptors in the hypothalamus leading to impaired thermoregulation resulting in emesis. Hot water bathing may improve thermoregulation, leading to relief in CHS patients. Another theory proposes that hot bathing, through peripheral vasodilation, decreases blood flow to the stomach and splanchnic circulation resulting in improvement in symptoms.

Management can be challenging, as patients are typically resistant to conventional antiemetic treatment. Haloperidol, a D2 antagonist classically used to treat agitation, is a common but off-label treatment option in CHS. Capsaicin cream has also been utilized with some success in CHS patients. Opioids should be avoided for the abdominal pain seen in CHS, as these medications can worsen nausea and vomiting. Many patients will require fluid resuscitation and electrolyte replacement, especially if symptoms have been ongoing for several days. Oral hydration is the preferred method; however, many patients will not be able to tolerate oral fluids in which case intravenous fluids are appropriate. Additionally, esophagitis and gastritis are common findings in CHS patients, so acid suppression therapy is a mainstay in treatment. Patients should follow up with primary care as needed, and substance abuse resources should be made available as appropriate. With the increasing incidence of CHS, this is an important diagnosis for providers to consider on their differential list.

References

Chu F, Cascella M. Cannabinoid Hyperemesis Syndrome. [Updated 2022 Feb 5]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan.

Galli JA, Sawaya RA, Friedenberg FK. Cannabinoid Hyperemesis Syndrome. *Curr* Drug Abuse Rev. 2011;4(4):241-249. doi:10.2174/1874473711104040241

DePuy A., Andres J. Cannabinoid Hyperemesis Syndrome. *US Pharmacist*. 2016;41(12): HS16-HS19

Medical Student Corner

Guideline for COVID-19 Management in the ER

Wyatt Telken, MSIV

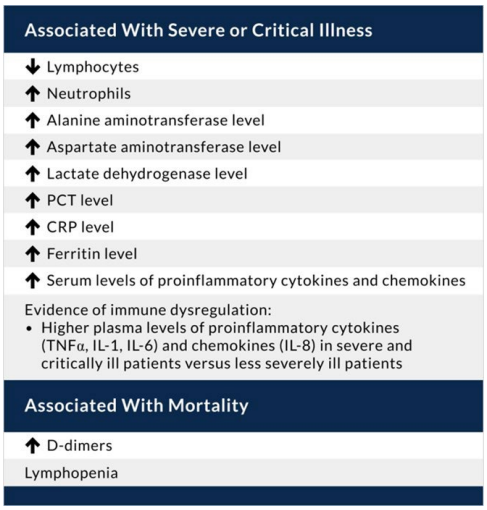
In March of 2022, the American College of Emergency Physicians (ACEP) released updated guidelines for management of COVID-19 patients in the ER.

The aim of making this guideline was to help ER physicians have a central source of information for treatment protocols. While North Dakota is now past the major spike that occurred from the end of December into January, it is still important to be prepared to treat these patients. This article will summarize management tool produced by ACEP.

The current management tool lays out 7-steps for physicians to follow starting with Severity Classification. Severity classes include Mild, Moderate, Severe, and Critical. The purpose of these rankings is to determine what steps to take next. If a patient falls under the Mild and Moderate classifications, physicians will then continue to Step 2. However, if a patient falls under the Severe or Critical classifications, they can skip ahead to Step 4. Based on clinical experience, many physicians can determine for themselves how severe a patient's status is, but ACEP has laid out some simple guidelines to help determine if skipping to Step 4 is indicated. A patient who has an SpO2 < 94% on room air, and RR > 30 breaths/min are quick identifiers for escalation of care that can be recognized immediately upon entering a room.

If your patient is in the mild to moderate class, you will move onto Step 2: Risk Prognostication. This step involves using a PRIEST score which is a validated tool that uses information readily available on presentation to the ED to further assess risk of disease progression. The score then correlates to a risk percentage that the patient's disease will progress). Next comes Step 3: Risk Assessment which is a list of comorbidities that research has found to place patients at a higher risk of having Severe COVID-19. The number of checked boxes then comes into play for Step 4 along with our PRIEST score derived from Step 2.

Step 4 is dedicated to testing based on severity class. Patients whom testing is not necessary must have a Step 1 classification of Mild, PRIEST score ≤4, as well as 1 or less risk factors. If your patient does not meet the above qualifications, they may need tests which include different imaging modalities and various labs. Step 5 is Diagnostic Interpretation. Laboratory findings associated with Severe or Critical Illness are displayed in the following table from the ACEP COVID-19 Field Guide.



Associated With Severe or Critical Illness
↓ Lymphocytes
↑ Neutrophils
↑ Alanine aminotransferase level
↑ Aspartate aminotransferase level
↑ Lactate dehydrogenase level
↑ PCT level
↑ CRP level
↑ Ferritin level
↑ Serum levels of proinflammatory cytokines and chemokines
Evidence of immune dysregulation: • Higher plasma levels of proinflammatory cytokines (TNFα, IL-1, IL-6) and chemokines (IL-8) in severe and critically ill patients versus less severely ill patients
Associated With Mortality
↑ D-dimers
Lymphopenia

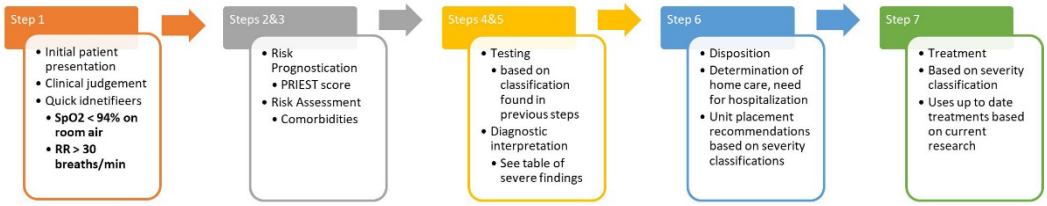
ACEP COVID-19 Field Guide.Table 7.2 Laboratory Abnormalities in Severe Disease Accessed February 23, 2022.

Step 6 leads us to patient Disposition. Those who have consistently tracked in the Mild category are free to go home with education on progression of symptoms and consideration for an at home pulse oximeter. Patients in the moderate category are where the stratification we did in the earlier steps help greatly with decision making as this category can either go home or be admitted. Of course, going into the decision making of admission includes the hospitals current capacity status. If a hospital currently has capacity constraints, those in the moderate category that meet criteria for admission may need to be sent home. In this case, the patients need to be properly educated on warning signs of worsening condition, have scheduled follow-up arranged with PCP, and consider sending them home with a pulse oximeter as well as oxygen therapy.

Additionally with Step 6, we have our Severe and Critical classified patients. For these patients, there is no debate of sending home; they require admission for further treatment. The only difference between these two classes at this stage is whether they need a floor bed, intermediate cares, or be placed in the ICU.

With Step 7 comes treatment recommendations, and it is split into non-pharmacological and pharmacological treatments. For those who are sent home, non-pharmacological treatment includes home oxygen, breathing exercises, proning, adequate rest and hydration, among others. Pharmacologic options are recommended for those sent home with a high risk of disease progression. Current recommendations are one of the following treatment options listed in order of preference: Nirmatrelvir 300 mg with ritonavir 100 mg (Paxlovid), Sotrovimab 500 mg IV, Remdesivir 200 mg IV, or Molnupiravir 800 mg orally twice daily for 5 days (please refer to attached reference for full treatment protocols of these medications).Patients who are admitted to the hospital have differences in treatment strategies depending on their classification for non-pharmacological treatment. Treatment in the Severe class is based around escalation of oxygen requirements. For patients in the Critical class, intubation has either already occurred, or needs to be performed promptly. The management tool provides details ventilator settings and goals. Pharmacologic treatment for Severe and Critical patients, while often not managed by emergency department physician, can be initiated while the patient is in the ER. Please refer to the attached resource for more in-depth information.

Link for Management Tool can be found here.



Resources

Hill AT. ACEP Emergency Department COVID-19 Management Tool. *Adv Emerg Nurs* J. 2021;43(4):249-254. doi:10.1097/TME.0000000000000379

Laboratory Abnormalities. Accessed February 23, 2022.

Adriana's Corner
Know Before You Go!

If you are planning to attend *ACEP22* in San Francisco. Find information about the COVID protocols here. Your safety & health matters to us!

Welcome Members!

A special welcome to the new members of the North Dakota Chapter and to those that renewed their membership. Please reach out if you would like to become involved at the chapter level, including leadership opportunities.

We are excited to have you!

Talus Jonnie McCowan	T Gardiner Adams, MD
Elizabeth Roeber, MD	Zachary Michael Elliott, MD
Karan Saravana	Stephen S Humble, MD

FROM NATIONAL ACEP

American College of Emergency Physicians®
ADVANCING EMERGENCY CARE

ACEP Resources & Latest News

Monkeypox: Utilize ACEP's monkeypox resources, including the Monkeypox Field Guide and the Monkeypox EM Project.

The Wait is Over — The No Surprises Act Final Reg is Out!

- The latest edition of Regs & Eggs highlights some of the major policies and their implications on you as emergency physicians.
- Read ACEP's comprehensive summary of the final rule of the *No Surprises Act* that came out on August 19. See the specific provisions ACEP has been fighting for and how they were incorporated into the rule.
- **Related study:** Insurer QPA calculation may violate No Surprises Act

Apply for ACEP's Reimbursement Leadership Development Program by Sept. 8. ACEP is sponsoring three members to attend several key events in order to train the future leaders in EM reimbursement. Commitment is estimated at 25 days of travel during the 18-month program. Learn more.

Advocating for Physician-Led Care Teams

As part of our advocacy to combat dangerous policies allowing non-physicians to practice medicine without physician supervision, ACEP just released another entry in our My Experience Matters video series. This campaign amplifies the voices of members who began their career in another role on the care team. This time, we hear from Ricki Brown-Forestiere, MD, who began her medical career as a physician assistant. She was told her PA training would prepare her to do pretty much everything a physician does, but nothing could have been further from the truth. Hear about it in her Doc Blog. **Related:** Learn more about ACEP's efforts to protect the physician-led care team.

Advocacy at Home Toolkit: Connect with your Legislators

Elected officials are back in their districts for the month and our Advocacy At Home: August Recess Toolkit can help you set and prepare for local meetings with federal legislators or staff. This is a great time to share your stories that personalize our calls for policy changes. Find this toolkit and more helpful resources for speaking with media and legislators in ACEP's Media Hub.

Myth BustED: Patients' Rights in the Emergency Department

ACEP recently launched a "Myth BustED" video series to debunk common misconceptions and educate the public about emergency care. In our first video—*Patients' Rights in the Emergency Room*—Dr. Avir Mitra educates patients about laws like EMTALA and the Prudent Layperson Standard that protect access to emergency care. Watch now to see how ACEP is encouraging patients to always seek care when they need it.

ACEP22 Countdown

There are only 34 days left until the ACEP Scientific Assembly in San Francisco. While you're in trip-planning mode, keep these recent updates in mind:

- **Get Your Bike Helmet Ready! Dr. and Lady Glaucomflecken** are speaking at ACEP22**!** Don't miss these social media sensations as they share their perspectives about the physician, patient and family experience.
- **Family**: Affordable childcare is available on site, but it does require pre-registration so we can ensure appropriate staffing.
  Flights: ACEP partner TripEasy could help you save money on your flights to the Bay Area.
  Hotels: Many of our convention hotels have recently lowered their rates. If you've already booked, your rate will automatically be adjusted to reflect the new prices

New Bedside Tools for Posterior Circulation Ischemic Stroke, Cancer Complications

- *Dizzy+* is focused on the recognition and treatment of posterior circulation ischemic stroke.
- ImmunoTox is focused on caring for patients who are experiencing adverse events related to cancer immunotherapy.

Introducing the EM Opioid Advisory Network
Receive clinical guidance, discover tools and resources, and get your questions answered through ACEP's EM Opioid Advisory Network. ACEP's new initiative connects emergency physicians combating the opioid crisis with expert advice on managing Opioid Use Disorder patients presenting in the ED, creating a protocol to initiate buprenorphine, and more. The expert panel is here to help ALL emergency health care professionals, free of charge. Learn more.

Podcast: Podcast: This week in our ACEP Frontline author series, Dr. Jay Baruch talks about his new book, **"Tornado of Life: A Doctor's Journey Through Constraints and Creativity in the ER."** Listen now.

Now Accepting ACEP23 Course Proposals
As we start our countdown to ACEP22 in San Francisco, we're already thinking about ACEP23 in Philadelphia! ACEP's Educational Meetings Subcommittee is now accepting course proposals for the 2023 Scientific Assembly. Learn more.

In Memoriam: ACEP remembers emergency medicine pioneer Jim Roberts, MD, FACEP. One of the first five board-certified emergency medicine physicians, Dr. Roberts became a household name in our specialty through his authorship of *Clinical Procedures in Emergency Medicine and Acute Care*, a prominent book that printed seven editions.

Upcoming ACEP Events and Deadlines

Oct. 1-4: ACEP Scientific Assembly in San Francisco
Oct. 17-22: EM Basic Research Skills (EMBRS)
Nov. 11: Last day to submit ACEP23 course proposals

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