

MCEP
ADVANCING EMERGENCY CARE

News & Views

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Submissions to the May/June 2023 Newsletter should be received by the Chapter office no later than June 1, 2023.

FROM THE PRESIDENT

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Diana Nordlund, DO, JD, FACEP

The definition of a mass shooting varies, as do the associated statistics of how many have occurred, at how many sites, and with how many lives lost or irrevocably altered. The frequency of female perpetrators became a common question after Nashville; although it depends on the parameters applied, the percent of mass shootings perpetrated by a female in the US range somewhere between 2 to 7.6%.

Still, the statistics matter far less than the reality of the pervasive threat and deadly impact of gun violence in our nation. MCEP honors the victims and their families, applauds the medical community who responded, and is working with our legislature to support measures to reduce gun violence in our state.

February brought tragedy to our doorstep and grief to our hearts. April brings us the promise of spring. The days are longer, and the dogs' paws are muddier. We move forward even as we wonder—not if, but when—history will repeat itself.

A lighter side of history is observing Women's History Month in March. Some firsts for women in the world of medicine are:

- Elizabeth Blackwell, MD – First woman to earn the MD degree in the US (1849)
- Antonia Novello, MD – First female and first Latina US Surgeon General (1990)
- Nancy Dickey, MD – First female president of the AMA (1998)
- Nancy Auer, MD – First female president of ACEP (1998)
- Constance Doyle, MD – First female president of MCEP (1986)

It seems trite to wish everyone a happy spring, though I do not take lightly the benefit of longer days and Vitamin D levels greater than 0.01 ng/mL. It seems woefully inadequate to commend you for your time and toil in the trenches and for all that you do for our patients, our profession, and the College, particularly with the echoes of the MSU shooting still ringing. As we work together on the many issues facing Emergency Medicine, we still walk as individuals into our respective shops to touch just one life at a time.

May your heart be strong, your head level, and your hands steady. §



FROM THE EDITOR

LET'S TALK ABOUT THE MATCH.

In the month of March, the annual National Resident Matching Program (NRMP) Match rocked the world of Emergency Medicine (EM) and the state of Michigan. 555 EM spots nationwide were unfilled prior to the Supplemental Offer and Acceptance Program (SOAP). This is approximately 1 in 6 spots nationwide. In the state of Michigan, 92 spots were unfilled. All but 5 of the EM training programs in the state, or 20 programs in total, had open positions. If you train emergency residents in the state of Michigan, the odds are excellent that your program participated in the SOAP process this year.

What happened to Emergency Medicine? What happened in Michigan? How did Emergency Medicine become the least popular specialty in the house of medicine? These straightforward questions do not have straightforward answers. We saw the decline of filled positions in the 2022 NRMP Match, but I do not think anyone was prepared for the sheer number of unmatched positions this year.

When I think about EM, I think about what students would have seen or heard about our specialty, including the 2021 Emergency Medicine Physician Workforce report that projected an oversupply of emergency physicians to the tune of 8000 doctors by 2030 (https://doi.org/10.1016/j.annemergmed.2021.05.029). In online forums, the future of our specialty and employment models are constantly debated and dissected. The students in the current Match cycle started medical school right at the beginning of the pandemic. Their clinical rotations coincided with some of our biggest challenges, including initial fears of death and disability from Covid19, availability and access to PPE, nursing and staff shortages, the worsening Emergency Department (ED) boarding crisis, and unprecedented levels of burnout. When I applied to EM, I loved the fast pace of patient care, the variety of pathology, the teamwork dynamic of the ED, and the ability to immediately make a difference in someone's life. I still remember patients who were very appreciative when I, as a student, sutured their wound, applied a splint, or otherwise participated in their care. Many students today likely had EM rotations characterized by ED treatment rooms full of admitted patients, evaluations of frustrated fully clothed patients in chairs and hallways, burnt out staff, and exhausted physicians keeping a wary eye on the large volume of patients in the waiting room. I'm sad that more didn't get a better experience of our specialty, but I am less surprised about the Match results, given the above.

I think Michigan in particular struggled in the Match for a number of reasons. As a state, we are not generally considered a trendy locale, and even residencies in typically competitive cities and states suffered, too. Michigan has a high density of EM residency programs, particularly in suburban Detroit, including a large number of historically DO programs that have combined with MD programs in the ACGME merger within the last decade. These community programs provide excellent training but may not have the historical big-name recognition of some of the larger programs whose hospitals are directly affiliated with a major university or healthcare system. The virtual interview process of the last three years, while allowing medical students to interview from the convenience of home and without the expense of travel, hurt our smaller programs through lack of in-person exposure and connections. The increase in EM residency spots nationwide no doubt also contributed to the Match results. Still, approximately 40% of total EM spots in the state filled through the SOAP process this year.



Sara Chakel, MD, FACEP

Many have and many more will analyze the Match results from this year. As a specialty and in the state, we have a lot of reflection to do. We need to think about how to make our residency programs competitive from an individual granular level all the way up to the state level. We need to celebrate what makes EM great in Michigan and address the controllable factors that contributed to our lack of appeal in this year's Match. We also need to maintain some perspective. Our specialty was founded by Michigan physicians who didn't fit into the traditional specialties in medicine, who had vision, and who were trailblazers. Similar to some of our incoming residents, many of these early emergency physicians faced and overcame hurdles in joining the field.

In preparing for our newly Matched residents this July, I would like to welcome them to the state and to the world of EM, no matter how they came to our specialty. ACEP was founded here in Michigan in 1968, and MCEP become one of the first chapters of ACEP in 1969. The first president of ACEP was Michigan's own John Wiegenstein, MD. The first EM residency in Michigan was established through MSU in Lansing in 1973. The American Board of Emergency Medicine is headquartered in Lansing. Many historically prominent emergency physicians are from the state, including seven past Presidents of ACEP, two past Council Speakers, current and past members of the ACEP Board of Directors, and numerous internationally known EM educators and researchers. Many more have called the state home for their training or for part of their careers.

Going forward, we need to maintain perspective. We are emergency physicians. We are innovators. We are sometimes misfits. We are often trailblazers. We are frequently the MacGyvers of the medical world. We solve problems, and we are now facing a challenging problem. We need to rise up with ways to make EM an attractive specialty for medical students again, and we need to share what a fantastic place Michigan is to train in EM.

To our newly matched residents, no matter how you selected the specialty of Emergency Medicine, and no matter how you came to Michigan, we welcome you with open arms. We are excited to show you how amazing Emergency Medicine can be. We look forward to training you, in the state where our specialty formally began. §

***Editor's note: Thanks to Dr. Paul Pomeroy, whose article written to celebrate the fiftieth anniversary of MCEP I referenced for key historical facts above.



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102nd MICHIGAN LEGISLATIVE SESSION BEGINS WITH A 100 DAY RUSH!



Brett Marr, Lobbyist
Muchmore, Harrington, Smalley & Associates

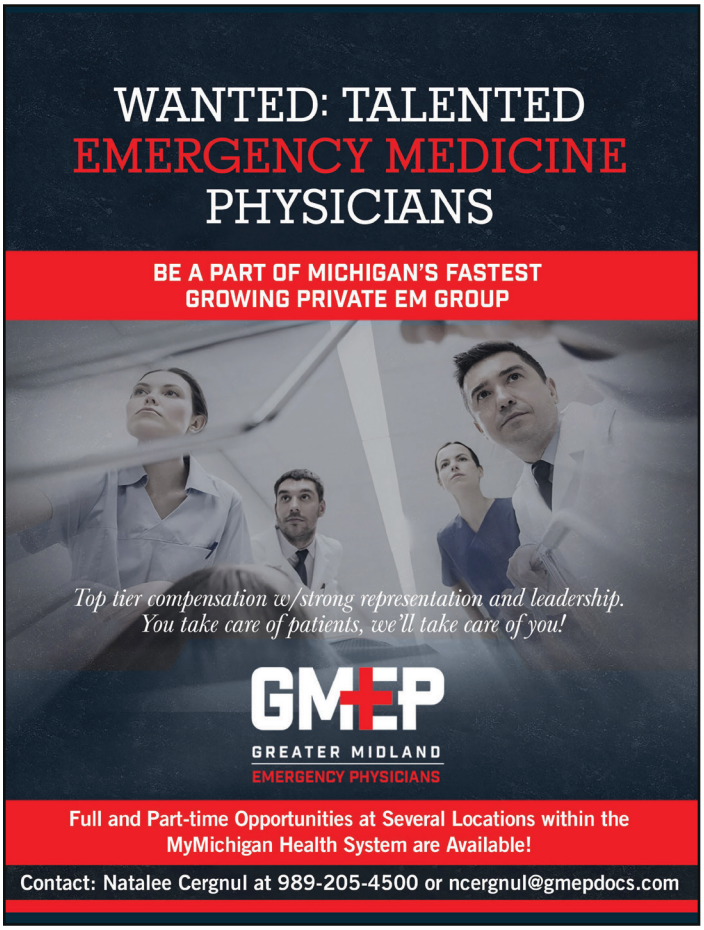
As we discussed in my last newsletter, Michigan Democrats are in complete control of state government for the first time in four decades. Second term Governor Gretchen Whitmer, Speaker of the House Joe Tate, and Senate Majority Leader Winnie Brinks wasted no time in catching up on lost policy ground. Starting with a monumental package to fund the state's economic development actions, billions were deposited into the Strategic Outreach Attraction Reserve (SOAR) fund to help the state compete for a new Ford electric vehicle plant and several electric battery plants. The state also repealed the pension tax on public sector pensions and massively expanded the Earned Income Tax Credit (EITC). Both of those provisions enjoyed widespread bipartisan support in their initial legislative actions.

The Governor and her legislative partners also had to deal with a 2015 income tax trigger, as the state's share of federal stimulus dollars threatened an automatic rollback in the state's income tax. Legislative Republicans blocked that rollback from being repealed and, in the process, prolonged the enactment of the pension and EITC reforms.

In addition to these tax and economic development reforms, the Governor and Legislative Democrats have amended the state's Elliott-Larsen Civil Rights Act to add sexual orientation and gender identity to the list of protections afforded under that act. The state also repealed a set of laws pertaining to the 1931 felony provisions for performing, receiving, or assisting in an abortion in our state. These provisions were largely offset by Proposal 3 of 2022, but there is now no ambiguity for health care providers on abortion issues.

The Governor and legislative leaders also tackled the difficult issue of gun control in our state after the tragic events of early February on MSU's campus. The Legislature passed legislation requiring more stringent background checks for all gun purchases that the Governor quickly signed. Still being debated and finalized are further measures for safe storage requirements in homes with minors present and a state "red flag" law or Extreme Risk Protection Order (ERPO) process. The MCEP Board met and discussed these measures and took a position of support for all three laws.

Lastly, the Governor proposed her FY2023-24 budget in early February. This budget included billions in new investments into health care, specifically behavioral health initiatives, and education programs. These proposals are being evaluated by the Legislature, and we expect this budget to be done by the end of June.



VIOLENCE IN THE EMERGENCY DEPARTMENT AND MEDICAID REIMBURSEMENT

MCEP has been working with MSMS and other health care groups to raise awareness of unnecessary violence in the Emergency Department (ED) workplace. Last session, we supported HB 5682 and successfully got it through the House. We are again working with Representative Mike Mueller of Genesee County. We expect to introduce the bill by May and begin working for House passage this spring. Senate consideration will be early summer or may spill over to fall session.

MCEP and MHSA will call on members throughout 2023 to help educate new House and Senate members on challenges both in emergency departments and with physician reimbursement for Medicaid plans. Our focus will be on Health Policy and Appropriations Committee members. §





Thank you for all that you do!

To all of our frontline workers

From all of us at MCEP

MCEP Calendar of Events

April 30 – May 2, 2023
ACEP Leadership & Advocacy Conference
Washington, DC

May 6, 2023
Mock Oral Board Review Course
Virtual Zoom Meeting

May 10, 2023
Board of Directors
Chapter Office
Lansing, Michigan

July 30 – August 2, 2023
Michigan EM Assembly
Grand Hotel
Mackinac Island, Michigan

July 31, 2023
Annual Membership Meeting & Board of Directors
Grand Hotel
Mackinac Island, Michigan

August 16, 2023
EM Career Planning: Life After Residency
Somerset Inn
Troy, Michigan

September 6, 2023
Board of Directors
Chapter Office
Lansing, Michigan

September 15, 2023
Observation Medicine Conference
Virtual Zoom Meeting

September 26, 2023
MCEP Councillor Meeting
Chapter Office
Lansing, Michigan

October 7-8, 2023
ACEP Council Meeting
Philadelphia, Pennsylvania



October 9-12, 2023
ACEP Scientific Assembly
Philadelphia, Pennsylvania

November 14, 2023
$traight Talk Reimbursement Course
Somerset Inn
Troy, Michigan

December 6, 2023
Board of Directors
Chapter Office
Lansing, Michigan

BRASH SYNDROME COMPLICATED BY RIGHT VENTRICULAR (RV) FAILURE: BREAK THE VICIOUS CYCLE

Daniel Grahf, MD and David Klemet, BS of Henry Ford Hospital in Detroit, MI

INTRODUCTION:

BRASH Syndrome is a clinical syndrome defined by **B**radycardia, **R**enal failure, **A**V nodal blocking agents, **S**hock, and **H**yperkalemia. It wasn't until 2016 that this conglomeration of clinical features was typified as a distinct clinical entity by Dr. Farkas.[1,2] Its diagnostic elusiveness has made the true epidemiology of the syndrome difficult to determine. Without early recognition and aggressive, timely interventions that specifically target each component of BRASH Syndrome, rather than the singular elements, a catastrophic, self-perpetuating cycle may result that is associated with significant morbidity and mortality.[1,3,4,5]

CASE PRESENTATION:

A 72-year-old female with a past medical history of hypertension, diabetes mellitus, COPD, pulmonary hypertension, and diastolic heart failure, taking atenolol 100 mg twice daily and bumetanide 1 mg twice daily, presented with one week of worsening shortness of breath, lower extremity edema, fatigue, and decreased oral intake. She was taking her medications as prescribed. Upon arrival the patient was hypotensive with blood pressure 78/53 mmHg, and she had a relative bradycardia of 50-60 beats per minute. She was found to be in acute renal failure with creatinine 5.27 mg/dL, BUN 100 mg/dL, and potassium 6.6 mEq/L. Electrocardiogram (ECG) demonstrated sinus bradycardia without other sequelae of hyperkalemia. Brain natriuretic peptide was significantly elevated at 2,624 pg/mL. Lactic acid was elevated at 6.4 mmol/L. The patient was initially treated with calcium gluconate, insulin, dextrose, and sodium bicarbonate with minimal improvement.

After admission to the intensive care unit, BRASH Syndrome was identified. Shortly thereafter, significant interventions were pursued including slow efficiency dialysis, dobutamine, and norepinephrine. Echocardiogram demonstrated grade 1 diastolic dysfunction, severe globally reduced right ventricular function, severe tricuspid regurgitation, and a pulmonary artery pressure of 68 mmHg. A pulmonary artery catheter (PAC) showed right atrial pressure (RAP) of 22 mmHg (normal <5mmHg), pulmonary artery pressure of 77/26/45 mmHg (normal <25/10/15 mmHg), pulmonary capillary wedge pressure (PCWP) of 6 mmHg (normal <12mmHg), and cardiac index (CI) of 1.0 (normal 2.5-4.0). The patient was transitioned to high dose dopamine and norepinephrine. Norepinephrine was weaned off 3 days later, and dopamine was discontinued after 7 days. The patient was discharged from the hospital 25 days after presentation with renal recovery.

DISCUSSION:

BRASH Syndrome is most often prompted by renal hypoperfusion, which was caused by dehydration in this case.[1,4,6] The renal injury leads to hyperkalemia that works synergistically with the AV nodal blocking agent to cause bradycardia, worsening renal hypoperfusion, worsening hyperkalemia, and eventually shock.[1,5] BRASH syndrome can be compounded by decreased renal excretion of certain AV nodal blocking agents, such as atenolol.[1] The degree of bradycardia is disproportionate



to the AV nodal blocking agent dose and level of hyperkalemia.[1,2,4,5] ECG typically shows sinus bradycardia without other sequelae of hyperkalemia.[5] Patients don't often appear as toxic as their clinical picture would suggest.[1] Mild hypotension that is compounded by bradycardia still may result in severely decreased cardiac output despite each individual sign not being profoundly abnormal. This may prompt less aggressive interventions initially. Additionally, these patients often do not respond robustly to treatments that target only the bradycardia or only the hyperkalemia, as seen in this patient.[1–6]

Many patients who develop BRASH Syndrome have or are at risk for heart failure given the indications for beta blockers. This introduces another layer of complexity as these patients are much more prone to that notable BRASH Syndrome vicious cycle of bradycardia, hypotension, and hypoperfusion. This is secondary to already compromised contractility and inability to tolerate any significant degree of bradycardic shock before developing cardiogenic shock. This patient's right ventricular failure, confirmed by her PAC readings with a high RAP, normal PCWP, and severely reduced CI, put her at very high risk for a poor outcome. However, the management of BRASH Syndrome with concomitant cardiogenic shock has a high degree of overlap, not requiring substantial deviation from the early and aggressive intervention mantra of dialysis and inotropes.

Early identification and early aggressive interventions are key to halting the vicious cycle that can develop in BRASH Syndrome, specifically dialysis, inotropes such as epinephrine, dopamine, or isoproterenol, and pacing as needed.[1-6] If done appropriately, patients can often make a full recovery and avoid a significant degree of morbidity and mortality.[3] For this reason, maintaining a high degree of suspicion for BRASH Syndrome with at risk patients in the emergency department is critical. It can be enticing to delay aggressive interventions given initial presentation, including often only mild hypotension, ECG findings without sequelae of hyperkalemia beyond bradycardia, and a frequently non-toxic appearance, but initiating those early and aggressive interventions has the potential to make a large impact downstream. §

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EMRAM EXCELLENCE IN TEACHING AWARD



Benjamin Schoener, MD, FACEP

The Emergency Medicine Residents' Association of Michigan (EMRAM) announces the recipient for its **31st Annual Excellence in Teaching Award is Dr. Benjamin Schoener of Covenant Healthcare**. This award is given to recognize faculty members who have made outstanding contributions to emergency medicine resident education. The award will be presented at the Michigan Emergency Medicine Assembly President's Banquet scheduled for **Tuesday, August 1, 2023, at the Grand Hotel on Mackinac Island, MI.**

EMRAM

MCEP 2023 BOARD OF DIRECTORS CANDIDATES

ANTONY HSU, MD, FACEP



- Graduate, New York University School of Medicine, New York, New York, 2005
- Residency in Emergency Medicine, Christiana Care Health System, Newark, Delaware, 2008
- Attending Physician, Trinity Health Ann Arbor, Livingston, Michigan, 2015-present
- Core Faculty, Adjunct Professor, University of Michigan School of Medicine, Ann Arbor, Michigan, 2015-present
- Adjunct Professor, Michigan State University School of Medicine, East Lansing, Michigan, 2019-present
- Diplomate, American Board of Emergency Medicine, 2009-present
- ACEP, Emergency Reproductive Health and Patient Safety Task Force, Co-chair, 2022-present
- ACEP, Research Committee 2022-present
- ACEP, Public Health and Injury Prevention Committee 2020-present, Chair 2020-2022
- ACEP, 2022 Reference Committee, 2022
- AHA, Council on Cardiopulmonary Critical Care, Perioperative and Resuscitation 2020-2022
- MCEP, Alternate Councillor and ACEP Council in 2017, 2021, 2022
- MCEP, EMS Committee, 2017-present
- MCEP, Legislative Committee, 2017-present
- MCEP, Leadership Development Program Graduate, 2017
- DMAT, New York-6, Medical Officer, Hospital Augmentation Response CMO, 2021; Northern Cheyenne Reservation Response, 2020; Grand Princess evacuation team, Task Force Lead, 2020; Hurricane Harvey Response CMO, 2017

Dr. Hsu first became involved in MCEP after settling in Michigan upon moving from the East Coast. He has served in leadership positions in multiple state and national organizations and has been active in policy and legislative matters both on local, state and national level to improve the conditions for both those who work and those who receive care in an emergency medical setting, both hospital or community-based.

He has led survivorship and bystander recognition efforts at SaveMiHeart, a 501(c)3 nonprofit, contributing to the state-wide annual conference and the EMS and Community Response Subcommittees. More locally, he leads the Post-Arrest Care Task Force at Trinity Health Ann Arbor and has reviewed dozens of grant applications with the Academic Research Committee and led changes to the cardiac arrest care process in the hospital including policy writing for family presence during resuscitations, end-tidal CO2 goal directed care and AED updates on campus.

Dr. Hsu aims to leverage his work on the Board of Directors and by working on the Legislative and EMS Committees improving the conditions in which emergency physicians work, leading the front-line responders and involving the community in their care. §

DIANE PARATORE, DO, FACEP



- Graduate, Michigan State University COM, E Lansing, MI, 1992.
- Internship, Ingham Medical Center, Okemos, MI 1992-1993.
- Residency in Emergency Medicine, MSU/ Botsford, Farmington Hills, MI, 1993-1996.
- Chief Resident, Botsford Hospital, Farmington Hills, MI 1995-1996.
- Diplomate, American Board of Osteopathic Emergency Medicine.
- Attending Physician, Mercy Memorial Monroe, MI 1995-1997.
- Attending Physician, Botsford Hospital, Farmington Hills, MI 1996-present
- Associate Clinical Professor, MSU, 1996-present.
- Medical Director, Life Support Training Institute 1998-present. Superior Ambulance; formerly Community EMS.
- Core Teaching Faculty, MSU/Botsford Hospital EM Residency, Farmington Hills 1996-present.
- Item Writer, NBOME, AOBEM SINCE 2007.
- Member and Fellow, MCEP, ACEP, ACOEP, CMDA, MSMS 1996-present.
- ACEP Teaching Fellowship.
- ACEP Sections, EMS, Geriatric, Toxicology.
- Member AAEM, 2012-present.
- GLAAEM, 2015-present.
- Program Director, EM Residency, Beaumont Farmington Hills, 2016-present.
- Member CORD, 2016-present.
- Board Member, AOBEM, 2018-present.
- GMEC, Beaumont Farmington Hills, 2016-present.
- MCEP, Education Committee, 2016-present.
- MCEP, Academic Affairs Committee, 2016-2018.
- MCEP, Membership Committee, 2021.
- Global Health Committee, Beaumont Health System 2018.
- MCEP Leadership Development Program Graduate, 2018.
- GMEC, Beaumont Health System, 2022-present.
- Multiple Medical Missions in Multiple Countries.

Dr. Paratore has been a member of MCEP since graduating residency. Dr. Paratore has a Master of Education and a passion for education. He has worked diligently on the curriculum of the EM Residency at BFH. Since she has enjoyed years of educational offerings from MCEP, it is Dr. Paratore's wish to join the Board of Directors and give back to the college that has done so much for her. Dr. Paratore has gotten to know many of the current MCEP participants and would like to join them in working for the college to enhance and sustain our specialty of Emergency Medicine. After this year's match results, Dr. Paratore thinks it is important to spread the word about what we do and our importance within the healthcare system. §

JEFF MCGOWAN, DO, FACEP



- Graduated A.T. Still University-Kirksville College of Osteopathic Medicine, Kirksville, MO, 2012
- Internship, Residency, Chief Resident, Michigan State University/Sparrow Hospital Emergency Medicine Program, Lansing, MI, 2016
- Sparrow Neuro Intensive Care Unit, Sparrow Hospital, Lansing, MI - 2015-2016
- Emergency Medical Associates, PLLC, Sparrow Hospital, Lansing, MI - 2013-2016
- Emergency Medical Associates, PLLC, Sparrow Ionia Hospital, Ionia, MI - 2015-2016
- Emergency Medical Associates, PLLC, Sparrow Health System, Lansing, MI - 2016-2017
- Emergency Physicians Medical Group, Sparrow Health System, Lansing, MI - 2017-2021
- Sparrow Carson City Hospital, Carson City, MI - 2022 – Current
- Simulation Education Director, Sparrow Hospital Graduate Medical Education, Lansing, MI - 2021 – Current
- Assistant Program Director and Simulation Director for MSU/Sparrow Hospital Emergency Medicine Program, Vituity, Lansing, MI - Current.
- Vituity, Sparrow Health System, Lansing, MI - 2021 - Current
- Member, American College of Emergency Physicians, Current
- Member, Michigan College of Emergency Physicians, Current
- Board Member, Michigan College of Emergency Physicians, 2020-Current
- Member, Michigan College of Emergency Physicians (MCEP) Education Committee
- Member, MSU/Sparrow Emergency Medicine Residency Program Evaluation Committee, Chair
- Member, Sparrow Hospital Wellbeing Committee

Dr. McGowan completed his Emergency Medicine Residency at MSU/Sparrow Hospital in Lansing, MI. Since graduation, Dr. McGowan has focused on resident education with a special interest in procedural competency and simulation. He currently is the Assistant Program Director and Director of Simulation for the MSU/Sparrow Emergency Medicine Residency. He is a proud graduate of the MCEP Leadership Development Program and ACEP Teaching Fellowship. Dr. McGowan continues to take part in multiple MCEP roles including Co-Director for the Michigan Emergency Medicine Assembly, MCEP Education Committee Member, and a MCEP Board Member. As a Board Member, he hopes to continue providing high quality education to our membership and being an advocate for Emergency Medicine. §

LUKE SASKI, MD, FACEP



- Graduate, Wayne State University School of Medicine, Detroit, Michigan, 2004.
- Residency in Emergency medicine, Detroit Medical Center – Sinai Grace Hospital, Detroit, Michigan, 2007.
- Attending Physician, Sinai Grace Hospital, 2007-2015.
- Attending Physician, VA Hospital, Ann Arbor, 2015-present.
- Attending Physician, Sturgis Hospital, Sturgis, MI, 2013-present.
- Attending Physician, Promedica Coldwater Regional Hospital, Coldwater, Michigan, 2018-present.
- Attending Physician, Numerous other past sites for a total of 14 hospitals.
- ED Medical Director, Sturgis Hospital, 2018-present.
- ED Medical Director, Promedica Coldwater Regional Hospital, 2022-present.
- Medical Staff President, Sturgis Hospital, 2023-present.
- ACEP, Councilor/Alternate Councilor, 2007-present.
- MCEP, Board of Directors, 2008-2016 and 2020-present.
- MCEP, LDP Graduate, 2008.
- MCEP, Midwest Winter Symposium, Course Director, 2013-present.

Dr. Saski first became involved in MCEP as a 2nd Year Resident. He is a graduate of our second LDP class and continues to stay active currently as course director for our Midwest Winter Symposium, LDP Task Force, ACEP national events, and a current member of the MCEP Board of Directors. Clinical experience is broad spanning, Urban, Suburban, Rural, and Government sites. Employment models under which he's worked include CMG (Envision), SDG (MCES), Locums (various), and Government (VA). The combination of employment size and location as well as employment models allows for a unique perspective on the different challenges that physicians face across the state. Dr. Saski is particularly concerned with the survival of small hospitals, EMS access, and scope of practice. He is asking for reelection to the MCEP Board in order to help continue to push these specific areas of interest while also addressing the individual needs of our General Membership. §



TACKLING ASTHMA WITH EASE



Pamela Coffey, MD, FACEP

Warmer weather, sunshine, flowers blooming, and asthma. It's like a rite of passage in Michigan spring, and, as typical, this year "they" are predicting a rough one. I put "they" in quotes because it seems like I am always seeing this information from random sources and thus can't quote a specific site that isn't linked to an organization with an agenda for promoting a bad asthma year. But I digress. Asthma is a mainstay of most pediatric emergency departments, something we see all year, but asthma has a significant peak in the spring. It's not the most exciting topic but one that requires due diligence.

In the US, asthma affects 6-8% of the population, or 1 out of 12 children. These numbers have ebbed and flowed over the years but there has not been a drastic, sustained improvement or decline since the early 2000s. As per the CDC, asthma is more prevalent in low-income families, those living in the south, and non-Hispanic black children. But all races, ages, genders, and socio-economic classes can have asthma, and many go undiagnosed for years. For some, asthma is a cough that worsens at night or when they are doing sports, but for others, asthma means they have no air exchange and literally cannot breathe. Deaths from asthma are rare and declining but remain an often-preventable cause and continue to need our attention.

In 1989, the National Heart, Lung, and Blood Institute (NHLBI) formed the National Asthma Education and Prevention Program (NAEPP) to address the growing health problem of asthma in our country. The released their widely followed guidelines in 1991, and revised them in 1997, 2002, and 2007. Most recently, in 2020, they updated their guidance on six selected topics, none of which directly affect our ED treatments. The 2007 guidelines mostly gave recommendations for outpatient diagnosis and management, but one very concise section gave excellent recommendations for management in the ED that is still relevant today. A quick online search of asthma protocols brings up a long list of various children's hospital algorithms, all which vary slightly in their approach but generally still follow the same process and treatment methods identified by the NAEPP. They include the following:

1) Assess the severity of the exacerbation,
2) Treat to relieve hypoxemia and airflow obstruction and to reduce airway inflammation,
3) Monitor response, and
4) Discharge or admit.

If you already follow a protocol at your hospital and feel comfortable with pediatric asthma, I'm going to save you time and recommend that you read the next Kids Korner article! But if you find yourself randomly trying things with your pediatric asthmatics, the following information may make your next shift just a little bit easier!

ASSESS THE SEVERITY OF THE EXACERBATION.

According to the NAEPP, asthma is defined as a chronic disorder of the airways characterized by variable and recurring symptoms, airflow obstruction, bronchial hyperresponsiveness, and underlying inflammation. They break exacerbations down into mild, moderate, and severe as follows:

- **Mild** – A mild exacerbation is characterized by normal alertness, slight tachypnea, expiratory wheezing only, a mildly prolonged expiratory phase (inspiratory-to-expiratory ratio of 1:1 rather than the normal 2:1), minimal accessory muscle use, and an oxygen saturation of >95 percent.
- **Moderate** – A moderate exacerbation is characterized by normal alertness, tachypnea, wheezing throughout expiration with or without inspiratory wheezing, an inspiratory-to-expiratory ratio of approximately 1:2, significant use of accessory muscles, and an oxygen saturation that is typically 92 to 95 percent.
- **Severe** – A severe exacerbation is characterized by inability to repeat a short phrase, extreme tachypnea, inspiratory and expiratory wheezing, an inspiratory-to-expiratory ratio exceeding 1:2, very poor aeration, significant use of accessory muscles, and an oxygen saturation that is typically <92 percent. Signs of impending respiratory failure include cyanosis, inability to maintain respiratory effort (respiratory rate may be inappropriately normal to low), depressed mental status (lethargy or agitation), oxygen saturation <90 percent, and respiratory acidosis (elevated partial pressure of carbon dioxide [pCO2] noted on venous, arterial, or capillary blood gas sample).

Various measurement scales exist, including the Pulmonary Index Score and the Pediatric Asthma Severity Score. If your department is not already using one, you might consider starting as it will make your job that much easier. If you are relying on general assessment, remember that kids are very good at hiding their severity of illness. Lack of speaking may be attributed to shyness, and lack of audible breath sounds may be attributed to not wanting to cooperate. In reality, the child may not be able to get any words out and may not be moving enough air to generate a wheeze. Using an objective scale enables you to quantify your starting point using real data. Using the scale again after treatments lets you see how much the patient has improved.

TREAT TO RELIEVE HYPOXEMIA AND AIRFLOW OBSTRUCTION AND TO REDUCE AIRWAY INFLAMMATION.

There are four main treatments that should be used together to manage an acute exacerbation: Oxygen, inhaled short-acting beta-2 agonists, anticholinergics, and corticosteroids:

- **Oxygen:** This seems obvious, but optimizing oxygenation is often overlooked in an attempt to get other treatments started. The hypoxia is usually due to a VQ mismatch, and the goal is passive oxygenation to get to at least 92% pulse oximetry. Oxygen should not be started unless the patient is below 90% on room air. Oxygen can be given via nasal cannula and by oxygenating the nebulized treatments. If this is not enough, you can consider noninvasive approaches such as high flow nasal cannula, CPAP, or BiPAP to help reduce the work of breathing. Avoid intubation as long as possible as it increases the risks of bronchospasm, which can worsen the hypoxia.
- **Inhaled short-acting beta-2 agonists (SABAs) and anticholinergics:** This is the mainstay of treatment: Albuterol or levalbuterol alone, or combined

with ipratropium bromide (Atrovent). The SABAs are bronchodilators that relax smooth muscle primarily of the smaller bronchioles. The anticholinergics inhibit muscarinic cholinergic receptors and reduce intrinsic vagal tone in the airway, working primarily in the larger airways. For those with mild exacerbations, albuterol via meter dosed inhaler (MDI) and reassessment may be sufficient. For moderate and severe exacerbations, the recommendation is to give three doses of the combined medications within the first hour and then reassess. The dosage is weight-based and the same for moderate and severe exacerbations. These can be delivered via meter dosed inhaler (MDI) or nebulizer depending on your institution's protocols. Multiple studies say that either delivery method is effective.

- **Corticosteroids:** Steroids should be given as soon as possible upon presentation to the ED, including for mild exacerbations. The anti-inflammatory effects reduce airway edema within 2 hours of administration via oral (preferred) or parental administration. Dexamethasone has a longer half-life and is well tolerated at a dose of 0.3-0.6 mg/kg with a max of 12-16 mg/day. Prednisone or methylprednisolone can also be used.

I'm going to interject a push for early rehydration at this point. I often tell my patients and their parents, "Congratulations, your child is running their first marathon!" They look at me funny, but many of these kids have been tachypneic and tachycardic for several hours, if not longer. They are using substantial accessory muscles and likely not staying hydrated. If they are not showing clinical signs of dehydration yet, they will soon. If you feel like your patient is dehydrated and will not be able to start rehydrating orally, do not hesitate to start an IV and give fluid boluses as your initial treatments are going.

Once these treatments are in, the patient should be reassessed. If the patient has completely cleared the exacerbation, they are stable for discharge to continue their home treatment plan. If the patient is still in the moderate category, they should either be observed in the ED or admitted for treatments every 1-4 hours until the exacerbation is resolved. If the patient is still in the severe category, it's time for adjunct treatments as follows:

- **Continuous nebulized SABA:** This is given in a weight-based dosage amount and should be started as soon as possible if the initial treatments are not effective enough. Add oxygen if the patient is hypoxic, and consider noninvasive oxygenation support as needed. Adding ipratropium has not been shown to provide any further benefit after the initial treatments.
- **Magnesium sulfate:** Magnesium relaxes bronchial smooth muscles and should be given after the initial treatments, particularly to aid in the uptake of further treatments. At a dose of 25-75 mg/kg (maximum 2 grams), magnesium is considered safe with minimal adverse effects.
- **Epinephrine or Terbutaline:** These are beta-2 agonists that were once considered next line treatments but now have mixed reviews. These medications should be considered in severe exacerbations but may not be as effective for moderate exacerbations. They have the potential to cause dysrhythmias, hypertension, and myocardial ischemia, so cardiac monitoring is recommended.
- **Heliox:** Heliox is recommended to help with the delivery of medications, as the lower gas density should result in decreased flow resistance. Heliox should not delay care, nor should it interfere with more standard treatment approaches. If you have it available, it might help with acute treatment.
- **Chest x-rays:** These are NOT recommended unless you have concerns for non-asthmatic pathology such as pneumonia, pneumothorax, or effusion.

MONITOR RESPONSE AND DISPOSITION.

I have combined these two because they truly are institution specific. If your patient is still severe and on continuous nebulizer treatment, consider admission to the pediatric intensive care unit. If your patient needs further treatments, this is where you can decide to either observe in the ED, at least to see if the steroids have any effect, or to admit for observation and treatment.

If your patient has completely improved, there is no reason to monitor in the ED, and they can be discharged home, ideally with an Asthma Action Plan for home use. Like the assessment scales, there are several options available online. The CDC has a toolkit available to develop your own Asthma Action Plan that can be integrated into your EMR discharge information. This can be found at https://www.cdc.gov/asthma/actionplan.html. Additional resources for your patients can be found via the Asthma initiative of Michigan at https://getasthmahelp.org.

Asthma is tough, but with the right plan in place, it can be conquered! Happy Spring! §

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ADULTING WHILE IN RESIDENCY... IT'S NEVER TOO EARLY.



Krishna Patel, DO

As this academic year slowly inches to a close, I reflect on the whirlwind of a journey that residency has been. While my last year in residency has been jam packed with seeing as much diverse pathology as possible and hunting down the hard to come by procedures, I've also had to check off some "adulting boxes." You know, these are the things we all know we have to hammer down and get done but never quite focus on. In talking to many residents, it has become clear that I am not alone.

One important area to focus on before graduation is obtaining career-specific "own occupation" disability insurance. This type of insurance is designed to protect emergency medicine physicians in the event that they are unable to work due to an injury or illness. The key here is trying to lock in a policy while you're still relatively young and healthy...cheers to lower rates! When looking for an insurance broker, always ask how they "make their cut." There are great resources and agents out there, but there are also ones who don't have your best interests at heart. In general, physicians tend to be regarded as a high debt, high earning, but not financially savvy pool...aka great marks.

Another consideration should be life insurance. We've seen a pandemic take both the young and the healthy. If there's anything that Covid has taught me, it's that nothing is finite, especially your health. If you have dependents who rely on your income, life insurance is essential. It can provide financial support to your loved ones in the event of your untimely death. Look for a policy that is adequate to cover your family's needs, including expenses such as childcare, education, and mortgage payments. Both EMRA and ACEP have multiple online resources that can help you navigate these new waters.

Emergency medicine encompasses a little over 45,000 active physicians. However, what I've learned is that our world is actually a lot smaller than it seems at times. You never know which paths will intersect again. This has never been more important than when it comes to the job hunt.

Consider the type of practice you want to work in, such as academic, private, or community-based, and look for opportunities that align with your career goals. Make a negotiable and non-negotiable list for yourself when considering opportunities. Is living in Hawaii by the beach an absolute must? Or is it being near your family? Or both? Do you thrive in a single doc shop, or would you rather work at a Level 1 trauma center? At this point, many of us come to understand the pros and cons of different practice environments and start to figure out which ones we want for our careers.

Check out your social media platforms for groups specifically tailored towards EM physician jobs. This is a great place to jumpstart your job search. ACEP has a large job fair that is held annually each fall at Scientific Assembly. While your dream job may not always be at a booth, you'll be surprised by the connections you make. At the end of the day, your job search really is dependent on your network and the people you know. Try not to burn bridges, and be open to opportunities. Additionally, there are a plethora of online job forums, including EMCareers at https://www.emcareers.org/.

In closing, here are pro-tips for adulting if you're in the early stages of residency:

- Update your CV throughout residency; it's a lot easier this way.
- Don't underestimate the power of a well written cover letter.
- Get a trusted mentor/advisor to proofread the above.
- Invest in a good webcam for first meets or initial interviews.
- Try on that suit from medical school to make sure it still fits.
- Stay on top of logging your procedures, as jobs tend to ask for these during the interview process and/or credentialing.
- If you can, save a small nest egg to cover the potential gap between graduating from residency and starting attending-hood.
- Obtaining your unrestricted medical license and documents for credentialing not only takes time, but also money...take this into consideration when planning your finances and your future.

MCEP holds a "Life After Residency" conference every August that dives deeper into these adulting topics with many valuable pearls. Be sure to join us then! §

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Life insurance is an essential part of financial planning that many young professionals overlook. Many believe that they don't need it since they're young and healthy. However, the truth is that life insurance is critical for anyone who has financial dependents. Whether you're single, married, or have children, life insurance can offer peace of mind to you and financial security to your loved ones in the event of an unexpected tragedy.

As a young professional, your earning potential is likely to increase significantly over time. This means that your financial responsibilities will also grow as you take on larger debts such as mortgages, car loans, and credit card balances. In the unfortunate event of your untimely death, your loved ones could be left with significant debt and no means to pay for it. Having life insurance can help cover these expenses and ensure that your family is not left in a financial bind.

There are two main types of life insurance policies available: Term life insurance and whole life insurance. Term life insurance provides coverage for a specified period, usually between 10 and 30 years. This type of policy is more affordable than whole life insurance and is an excellent option for young professionals who want to provide financial protection without breaking the bank. Whole life insurance, on the other hand, offers lifelong protection and accumulates cash value over time. This type of policy is more expensive than term life insurance.

In addition to providing financial security, life insurance can also help cover your funeral expenses. The average funeral can cost upwards of $10,000, and many families are not prepared to handle this expense on their own. Life insurance can help cover these costs and ensure that your family can focus on grieving instead of worrying about how they'll pay for your final expenses.

Another benefit of life insurance is that it can provide an inheritance. If you don't have significant assets or savings, life insurance can be an excellent way to leave a financial legacy. This can help provide financial security and give your beneficiaries a head start in building their own financial futures.

Finally, life insurance can provide peace of mind. Knowing that you have



financial protection in place can help alleviate stress and worry. This can allow you to focus on building your career and enjoying your life without the constant fear of the unknown.

In conclusion, life insurance is an essential part of financial planning that young professionals should not overlook. Whether you're single or have a family, life insurance can provide financial security and peace of mind to you and your loved ones. By taking the time to research your options and choose the right policy, you can ensure that your beneficiaries are protected in the event of an unexpected tragedy. Don't wait until it's too late – start exploring your life insurance options today. §

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ABOUT THE OBSERVATION MEDICINE COMMITTEE

The Observation Medicine Committee consists of Observation Unit (OU) medical directors and physicians who have an interest in Observation Medicine across Michigan. We meet quarterly and work together to assist EM physicians starting or thinking about starting an OU in Michigan. We provide a collaborative platform to brainstorm and discuss issues OU directors may be facing and how best to inform and educate EM physicians and residents about Observation Medicine. Visit our webpage at: https://www.mcep.org/about-us/committees/obstoc/ to learn more and to find information on:

- Protocols, pathways, and other tools for management of an Observation Unit
- Educational Observation Medicine content
- Observation Medicine educational opportunities such as medical student and resident elective rotations and OM fellowships
- Information about our yearly *Observation Medicine - Science and Solutions* conference. Save the Date for our 2023 virtual conference on *September 15, 2023!*

Please contact me at margarita.pena@ascension.org if you are interested in joining our committee.

Margarita E. Pena, MD, FACEP
Chair, Observation Medicine Committee

MCEP ADVOCACY AROUND MICHIGAN

Over the past few months, MCEP has been busy advocating for your interests as emergency physicians:

- MCEP President Diana Nordlund spoke with Governor Gretchen Whitmer regarding the recent gun violence measures that have been introduced and passed by the Legislature in Michigan.
- In March, MCEP members met with Michigan House Speaker Pro Tempore Laurie Pohutsky at the headquarters of Independent Emergency Physicians (IEP) as part of a southeast Michigan meet and greet with legislators. Many thanks to IEP for hosting this event.
- In April, MCEP's Leadership Development Program (LDP) class went to the Capitol with MCEP leadership to educate their elected officials about violence in the Emergency Department. MCEP asked for support when a bill requiring enhanced penalties and signage for assault in the ED is reintroduced this legislative session. This bipartisan bill successfully passed the House in 2022 but did not make it out of the lame duck Senate session last year. We anticipate that it will be reintroduced in the next few months.
- In late April, MCEP Board members Sara Chakel and Luke Saski represented MCEP at the Michigan State Medical Society (MSMS) House of Delegates as delegate and alternate delegate, respectively. MCEP provided testimony on Resolution 16-23 (Physician antiretaliation, due process, and indemnification rights), Resolution 20-23 (Dedicated on-site physician requirement for emergency departments), and Board Action Report 2 (Resolution 38-22 NBPAS as equivalent certification for health Insurers and hospitals). The House of Delegates approved Resolution 16-23, approved Resolution 20-23 with amendments, and approved Board Action Report 2, which recommended disapproval of Resolution 38-22. MCEP supported all three decisions. The 2023 Final Action Report of the MSMS House of Delegates can be found at: https://www.msms.org/About-MSMS/House-of-Delegates. §



MCEP Legislative Meet & Greet pictured left to right; Bret Marr; Sara Chakel, MD, FACEP; Bradford Walters, MD, FACEP; Michael Gratson, MD, MHSA, FACEP.



MSMS House of Delegates pictured left to right Luke Saski, MD, FACEP and Sara Chakel, MD, FACEP.



LPD Legislative Day pictured left to right: David Strong, MD, PhD, FACEP; Michael Gratson, MD, MHSA, FACEP; Sara Chakel, MD, FACEP; Becky Loney, MD; Diana Nordlund, DO, JD, FACEP; Christy Snitgen; Michael Doyle, DO; Brandtly Yakey, DO; Ryan Reece, MD, FACEP; and Dane Brown, MD.