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Submissions to the January/February 2024 Newsletter should be received by the Chapter office no later than February 1, 2024.

FROM THE PRESIDENT



This time of year, in Michigan can be a bit gloomy. One must admit that you don't see much advertising promoting a visit to Michigan in November and December. The days are short, and the weather is usually cold, cloudy, and rainy. All the beautiful fall colors are gone from the trees. Most of us have put away our boats, campers and other summer toys. I must throw on my heavy coat and muck boots to walk outside in my yard. Even my dog does not seem to want to go out to do his business in the morning!

Given these gloomy times, I find it interesting the types of holidays we celebrate in late fall and early winter. Despite the dismal outdoor climate, our holidays focus on giving thanks, having hope, spending

time with family, and bettering ourselves for the coming year.

I don't need to tell this group that the practice of Emergency Medicine has been challenging over the past several years. Much like the current season, these times can seem dark and discouraging in our profession. We have experienced a pandemic, increasing violence in the workplace, reimbursement challenges, and bankruptcies of certain physician employers. Suffice to say that many of our colleagues feel morally injured by our workplace issues.



Michael Fill, DO, FACEP

Despite the dark and cold, in a few weeks we will get a few extra minutes of daylight each day. Eventually, this gives way to less clouds, more sunshine, and the anticipation of spring. Although MCEP will not be able to solve all of our specialties' issues by the time the flowers bloom, we can and should celebrate our recent victories. By the time you read this, our ED violence bills will have been signed into law by the governor. These bills do not contain everything that we wanted, but they are a significant step in the right direction. MCEP has also worked with the Michigan State Medical Society to draft a letter to the Michigan Attorney General, asking her to investigate the current state of the corporate practice of medicine in the State of Michigan. This has been noticed and reported on by both Crain's Grand Rapids Business and ACEP Emergency Medicine Today. Our Health Finance Committee has begun conversations with the Michigan Department of Human Services regarding Medicaid Reimbursement.

Despite all this work, I realize that we have more to do, and our shifts will continue to be taxing at times. I hope that during these next few weeks you have a chance to take a break from the grind of the ED and spend some time with family and friends. I also hope that we can all take a moment to be thankful for what we have and reenergize ourselves for the work of improving our specialty in the new year! \$



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February 9, 2024



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This MCEP issue spans an interesting collection of national and local holidays, as well as the expected celebrations and gatherings associated with this time of the year. We move from the fall season into early winter, where the days get shorter and the evening hours seems to quickly creep into the daytime hours, with the shiftwork of emergency medicine making it seem like perpetual nighttime when on a string of shifts.

Shift work is always a transition when you first start working this type of schedule, and for me it came when I was when I was a college student on summer break. The iron mine in the Upper Peninsula hired students on an hourly employee basis to replace full time workers who had often preferred to take vacation in the summer. The crews relied on a seniority type rotating schedule, not entirely unlike many emergency medicine schedules with the varying shift work on an A, B, C crew assignment, which rotated predictably into the future.

This type of predictable setup made it easy to plan out your upcoming shifts, but the more important element for many of the full-time employees was each crew had its own seniority for vacation. I had heard of people intentionally moving their shift assignment in order to gain priority in their vacation, and for some it gave them the ability to get deer season in their vacation requests every single year. To them, that was their holiday season. For others, the Holidays may revolve around thanksgiving and the combination of Christmas and the New Year. It may be filled with end of the year celebrations, family gatherings, or celebrating the past year and looking forward to the new year. This is of course if it is your year off from being scheduled, since the holidays were shared just like in emergency medicine.

One of the most memorable parts of my shift work summer job was a mandated safety event where we heard safety stories that had happened to others on the job. Since it was often a dangerous job, working with heavy equipment and large machinery, occasionally people would have injuries or events that happened while at work. Unfortunately, it is all too common to hear about injuries that had happened working in the emergency department; so much so that it seems that violence and threats of violence have become commonplace in many emergency departments. Recently it has been much more (appropriately) recognized that this cannot and should not just be thought of as part of everyday emergency medicine practice. I have never heard anyone at another area of employment accept that violence is just part of the job, and emergency medicine should not be any different.

Just earlier this month, on December 6th, Governor Whitmer signed House Bill 4520 and 4521 into law providing a much-needed step

to protect emergency medicine workers. As mentioned in the [press release from MCEP](#), as well as Bret Marr's article in this edition, the signing was an important and very welcome accomplishment of multiple years of political advocacy and effort from many here in Michigan. While there is still much work that is to be needed to be done on the ED workplace violence front, it is important to celebrate the victories and recognize this significant achievement. Emergency medicine does so much to take care of others, it's important to remember to take care of ourselves as well, in order to be able to provide top notch emergency care.



Andrew Taylor, DO, FACEP

Whatever the holiday season has in store for you this year, make sure to take time to celebrate the end of the year. If that means visiting with family and friends, or if it means that you go outside for deer season, take time to enjoy the season and all the opportunities it has to offer. Take time to celebrate with colleagues all the hard work that you have done in the emergency room clinically, and all the excellent patient care that you continue to provide. Remember to look towards the future and let's keep up the hard work to end violence in the emergency department.

This edition of the newsletter has contributions from Mike Fill as well as Bret Marr, both of which discuss recent victories in Michigan legislative and advocacy. Similarly, Michael Gratson presents highlights from reimbursement from the Straight Talk Reimbursement Conference, as well as advocacy efforts for reimbursement across Michigan, as well as Don Powell providing updates on reimbursement outlook for the new year. We welcome new contributors Alan Lazzara with an article on deer stand related injuries, as well as Brandtly Yakey and Varun Vohra from the Michigan Poison Center who provide a toxicological perspective on the new trend of increase Nitrous Oxide usage in Michigan. Our resident article comes from the residency program of Corewell Health Lakeland, on ocular related trauma.

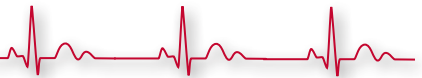
As we look towards the future, if anyone is interested in Board of Directors service for MCEP, submissions are open at mcep@mcep.org until March 1, 2024, with elections taking place at Michigan Emergency Medicine Assembly at Boyne Highland Resort. §



Thank you for all that you

To all of our frontline workers

From all of us at MCEP



RECREATIONAL NITROUS OXIDE USE ON THE RISE IN MICHIGAN

Brandtly Yakey, DO, Medical Toxicologist and Emergency Physician, Michigan and Poison Drug Information Center Henry Ford Hospital, Department of Emergency Medicine

Varun Vohra, Pharm.D., MPH, DABAT, FAACT, Clinical Toxicologist, Assistant Clinical Professor, Wayne State University School of Medicine, Department of Emergency Medicine Academic & Managing Director, Michigan Poison & Drug Information Center



Brandtly Yakey, DO

INTRODUCTION

The recreational misuse of nitrous oxide (N₂O), primarily through purchased food cartridges and inhaled directly or via a balloon, has increased in recent years. Nitrous oxide, also known as ‘laughing gas’ or ‘whippets’, is frequently misused due to its rapid induction of euphoria, relaxation, and hallucinogenic effects. Long-term use, however, has been associated with disabling polyneuropathy (1). Early recognition and intervention are crucial to mitigate long-term neurological damage. A recently published MCEP case report provided a review on a case of N₂O toxicity (2).

EPIDEMIOLOGY

Nitrous oxide is easily obtained via the internet, vape stores, headshops, and gas stations. A recent visit to a local gas station revealed canisters in full view next to the cash register (Figure 1). Such widespread availability likely contributes to the misconception that N₂O is safe or harmless. The potential for N₂O misuse is not a new phenomenon, with literature documenting its use as far back as 1799 with chemist Humphry Davy coining the term ‘laughing gas’ (3). Data from Global Drug Surveys from 2014 and 2019, in addition to national studies, indicate a significant increase in the recreational use of N₂O globally. The highest usage rates were reported in the United Kingdom with notable increases in the United States after 2013 (4,5). In Michigan, evidence of N₂O use is increasingly visible (6) and corroborated by increasing calls to the Michigan Poison and Drug Information Center (MiPDC) as well as toxicology consults related to N₂O toxicity.



Figure 1: Nitrous oxide canisters at sale at local gas station.

The increasing visual evidence of N₂O use is supported by data derived from the MiPDC, where we have observed a marked increase in calls from healthcare facilities, particularly since 2020. Of the 114 cases reported since 2010, more than half occurred after 2020 (Figure 2). The median age of users is 24 years. While retrospective poison center data is valuable for emerging trend and signal detection, implicit limitations and biases warrant equal consideration (7). The reported data likely represent an underestimation of the true extent of usage. Poison center data rely on passive, voluntary and/or self-reporting. Therefore, the data should not be interpreted as a true representation of the statewide incidence pertaining to N₂O use and toxicity.

CLINICAL MANIFESTATIONS

Long-term exposure to N₂O can lead to neurological, hematologic, psychiatric, and immunologic derangements. The exact mechanism of toxicity, though not fully understood, is believed to be a result of the irreversible oxidation of the cobalt ion in cyanocobalamin (vitamin B₁₂) causing a functional deficiency. This oxidation inhibits methionine synthase, preventing the conversion of homocysteine to methionine, and inhibits the conversion of methylmalonic acid to succinyl Co-A. The inhibition of these pathways leads to impaired myelin production and DNA synthesis, and results in symptoms similar to those observed in pernicious anemia (8).

Nitrous oxide-associated neuropathy is characterized by sensorimotor polyneuropathy, often combined with signs of posterior and lateral spinal cord involvement. Symptoms include paresthesia, decreased proprioception and vibration sense, and weakness. Sensory and motor deficits classically begin distally at the feet and hands, progressively extending proximally, and can include varying degrees of ataxia. Magnetic resonance imaging (MRI) may reveal abnormal signal patterns involving both the posterior and anterior spinal cord columns (4, 9). These symptoms typically manifest after severe chronic use but can occur earlier in patients with co-existing vitamin B₁₂ deficiency (4). Hematologic abnormalities associated with N₂O use include leukopenia, agranulocytosis, thrombocytopenia, megaloblastic anemia and myelosuppression (10). Recent case reports have suggested a link between elevated homocysteine levels and development of venous thrombosis (11,12). Psychiatric symptoms such as delusions, paranoia, hallucinations may present with or without accompanying neurological signs (13). Frostbite injuries, particularly in the oropharynx, can occur from the cooling discharging cylinders (14). The threshold for toxic



consumption is difficult to determine, and unknown, however a dose-response relationship between the number of cartridges consumed per session and occurrence of paresthesia has been proposed (15)

DIAGNOSIS

A diagnosis of nitrous oxide toxicity requires a high degree of clinical suspicion and consideration of a broad differential diagnosis. When suspected, tests for serum B₁₂, methylmalonic acid, homocysteine, and folic acid concentrations should be obtained. Vitamin B₁₂ levels are often found to be normal or low-normal, and do not correlate well with neurotoxicity. Elevated concentrations of homocysteine and methylmalonic are sensitive markers and more indicative for assessing N₂O-related vitamin B₁₂ status. An MRI of the cervical, thoracic, and lumbar regions can be useful in narrowing the differential diagnosis, typically showing hyperintensity on T2-weight images of the spinal cord with the posterior column most affected (4).

TREATMENT

Currently, there are no standardized treatment guidelines for N₂O toxicity. The mainstay of therapy includes cessation of N₂O use and vitamin B₁₂ administration. The treatment of neurological sequelae resulting from N₂O-associated functional B₁₂ deficiency typically involves administering vitamin B₁₂ via a similar protocol used for pernicious anemia. A common approach is to provide 1000 microgram (µg) of cyanocobalamin intramuscularly for 7-14 days, then taper to once a week for four weeks, and then to monthly until clinical resolution (16). Due to poor oral bioavailability and significant excretion with intravenous administration, intramuscular dosing is the preferred route for vitamin B₁₂ administration. However, high-dose oral regimens,

ranging from 1000-2000 µg daily until clinical resolution, have been recommended by some authors (4). Oral regimens may be particularly useful for patients unwilling to remain hospitalized for treatment and who are at risk of being lost to follow-up.

The myeloprotective efficacy of methionine has been suggested by both animal and human studies, although the human clinical evidence is largely limited to case reports. Since methionine is not being created normally, there is interest in supplementing it as treatment of nitrous oxide-induced myeloneuropathy. There are no established guidelines for dosing methionine in patients with N₂O toxicity, however, case reports have used a 3gram daily regimen (17, 18).

With cessation of N₂O use in conjunction with clinical treatment, the prognosis is often favorable with patients typically experiencing partial, if not complete, recovery. However, the clinical course can be prolonged, with neurological sequelae lasting up to 14.5 months in some cases following cessation, despite vitamin B₁₂ supplementation (19).

The misuse of N₂O is on the rise with and significant clinical effects becoming increasingly evident in our emergency departments. Prompt diagnosis based on high order of clinical suspicion and patient history if integral to inform appropriate and timely treatment. As emergency medicine physicians, we are also in the position to provide education to our patients about the health risks associated with N₂O use. Should you encounter a suspected case, the specialists and toxicologists at the Michigan Poison & Drug Information Center are readily available for assistance at **1-800-222-1222**. §

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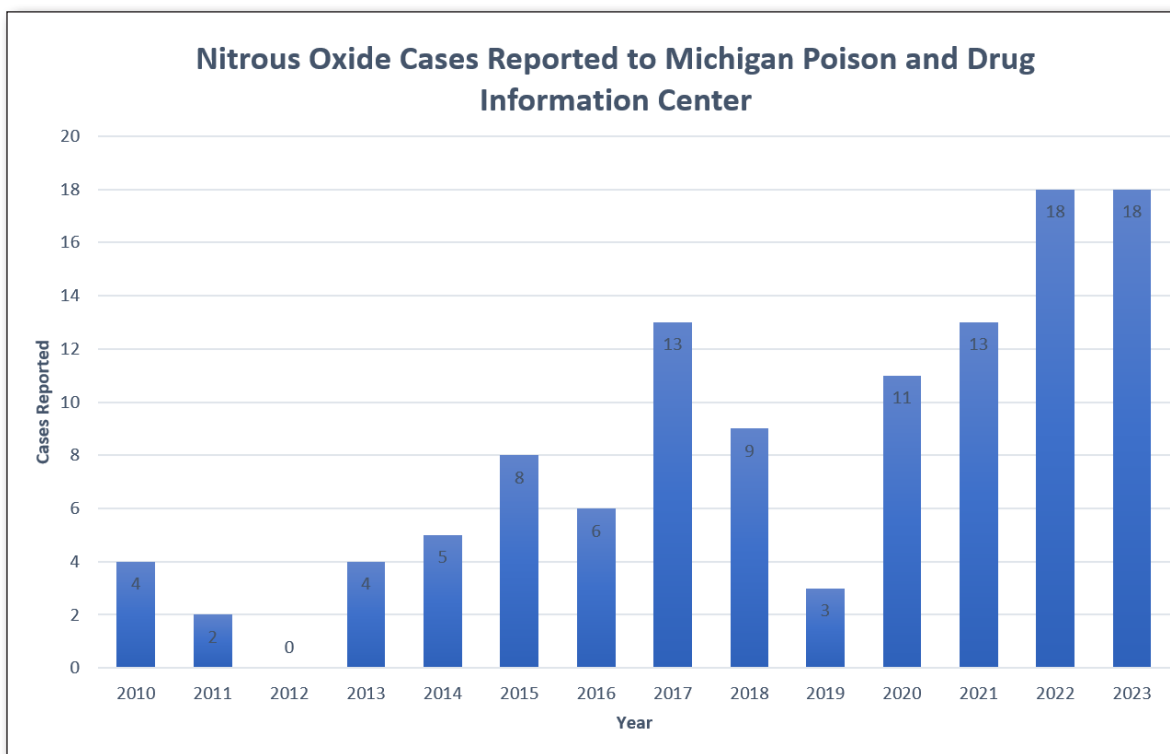


Figure 2: Nitrous oxide cases report to Michigan Poison and Drug Information Center.



2024 MEDICARE CONVERSION FACTOR

The final CMS rule for the 2024 Medicare Physician Fee Schedule conversion factor has been released. This year's Medicare Conversion Factor (CF) is \$32.74. This compares to a 2023 CF value of \$33.88. Unfortunately, this follows a multiyear downward slide of Emergency Medicine E&M reimbursement. This has been a very frustrating issue with EM as well as all other specialties/providers. Especially since the other areas of medicine (Hospital inpatient, Hospital outpatient, LTC hospitals, SNF's, Hospice, ASC's) have regularly been provided inflationary updates.

Although emergency medicine RVU's are stable, the overall effect is a 3.37% cut when this is factored in. Emergency Medicine cuts are mostly due to significantly increased RVU's to the office and outpatient E/M code sets imposed in 2021 and new 2024 outpatient "complexity" add-on code G2211. These new code sets have or are estimated to generate significant "new" Medicare Physician Fee Schedule (MPFS) spending. Unfortunately, these are not codes that Emergency Medicine can use. CMS statutory budget neutrality requirements mandate the recoupment of this additional spending.

There is some potential hope on the horizon. Although it is unlikely we will see a fix before year end, there are several bills that have been proposed to help alleviate some or all of the cuts. There is a possibility that if any of these fixes pass there may be a retrospective CMS payment fix to 1-1-2024. ACEP, EDPMA as well as many physician groups continue to lobby on our behalf.

Current bills and intent:

- **Preserving Seniors Access to Physicians ACT (H.R. 6683)**

- This bill is requesting a full 2024 MPFS CF fix and thus alleviate the 3.37% cut.

- **Strengthening Medicare for Patients and Providers Act (H.R. 2474)**

- This bill hopes to tie the yearly MPFS to the Medicare Economic Index thus providing an annual inflation-based adjustment to provider reimbursement

- If this type of inflation-based adjustment was in place in 2000, the current CF would be in excess of \$70

- **Provider Reimbursement Stability Act of 2023 (H.R. 6371)**

- This bill would look to readdress the current Budget Neutrality Threshold Bill, which is set at 20 million. The hope would be to increase the threshold to over 100 million before CMS was required by statute to initiate cuts in other payments for any new costs over the established threshold. This years proposed complexity code G2211 is an example. \$



Don Powell, DO, FACEP

Don H Powell, DO, FACEP

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ENHANCED PENALTIES FOR VIOLENCE IN MICHIGAN'S EMERGENCY DEPARTMENTS NOW LAW WITH GOVERNOR'S SIGNATURE!!

On Wednesday, December 6, 2023, Governor Whitmer signed [House Bill 4520](#) and [House Bill 4521](#), increasing penalties for assaults on health professionals and volunteers in emergency departments. The bill signing took place at UM Health Sparrow Hospital in Lansing. MCEP was proud to join the Governor for the bill signing, with MCEP Board President Dr. Michael Fill on stage during the ceremony.

MCEP has long advocated for these increased penalties and worked to pass this year after coming close to the finish line in 2022. MCEP Executive Director Christy Snitgen and Board Member Dr. Pam Coffey testified in the Senate Civil Rights, Judiciary and Public Safety Committee in early October. Dr. Michael Fill testified on the package in the House late spring of 2023. The bills received widespread, bi-partisan support during the voting process on both the House and Senate floors.

MCEP, its members, and chapter leadership have spent numerous hours educating lawmakers and stakeholders on the need to send the Michigan public a message that it's not ok to physically harm or intimidate healthcare providers. We will continue to advocate for strengthening this law over the coming years. Governor Whitmer ended her press conference with a straightforward message "Healthcare Workers – we've got your back and appreciate your lifesaving jobs!" We couldn't agree more. Congratulations to MCEP on getting this needed policy change accomplished!

LEGISLATURE ADJOURNS EARLY FOR 2023

The Michigan Legislature wrapped up the 2023 legislative calendar in mid-November after a flurry of activity to close out the year. A major overhaul of the state's energy plan requiring the state's electricity providers to be close 100% renewable energy sources by 2040 was the main impetus of the package. Governor Whitmer announced the Clean Energy plan in her August 2023 legislative speech.

Quick refresher, the Michigan Legislature runs on a two-year cycle that starts at the beginning of an odd numbered year and ends 24 months later after an even year election cycle. Traditionally, the fall of the odd year is heavily focused on policy issues and wraps up in mid-December. Earlier this year, while enjoying their first complete majority in forty-years, Legislative Democrats passed several policy proposals that did not receive Immediate Effect, meaning those bills would not take effect until the end of March 2024.

One option to help those bills take effect earlier, is for the Legislature to adjourn earlier, and let the 90-day effective date clock begin ticking earlier. If the legislature leaves by mid-November, one of the bills Democrats would like to take effect earlier, moving the 2024 Presidential Primary to February 27, 2024, could take effect and be held. This has shortened the fall session and made it function more like a Lame Duck session.

MCEP PURSUES MICHIGAN MEDICAID REIMBURSEMENT INCREASE

MCEP Leadership, led by Health Finance Committee Chair Dr. Michael Gratson, has begun the process of pushing for an increase in Medicaid reimbursement for visits to emergency departments. Some in the college may recall that MCEP pursued a similar effort in the mid-2000s. This is a multi-year process, but it starts with conversations with the state's Medical Services Administration (MSA), which is part of the Department of Health and Human Services. MCEP will keep members posted as these discussions progress over the coming months. §



*Bret Marr, Lobbyist
Muchmore, Harrington, Smalley
& Associates*

2024 BOARD ELECTIONS

All active members of the Michigan College of Emergency Physicians interested in serving on the Board of Directors are encouraged to submit their names to the 2024 Board Nominating Committee for consideration as the Committee develops the slate of candidates.

New Board members will be selected by the membership during the Annual Meeting that takes place at the Michigan Emergency Medicine Assembly to be held in beautiful northern Michigan at The Highlands in Harbor Springs at the end of July. **Four** 3-year positions on the Board are open for election this year.

Those interested in Board service should e-mail their notice of intention to the Chapter office, mcep@mcep.org, no later than **March 1, 2024**. Please include with your notice a brief biographical sketch, a copy of your curriculum vitae, current photo, and your preferred contact information. Additional information can be found on our website here. Any questions regarding Board service and expectations should also be directed to the Chapter office. Thank you! §



TRAUMATIC FALL CAUSING RUPTURED GLOBE AND COMPLETE DEHISCENCE OF CORNEA AFTER PENETRATING KERATOPLASTY

Erin Leach, MD¹, Michelino Mancini, DO¹, Michael Seward, MD²

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INTRODUCTION:

Geriatric falls are a common cause of emergency department visits. In these patients, as with all trauma patients, it is essential to evaluate the entire body including the eyes. Ocular trauma due to falls has been shown to account for 29.6% of eye related admissions (7). A common cause of ocular morbidity is corneal perforation (an open globe injury), which potentially leads to decreased visual acuity, occasionally blindness or complete loss of affected eye (5).

Penetrating keratoplasty (PKP), also known as corneal transplant, is the standard of care for corneal disease and is a common surgical procedure. Therefore, in trauma, it is vital that emergency physicians be aware that patients with history PKP have higher rates of globe rupture compared to other eye procedures (2).

There has been a previous case report regarding simple dehiscence after attempt to insert contact lenses post PKP, however a case report regarding emergency care after ground level fall leading complete dehiscence of cornea plus other distracting musculoskeletal injuries on presentation in a patient with history of PKP has yet to be described (6). This case aims to highlight the importance of keeping ocular care a priority while attending to other injuries sustained by traumatic falls in an elderly patient.

NARRATIVE:

A 95-year-old woman presented via EMS with chief complaint of mechanical ground level fall, head injury, right sided visual loss and

right shoulder pain. No loss of consciousness, not taking anticoagulants. On examination she had a GCS of 15, a two-centimeter laceration of the right eyebrow, superficial abrasions to right cheek and forehead, right acromioclavicular joint tenderness, trauma to right eye with subconjunctival hematoma and what appeared to be complete obliteration of cornea resulting in open globe injury (figure 1 and 2). The right eye was painless with significant loss of visual acuity, preserved ability to detect light, and extraocular movements intact.

Pertinent history of two right corneal transplants (PKP), with the most recent eight years prior. Ophthalmology recommended Polytrim drops hourly and apply protective shield cover. They planned to take the patient for repair after acute workup in ED was completed. Computed tomography of head, neck and facial bones plus X-ray of shoulder were without acute abnormality. Facial laceration was repaired, and the patient was transferred to OR.

DISCUSSION:

In the OR, the corneal graft was found completely dehisced, lying inside the anterior chamber but not connected to the eye except by vitreous adhesions. The graft was removed, and the same graft was sutured back into place. Procedure and post-operative course was without significant events. On the three-month follow-up visit, the patient continued to have profound vision loss of the right eye, but not complete loss.

In this case the patient was able to recount her past medical history helping the provider determine that her vision loss was likely related

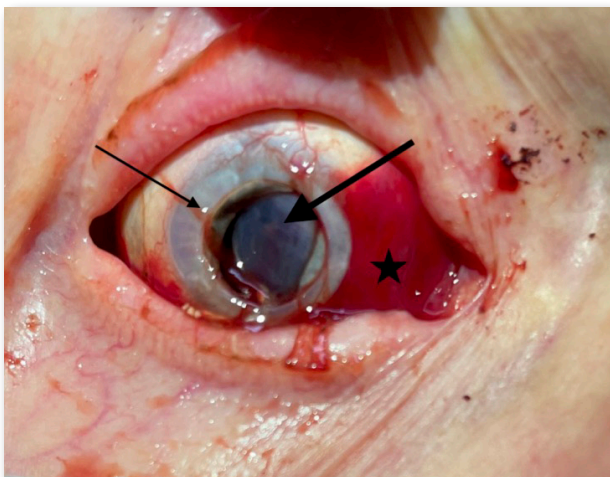


Figure One: iris (thin), pupil (thick), subconjunctival hematoma (*)

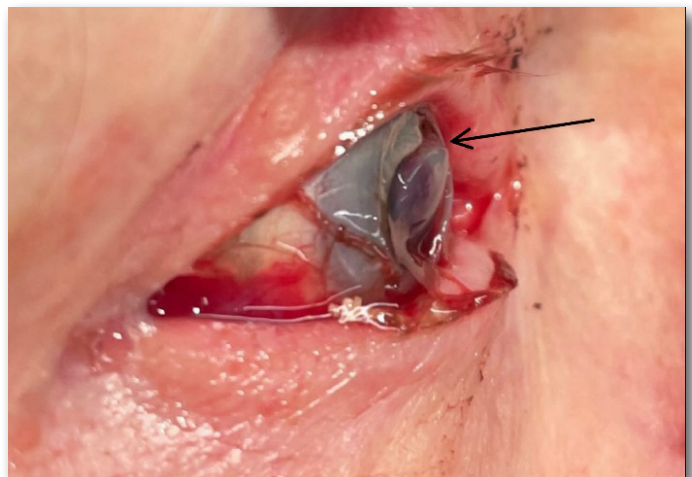


Figure Two: corneal dehiscence



to trauma to PKP. It is well reported in literature that while graft dehiscence can occur for a variety of reasons, one of the most common is blunt trauma. Others include infectious keratitis, suture failure, or spontaneous dehiscence (1).

After PKP the graft-host interface never regains full structural integrity and is at risk for dehiscence (2). What is more, it has been reported that while 43% of globe ruptures after PKP occurred within three years, it can still occur up to 14 years later (4). Our patient was approximately eight years from her most recent PKP. Failure to properly treat open globe injury not only may lead to blindness but may lead to severe ocular complications including iris prolapse, extrusion of the crystalline lens (or intraocular lens), vitreous loss, and early or late retinal detachment (3).

In conclusion, while emergency medicine providers must evaluate for immediate life-threatening injuries in patients sustaining trauma, it is important that they do not neglect the eyes as part of their comprehensive physical exam. In addition, obtaining ophthalmology consult early in encounters when there is evidence of corneal perforation and open globe injury, especially with history of PKP, can minimize time to antibiotic initiation and optimize operative repair planning thus resulting in better outcomes. §



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REFERENCES:

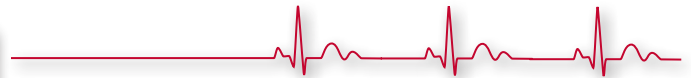
1. Bamashmus MA, Al-Akily SA, AlAkhalee HA, Al-Nuseriy KO, Farhan MH. (2017). Emergency visits after corneal transplantation in Yemen. *Oman J Ophthalmol. Sep-Dec;10(3)*,193-197. doi: 10.4103/ojo.OJO_217_2016. PMID: 29118495; PMCID: PMC5657162.
2. Elder, Mark J MD, Franzco; Stack, Rebecca R MBCHB. (2004). Globe Rupture Following Penetrating Keratoplasty: How Often, Why, and What Can We Do to Prevent It? *Cornea 23(8)*, 776-780, | DOI: 10.1097/01.icc.0000133996.99520.c4
3. Jafarinasab MR, Feizi S, Esfandiari H, Kheiri B, Feizi M. (2012). Traumatic Wound Dehiscence following Corneal Transplantation. *J Ophthalmic Vis Res. Jul;7(3)*, 214-8. PMID: 23264863; PMCID: PMC3520589.
4. Kawashima, M., Kawakita, T., Shimmura, S., Tsubota, K., & Shimazaki, J. (2009). Characteristics of traumatic globe rupture after keratoplasty. *Ophthalmology*, 116(11), 2072-2076. doi:10.1016/j.ophtha.2009.04.047
5. Stamate AC, Tătaru CP, Zemba M. (2018). Emergency penetrating keratoplasty in corneal perforations. *Rom J Ophthalmol. Oct-Dec; 62(4)*:253-259. PMID: 30891520; PMCID: PMC6421488.
6. Walter L. Green, Jo-Anna Palma, Martha Grace Patel (2021). Traumatic Corneal Dehiscence After Penetrating Keratoplasty, *The Journal of Emergency Medicine*, 60 (3), e61-e62, ISSN 0736-4679, <https://doi.org/10.1016/j.jemermed.2020.10.027>.
7. Wen-Shen Lee, Philomena McNamara, James English, Robin Meusemann, (2020). Ocular trauma associated with falls in older people: A 10-year review from a state trauma service, *Injury*, 51 (9), 2009-2015, ISSN 0020-1383, <https://doi.org/10.1016/j.injury.2020.07.029>.



Pamela Coffey, MD, FACEP;
Antony Hsu, MD, FACEP;
Douglas Casa, Ph.D, ATC;
Ryan Reece, MD, FACEP;
and Mitch Smelis, AT, ATC



MCEP Representatives attended the Team Up for Sports Safety (TUFSS) event that Thom Mayer, MD, FACEP of the American College of Emergency Physicians has worked closely with regarding rollout of best practices for secondary school athletic programs trying to prevent sudden death mostly from cardiac arrest and malignant hyperthermia. MCEP members participated in groups to coordinate the advocacy for the safety of student athletes and general school safety at secondary schools where many of the bad outcomes can occur from practices and competitions.



INCORPORATING MEDICAL STUDENTS INTO YOUR EMERGENCY MEDICINE SHIFT

The emergency department is a fast-paced environment, and interdisciplinary team dynamics are crucial for patient care, department flow and efficiency. Team players include emergency medicine physicians, physician assistants, nurse practitioners, specialists, residents, nurses, phlebotomy, respiratory therapy, laboratory technicians, EKG technicians, certified nursing assistants, imaging technicians, registration and student learners. One of the team players that I feel are often underutilized are the medical students.

Although, it can often be time consuming working with a medical student on your shift, they can positively benefit the team. If they are better incorporated into the team, then it can help your shift flow, patient care, and benefit medical student education. Last year there were numerous emergency medicine unmatched positions, which lead to many programs participating in the Supplemental Offer and Acceptance Program (SOAP) in the match. If we can better integrate medical students into the team, then maybe we can also inspire them to pursue a career in emergency medicine.

Below are some tips and tricks for interacting with medical students during your shift.

- **Introduction:** At the beginning of the shift, introduce yourself to your student. Ask them their desired specialty, year in medical school and medical school they attend. This will help you gauge what knowledge and clinical skills level they will likely be at.
- **Emergency Department Orientation:** If it is their first time in your emergency department, then give them a brief tour including where the bathroom and break rooms are located. Also introduce them to other staff members so they feel part of the team.
- **Set Expectations:** At the beginning of the shift, set expectations so everyone is on the same page. Additionally ask them if they have any specific goals for the shift; this can help you focus on things to watch for and give feedback on. This is a great time to them that you will be providing them with feedback at the end of the shift.
- **Initial Patient Interaction:** Bring the medical student to the patient room and introduced yourself and your medical student as “Student Dr XYZ”. If the patient is stable, then ask if it would be okay for your medical student to gather some information first. Allow the medical student 5-10 minutes to gather their history and physical exam.
- **Patient Presentation:** Allow the medical student to have 1-2 minutes to gather their thoughts. Then tell them to give them a 1-minute oral patient presentation. There are numerous formats for patient presentations. You can tell them which presentation format you prefer when you are setting expectations at the beginning of the shift. Ask them to form broad differentials. Based on their level of training you can also inquire what diagnostic testing and interventions they would like to order.
- **Re-Evaluation:** Medical students usually have the gift of time on their shifts since they don’t have to write all the patient notes, talk to consultants and they see fewer patients than their supervising physician. This is the area where medical students can greatly impact your shift flow. They can frequently re-evaluate their patients after interventions and keep an eye on laboratory and imaging results.



Laura Schroeder, MD, MS

- **Gentle Pimping:** Frequently engage learners by asking questions related to patient cases. Based on their level of training, allow the students to interpret laboratory and imaging results. Make them “use their doctor words” to start forming good habits early. Additionally, inquire what interventions they would like to implement. This can allow you to gauge their educational level and identify areas of weakness in their fundamental knowledge. Based on this, you can ask your students to research topics during their shift downtime. Allow them to give you a 1-minute summary of their findings on specific topics. Sometimes on rare medical conditions, this can also be a good educational refresher for the resident or attending.
- **Get Their Hands Dirty:** Procedures and resuscitations are often viewed as highlights of students shifts. We get to do a lot of interesting and fun procedures as emergency medicine physicians, which can inspire future learners. Whenever possible, allow them to assist with procedures such as laceration repair, fracture dislocation reduction, splinting, ultrasounds, peripheral IVs, central lines, arterial lines, bag-valve-mask ventilation or CPR. If another provider has an interesting case, ask the other provider for permission for your medical student to work with them on that case.
- **Feedback:** At the end of the shift, take a walk with your medical student. Give them specific feedback about what went well, what could be improved upon, and how they did with reaching their shift goals. Giving specific feedback on areas to work on is much more useful than just saying “good shift” or “read more”. Also ask them for feedback on your teaching styles and if there is anything you can do better for them as an educator. This can also help you refine your educator abilities.

Medical students can be very helpful in the emergency department. Introduce them to the team and make them feel welcomed. Set clear expectations for your shift together. Allow them to interact with patients to develop their history, physical exam and oral presentation skills. Utilizing them for patient re-evaluations to help with shift flow. Use gentle pimping and mini research assignments on shift to expand your learner’s knowledge. Deliver tangible feedback after your shift. Allow your learners to see all the cool things we get to do as emergency medicine physicians by getting them involved in all procedures and resuscitations. Lastly, inspire future physicians to pursue a career in emergency medicine. §

UPCOMING EVENTS:

- MCEP Winter Symposium at Boyne on January 25-28th
- EMRAM Scholarship to ACEP Leadership & Advocacy Conference in Washington, D.C. Nominations Open February 1st
- Online In-Training Exam Review Course on February 9th



KID'S KORNER (Continued from Page 5)

REFERENCES

- Layzer RB, Fishman RA, Schafer JA. Neuropathy following abuse of nitrous oxide. *Neurology*. 1978 May;28(5):504-6. doi: 10.1212/wnl.28.5.504. PMID: 205816.
- Hirschl J, Krauss J. A Case of Nitrous Oxide-Induced Subacute Combined Degeneration. *Michigan Emergency Medicine News & Views*. 2023 June; 43(3) 6-7
- Davy H. The collected works of Sir Humphry Davy: researches, chemical and philosophical, chiefly concerning nitrous oxide, or dephlogisticated nitrous air, and its respiration. London: Smith, Elder and Company; 1839; 516-17.
- Xiang Y, Li L, Ma X, Li S, Xue Y, Yan P, Chen M, Wu J. Recreational Nitrous Oxide Abuse: Prevalence, Neurotoxicity, and Treatment. *Neurotox Res*. 2021 Jun;39(3):975-985. doi: 10.1007/s12640-021-00352-y. Epub 2021 Mar 26. PMID: 33770366.
- Forrester MB. Nitrous oxide misuse reported to two United States data systems during 2000-2019. *J Addict Dis*. 2021 Jan-Mar;39(1):46-53. doi: 10.1080/10550887.2020.1813361. Epub 2020 Sep 2. PMID: 32875958.
- <https://www.clickondetroit.com/news/local/2022/03/27/volunteers-help-southwest-detroit-coalition-clean-up-littered-whippet-canisters/>
- Hoffman RS. Understanding the limitations of retrospective analyses of poison center data. *Clin Toxicol (Phila)*. 2007 Dec;45(8):943-5. doi: 10.1080/15563650701233370. PMID: 18163236.
- Nunn JF. Clinical aspects of the interaction between nitrous oxide and vitamin B12. *Br J Anaesth*. 1987 Jan;59(1):3-13. doi: 10.1093/bja/59.1.3. PMID: 3548788.
- Hsu CK, Chen YQ, Lung VZ, His SC, Lo HC, Shyu HY. Myelopathy and polyneuropathy caused by nitrous oxide toxicity: a case report. *Am J Emerg Med*. 2012 Jul;30(6):1016.e3-6. doi: 10.1016/j.ajem.2011.05.001. Epub 2011 Dec 12. PMID: 22169583.
- Amess JA, Burman JF, Rees GM, Nancekivell DG, Mollin DL. Megaloblastic haemopoiesis in patients receiving nitrous oxide. *Lancet*. 1978 Aug 12;2(8085):339-42. doi: 10.1016/s0140-6736(78)92941-0. PMID: 79709.
- Pratt DN, Patterson KC, Quin K. Venous thrombosis after nitrous oxide abuse, a case report. *J Thromb Thrombolysis*. 2020 Apr;49(3):501-503. doi: 10.1007/s11239-019-02010-9. PMID: 31820264.
- Lin SS, Fan IW, Chen CY, Su YJ. A nitrous oxide abuser presenting with cerebral venous thrombosis: A case report. *Med Int (Lond)*. 2022 Jun 7;2(3):20. doi: 10.3892/mi.2022.45. PMID: 36698503; PMCID: PMC9829206.
- Paulus MC, Wijnhoven AM, Maessen GC, Blankensteijn SR, van der Heyden MAG. Does vitamin B12 deficiency explain psychiatric symptoms in recreational nitrous oxide users? A narrative review. *Clin Toxicol (Phila)*. 2021 Nov;59(11):947-955. doi: 10.1080/15563650.2021.1938107. Epub 2021 Aug 4. PMID: 34348072.
- Quax M, Van Der Steenhoven T, Bronkhorst M, Emmink B. Frostbite injury: an unknown risk when using nitrous oxide as a party drug. *Acta Chir Belg* 2022; 122: 140-3
- Winstock AR, Ferris JA. Nitrous oxide causes peripheral neuropathy in a dose dependent manner among recreational users. *J Psychopharmacol*. 2020;34:229-236.
- Stabler SP. Clinical practice. Vitamin B12 deficiency. *N Engl J Med*. 2013 Jan 10;368(2):149-60. doi: 10.1056/NEJMcp1113996. PMID: 23301732.
- Stacy CB, Di Rocco A, Gould RJ. Methionine in the treatment of nitrous-oxide-induced neuropathy and myeloneuropathy. *J Neurol*. 1992 Aug;239(7):401-3. doi: 10.1007/BF00812159. PMID: 1403023.
- Scott JM, Dinn JJ, Wilson P, Weir DG. Pathogenesis of subacute combined degeneration: a result of methyl group deficiency. *Lancet*. 1981 Aug 15;2(8242):334-7. doi: 10.1016/s0140-6736(81)90649-8. PMID: 6115112.
- Berling E, Fargeot G, Aure K, Tran TH, Kubis N, Lozeron P, Zanin A. Nitrous oxide-induced predominantly motor neuropathies: a follow-up study. *J Neurol*. 2022 May;269(5):2720-2726. doi: 10.1007/s00415-021-10858-2. Epub 2021 Nov 6. PMID: 34741241.

MCEP CALENDAR OF EVENTS

December 6, 2023

Board of Directors
Chapter Office
Lansing, Michigan

January 25-28, 2024

Midwest Winter Symposium
Mountain Grand Lodge
Boyne Mountain, Michigan

January 27, 2024

Board of Directors
Mountain Grand Lodge
Boyne Mountain, Michigan

February 9, 2024

EMRAM ITE Review
Virtual Zoom Meeting

February 22, 2024

The Expert Witness Course
Virtual Zoom Meeting

March 6, 2024

Board of Directors
Chapter Office
Lansing, Michigan

March 21, 2024

Critical Care in the
ED Conference
Virtual Zoom Meeting

April TBD, 2024

MCEP Legislative Day w/ LDP
Capitol Building
Lansing, Michigan

April 10, 2024

EMRAM SIMWARS
Central Michigan University
SIM LAB
Saginaw, Michigan

April 14 - April 15, 2024

ACEP Leadership & Advocacy
Conference
Washington, DC

May 1, 2024

Board of Directors
Chapter Office
Lansing, Michigan



MICHIGAN'S REIMBURSEMENT LANDSCAPE

This year's Straight Talk Reimbursement Conference brought together numerous national presenters to inform us about the changing landscape of documentation, coding, and finance. We covered a range of topics including artificial intelligence, the updated CMS guidelines for 2024, and the current legal landscape of the federal No Surprises Act. This discussion gave me both concern and hope for our own reimbursement challenges in the State of Michigan.

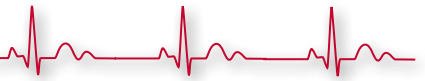
On October 22nd, 2020, Michigan signed its own No Surprises Act which correctly removed patients from the middle as they needed out of network emergency care and their private health insurance was unwilling to cover the cost. However, the law did introduce a reimbursement benchmark of 150% of Medicare, or the median in-network rate, despite the best efforts of MCEP and the Michigan State Medical Society (MSMS) to pass alternative legislation that would lead to a fairer reimbursement landscape.

What we have seen over the last year is a push from private insurers to renegotiate their in-network rates to 150% of Medicare, with the knowledge that if even one group takes that rate, they can and have, cancelled their other contracts establishing a new, lower in-network rate. These new lower rates would mean significantly less reimbursement and deep budget cuts for our groups and doctors. Ultimately it would create a more challenging practice environment where our doctors are already asked to do so much with so little.

MCEP has pushed back against this dishonest negotiation strategy by meeting with the Department of Insurance and Financial Services and with state legislators to craft new legislation to correct this unfair language. MCEP has employed our lobbyist, Bret Marr of Muchmore Harrington Smalley & Associates, to work behind the scenes to gather bipartisan support for amended language to the Surprise Medical Billing Law. Additionally, MCEP is working with the MSMS to build a coalition across Medicine to support fairer reimbursement protections. The College is working hard to protect and improve the practice environment of emergency medicine doctors across the state. Proactively, the College has been working with the Michigan Department of Health and Human Services to budget an increase to Medicaid reimbursement to more closely match that of Medicare. This work will take time, but with our collective efforts, we will be successful. We will continue to develop a practice environment that will lead Michigan to become one of the best locations to practice Emergency Medicine; however, this would not be possible without the continued support of our members and their support of our Michigan Emergency Doctors' Political Action Committee ([MEDPAC](#)). It is only through their support that we will be victorious, and we will be victorious. §

Michael Gratson, MD, MHSA, FACEP
MCEP Executive Board, Treasurer
MCEP Health Finance Committee Chair





TREE STAND RELATED INJURIES — BIG BUCKS AND BIG FALLS

Alan A. Lazzara Jr., MD, FAWM, FACEP and Lauren Yangouyian, DO

In late October, the leaves turn shades of earth and flame. Cold nights herald winter's proximity, stirring excitement in hunters. In Michigan, deer hunter numbers top 550,000 annually. Hunting is an exceptionally safe pastime, but elevated tree stands pose unique safety issues. Tree stand related injuries (TSRI) are the most likely cause of serious injury for big game hunters. The astute emergency medicine physician should be aware of TSRI and their prevention.

Editor's Note: The following case is fictional, made to illustrate the dangers of tree stand related injuries.

Season – archery

Game– white-tailed deer (*Odocoileus virginianus*)

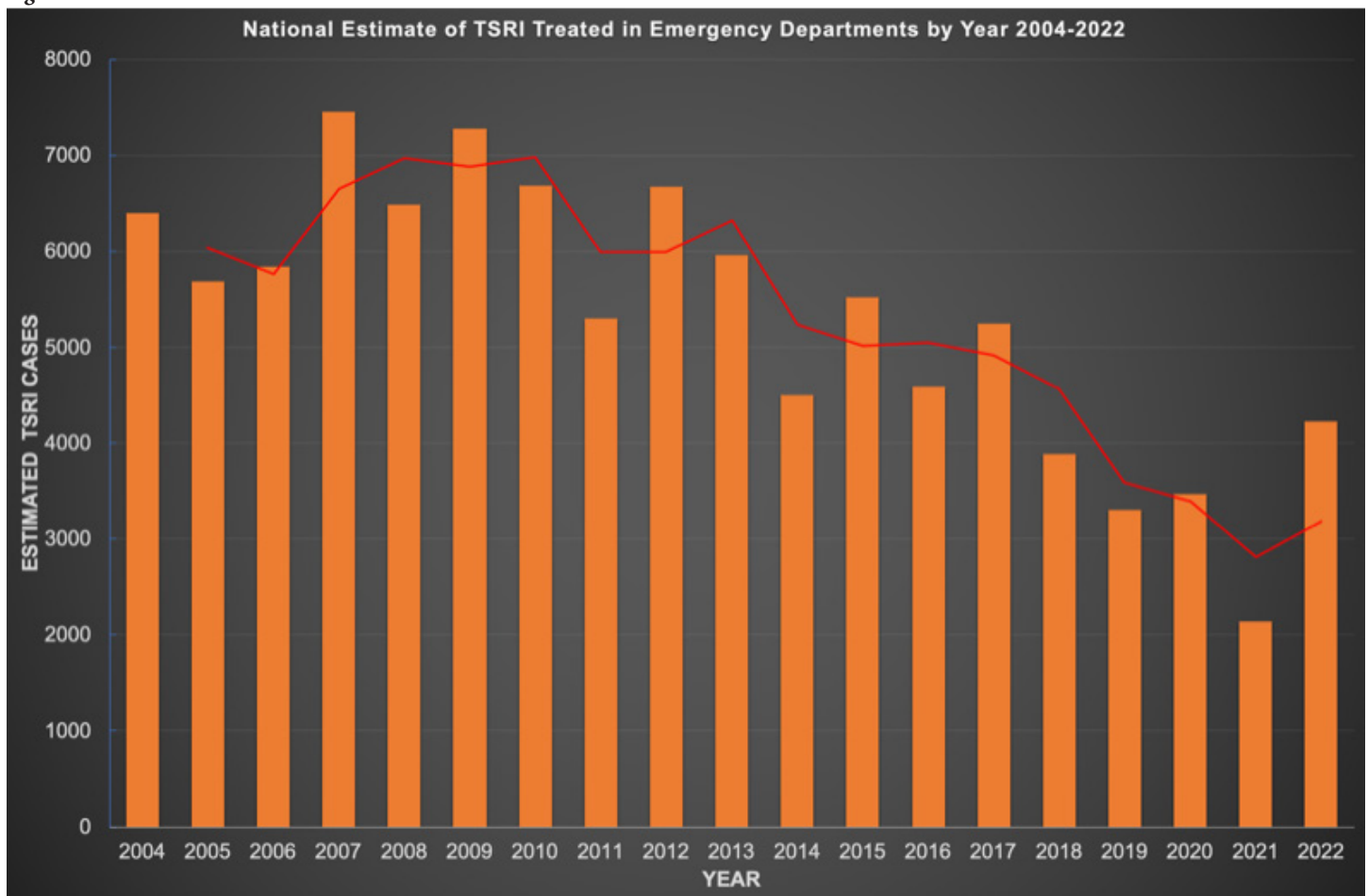
Case – With compound bow in hand, a 31-year old male ascends a modular ladder system made of “climbing sticks” attached to a tree with nylon ratchet straps. The top strap breaks and the single metal shaft bends backwards, sending the man 20 ft earthward. Dazed, he checks himself for injuries, his right ankle hurts. The fallen hunter limps almost a mile

back to the truck and brings himself to the county emergency department.

The height of the fall requires trauma team activation. He is tachycardic, with otherwise normal vitals. Primary and secondary surveys are completed without emergent intervention. Catalog of injuries include: a 3 cm scalp contusion with simple hemostatic laceration, swollen right ankle with neurovascularly intact foot, and mid thoracic tenderness to palpation. X-rays show lateral malleolus fracture. Pan CT scan reveals T8 lateral spinous process fracture. Posterior/ankle stirrup splints are placed, his scalp laceration cleaned and approximated with staples. He is given return precautions, orthopedic and neurosurgical follow up, and finally, encouragement to always use a fall arrest system while hunting from an elevated stand.

Hunter errors – no fall arrest system (ie, full body safety harness, lineman's belt, safety rope); no haul line (ie, climbed up with bow in hand); climbing sticks left out year-round allowing weather, UV light, and tree expansion to compromise the integrity of the nylon straps.

Figure 1





DISCUSSION

TSRI are the most prevalent, serious injury experienced by hunters, especially in the Midwest and eastern half of the United States where tree stands are frequently used to hunt deer. TSRI are about 3x more frequent (5.45-4.98/10,000 hunters in 2006-2016) than hunting related firearm injuries (1.66/10,000 hunters in 1993-2008).¹⁻⁴ This is inadequately publicized in the hunting community and public at large. Alcohol playing a major role in TSRI is a false stereotype. Multiple studies show alcohol intoxication is only present in 2.3-9.1% of cases.^{4,6,7} Not surprisingly, the vast majority of hunters who fall were not wearing a fall arrest system.⁴⁻⁸

These injuries can be life altering and costly. One study from New York showed the average hospital length of stay for TSRI patients was 6.6 days with 28% of patients needing rehabilitation/home services upon discharge.⁵ Data collected from Pennsylvanian trauma centers over 20 years (1987-2006) showed a 39% impairment in locomotion or transferring in 395 TSRI cases.⁶ Longitudinal studies on the financial impact of TSRI for health care systems do not exist.

Our described case is an archetypal TSRI – male, average age 25-45 with the most commonly injured categories: boney spine and lower extremities.⁴⁻⁸ He did not need admission to the hospital, but discharge does not mean uninjured. A recent study from Henry Ford Jackson Emergency Department, detailed 33 TSRI cases from 2015-2019; 33% of which were not admitted – some suffering significant injuries (e.g. complex scrotal laceration, lower extremity, and spinal fractures).⁷

Our patient's case will remain unregistered in the hospital's trauma database because he was not admitted or transferred. It will not be reported to or logged by the Michigan Department of Natural Resources (MIDNR). The MIDNR requires hunting related firearm injuries to be reported but no such mandate exists for TSRI, despite the greater prevalence. The United States National Electronic Injury Surveillance System (NEISS), estimates 4,229 TSRI occurred nationally in 2022, a 5 year high from 2018. See Figure 1.²

Persistent problems require a rethinking of how to prevent them. Hunter safety courses contain information on tree stand and firearm safety procedures, but the course is only taken once in a hunter's life. MIDNR currently utilizes TSRI prevention messages via social media and online newsletters. Attaching a tree stand safety card to the required deer license/harvest tag was recently proposed to the MIDNR and is under review. Ultimately, accounting for TSRI (admitted and non-

admitted) is important; accurate numbers will highlight the true extent of the problem and galvanize trauma prevention efforts. Potentially organizations such as MCEP could help advocate at the state level to make TSRI as important as hunter related firearm injuries.

Safety harnesses for TSRI are analogous to seat belts in motor vehicle collisions – they prevent injuries and can save lives. Ultimately, the best treatment for TSRI is prevention. Take the time to counsel the next hunter you meet in the ED about using a safety harness. §

SOURCES

1. Loder RT, Farren N. Injuries from Firearms in Hunting Activities. *Injury*. 2014 Aug;45(8):1207-14.
2. Consumer Product Safety Commission. National Electronic Injury Surveillance System 2004-2022 on NEISS Online Database, released October, 2023. Generated at <https://www.cpsc.gov/cgibin/NEISSQuery/home.aspx>. on: October 15, 2023 at 21:25:54
3. U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*. Washington, DC: Government Printing Office; 2006, 2011, and 2016. <https://www.census.gov/content/dam/Census/library/publications/2018/demo/fhw16-nat.pdf>
4. Crockett, A, et al. Tree Stands, Not Guns, are the Midwestern Hunter's Most Dangerous Weapon. *The American Surgeon*. 2010, 76: 1006-10.
5. Pierre, Clifford, et. al. Tree Stand Falls: A Persistent Cause of Neurological Injury In Hunting. *World Journal of Clinical Cases*. 2014. 2(8):345-350.
6. Smith JL, Lengerich EJ, Wood GC. Injuries Due to Falls from Hunter's Tree Stands in Pennsylvania. *American Journal of Preventative Medicine*. 2009; 37(5). 433-6.
7. Lazzara AA, Ditmer BI, Doughty KW, Reynolds KR. Tree stand-related injuries in nonadmitted and admitted patients at a level 2 trauma center in Michigan: 2015-2019. *WEM*. 2021, 32(4):468-473.
8. Terry, J; Russell G; Rue, L; McGwin, G. Epidemiology of Tree Stand-Related Injuries in the United States From 2000 to 2007. *The Journal of Trauma: Injury, Infection, and Critical Care*. 2010. 68:3, 712-5.

THE MCEP OFFICES
WILL BE CLOSED FROM
DECEMBER 22ND THROUGH JANUARY 2ND.

Happy Holidays!



RECENT GRADS BEGIN CAREERS ACROSS COUNTRY

With a total of 26 (allopathic and osteopathic) emergency medicine residencies, Michigan sends many of its newly trained emergency medicine physicians all over the United States and the globe. In this issue, we list where the 2023 graduates will be practicing.

FROM BEAUMONT HEALTH ROYAL OAK

Ali Abou-Alawi, MD	Corwell Wayne Hospital and Canton Medical Center, Wayne/Canton, MI
Sarah Dalton, MD	Marshfield Medical Center, Eau Claire, WI
Dema Fawaz, MD	Beaumont, Troy, MI
John Frawley, MD	Winneshek Medical Center, Decorah, IA; Mayo Luther Hospital, Eau Claire, WI
Mayank Gupta, MD	Emory Midtown Hospital, Atlanta, GA
Liza Khalil, MD	Beaumont, Grosse Pointe, MI
Michael Muradian, MD	University of Minnesota Medical Center, Minneapolis, MN
An Nguyen, MD	Barnes-Jewish Hospital & St. Louis Children's Hospital, MO
Hamzeh Omar, MD	Advocate Sherman Hospital, Elgin, Chicago, IL
Eric Pai, MD	Fremont Medical Center, Fremont, CA; San Leandro Medical Center, San Leandro, CA
Liza Richardson, MD	St. Vincent, Caramel, Fishers, Indianapolis, and Heart, Indianapolis
Thomas Ryan, MD	Mercy Cedar Rapids, Cedar Rapids, IA; Mercy Iowa City, Iowa City, IA
Michael Sobin, MD	William Beaumont University Hospital, Royal Oak, MI
Rochelle Versalle, MD	Bronson Methodist Hospital, Kalamazoo, MI

FROM BEAUMONT HOSPITAL TRENTON

Ali Abdallah, DO	Mercy Hospitals, OH and United States Acute Care Solutions (USACS), OH
Ahmad Al-Jamal, DO	Corewell Health, Taylor, MI
Scott Anteau, Jr, DO	Corewell Health Trenton, MII Emergency Physicians of Northwest Ohio (EPNO)
Bruce Bosman, DO	West Sound Emergency Physicians, Silverdale, WA
Michael Brennan, DO	Critical Care Fellowship, Chicago, IL
Zachary Durham, DO	USACS/ Meritus Health Center, Hagerstown, MD
Zainab Hammoud, DO	Ascension Macomb-Oakland Hospital, Warren, MI
Mansour Mohamed Mansour, DO	Mercy Health, Oregon, OH
Stephen McKinney, DO	Sunrise Hospital, Las Vegas, NV
Ali Shuayto, DO	Corewell Health, Dearborn, MI
Andrew To, DO	Mercy Health Riverwood Emergency Services, Perrysburg, OH

FROM CMU COLLEGE OF MEDICINE

Chad Bambrick, MD	Bayonet Point Hospital, Hudson, FL
Peter Biggane, MD	Maryland Emergency Medicine Network, Baltimore, MD
Steve Dang, DO	Christus ECC, Tyler, TX
Alicia Hoban, MD	MyMichigan Health, MERC, Midland, MI
Matthew McDowell, DO	GSEP Emergency Medicine, San Antonio, TX
Brent Oldham, MD	Prisma Health – Upstate, Greenville, SC
Krishna Patel, DO	USACS: Reston Hospital Center, Tysons Emergency, Stone Springs Hospital Center, Metro DC/Northern Virginia
Andrew Simon, DO	Ascension St. Mary's, Saginaw, MI
Thomas Taugher, DO	MyMichigan Health, MERC, Midland, MI

FROM CORWELL HEALTH FARMINGTON HILL

Lucas Beven, DO	US Acute Care Solutions, San Antonio, TX
Rebecca Gust, DO	Marshfield Clinic Minocqua, Minocqua, WI
Pradeep Johns, DO	Kaiser Permanente, Sacramento, CA
Sheyann Kirby, DO	Vituity, Redding, CA
Matthew Magnone, DO	Envision, Plantation, FL
Laurene Reed, DO	Mercy Medical Center, Roseburg, OR



FROM COREWELL HEALTH LAKELAND

Sameed Ashfaq, DO	Kaiser Permanente, Sacramento, CA
Erin R. Burchett, DO	American Physician Partners at Franciscan, Michigan City, IN
Sydney C. Cryder, DO	Singing River Health System, Ocean Springs, MS
Ahmed Elshareif, DO	Silver Cross Hospital, New Lenox, IL
Ariel J. Hawley, MD	Prisma Health, Greenville, SC
Taylor J. Huizenga, DO	Emergency Care Specialists, Grand Rapids, MI
Stephen P. Jensen, DO	Emergency Physicians Professional Association, Twin Cities, MN
Kathryn E. Kammert, DO	Olympia Emergency Care Physicians, Olympia, WA
Kayde R. Schaefer, DO	Professional Emergency Physicians, Fort Wayne, IN
Amanda M. Smith, DO	Prisma Health, Greenville, SC
Jared G. Sustad, DO	US Acute Care Solutions, Denver, CO
Emily F. Veltus, MD	Pinnacle Emergency Medical Group, Arizona and New Mexico
Ryan M. Warren, DO	Riverside Medical Group, Newport News, VA

FROM HENRY FORD HEALTH

Marwa Ayyash, MD	Team Health, Ohio
Fadal Bazzi, MD	Henry Ford Health Fairlane, Dearborn, MI
Louise Colo, MD	US Acute Care Solutions, Denver, CO c/o Littleton Adventist Hospital, Denver, CO
Brian Conner, DO	Augusta University Hospital, Augusta, GA
Jeffrey Dueweke, DO	St. Margaret and Shadyside, Pittsburgh, PA
Leonard Edwards, MD	Indiana University School of Medicine, Indianapolis, IN
Andrew El-Alam, MD	Sinai Health System; Mt. Sinai Hospital; Holy Cross, Chicago, IL
Naureen Farook, MD	EMS Fellowship, Louisville, KY
Bret Foster, MD	Augusta University, Augusta, GA
Joshua Fuchs, DO	Kaiser Hospital, San Diego, CA
Daniel Graf, MD	Advocate Christ Hospital, Chicago, IL
Dennis Jackson, MD	University of Utah, Salt Lake City, UT
Reba John, MD	Henry Ford Health Fairlane, Dearborn, MI
Yah Kamei, MD	Inova Fairfax Hospital, Fairfax, VA
Nicholas Konowitz, MD	EMERUS
Andrew Loftus, MD	Lincoln Hospital, Bronx, NY; HHC. Emergency Medicine
David Marshall, DO	Easside Emergency Physicians, Seattle WA
Spencer Printen, DO	Henry Ford Health, West Bloomfield, MI
Abouarbid Samer, MD	Non-Mich Practice
Sarah Zamamiri, DO	UT Southwestern Medical Center, Dallas, TX

FROM HENRY FORD HEALTH JACKSON

Nicholas Hoggan, MD	Hawaii Emergency Physicians Associate, Inc., Kailua, HI
Rachael Huwyler-Wiig, DO	Cayuga Medical Center, Ithaca, NY
Jory Johnson, DO	Mercy Hospital, Fort Smith, AR
Taylor Markell, DO	Ohio Health, Columbus, OH
Ryan Renfro, MD	Trident Medical Center, Charleston, SC
Clark Stephenson, DO	Southwest Emergency Physicians, St. George, UT
Frank Tarn, DO	Northridge Hospital, Northridge, CA
Kenneth Thomson, DO	Emergency Medicine Specialists, Wauwatosa, WI

FROM HENRY FORD HEALTH WYANDOTTE

Abe Ale Hage, DO	Henry Ford Health, Wyandotte, MI
Emma Beasley, DO	Henry Ford Health, West Bloomfield,
Zoe Kaps, MD	Weiss Memorial Hospital, Chicago, IL
Zachary Mauro, DO	University of North Carolina EMS Fellowship, Chapel Hill, NC
Elizabeth Miller, DO	Sunrise Health System, Las Vegas, NV
Hannah Mitchell, DO	Peacehealth St Johns Hospital, Longview, WA
Alexander Nguyen, DO	University of Michigan, Ann Arbor, MI
Michael Valentim, DO	Allegheny Valley Hospital, Natrona Heights, PA
Harini Vijay, DO	University of Michigan, Ann Arbor, MI
Han Yu, DO	University of Michigan, Ann Arbor, MI

(Continued on Page 18)

2023 — WHERE ARE THEY GOING?



(Continued from Page 17)

FROM SINAI GRACE/WAYNE STATE UNIVERSITY

Aaron Acosta, DO	Kaiser Permanente Walnut Creek, Walnut Creek, CA; Kaiser Permanente Antioch, Antioch, CA
Nicholas Burke, DO	MEDS Physician Group, East St. Louis, IL
Amy Capone, MD	MPH USACS Firefighters
Charmayne Cooley, MD	Anderson Hospital, Maryville, IL; Sparta Community Hospital, Sparta, IL; Touchette Regional Hospital, Centerville, IL
Connor Erickson, MD	Kadlec Regional Medical Center; Kadlec Freestanding ED; Lourdes Hospital, Tri-Cities, WA
Junaid Hashim, DO	Sparrow Health System, Lansing, MI
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Hiba Samaha, MD	Henry Ford Health, Detroit, MI
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Michael Hovenden, MD	UH Cleveland, Cleveland, OH
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Jia Liu, MD	Henry Ford, Detroit, MI,
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