



**Department of Family Medicine
and Community Health**

UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Madison and Baraboo Family Medicine
Residency Programs

**Scholarly Projects and
Community Health Learning
Experiences**
From the Class of 2022

Nicole Altman, MD

Projects Completed During Residency:

Community Health Learning Experience:

CHOICES Program- Reducing Alcohol-Affected Pregnancies Through Evidence-Based Virtual Groups for Reproductive-Age Women

Scholarly Project:

Rural Health Presentations:

Expanding Rural Training Options in Family Medicine: The Rural Health Equity Track (RHET) and Rural Pathway at UW-Madison – I was involved in a group poster presentation at the 16th WONCA World Rural Health Conference where we presented on our program's Rural Health Equity Track (RHET), including RHET's objectives, successes, and challenges.

Rural Emergency Care- I presented at Off The Beaten Path: Training, Practice, and Life in Rural Wisconsin, an event by the WCRGME. My presentation focused on disparities in rural emergency care, including access, resources, and workforce as well as interventions that have been utilized to help close these gaps.



Thank you to my husband and parents for always being there to support me throughout my medical training- you are the best! Thank you to my dog for always being excited to see me when I get home, even after a long night shift. A special thank you to my fellow residents, faculty, and mentors - I have learned so much from all of you over the last 3 years.



Nicole Altman loves family medicine because of the lifelong relationships and connections that she builds with her patients. She is thrilled to provide care to whole families and communities. Nicole is from Merrill, WI. She earned both her undergraduate degree in

biology and her medical degree from the University of Wisconsin-Madison. Nicole is passionate about practicing family medicine in a rural Wisconsin community. She participated in the Wisconsin Academy for Rural Medicine (WARM) program and completed her clinical training in and around Marshfield, WI, where she gained a better appreciation and understanding of the unique health care challenges of rural Wisconsin. While in college, Nicole was a certified nursing assistant; this helped her develop a compassionate bedside manner and see the importance of maintaining patient dignity and autonomy. Nicole completed a Path of Distinction in Public Health and worked to improve the Marshfield community's knowledge of NSAIDs through a media campaign she implemented. Nicole is passionate about primary care, rural medicine, public health, women's health, pediatrics, and preventative medicine. Nicole enjoys getting outdoors. She likes to hike, explore state and national parks, and walk her dog.

Reducing Alcohol Exposed Pregnancies in the Belleville Community

Nicole Altman, MD

Background

I partnered with the Belleville Area Cares Coalition and Safe Communities of Madison to bring a CDC promoted program, CHOICES (Changing High-Risk Alcohol Use and Increasing Contraception Effectiveness Study) to the Belleville community. The Belleville Clinic was approached by the Belleville Area Cares Coalition to partner with them in this new project and strengthen the connection between the Coalition and our clinic. CHOICES is an evidence-based intervention promoted by the CDC that includes 4 counseling sessions to help reduce participants' risk of alcohol exposed pregnancies.

Objective

The goal of the project is to reduce alcohol exposed pregnancies by screening and identifying women of reproductive age for risky alcohol use and alcohol use disorders and providing education and support surrounding alcohol use and contraception. My role in the project was to coordinate with the Belleville Area Cares Coalition/Safe Communities to determine an effective screening method to identify potential participants and to tailor the CHOICES program curriculum to our community. The long term goal, once participants were recruited, was to co-lead the program sessions with education surrounding alcohol use and motivational interviewing/feedback on participants' current practices.

Methods

I met regularly with our community partner to discuss how to screen patients in clinic and recruit community members to participate in the program.

I created an EPIC Smart Phrase to be used during the rooming process in clinic to screen eligible patients for risky alcohol use/alcohol use disorders. This included the AUDIT-C questionnaire to screen patients for risky alcohol use as well as a prompt to provide patients with information about the CHOICES program if they screen positive. I worked with a medical assistant in clinic to seek feedback and design a process that was usable and realistic in the clinic setting.

I also worked with our community partners to help tailor the CHOICES program curriculum to our specific community and the goals we had for the program. CHOICES is designed as a 4-session program incorporating motivational interviewing and self-reflection regarding participants' knowledge and behaviors surrounding their alcohol use and contraception. Due to the COVID pandemic, we had to adapt this curriculum to a virtual format. I also designed additional resources and curriculum materials around the adverse health outcomes of alcohol use, education surrounding various methods of contraception, and mental health.

I designed a pre- and post- intervention survey to assess participants' knowledge and behaviors surrounding alcohol use and contraception before and after completing the CHOICES program. I met with the University of Wisconsin Survey Center to discuss strategies to improve surveys to obtain more useful data.

I also created additional material to promote the program, including an editorial letter for the local newspaper, The Post Messenger, focusing on health impacts on alcohol and pregnancy.

Results

The CHOICES program is still in the recruiting phase. To date, there have not been enough participants recruited to start conducting sessions. The curriculum is ready to be rolled out once a small group of people enroll.

This project did however foster a better connection between the Belleville Clinic and our community partners.

Conclusion

I learned a lot from working on CHOICES. I gained experience working with community partners. I also gained experience with adapting a standardized community health intervention to best fit my community's goals and needs. I also gained experience with leading a clinic-based project and developed strategies to communicate with my colleagues and clinic staff. One major challenge that the project faced was launching a new clinic project and screening process during the COVID-19 pandemic, a time when the clinic is already facing many other frequently evolving changes and additional stressors. Going forward, I think identifying an appropriate time frame that will set the project up for success, regularly checking in with both partners and clinic staff, and seeking early and regular feedback will help keep a similar community project moving forward.

Next steps for the CHOICES project will be continuing with recruitment efforts, including the screening process in clinic and community-based recruitment efforts. Once a small group of participants are identified, it would be a great experience for future residents to participate in the group sessions to provide motivational interviewing surrounding health behaviors as well as community-based education. An additional next step could also involve adapting the CHOICES curriculum to a SBIRT (Screening, Brief Intervention and Referral to Treatment) quality improvement initiative involving screening for unhealthy alcohol use in a broader primary care population.

Acknowledgements

Jillian Landeck, MD and Cathy Kalina, PICADA Coordinator and Prevention Specialist.

Anne Drolet, MD

Projects Completed During Residency:

Scholarly Project:

Improving Family Medicine Resident Comfort
with Managing Perinatal Opioid Use Disorder

Community Health Learning Experience:

MEDiC Student Run Free Clinic:

For my community health learning experience, I worked with the MEDiC Clinic. This is a student run free clinic operated in the southside of Madison. The goal of the clinic is to provide care to patients without insurance. Through work in previous years, there has been expanded access in connecting patients with primary care providers. I worked with student leaders to help them understand the importance of a medical home outside of a student run clinic and guided them to making more patient-centered decisions in planning a re-opening of the clinic post-COVID. Additional work will need to be done to include patient voices in the leadership of MEDiC clinic.



Anne Drolet is drawn to family medicine because she enjoys building relationships with patients and becoming a part of the community in which she lives and works. Anne grew up in Clarkston, MI and earned her undergraduate degree in biomedical sciences from Central

Michigan University. She went on to earn a master's degree in basic medical sciences from the Wayne State University School of Medicine before earning her medical degree from Michigan State University College of Human Medicine. While in medical school in Flint, Anne earned a certificate in public health and saw firsthand the importance of community resources to building and sustaining the health of a community. She is interested in providing full spectrum care and helping whole families throughout all of life's stages. Outside of medicine, Anne enjoys knitting, drinking coffee, watching HGTV, and spending time with friends and family.



Thanks to my husband Chris, parents, and family for their endless support through this entire journey!

Improving Family Medicine Resident Comfort with Managing Perinatal Opioid Use Disorder

Nicholas Sullivan, DO; Anne Drolet, MD; Alyssa Bruchlman, MD; Jillian Landeck, MD

1. Abstract

Background: As the incidence of opioid use disorder (OUD) rises, we are also seeing an increase in perinatal OUD and neonatal opioid withdrawal syndrome. However, there remains an inadequate amount of maternity care providers trained and comfortable with providing this care. Family medicine training programs can address this disparity with curriculum integration to address this knowledge and comfort gap.

Methods: Surveys were distributed to residents to assess general comfort in managing OUD as well as in the perinatal and newborn setting. Electronic health record (EHR) tools were created alongside an educational presentation delivered during resident seminars. Residents completed a post-survey following this presentation.

Results: Residents expressed increased comfort with managing perinatal OUD after the presentation. Residents also reported managing low volumes of patients with adult OUD in general.

Discussion: Our findings suggest a simple curricular change has a large impact on resident knowledge and comfort. The overall effect was likely dampened by overall inexperience with managing OUD. Future efforts should focus on longitudinal and sustainable resident education to maintain these skills throughout residency and into practice, as well as similar interventions to increase faculty comfort and experience.

2. Background

The prevalence of perinatal opioid use disorder (OUD) has mirrored the incidence of opioid use at large over the past 20 years, exhibiting a 4-fold increase from 1999-2014, and nearly doubling from 2010-2017. (Cerdá et al, 2020). In Wisconsin, the trend is worse, with the rates of maternal opioid-related diagnoses tripling from 2010-2017. In the same time, the prevalence of neonatal opioid withdrawal syndrome (NOWS) in Wisconsin has doubled, incurring increased morbidity and mortality as well as increased health care costs and newborn hospital length of stays (Hirai et al, 2021), (Lisonkova et al, 2019), (Strahan et al, 2017)(Atwell et al, 2016). Currently, the recommended treatment of opioid use disorder during pregnancy includes agonist pharmacotherapy with methadone or buprenorphine (Jones et al, 2008), (ACOG Committee Opinion 711). Emerging data suggest non-inferiority and safety of the buprenorphine-naloxone combination product for pregnant persons as well (Debelak et al, 2013), (Link et al, 2020).

Pregnant patients seeking treatment for opioid use disorder are less likely than nonpregnant patients with OUD to have an appointment with a clinician who prescribes buprenorphine (Cerdá et al, 2020). A national survey of recent family medicine (FM) residency graduates found that roughly 10% of respondents were waived to prescribe buprenorphine. Of these providers, only 35% practiced maternity care in any setting (St. Louis et al, 2020). The University of Wisconsin-Madison Family Residency program includes a robust perinatal care curriculum, with a standard fifteen weeks of inpatient obstetrics experience. Since 2019, the Drug Addiction Treatment Act (DATA) X-waiver training has been incorporated as a standard part of the curriculum for first- and second-year residents. However, there remains limited standardized experiences to specifically address perinatal opioid use disorder.

3. Methods

In February 2021, a 14 question needs assessment survey was conducted to assess resident comfort in both general buprenorphine prescribing as well as in the pregnancy care setting. Questions focused on perceived comfort with prescribing buprenorphine and number of patients previously managed with the medication. Residents were also asked their preferred method to receive information. Majority of questions were on a five-point Likert scale with additional space for comments. The scale ranged from 1 (extremely uncomfortable) to 5 (extremely comfortable).

Results from this survey were used to create a one-hour educational presentation to help address these perceived knowledge gaps. This was presented at the senior resident and intern didactics. Additionally, note templates (H&P, labor and delivery, newborn progress notes) were created in the electronic health record to serve as a guide for providers treating the patients. Note templates were shared with residents during the lectures. A 12 question follow-up survey was sent to current residents after these education sessions, focusing on comfort with managing OUD in different phases of perinatal care as well as accessibility and utility of templates.

This project is characterized as a quality improvement project under 45 CFR 46.102(d) and did not require Institutional Review Board review.

4. Results

The initial survey had a total of 27 resident respondents. Most residents (17/27) reported no previous experience prescribing buprenorphine and the average resident comfort level was 2.22 on a scale of 1 (least comfortable) to 5 (extremely comfortable). See Table 1 for resident comfort in different levels of perinatal and neonatal care. 77.78% of residents reported wanting to learn more about these topics via didactics and 59.26% of residents wanted to learn via standardized templates or checklists.

See Table 2 for resident comfort in different levels of perinatal care on the initial survey as well as after the educational sessions. There was an increase in perceived comfort with

buprenorphine prescribing in all categories after the lecture series, with the largest changes noted in labor and delivery and postnatal care.

In open-ended comments, residents reported feeling uncomfortable with the high-risk nature of pregnancies affected by OUD and potential complexity of care. One respondent also expressed concern about having never prescribed for any patients previously.

Table 1. Resident Experience in Managing Patients with Buprenorphine Treatment		
	Residents surveyed in February 2021(N=27)	Residents Surveyed in January 2022* (N=19)
1-5 patients	37.5%	36.8%
6-30 patients	3.1%	5.2%
30-50 patients	0%	0%
51-100 patients	0%	0%
100+ patients	0%	0%
I have not prescribed to any patients	59.4%	57.8%
*These are not matched data sets, with residents having graduated/started the program in between survey distribution		

Table 2. Perceived Comfort with Buprenorphine and Opioid Use in Different Phases of Perinatal Care in Resident Physicians			
	Initial Survey in February 2021*	Follow Up Survey in January 2022*	Change
Prenatal Care	2	2.52	+0.52
Labor and Delivery	2.85	4.43	+1.58
Postnatal Care	2.67	4.29	+1.62
Newborn Care	3.77	4.81	+1.04
*These are not matched data sets, with residents having graduated/started the program in between survey distribution			

5. Discussion

Given the rise and impact of opioid use disorder on maternal child health combined with the lack of access to perinatal providers trained and comfortable with OUD treatment, we sought to introduce and evaluate curriculum focused on the management of pregnant people with OUD. There is a need for more family medicine physicians to be prepared when they encounter this patient population, both in training and post-graduation. The increased perceived comfort with the care of OUD in the follow-up survey suggests that a simple curriculum can still have a meaningful impact on provider comfort. The most notable increases were in labor and delivery and hospital postpartum care. The presentation content was focused on inpatient management, given that all FM residents have a shared labor and delivery and newborn care experience, and outpatient management occurs in more varied settings.

Notably, resident comfort in treating newborns with opioid withdrawal syndrome was highest at baseline among the phases of perinatal care and remained highest following the presentations (Table 2). Prior to this initiative, residents had already been caring for neonates undergoing the Eat, Sleep, Console protocol for NOWS on inpatient pediatrics services. Both the Finnegan Neonatal Abstinence Scoring System and Eat, Sleep, Console approaches to treatment of neonates with NOWS have stepwise interventions based on objective clinical findings, which limits clinical ambiguity for learners. (Grossman et al 2018). This baseline level of experience as well as algorithmic approach to NOWS care are likely responsible for the high level of resident comfort.

One limitation of this study is the short interval follow up. Longitudinal retention and follow-up data has yet to be collected. This was a resident-led initiative, and family medicine residencies are limited to three years. Background research, development, and implementation of this project amid the coronavirus pandemic lasted for 2.5 years. We plan to re-evaluate this curriculum on an ongoing basis going forward to determine if additional curricular changes are needed.

Another significant limitation is the baseline limited resident experience with opioid agonist pharmacotherapy for the treatment of adult patients with opioid use disorder in general. Only 8/19 of resident respondents had any prior experience prescribing buprenorphine in their practices. While all resident respondents had either satisfactorily completed, or were in the process of completing, the DATA X-Waiver Training, opportunities for clinical experience to this point have been lacking. While this was a resident-led, peer-to-peer initiative, we expect that an increased number of X-waivered faculty providers, application of similar case-based training, and increased comfort and confidence among faculty is also necessary to increase experience for resident physicians.

The results from these surveys are promising. Given all residency programs incorporate didactic learning, we believe that similar case-based presentations and templated notes in the electronic health record would be adaptable to different didactic models. We hope that future surveys show longer term retention and comfort with the presented information. Additionally, continued evaluation and needs assessment among our patient population is warranted. We anticipate perinatal OUD will be an increasingly encountered clinical situation given the continued opioid epidemic. Concurrent faculty education and training would be an appropriate intervention as

well, which could further expand patients' access to care as well as resident exposure to caring for this patient population. With the breadth of family medicine residency training encompassing perinatal and newborn care, and care for patients with substance use disorders, family medicine physicians and residents are well positioned to address the disparity in access to health care for patients experiencing pregnancy and opioid use disorder concomitantly. Further, this can progress towards a more integrated, colocated treatment model, which has been suggested to lead to decreased rates of premature delivery and shorter hospital stays than nonintegrated treatment models (Goodman et al, 2020). Creation and implementation of a fully integrated perinatal-neonatal-addiction care model may not be imminent given the needs for ongoing family medicine workforce training, but we remain encouraged about the potential to achieve this in the future.

6. Sources

- Atwell KA, Weiss HB, Gibson C, Miller R, Corden TE. Neonatal Abstinence Syndrome and Maternal Substance Use in Wisconsin, 2009-2014. *WMJ*. 2016;115(6):287-294.
- St. Louis J, Eden AR, Morgan ZJ, Barreto TW, Peterson LE, Phillips RL. Maternity Care and Buprenorphine Prescribing in New Family Physicians. *The Annals of Family Medicine* Mar 2020, 18 (2) 156-158; DOI: 10.1370/afm.2504
- Cerdá M, Krawczyk N. Pregnancy and Access to Treatment for Opioid Use Disorder. *JAMA Netw Open*. 2020;3(8):e2013899. doi:10.1001/jamanetworkopen.2020.13899
- Strahan AE, Guy GP, Bohm M, Frey M, Ko JY. Neonatal Abstinence Syndrome Incidence and Health Care Costs in the United States, 2016. *JAMA Pediatr*. 2020;174(2):200–202. doi:10.1001/jamapediatrics.2019.4791
- Jones HE, Martin PR, Heil SH, et al. Treatment of opioid-dependent pregnant women: clinical and research issues. *J Subst Abuse Treat*. 2008;35(3):245-259. doi:10.1016/j.jsat.2007.10.007
- Committee Opinion No. 711: Opioid Use and Opioid Use Disorder in Pregnancy. *Obstet Gynecol*. 2017 Aug;130(2):e81-e94. doi: 10.1097/AOG.0000000000002235. PMID: 28742676.
- Lisonkova S, Richter LL, Ting J, et al. Neonatal Abstinence Syndrome and Associated Neonatal and Maternal Mortality and Morbidity. *Pediatrics*. 2019;144(2):e20183664. doi:10.1542/peds.2018-3664
- Hirai AH, Ko JY, Owens PL, Stocks C, Patrick SW. Neonatal Abstinence Syndrome and Maternal Opioid-Related Diagnoses in the US, 2010-2017. *JAMA*. 2021;325(2):146–155. doi:10.1001/jama.2020.2499
- Debelak K, Morrone WR, O'Grady KE, Jones HE. Buprenorphine + naloxone in the treatment of opioid dependence during pregnancy-initial patient care and outcome data. *Am J Addict*. 2013;22(3):252-254. doi:10.1111/j.1521-0391.2012.12005.
- Link HM, Jones H, Miller L, Kaltenbach K, Seligman N. Buprenorphine-naloxone use in pregnancy: a systematic review and metaanalysis. *Am J Obstet Gynecol MFM*. 2020 Aug;2(3):100179. doi: 10.1016/j.ajogmf.2020.100179. Epub 2020 Jul 3. PMID: 33345863.

- Goodman DJ, Saunders EC, Frew JR, Arsan C, Xie H, Bonasia KL, Flanagan VA, Lord SE, Brunette MF. Integrated vs nonintegrated treatment for perinatal opioid use disorder: retrospective cohort study. *Am J Obstet Gynecol MFM*. 2022 Jan;4(1):100489. doi: 10.1016/j.ajogmf.2021.100489. Epub 2021 Sep 17. PMID: 34543754.
- Grossman MR, Lipshaw MJ, Osborn RR, Berkwitt AK. A novel approach to assessing infants with neonatal abstinence syndrome. *Hosp Pediatr*. 2018 Jan;8(1):1-6. doi: 10.1542/hpeds.2017-0128. PMID: 29263121.

Megan Dudek, DO

Projects Completed During Residency:

Community Health Learning Experience:

Quality Improvement of ChopChop Cooking Club

Scholarly Project:

Review of Anti-Nausea Medications Most Likely to Increase QT Interval:

A summary of evidence for anti-nausea medications likelihood of increasing QT interval was examined, synthesized, and submitted to FPIN for evaluation. The evidence reviewed revealed that most antiemetic comparisons show an uncertain effect on QT prolongation and have low certainty of evidence. The literature review also revealed that 8 mg of ondansetron is associated with transient QTc prolongation when compared to 4 mg of ondansetron.



Megan was drawn to family medicine so she could provide accepting, non-judgmental care to patients of all ages and identities. Megan Dudek is originally from Pulaski, WI and earned her undergraduate degree in biochemistry and molecular biology from the University of Wisconsin –

Eau Claire prior to earning her medical degree from Des Moines University. Megan's interests include LGBT/Trans/Nonbinary healthcare, OMT, mental wellness, integrative and preventative medicine, and nutrition. During medical school she served as a leader in the Gay Straight Alliance Club and provided input on the new gender identity portion of the electronic medical record that was being implemented at one of her clinical rotation sites. She also volunteered at a free clinic where she learned first-hand about the disparities and medical needs of her community. Megan also has a strong interest in mental health compassion and care. After witnessing the struggles of her peers and loved ones, she became involved with stress management groups and other projects to help others express their struggles in a safe, confidential, and supportive environment. Megan is committed to helping her patients live healthy lives by promoting disease prevention and nutrition. Outside of work Megan enjoys time with her wife and daughter and hobbies like kayaking, board games, cooking, baking, and hiking, and snuggling with her two huskies.



I want to send the largest and most gracious thank you to my incredible support system- first and foremost my wife, Frances, who has kept me and our family going throughout this long journey and our wonderful daughter for bringing us so much joy everyday. I also need to thank my incredible mom, dad and sister for their constant love, support and encouragement. And my amazing resident friends, especially the one who has had to hear me complain the most - Jeremiah and the best Northeast clinic posse. I feel incredibly lucky to be surrounded by the best residency crew and am truly better for it. #inspirational quote

Quality Improvement of ChopChop Cooking Club

Megan Dudek, DO

Background

In 2017, the local Wisconsin food pantry, Badger Prairie Needs Network (BPNN), began holding community cooking classes known as the ChopChop Cooking Club. These classes used the ChopChop Kids platform to host healthy cooking classes for children ages 5-13 years old and their families with a focus on developing cooking skills and teaching about healthy eating. The classes lasted about 60-90 minutes long and consisted of an educational activity followed by cooking a recipe together. Up until the COVID-19 Pandemic in March of 2020 these classes had become an established community activity at BPNN. The program has evolved over its three years of classes and has proven to be adaptable, seeking to meet the needs of the community members who participate.

Objectives

This quality improvement (QI) project goal was to gather feedback about ChopChop Cooking Club classes to shape the program's future. My role in this project was to help develop the survey and conduct phone interviews. With the onset of the pandemic changing the ability to conduct in person classes, I also helped develop, organize, and lead the 1st virtual ChopChop virtual class

Methods

We conducted semi-structured interview surveys over the phone with prior adult participants. We targeted to interview 50% of the 60 past participants. An email was sent out to all prior ChopChop participants asking for voluntary participation. Multiple rounds of emails were sent out and a total of 4 participants responded and were interviewed. Interviews were recorded and then transcribed. There was a lot of limiting factors as we were not able to reach all past participants and recommendations and future planning from our results will not be able to be immediately implemented due to the current pandemic restricting current classes.

Results

A total of 4 participants responded and were interviewed over the phone. They were all parents of participants. Based on the interviews some common themes noted were that parents liked the fun, easy going learning environment. They appreciated how hands on it was, how most kids could do most activities organized, kids were set up to succeed and everything could be done at tabletop. Multiple parents did note that some of their children were picky eaters and didn't love all the food that was prepared. Consideration of making more of an entree and offering different weekend dates/times as one participant had conflicting obligations.

Conclusions

Though the number of phone interviews was limited, the feedback was largely positive and encouraging. Unfortunately, consideration of modifications to the ChopChop Kids cooking class of

our efforts were impacted by the COVID pandemic as no in person classes were able to be resumed following results. We were able to adapt and a virtual ChopChop curriculum was developed and implemented. The first virtual classes were held at BPNN on 2/5/22 and 2/6/22 and participants joined a Zoom call to participate. Participants were also able to pick up all ingredients at BPNN prior to classes if purchasing ingredients was a barrier to participation. Additionally, in one instance a family was unable to pick up their items due to car troubles and a volunteer was able to hand deliver their ingredients. This personal drop off may be a may be a consideration in the future to help with access depending on volunteer support. The virtual class was well attended and received, and plans are to continue both virtual and in person classes when safely able to.

Acknowledgements

Allison Couture, Maggie Gleason (Executive Director at BPNN) and BPNN

Brenna Gibbons, MD

Projects Completed During Residency:

Community Health Learning Experience:
Belleville Clinic Patient Advisory Council

Scholarly Project:

It's in the History: Consider Bechet's Disease in Patients with Unprovoked Deep Venous Thrombosis:

This case report articulates the clinical course of a 40-year-old patient admitted to the Family Medicine Service for subacute rigors and weight loss, as well as extensive DVT and IVC thrombus, found to have incomplete Bechet's disease. Drafted for submission to the Journal of Family Practice, this case underlines two subtle elements of the patient's history suggesting Bechet's disease as the driving etiology of his symptoms, though the most common manifestations of Bechet's were absent at his presentation. Bechet's disease is highlighted as a rare but important clinical consideration in young patients with unprovoked venous thromboembolism.



Sincere thanks is extended to the attending physicians and staff at the Belleville Clinic, as well as my mentor Dr. Lubsen, for their patience, guidance, and kindness. Thanks to my co-chiefs for their excellent leadership; I've learned from each of you. Special thanks is extended to my family, my partner, and my riding teammates for their understanding, support, and consistent gift of a generous draft throughout my residency.



Brenna Gibbons grew up in the tiny town of Coon Valley, WI, nestled in the Driftless area. Brenna moved to Decorah, IA to earn her degree in biology. While in Decorah, she coached collegiate basketball, volunteered with Iowa Hospice and a free clinic, and gained an appreciation for tightly knit communities. Brenna returned to Wisconsin to attend medical school at the University of Wisconsin School of Medicine and Public Health. While in Madison, Brenna co-founded the Alumnus Project, a non-profit organization promoting cycling in the Madison area and encouraging kids to ride bikes. This experience blended her passions of sports and public health, and she organized a seminar for cyclists on concussion recognition and safe return to sports. Brenna also served as a coach for the Allied Running Club to promote healthy lifestyles. Brenna is drawn to family medicine because it provides the opportunity to meet the needs of the community through inpatient, outpatient, obstetrical, and pediatric care. She is also interested in palliative care, women's health, hospital medicine, and medical ethics. In her free time, Brenna enjoys singing and playing with her family band, competitive cycling, running, fishing, coaching youth athletics, and writing.

Belleville Clinic Patient Advisory Council

Brenna Gibbons, MD

Background

In the setting of a rural clinic with a far-reaching clinic population, the Belleville Clinic seeks an enduring forum to elicit and understand the needs of our patients to improve the patient experience and clinic processes for healthcare delivery. In a Patient Advisory Council (PAC), the development of key community partners involves leveraging individual community members to provide insight into specific patient populations. Rather than identifying a specific “problem” at its outset, the goal of the PAC is to have an enduring forum for identification of problems and gaps in our models of care from patients’ perspectives. In 2012, Belleville did institute its first PAC propelled by Dr. Lochner and the clinic manager at the time; however for a myriad of reasons, the project lost momentum and expired after a few years. I did benefit significantly from Dr. Lochner’s past experience with PAC and reference to prior documents like the prior PAC’s charter, mission statement, draft invitations to join the PAC, and expectations/confidentiality agreements.

Objectives

In the re-institution of a Patient Advisory Council (PAC) after a long hiatus, my objectives are to establish a sustainable PAC entity which aims simply to put patients and families in the community first: increasing patient-centered initiatives, facilitating transparency, creating an enduring space for patient feedback. Ongoing objectives are by definition patient-led, but possible targets include refining processes for chronic care delivery, transitions of care settings, assisting in creation of educational material and communications for patients/families, improving pandemic-driven changes to care delivery (telehealth, changes to clinic flow to minimize exposure to communicable disease), and developing community needs-based services like group visits and fitness/education classes. The Patient Advisory Council presents a valuable opportunity for feedback regarding the accelerated changes the pandemic has engendered in how we engage in healthcare: the normalization of virtual visits, the implementation of self-rooming, the limitations of support people in exam rooms, etc.

Methods

Initial research involved a basic literature search on precedents for Patient Advisory Council models, including AAFP articles and presentations from other healthcare organizations on basic models for establishing a PAC, which is distinct from “patient advisory boards” required of FQHCs. I met with our clinic’s medical director to reflect on past experience with the PAC at the clinic and gathered prior resources/materials. It proved challenging to find other clinics locally with active PACs to generate other start-up advice. I engaged in some informal interest-gauging and idea-gathering with patients during office visits. We developed a basic outline of objectives, goals for size and breadth of patient membership, and

began recruitment efforts through direct provider nomination of patients and creating flyers for display in clinic. In efforts to expand access for those facing transportation barriers, we plan a blended in-person and Webex/virtual meeting structure.

Results

As the Patient Advisory Council is yet in its fledgling stages, there are few results in terms of community impact to report. At the time of writing, we are wrapping up the recruitment phase, moving to invitation and committee selection, and projecting an open agenda for the first quarterly meeting. The simple exercise of how to recruit and nominate patient members has challenged providers and staff to think critically in applying a DEI lens and working toward a representative council. We acknowledge the bias in a staff nomination process and even with flyers to elicit patient self-nomination, we are likely missing large groups of patients for whom it's difficult to get to clinic, or community populations who are less known to clinic staff. The personal impact of this project has been humbling by exposing gaps in reaching and engaging certain patient populations, particularly those with transportation barriers, language barriers, technology barriers, or those with yet stigmatized medical comorbidities. Time will tell what kind of impact the PAC will have on the broader Belleville Community and how we can enact improvements identified by patients/community members in how we deliver healthcare.

Conclusions

Every healthcare facility should have some model to expose blind spots in care from the patient perspective, and a PAC is an established method to open communication between a community clinic and its patients. Still, a community engagement project is somewhat of a compromise between ideology and reality, and this author is continually learning the value of just moving forward with ideas, even if imperfect. I found it challenging to have few precedents for comparison locally – none of the residency clinics currently have an active PAC. One quite humbling lesson from the creation of this nascent PAC was how difficult it would seem to engage as a patient if English is not one's first language. In designing recruitment strategies and materials, I felt wholly inadequate to access and engage our Spanish-speaking population. Though I am working informally with an interpreter on flyers/recruitment materials, we still do not have an established process for interpreting at PAC meetings should Spanish-speaking patients accept nomination to the Council. Our academic emphasis on diversity, equity, and inclusion mean nothing if we lack the logistical means to communicate on the same plane.

Another challenge in reflecting on the prior PAC effort at Belleville is not a novel one for CHLE projects –determining how to ensure continuity of the PAC and prevent this effort from fizzling out with inevitable patient and staff turnover, not only through identifying and leveraging more clinic staff committed to the project, but importantly establishing an annual process for re-enrolling interested PAC members or replacing members who end their membership.

Next steps:

- Finalization of council roster and confirming a date for the first meeting
- Continue problem-solving for access for Spanish-speaking population – identify and connect with community leaders to better engage this population specifically
- Consideration of sub-committees for a populations of patients who may be less likely to actively speak up amongst other community members about their specific healthcare needs – for example, patients with opioid use disorder
- Brainstorm ways to marry the patient-centered motives of the PAC to our systems-driven Quality Improvement projects (ex: Advanced Care Planning, Cervical Cancer Screening, etc)
- Centralize collated resources for incoming residents interested in taking on this project as their CHLE activity

Acknowledgments

My gratitude extends to Dr. Lochner as the Medical Director at Belleville whose past work with establishing a PAC has been most valuable; Dr. Landeck for her always-thoughtful reflections on community health work specific to our rural clinic; the clinic staff at Belleville for their insights into community needs.

Tyler Grunow, MD

Projects Completed During Residency:

Scholarly Project:

Do Statins for Primary Prevention Improve Outcomes in Older Adults?

Community Health Learning Experience:

Improving ACP Completion Rate:

Advance care planning (ACP) has emerged as a response to low-value end-of-life care. While data are mixed on if ACP has consistent, meaningful impacts on low value healthcare utilization at the end of life, there are relatively consistent data that patients and families have higher satisfaction with their quality of care. With this in mind, Dr. Julia Lubsen has been working to initiate a quality improvement initiative to improve the rates of completed advance directives documented within the EHR. In identifying this as a general need, identifying and tracking specific rates was not feasible with current EHR data.



Tyler (Ty) Grunow is dedicated to the broad scope of practice of family medicine and developing personal, long-lasting relationships with his patients. His goal is to work with patients to improve their health by preventing disabling and costly chronic diseases

and providing evidence-based care. By partnering with each of his patients, Ty hopes to transform the health of his whole community. Originally from Dodgeville, WI, Ty attended the University of Wisconsin – Platteville, where he majored in biology. Before starting medical school, Ty worked as a medical scribe in the emergency room at St. Mary's Hospital. He earned his medical degree from the University of Wisconsin School of Medicine and Public Health. While in medical school, Ty was part of the Wisconsin Academy for Rural Medicine (WARM) program and completed his clinical rotations at the La Crosse Gunderson campus. While in medical school, Ty organized and participated in training exercises for local EMS squads to improve the care provided for severe rural and farm injuries. As a public health intern with the Jackson County Public Health Department, he developed educational materials about infectious diseases and vaccinations and developed emergency preparedness plans for tornado and thunderstorm disasters. In his spare time, Ty enjoys exercising, playing with his dog, and spending time with his wife and 2 rambunctious children.



Thank you to my wife and children for tolerating me at the edge of sanity during many sleepless days and nights these 3 years!

Do Statins for Primary Prevention Improve Outcomes in Older Adults?

Tyler Grunow, MD

CASE

A 76-year-old man presents for an annual wellness visit. He has no personal history of cardiovascular disease, although he notes his wife recently had a stroke. He feels he is a robust grandfather and wants to know what he can do to stay healthy and prevent or delay common causes of death in his age group. Does statin use for primary prevention reduce morbidity and mortality in older adults?

Bottom Line

When used for primary prevention in older adults, statins decrease risk of cardiovascular events. While a large retrospective cohort study demonstrated a reduction in all-cause mortality as soon as 2 years after initiation of a statin for primary prevention, meta-analyses of RCTs have not clearly demonstrated a mortality benefit.

Evidence Summary

A meta-analysis of 17 RCTs summarized the evidence for both primary and secondary prevention of cardiovascular disease in patients 65 years old and older.¹ The mean follow-up duration was 3.7 years. Seven RCTs (N = 21,781) demonstrated a similar risk of composite cardiovascular events (myocardial infarction (MI), stroke, cardiovascular death, revascularization) in patients on statin therapy for primary prevention compared to controls (odds ratio [OR], 0.88; 95% CI, 0.72-1.1). Four RCTs (N = 14,821) demonstrated that statins used for primary prevention did not reduce all-cause mortality (OR 0.94; 95% CI, 0.76-1.2). Four RCTs (N = 14,136) reported no significant effect of statins on primary prevention of cardiovascular mortality (OR 1.0; 95% CI, 0.81-1.2) but did show a significant reduction in the incidence of MI (OR 0.61; 95% CI, 0.50-0.73). Two RCTs (N = 6,824) showed a reduced risk of revascularization with statin use for primary prevention (OR 0.49; 95% CI, 0.32-0.76). For primary prevention of stroke, 6 RCTs (N=19,189) showed a similar risk of stroke in the statin group compared to the control group (OR 0.78; 95% CI, 0.60-1.00). However, after further analysis and excluding studies with high risk of bias, the statin group was found to have a lower risk of stroke (OR 0.72; 95% CI, 0.54-0.95). This analysis suggests that statins used for primary prevention in the elderly may lower the risk of MI, revascularization, and stroke, but not lower cardiovascular or all-cause mortality. The safety of statin use was not evaluated.

A meta-analysis of two large RCTs evaluated the age-specific effect of statin initiation for primary prevention on the composite endpoint of nonfatal MI, nonfatal stroke and cardiovascular death.² One of the trials was also included in the above meta-analysis. Interventions in both trials were

rosuvastatin (either 20 mg or 10 mg) which is more reflective of current practice than some older trials. Among participants ≥ 70 years old, there was a 26% relative risk reduction in the treatment group compared to controls (N = 8,781; hazard ratio [HR] 0.74; 95% CI, 0.61–0.91). There was a similar risk reduction in adults 65 to 69 years old (N = 8,208; HR 0.51; 95% CI, 0.38-0.69) and in adults < 65 years old (N = 13,517; HR 0.75; 95% CI, 0.57-0.97), and heterogeneity by age was not observed. Older participants experienced higher rates of cardiovascular events, with patients ≥ 70 years old representing 24% and 32% of the trial populations but experiencing 43% and 55% of the cardiovascular events respectively. This would imply larger absolute rate reductions and smaller numbers needed to treat in older populations. All-cause mortality was reported as a separate endpoint for the RCTs individually, and neither showed a statistically significant reduction in mortality in patients ≥ 70 years of age. Notably, rates of drug withdrawal among patients ≥ 70 years old in the statin groups were 21.6% and 29.1%, which were higher than in younger age groups.

A retrospective cohort study of veterans 75 years old and older (N=326,981) evaluated statin initiation and all-cause mortality, cardiovascular mortality and composite cardiovascular events (myocardial infarction, stroke and revascularization).³ A total of 57,178 veterans (17%) initiated statins during the study period. Patients were primarily male (97%) and white (91%). Patients with a history of atherosclerotic cardiovascular disease or prior statin use were excluded, while those with cancer, dementia or paralysis were included. The mean follow-up was 6.8 years. The authors utilized a propensity score analysis to minimize bias although unmeasured variables are an inherent risk with this study design. Statin use was associated with lower all-cause mortality (HR 0.75; 95% CI, 0.74–0.76), lower cardiovascular mortality (HR 0.80; 95% CI, 0.78-0.81), and fewer composite cardiovascular events (HR 0.92; 95% CI, 0.91-0.94) compared with non-use. Notably, the study observed benefit in all-cause mortality as soon as 2 years from statin initiation (HR 0.68; 95% CI, 0.66-0.69) with significantly reduced all-cause mortality for up to 6 years (HR 0.87; 94% CI 0.84–0.91), but which became non-significant at 8 years. There was a similar pattern for cardiovascular mortality. An all-cause and cardiovascular mortality benefit was observed even in those 90 years old and older. The most common statin was simvastatin which may underestimate the effect size compared to higher-intensity statins.

CASE CONCLUSION

You explain to the patient that statins continue to reduce the risk of cardiovascular events in older adults, but they do not clearly alter longevity. After seeing what his wife went through with the stroke, he is strongly motivated to reduce his personal risk of that illness. Together, you decide to begin the patient on rosuvastatin 10 mg once daily.

References

1. Zhai C, Hou K, Li R, Hu Y, Zhang J, Zhang Y, Wang L, Zhang R, Cong H. Efficacy of statin treatment based on cardiovascular outcomes in elderly patients: a standard meta-analysis and Bayesian network analysis. *J Int Med Res.* 2020 Jun;48(6):1-21. [STEP 1]
2. Ridker PM, Lonn E, Paynter NP, Glynn R, Yusuf S. Primary Prevention With Statin Therapy in the Elderly: New Meta-Analyses From the Contemporary JUPITER and HOPE-3 Randomized Trials. *Circulation.* 2017 May 16;135(20):1979-1981. [STEP 1]
3. Orkaby AR, Driver JA, Ho YL, Lu B, Costa L, Honerlaw J, Galloway A, Vassy JL, Forman DE, Gaziano JM, Gagnon DR, Wilson PWF, Cho K, Djousse L. Association of Statin Use With All-Cause and Cardiovascular Mortality in US Veterans 75 Years and Older. *JAMA.* 2020 Jul 7;324(1):68-78. [STEP 3]

Danielle Hartwig, MD

Projects Completed During Residency:

Scholarly Project:

Increasing Family Medicine Resident Confidence
in Addressing Concerns of Menopause

Community Health Learning Experience:

Reducing Maternal Mortality Rates in India: BLSO
and ALSO Training for Community Partners:

India has the second highest maternal mortality rate in the world, and due to a variety of cultural practice and infrastructure barriers, many births occur outside of the hospital. BLSO and ALSO are standardized training programs developed to train birth attendants to respond to obstetrical emergencies. For the past decade, Dr. Ann Evensen has paired with the largest ambulance provider in India to train EMS and other providers in BLSO and ALSO. Due to the pandemic, we were unable to travel to India to continue this training in person; however, we were able to provide two webinars for our community partners to implement the updated curriculum and new blended classroom models in our absence.



I would first like to thank my husband, Spencer, for his unwavering support these last three years. I would also like to thank all my co-residents, past and present, for being “in the trenches” with me and making it easier to come to work every day. I’m so lucky to have made so many lifelong friends. Thank you to my family for generosity and patience. I would also like to thank the residency faculty and staff for all their mentorship and support, and particularly, everyone at Verona Clinic, who’ve helped me grow and become a better physician. Extra special thanks, as well, to Dr. Allison Couture for her sage advice over margaritas and for Dr. Ann Evensen for being always being a role model for “who I want to be when I grow up.” Lastly, I can’t resist thanking my cats, Guinness and Bucky, for waiting for me to come home from work every day to snuggle.



Danielle Hartwig is drawn to family medicine because she enjoys forming long-term relationships with patients and because of the broad scope of practice. She approaches each individual patient as their teammate, support system, teacher, and physician. She has special

interests in maternity care, women’s health, and procedures. Danielle is from New Berlin, WI and she earned both her undergraduate degree in medical microbiology and immunology and her medical degree from the University of Wisconsin-Madison. Prior to starting medical school, she worked as a lab technician at the Medical College of Wisconsin. While in medical school, she volunteered at the MEDiC student-run free clinics and served in a medical leadership role where she learned more about Madison’s public health needs. Danielle is interested in fostering inter-professional communication and participated in a “nursing for medical students” program at the VA Hospital. Danielle enjoys watching Badger football and hockey, playing board games and trivia, knitting, and spending time with her husband. She will also try to befriend every cat that she meets.

Increasing Family Medicine Resident Confidence in Addressing Concerns of Menopause

Danielle Hartwig, MD

Proposal

Curriculum dedicated to screening for and recognizing symptoms of menopause and the management of these symptoms with both non-hormonal and hormonal therapies should be included as part of the didactic series for all first year family medicine residents at the University of Wisconsin Department of Family Medicine and Community Health.

Background

Prior to 2000, hormonal therapies for the treatment of symptoms of menopause were commonly prescribed. This practice decreased abruptly, however, in the late 1990s after the Women's Health Initiative data indicated an increased rate of breast cancer and venous thromboembolism in patients receiving estrogen and progesterone.¹ Several follow-up studies to the Women's Health Initiative demonstrated that the risk of breast cancer and venous thromboembolism was vastly overstated in the initial trial. Despite this new evidence, physicians continue to be reluctant to treat appropriately selected patients with hormonal therapies even when the overall risk is low.

Furthermore, resident physicians are not receiving adequate training to comfortably manage menopause concerns. In a 2017 survey of 187 residents in family medicine, internal medicine, and OBGYN, only 6.8% reported feeling adequately prepared to manage experiencing menopause and only 34.4% would prescribe hormone therapy to a newly menopausal, symptomatic woman without contraindications. In the UWDFMCH Residency Program, there is one dedicated lecture to menopause provided every other year to second and third year residents. As it is provided every other year, half of residents will not receive this education until sometime in their last year of residency. There is no current formal education provided to interns on the topic of menopause.

With the average age of the menopause in North America being 51, and perimenopause starting several years prior, patients on the menopause spectrum make up a large percentage of an average clinical practice. Across the four UWDFMCH Madison campus residency clinics, female patients over the age of 40 years make up approximately 25% of the patient population. By improving education on the recognition and management of menopause concerns, the health and quality of life of up to a quarter of patients could be impacted.

Methods

First, a preliminary assessment was conducted; beginning in July 2021, UWDFMCH Madison and Baraboo residents completed a Qualtrics survey that measured menopause management within

multiple categories: self-reported comfort in addressing menopause concerns and prescribing hormonal and non-hormonal therapies, clinic patterns in screening for menopause concerns and in prescribing hormonal and non-hormonal therapies, perceived barriers to screening for menopause concerns and prescribing hormonal and non-hormonal therapies, perceived importance in learning about menopause and hormonal and non-hormonal therapies, and knowledge-based questions on menopause topics. Survey respondents were asked to provide a unique anonymous identifier so their surveys could be matched to subsequent surveys for analysis.

In mid-July 2021, UWDFMCH residents had the possibility of attending two presentations. The first was a one-hour Primary Care Conference titled “Hormone Therapy for Symptoms of Menopause” that was open to all residents. The second was a one-hour lecture titled “Menopause and Hormone Therapy” that was provided to interns only. The slides from these two presentations were sent out to all residents afterward regardless of attendance. Additionally, all residents were sent a PDF guide to be used as a reference in clinic on choosing various pharmacologic therapies for symptoms of menopause. After the two presentations, all residents, regardless of attendance, were sent a follow-up survey. This survey assessed similar categories as the initial survey in addition to assessing for perceived utility of the presentations. A final survey was sent to all residents in October 2021 to assess for the same domains as the previous two surveys in addition to the utility of the PDF guide that residents received.

The data from the Qualtrics survey was processed by the UW Biostatistics Department. Likert-scale data was translated into numeric data, with a 1 corresponding to a low level of preparedness or comfort and a 5 responding to a high level of preparedness or comfort. A Mann-Whitney U test was used to assess for shift in median response between surveys for respondents who completed at least two surveys. Multiple choice questions were analyzed as a 2-sample test of proportions. A Bonferroni correction was implemented/suggested in order to protect against Type I error. Analyses were performed in R (v 4.1.1; R Core Team 2021). A p value of <0.05 was considered statistically significant.

Results

Fifty of 52 residents responded to the initial survey, with 40 residents and 32 residents responding to the second and third surveys respectively.

Self-Reported Comfort in Addressing Menopause Concerns and Prescribing Therapies

Fifty-two percent of residents in the initial survey reported feeling “somewhat prepared” to discuss menopause concerns while 28% reported feeling “somewhat unprepared.” For the three surveys, average resident self-reported comfort with discussing menopausal concerns was 3.29, 3.66, and 3.38 respectively. There is a statistically significant increase in self-reported comfort between the initial survey and the second survey ($p=0.023$) but this change was not sustained with the third survey

($p=0.3$). Average self-reported comfort with prescribing hormone therapy was 2.49, 3.5, and 3.28. This increase was statistically significant between the first and second survey ($p=0.001$) and sustained between the first and third survey ($p = 0.002$).

Clinic Habits of Residents Regarding Menopause

In the initial survey, 70% of residents reported having patient-initiated menopause discussions no more frequently than once every few months. In the follow-up survey three months later, residents reported patient-initiated menopause discussions more frequently (2.94 vs 3.22), but this was of borderline significance ($p=0.05$). Sixty-two percent of residents in the initial survey reported initiating conversations about menopause once per year or less frequently, while 24% reported doing so once every few visits. No significant difference was found in this frequency at three month follow-up (3.02 vs 3.16, $p = 0.095$). Barriers to discussing menopause concerns cited on the initial survey included lack of time (80% of respondents), discomfort with available treatment options (60%), discomfort with knowing what to ask of patients (38%), and belief that it should be referred to another speciality (2%). These cited barriers did not significantly change in the three month follow-up survey.

Seventy percent of residents responded in the initial survey that they had not prescribed hormonal therapy for the treatment of menopause for any patient in the three preceding months, with an additional 28% of residents reporting having prescribed hormonal therapy for 1 – 5 patients. This prescribing rate did not change significantly in the three month follow-up survey (1.32 vs. 1.41, $p = 0.206$). Barriers to prescribing hormone therapy cited on the initial survey included uncertainty of available options (56% of respondents), lack of time (46%), unclear benefits (28%), cost to patient (12%), and concern for causing harm/side effects (8%). Barriers cited in the three month follow-up survey were similar except for a statistically significant increase in cost to patient as a barrier (12% vs. 57.9%, $p < 0.001$) and no respondents citing concern for causing harm/side effects. Barriers cited to prescribing non-hormonal therapies included uncertainty of available options (74%), unclear benefits (34%), lack of time (32%), and cost to patient (8%). Differences in barriers cited on the three month follow up survey included a statistically significant increase in cost to patient (8% vs. 31.6%, $p = 0.0104$) and lack of time (32% vs. 63.2%, $p = 0.007$) and a statistically significant decrease in uncertainty of available options (74% vs. 44.7%, $p = 0.0101$).

Resident Attitudes Towards Menopause Education

Ninety-four percent of residents responded in the initial survey that it was “somewhat important” or “very important” to feel comfortable discussing menopause concerns during residency. This did not change significantly in the three month follow-up survey (4.55 vs 4.71, $p = 0.48$). Ninety-two percent of residents responded in the initial survey that it was “somewhat important” or “very important” to feel comfortable discussing menopause concerns for their future careers. Likewise, this did not change significantly in the three month follow-up survey (4.57 vs. 4.57, $p = 0.763$).

Ninety-six percent of residents responded in the initial survey that it was “somewhat important” or “very important” to feel comfortable prescribing hormone therapy for menopausal symptoms during residency. This did not change significantly in the three month follow-up survey (4.55 vs. 4.71, $p = 0.48$). Ninety percent of residents responded in the initial survey that it was “somewhat important” or “very important” to feel comfortable prescribing hormone therapy for menopausal symptoms for their future career. Likewise, this did not change significantly in the three month follow-up survey (4.51 vs 4.67, $p=0.317$).

Menopause Knowledge

On the five-question medical knowledge quiz, there was an increase in the number of correct answers between the first and second survey (1.43 vs 2.11, $p = 0.004$). This increase in the number of correct answers was sustained at the three month follow-up survey (1.43 vs. 2.34, $p = 0.001$).

Perceived Utility of Curriculum

Seventy-eight percent of residents who attended the Primary Care Conference presentation found it “very helpful” for enhancing their comfort level discussing menopause symptoms and hormone therapy, and 21% found it “somewhat helpful.” Seventy-five percent of residents who attended the intern-only lecture found it “very helpful” for enhancing their comfort level discussing menopause symptoms and hormone therapy, and 25% found it “somewhat helpful.” Seventy percent of residents who used the PDF reference guide found it “very helpful” for enhancing their comfort level discussing menopause symptoms and 30% found it “somewhat helpful”; for enhancing their comfort level discussing hormone therapy, 80% found it “very helpful,” 10% “somewhat helpful,” and 10% “somewhat unhelpful.” When asked whether or not a menopause lecture similar to that of the Primary Care Conference or intern-only lecture should become part of the standard intern year didactics, 65% of residents responded that they “strongly agree,” 15.6% “somewhat agree,” 15.6% “neither agree nor disagree,” and 3% “somewhat disagree.”

Discussion

Waiting until the second or third year to provide UWDFMCH with formal education on menopause leaves junior residents, and some senior residents, underprepared to manage a condition that may affect up to a quarter of patients they will encounter. Even a brief intervention such as a one hour lecture increased self reported comfort level with discussing menopause concerns and prescribing hormone therapies. The lecture did not demonstrate a significant effect on the rate of patient-directed or physician-directed discussions around menopause and hormone therapy, with lack of time being the most commonly cited barrier to these discussions. Interestingly, after the lectures, cost to patient was cited significantly more frequently, indicating that perhaps this was not a topic on which residents had previously received education. Knowledge on menopause related topics was

significantly increased after the lectures and this increase was sustained at three months, indicating that residents are retaining the information learned in even a brief intervention.

Overall, the majority of residents feel that it is important to be comfortable with discussing menopause concerns and prescribing hormone therapy, both during their time in residency and for their future career goals. Furthermore, the majority of residents found the presentations and the PDF reference guide useful and increased their comfort level with discussing menopausal concerns and prescribing hormone therapy. Additionally, more than 80% of residents who responded agree that menopause should become a standard part of the intern year didactics.

There were several limitations to this study. First, the sample size was relatively small, and several respondents were lost to follow-up. Second, approximately one third of respondents on the initial survey were interns who had just started residency that month and had little clinical experience, which may have had an effect on their answers. Finally, due to the small sample size, there was no analysis performed between respondents who did and did not attend the presentations to assess for differences in comfort level with and medical knowledge of menopause.

Next steps for this project would be to incorporate menopause curriculum into the intern didactics series. Other steps, some of which were suggested on the survey by fellow residents, including updating the Resident Survival Guide with a menopause section, making Epic SmartPhrases, and having a second lecture later in the intern year to revisit and reinforce important information. It may also be valuable to survey the faculty on their experiences with menopause concerns and hormone therapy, as not all faculty may feel fully comfortable, especially if they staff residents in clinic.

Conclusions

Based on the data demonstrating a sustained increase in comfort with prescribing hormone therapies and increased medical knowledge, in addition to resident request for timely education, curriculum dedicated to discussing menopause and prescribing non-hormonal and hormonal therapies should be included as part of the didactic series for all first year family medicine residents at the University of Wisconsin Department of Family Medicine and Community Health.

Acknowledgments

Special thanks to Dr. Tom Hahn, Dr. Makeba Williams, Dr. Wen-Jan Tuan, Kaitlin Tetreault and the UW Biostatistics Department for their support on this project.

References:

- Palacios S, Stevenson JC, Schaudig K, Lukasiewicz M, Graziottin A. Hormone therapy for first-line management of menopausal symptoms: Practical recommendations. *Womens Health (Lond)*. 2019;15:1745506519864009. doi:10.1177/174550651986400

- Kling JM, MacLaughlin KL, Schnatz PF, Crandall CJ, Skinner LJ, Stuenkel CA, Kaunitz AM, Bitner DL, Mara K, Fohmader Hilsaca KS, Faubion SS. Menopause Management Knowledge in Postgraduate Family Medicine, Internal Medicine, and Obstetrics and Gynecology Residents: A Cross-Sectional Survey. *Mayo Clin Proc.* 2019 Feb;94(2):242-253. doi: 10.1016/j.mayocp.2018.08.033. PMID: 30711122.9.

Increasing Family Medicine Resident Confidence In Addressing Concerns of Menopause

Danielle Hartwig, MD

University of Wisconsin-Madison, Department of Family Medicine and Community Health



Watch my lecture here →

Background

- Prior to 2000, hormonal therapies for the treatment of symptoms of menopause were commonly prescribed; this decreased drastically after the initial results of the Women's Health Initiative were released demonstrating increased rates of VTE and breast cancer.¹
- Despite further evidence that these risks were overstated, rates of hormone therapy have not recovered.
- In a 2017 study of family medicine, internal medicine, and OBGYN residents, only 6.8% felt prepared to manage menopause concerns and only 34.4% would prescribe hormone therapy.²
- DFMCH residents receive only one formal lecture about menopause during either PGY2 or PGY3.
- Female patients at the average age of perimenopause and menopause make up 25% of the DFMCH residency clinic patient population.

Methods

- Two comprehensive menopause lectures were given, one available to all DFMCH residents and another available to only interns.
- A handout was provided for residents to reference in clinical scenarios.
- Surveys assessing medical knowledge, self-reported comfort discussing menopause and prescribing hormone therapy, prescribing habits, and perceived utility of curriculum were administered before, immediately after, and three months after the lectures.

How prepared do you feel to discuss/prescribe hormone therapy?

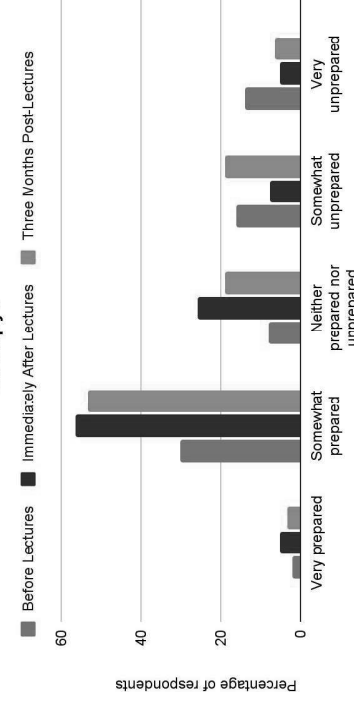


Figure 1: Self-Reported Comfort with Prescribing Hormone Therapy

Agree or Disagree: Menopause curriculum should be incorporated into intern year didactics

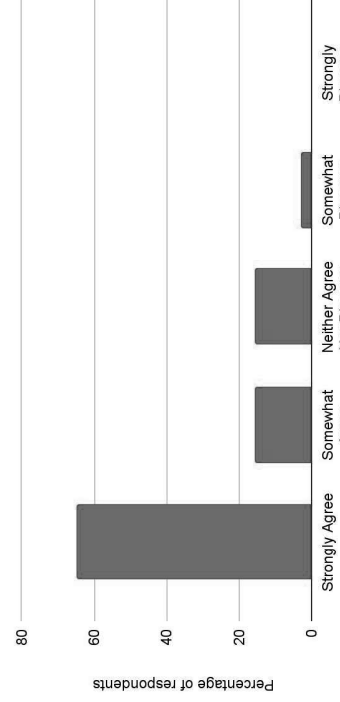


Figure 2: Resident Desire for Menopause Curriculum Implementation

Results

- Statistically significant and sustained increase in comfort with prescribing hormone therapy after the lectures and at three months ($p = 0.001$, $p = 0.002$, Mann-Whitney U Test) (Figure 1).
- Statistically significant and sustained increased medical knowledge after the lectures and at three months ($p = 0.004$, $p = 0.001$, Mann-Whitney U test).
- 75% and 78% of residents found the intern-only and all-resident lectures "very helpful" for increasing their comfort with menopause and hormone therapy, respectively.
- 80% of residents found the handout "very helpful" for increasing comfort with prescribing hormone therapy.
- 65% of residents "strongly agree" that this menopause curriculum should be incorporated into the intern-year didactic schedule (Figure 2).

Conclusions

- This menopause curriculum produced sustained increase in knowledge and confidence in prescribing hormone therapy.
- As residents desire further menopause education, this curriculum should be incorporated into intern year didactics.

Acknowledgements

- Dr. Tom Hahn, Dr. Makeba Williams, Dr. Wen Jan Tuan, Kaitlin Tetreault and the UW Biostatistics Department

References

1. Palacios S, Stevenson JC, Schaudig K, Lukasiewicz M, Graziotin A. Hormone therapy for first-line management of menopausal symptoms: Practical recommendations. *Womens Health (Lond)*. 2019;15:1745506519864006. doi:10.1177/1745506519864006
2. Kling JM, MacLaughlin KL, Schatz PF, Crandall CJ, Skinner LJ, Stuenkel CA, Kaunitz AM, Bliner DL, Mara K, Fohmader-Hilsaca KS, Faulson SS. Menopause Management Knowledge in Postgraduate Family Medicine, Internal Medicine, and Obstetrics and Gynecology Residents: A Cross-Sectional Survey. *Mayo Clin Proc*. 2019 Feb;94(2):242-253. doi: 10.1016/j.mayocp.2018.08.033. PMID: 30711122.9.

Melanie Hellrood, MD

Projects Completed During Residency:

Community Health Learning Experience:

Maternity and Infant Education Partnership with
Capital High Parenting Program

Scholarly Project:

Metformin for Pre-eclampsia Prevention in Women
with BMI > 30:

To address the question of whether metformin can be used for pre-eclampsia prevention in women with BMI > 30, I worked with Dr. Lee Dresang to submit a “Topics in Maternity Care” article to Evidence-Based Practice, which has been accepted for publication. After review of several systematic reviews and one Cochrane review, the evidence does not support metformin’s use for pre-eclampsia prevention in obese women without pre-existing PCOS, type-2 diabetes or gestational diabetes. These studies were limited in that pre-eclampsia prevention was a secondary outcome with significant heterogeneity in the original studies.



Melanie Hellrood values the relationships she is privileged to build with her patients as she cares for all ages and stages of patients’ lives. Melanie grew up in Mosinee, WI and earned her undergraduate degree in biochemistry and biology from the University of Wisconsin – Stevens

Point. Before medical school, she was an AmeriCorps member and helped coordinate a program for first-generation middle school students, which focused on career exploration and college readiness. Melanie earned her medical degree from the Medical College of Wisconsin Central Wisconsin campus, where she helped start the Family and Rural Medicine Student Organization. Melanie has been an on-call sexual assault response advocate, which has strengthened her passion for women’s health and taught her how deeply trauma affects people. Along with this, she has worked with a domestic violence and sexual assault prevention program in local high schools to assess the effectiveness of their prevention education. Melanie is also interested in maternity care, underserved medicine, and trauma-based care. Outside of medicine, Melanie can be found in nature: hiking and getting lost in new places. She also enjoys painting, cooking, baking, frequenting ice cream shops, and listening to live music. After a brief stint for residency away from her hometown, she will be returning to Wausau, WI to practice family medicine with obstetrics.



To my husband, who has been the calm through my storms and the anchor for my ever-fleeting thoughts despite having your own storms to bear: I want to say that I could not have done this without you. To my parents, who have been essential to my sanity through support and endless transportation and care of my daughter: my thanks will never be enough, but I’ll keep saying it. Thank you to my fellow residents who have become amazing friends. Lastly, thank you to my mentors throughout residency, especially Lee Dresang for guiding me in my maternity care journey and Beth Potter, who taught me to embrace the strength inside and let my true self shine through.

Maternity and Infant Education Partnership with Capital High Parenting Program

Melanie Hellrood, MD

Background

Started by Dr Paula Goldman and Dr. Lee Dresang, a partnership was created between the Wingra Clinic and, at the time, SAPAR (student age parent program) to help address common medical concerns and education related to pregnancy, childbirth, and parenting specifically for pregnant or parenting high school students. By being available for questions and discussions about topics pertinent to the students, we have been bridging the gap between a high-risk group of students and the medical field. Now going by the name of Capital High Parenting Program, we have transitioned back to in-person meetings after having virtual meetings through previous school year. We meet monthly with presentations about topics of interest and invite open, honest conversations with the students. Topics this year have ranged from trauma, mental health/postpartum depression, contraception, the L&D experience, developmental milestones, safety, and well-child visits.

Objectives

This project has been a group effort, with 2-3 residents facilitating the sessions per year. Last year, Andera Suarez and I led group discussions and presentations on alternating months, with the sessions being virtual due to Covid-19. This year, I was the lead on the project and organized the dates between myself and the program. We alternated sessions again this year between 3 residents, with a goal of 2 residents attending each session.

Methods

After discussing topics ahead of time with our community partner, we made presentations with plenty of time for questions and discussions. We connected our community partner with resources for future use on the topic. A shared drive with all the resources and presentations was created to aid in the continuation of this project moving forward.

Results

The students this year were very interactive with the wide variety of topics they wished to address. Their questions and concerns were addressed from both a medical perspective and a community health standpoint. We were able to connect students with their own providers for care beyond our interaction in class. As a result of the longitudinal nature of this project, the student built a trusting relationship with us, which was used to broach difficult topics they may not typically address in a medical visit.

Conclusions

This project has been very rewarding to watch the students grow as mothers and young women. This project has been ongoing to 4 years with plans to continue next year. Our relationship with our community partner is strong, as is the passion we experience about education for these students with unique struggles and gifts. Flexibility is an important aspect of this project for the facilitators, especially throughout Covid and the struggles with virtual schooling changes.

The challenges with the project continue to surround scheduling on our side, due to the short notice of schedule changes with the school.

A future path of this project was started at the end of this year, with another opportunity for educating local youth. I have been piloting a similar model for presenting to the Human Health and Wellness elective at Capital High West monthly to discuss topics pertaining to the current curriculum from a healthcare perspective. This has the potential to become another longitudinal project for connection and relationship building with students interested in promoting their own health.

Acknowledgments

This partnership was initially created by Paula Goldman then continued by Andrea Suarez, where much credit is due for their hard work making this project a longitudinal opportunity. Thank you to current residents, Laura Shingleton and Ana Pearson, who have helped with presentations and discussions with the students. Thank you to Lee Dresang for the support and guidance. And most importantly, thank you to Jessie Loeb, our wonderful community partner who works endlessly to make it a meaningful impact on so many students and their children.

Elise Malzer, MD

Projects Completed During Residency:

Community Health Learning Experience:

Implementing Information Visualization to Improve the Diagnosis and Treatment of Pain for Hmong Patients

Scholarly Project:

Information Visualization (InfoViz) to Improve Pain Communication Between Providers, Interpreters, and Patients with Limited English Proficiency:

The purpose of this study is to test a pain assessment information visualization (InfoViz) tool to facilitate communication about pain severity, location, and quality to increase mutual understanding between Hmong patients with limited English proficiency (LEP), interpreters, and providers during pain assessment. The Hmong describe pain using visual metaphors that are inconsistent with providers' knowledge, and interpreters struggle to translate metaphors accurately. Study goals are (1) to examine the feasibility of implementing the InfoViz tool, (2) to explore congruence of patient-interpreter-provider triads' mutual understanding (MU) of pain severity, location, and quality, and (3) to evaluate outcome measures selected to capture satisfaction with communication, pain relief, and pain interference with life and explore variables identified in the InfoViz tool. The investigators think InfoViz will increase MU of pain severity, location, and quality between patients, interpreters, and providers, and lead to increased satisfaction with communication, greater pain relief and functional improvement through better-informed diagnosis and treatment.



Elise Malzer is drawn to family medicine because of the long-term relationships that she builds with her patients. Elise is originally from Chicago, IL, where she spent her early years, before moving to La Crosse, WI. Elise earned her undergraduate degree in psychology from the

University of Pennsylvania and completed a post-baccalaureate program at the University of Chicago. Elise developed an interest in mental health through her work as a dormitory counselor and special education teacher at a residential psychiatric school prior to starting medical school. She earned her medical degree from the University of Wisconsin School of Medicine and Public Health. She is passionate about advocacy and teaching. As the president of the University of Wisconsin's Medical Students for Choice group, she worked with students, faculty, and local activists and lawmakers to advocate for women's reproductive healthcare needs. She also submitted testimony on several Wisconsin bills that would impact the quality and availability of graduate medical education in the state. In her free time, Elise enjoys running, hiking, ultimate Frisbee, cooking, baking, fly fishing, playing board games, and spending time with her partner and children.



Unending gratitude to my wonderful partner, Sam, for his unwavering support during my medical education and training. Thanks for being the best dad to our kids, the best adventure buddy, and the best human I know.

Implementing Information Visualization to Improve Pain Communication Between Providers, Interpreters, and Hmong Patients with Limited English Proficiency

Elise Malzer, MD

Background

Acute and chronic pain are significant burdens on patients and among the most common reasons for outpatient clinic visits. As clinicians, we rely heavily on a patient's descriptions of the quality, location, and history of pain to better diagnose and care for them. But when patients and clinicians do not share the same first language, these descriptions become more challenging. Furthermore, pain conceptualization is influenced heavily by cultural factors.

The Northeast Clinic, and northern Madison more broadly, are home to a patient population of great cultural diversity. Wisconsin, for instance, has the third largest Hmong population in the United States, and roughly 6,000 Hmong people make up the largest Asian ethnic group in the city of Madison. The Hmong people are an ethnic group from Southeast Asia, who came to the United States largely as refugees from the Vietnam War. The Hmong language is primarily oral, and many Hmong speakers cannot read or write in Hmong. Most Hmong peoples over the age of 50 have low English proficiency.

Prior research has demonstrated that Hmong patients describe pain using visual metaphors, or alternatively describe spiritual causes to pain. Further, the Hmong language lacks terms that are translatable to common pain descriptors in English. Given this lack of shared pain language, it was identified that Hmong patients with low English proficiency at Northeast Clinic were at high risk for poorly understood and therefore poorly treated pain, and subsequent dissatisfaction with medical care.

Objectives

For the language and cultural reasons described above, there was concern that the pain of Hmong-speaking patients was not well-understood by medical providers, and therefore not responded to appropriately. It was my goal with this CHLE to help promote more culturally competent care for Hmong patients. A prior Community Health Learning Experience completed by Xia Vang, MD (UW DFMCH Class of 2019) in conjunction with Maichou Lor RN, PhD (faculty, UW School of Nursing) addressed this in part, by developing and validating the InfoViz tool—a culturally appropriate visual pain tool for Hmong-speaking patients. InfoViz is a pain scale composed of faces, a body diagram, and icons representing 13 different pain qualities as metaphors. The goal of this CHLE was to evaluate the feasibility of implementing this tool for use with Hmong-speaking patients in a busy, outpatient, primary care setting. My role (along with Nick Sullivan, DO) was to assist Dr. Lor with ongoing components of her study “Visualizations to Improve Pain Communication Between Patients, Interpreters, and Providers.”

The aims of this study are to examine the feasibility of implementing the InfoViz tool; explore the congruence of the patient-interpreter-provider mutual understanding of pain severity, location, and quality; evaluate outcome measures selected to capture satisfaction with communication, pain relief, and pain interference; and explore variables identified in the InfoViz tool conceptual framework.

Dr. Sullivan and I are involved in liaising between study personnel and providers so that providers are aware of what their role is, as well as ensuring patients, providers, and interpreters are present for planned study visits. After study encounters, we use EpiData to abstract outcomes data from the charts of patients in both the control and intervention arms of the study. After data is fully abstracted, I will continue to work with Dr. Lor on writing up results and conclusions for publication of the trial. This portion of the project is scheduled to be completed during my residency extension.

Methods

The study utilizes the previously validated InfoVis scale for 20 acute pain visits of Hmong-speaking patients with limited English proficiency, with a certified Hmong interpreter present. The control group consisted of 20 acute pain visits for Hmong-speaking patients with limited English proficiency, in which a certified Hmong-interpreter was present but without the InfoVis pain scale. These visits were observed by study personnel. From these visits, we collected data from providers' visit notes pertaining to quality, location, diagnosis, and treatment recommendations for the patients presenting pain complaints. The groups will be compared—our hypothesis is that a more culturally-appropriate pain scale will lead to improved understanding of pain, and subsequent treatment for these pain complaints.

Results/Conclusions

Data collection and analysis are ongoing for this study, so results are not yet fully available. That said, implementing this standardized, culturally thoughtful pain scale has already modified my own patient interviewing and interpretation of pain for patients from cultural backgrounds different from my own. More broadly, it has reinforced that pain is a subjective, culturally-influenced, multi-faceted symptom, which is expressed in myriad ways—far beyond just pain descriptive words—by patients coming through my office.

Pending final results and interpretation of data, I anticipate that the implementation of this pain scale will lead to improved patient satisfaction, increased diagnostic accuracy, and more appropriate, timely pain treatment for our Hmong patients. Further, utilizing this method will likely help Hmong patients feel that Northeast is a supportive, inclusive medical home for them. If outcomes data support its use, it is my plan to present InfoViz to other clinics in the Department of Family Medicine and Community Health, in an effort to bring more culturally competent care to Hmong patients across Madison.

While this CHLE was a wonderful opportunity to learn more about the culture and language of Hmong patients, to think critically about pain assessment and treatment, and to build interprofessional connections, it was not without its challenges. One major challenge stemmed directly from impacts of the COVID-19 pandemic: the requisite number of visits took longer than anticipated to occur, as patients were seen remotely in higher numbers during the first year of the project. As each study visit required the presence of multiple parties (patient, provider, interpreter, observer), remote visits were not conducive to accurate communication and data collection. While telemedicine and electronic medical care have made their place in our medical system, I do think this CHLE reinforces that the underlying biases and inequities faced by our patients with limited English proficiency are likely magnified in the context of telemedicine.

Acknowledgments

This project required the commitment and support of many people. Thanks to:

Maichou Lor, PhD, RN

Xia Vang, MD

Nick Sullivan, DO

Jennifer Edgoose, MD, MPH

Additional thank you to the Northeast patients and providers that participated (and continue to participate) in this study, as well as the UW Health Hmong interpreters that were invaluable to this critical research.

Jack Masee, DO

Projects Completed During Residency:

Quality Improvement Project:

Improving Diabetic Foot Care in Clinic Setting

Scholarly Project

Whiplash: The Treatment of Acute Cervical Injury:

As part of the Statewide Osteopathic Collective, I led a presentation and demonstration for osteopathic colleagues from around the state. As a part of the presentation, I discussed the pathophysiology of acute cervical injury and prevalence in our patient populations. During the treatment portion of the presentation there were multiple Osteopathic Manipulative Treatment modalities that were discussed followed by a demonstration period in which these techniques were practiced with colleagues. The goal of this presentation was to share ideas and treatment modalities of common injuries with peers throughout the state in order to expand and practice one's own manual manipulation.



Jack Masee was born and raised in the small rural community of Appleton, MN. For Jack, the essence of medicine is to care for whole communities, from babies to the elderly, in clinics and in hospitals. Jack attended the University of St. Thomas where he received his degree in

neuroscience. After college, he worked as an EMT and saw firsthand that many medical situations could be prevented with comprehensive primary care. Jack earned his medical degree from Touro University Nevada College of Osteopathic Medicine. He is interested in rural medicine, with a focus in maternity care – he notes that every opportunity to deliver a baby is a humbling experience. While in medical school, Jack rotated at an HIV wellness clinic, where he learned how to work with patients to manage complex diseases. He also served meals at The Shade Tree, a shelter for women and children in Las Vegas. He is interested in osteopathic manipulative treatment because it provides a hands-on way to positively impact patients' lives. Jack is also interested in addiction medicine and inpatient care. Jack enjoys travelling, attending musicals, and spending time hunting, fishing, camping, and hiking in the great outdoors.



Thank you to all family, friends and colleagues for support throughout residency

Improving Diabetic Foot Care in Clinic Setting

Jack Masee, DO

Identified Risk Gap

All patients with known diabetes should have yearly visual and sensory foot exams performed for monitoring of peripheral neuropathy and high-risk wounds or infections.

Objective

To identify and increase the percentage of diabetic patients who have had yearly diabetic foot examinations performed.

Plan

Utilizing EMR review I collaborated with clinical staff to identify all diabetic patients that were eligible for yearly foot exams. Implemented a strategy of having all diabetic patients be adequately prepared for a foot exam at every visit regardless of presenting complaint. The goal was to increase the rate of diabetic foot exam performed on eligible patients to at least 90% over the course of 1 month.

Results

Utilizing data from the EMR in the 1 month prior to project there were 20 diabetic patients with office visits (total population). Of these 20 patients only 8 had not had annual diabetic foot exams performed. In these 8 encounters 5 of the patients had foot exams performed in those visits (62.5%).

There was a 1-month study period of implementing specific changes to rooming patients (i.e removing shoes, socks and having monofilament and tuning fork out) along with increased awareness utilizing EMR review of eligible patients. The rooming instructions and screening were also discussed with clinical staff at the beginning of each clinic day. After the trial period was complete there were 23 patients with diabetes identified. Of these 16 had previously had yearly foot exams performed and documented. There were 9 eligible patients who had not had foot exams and of those 9 all had foot exams performed in clinic (100%).

Ultimately after 1-month of implementing relatively simple steps and increasing provider and staff awareness about diabetic foot exams that percentage of eligible patients screened increased from 62.5% to 100%. While likely difficult to maintain 100% screening in all diabetic patients this project demonstrated that minor procedural changes and increased awareness can significantly increase screening foot exams and possibly identify potential infections early as well as monitor for disease progression more effectively.

Jamie Petzke, MD

Projects Completed During Residency:

Quality Improvement Project:

Reducing Time of Diagnosis of COVID-19 to Receiving Monoclonal Antibody Therapy:

As monoclonal antibody (MAB) therapy became available for use in the outpatient setting, patient access was limited by requirement to be seen by a provider for the consenting process after COVID-19 positive result prior to receiving MAB infusion. The process was modified by preemptively assessing which patients would qualify as high risk and within the recommended timeframe of symptom onset (inclusion criteria), and then reviewing MAB therapy education and consent with patients at the appointment prior to the test result. Results did not indicate improved access due to high quantity of negative results and additional factors.



Jamie Petzke was born and raised in Medford in north central Wisconsin and rural medicine is close to her heart. She values honesty, integrity, and hard work and creates honest, trusting relationships with her patients. Jamie served in the Wisconsin Army National Guard and was

called to active duty and deployed to Iraq during Operation Iraqi Freedom. She then earned her undergraduate degree in biology with a focus in neurobiology from the University of Wisconsin – Madison and her medical degree from the West Virginia University School of Medicine. Prior to starting medical school, Jamie worked as a research assistant at the VA where she enjoyed meeting the patients who enrolled in the study. Jamie's approach to medicine is very patient-focused and she chose family medicine so she can care for kids, adults, and the elderly. Jamie is committed to caring for her patients through all of life's stages, from maternity care and delivering babies to helping patients' families cope with sadness and loss. When she is not in the clinic or the hospital, Jamie loves the outdoors – fishing, backpacking, camping, and hiking with her dogs. She also enjoys cooking for her husband, family, and friends.



Thank you to my husband, Ron, and to my family for supporting me throughout this journey

Reducing Time of COVID-19 Diagnosis to Receiving Monoclonal Antibody Therapy

Jamie Petzke, MD

As monoclonal antibody (MAB) therapy became available for use in the outpatient setting, patient access was limited by requirement to be seen by a provider for the consenting process after COVID-19 positive result prior to receiving MAB infusion.

I aimed for 50% of qualifying/consenting patients seen in clinic for respiratory symptoms from 12/16/21-1/4/22 to receive MAB infusion within 24 hours of positive COVID result.

Results

5 patients with negative result; 3 patients with positive result received MAB infusion within 24 hours of result; 1 patient with positive result did not receive infusion (per chart review); 2 patients with positive result received MAB infusion > 24 hours of result.

The process was modified by preemptively assessing which patients would qualify as high risk and within the recommended timeframe of symptom onset (inclusion criteria), and then reviewing MAB therapy education and consent with patients at the appointment prior to the test result. If positive, then patient could be contacted and MAB infusion coordinated with our infusion center. If negative, then no need for MAB therapy.

While educating and consenting ALL patients being tested (and meeting inclusion criteria pending positive result) was relatively time efficient and beneficial for patients who did end up having a positive result, the time lost on educating and consenting patients who had a negative result was notable. Also, several outside factors impacted timing of receiving MAB infusion after result, including schedule availability of the infusion center, as well as patient compliance and communication of positive result.

Given the current hold on MAB infusion due to Omicron variant (at the time of the write up), and limited supply of appropriate therapy (sotromivab) for this variant, it is reasonable to limit education and consent to patients until AFTER they have a positive result and meet inclusion criteria.

Thomas Ridella, MD

Projects Completed During Residency:

Community Health Learning Experience:
ChopChop Cooking Club

Scholarly Project:

Review of Anti-Nausea Medications Most Likely to Increase QT Interval:

A summary of evidence for anti-nausea medications' likelihood of increasing QT interval was examined, synthesized, and submitted to FPIN for evaluation. The evidence reviewed revealed that most antiemetic comparisons show an uncertain effect of most antiemetic medications on QT prolongation, and they all have low certainty of evidence. Most recent studies have focused on the impact of these medications in the perioperative period. The literature review also revealed that 8 mg of ondansetron is associated with transient QTc prolongation when compared to 4 mg of ondansetron.



Thomas Ridella was born and raised in Detroit, MI. He is drawn to family medicine because of the long-term relationships with patients, the full-spectrum of care, and the positive impact primary care physicians can have on both their patients and their community. Thomas

majored in preprofessional studies and minored in science, technology, and values at the University of Notre Dame, and he earned his medical degree from the Michigan State University College of Human Medicine. Thomas earned a public health certificate there to learn more about improving community health and advocating for the needs of individuals and whole communities. In Flint, Thomas helped organize a free dental and health screening fair and in Lansing, he volunteered with the prescription assistance program at a free clinic. He completed a research project on Adverse Childhood Experiences and worked with an organization to help teach a resiliency model and connect people with community resources. In addition to preventative medicine, he is also interested in obstetrics, sports medicine, and clinic procedures. Thomas enjoys all sports, especially golf, basketball, cycling, and squash. He can often be found exploring local coffee shops and all of the best brunch spots with his wife, Alisha.



There are countless people to thank who have helped me along this journey to become a family medicine physician, but first and foremost thank you to my wife, Alisha. Thank you for being the most loving, supportive, and understanding through it all. Thank you to my parents and sisters for always being there for me, despite the distance. Thank you to my mentor, Brian Arndt, and the rest of the Verona family for making UW the best place to work, the best place to train, and the best place to receive care. And finally thank you to my co-residents for being such an incredible group to work alongside, hangout with, and just plain keep each other sane along the way.

ChopChop Cooking Club

Thomas Ridella, MD

Background

ChopChop Family is a national nonprofit organization that was founded in 2010 under the mission “to inspire and teach families to cook and eat real food together,” with one of the key driving forces being the childhood obesity epidemic. Starting about five years ago, UW Family Medicine residents started cooking classes utilizing ChopChop’s magazines, cookbooks, and various other online content. The ChopChop Cooking Club hosted regular classes at the Badger Prairie Needs Network (BPNN), a food pantry in Verona, to teach children ages 5-13 a fun recipe with their parents along with an educational activity. Classes were discontinued in the spring of 2020 due to the COVID-19 pandemic.

Objectives

Our objectives with the ChopChop Cooking Club was twofold: first, we wanted to find a way to bring back the classes in a safe and accessible manner for the Madison community. Secondly, we wanted to complete a quality improvement project to find ways to improve the class to better meet the needs of the community.

Methods

To find ways to bring the class back, we worked with BPNN to figure out how we could utilize an online platform to safely but still effectively engage with children remotely. We modified the existing class framework to accommodate the virtual model, and we also were still able to provide bags of ingredients to participants that they could pick up at BPNN. Through our project mentor, Dr. Couture, we were able to connect with past nutrition coordinator at The American Center (TAC) to utilize their learning kitchen. In the quality improvement part of this project, we contacted past participants for feedback on past classes and ways to make future classes more accessible, more educational, and ultimately more fun and interactive so that kids would be more likely to want to utilize their new cooking skills and knowledge. We completed semi-structured phone interviews with prior parent participants.

Results

We hosted our first two virtual classes this past February at BPNN via a video call, and we subsequently resumed our first in-person class at the TAC Learning Kitchen in March. Each session had 6-8 kids along with their parents. We made various fun and healthy snacks that required minimal kitchen gear, such as zucchini pizza bites, avocado toast, and granola bars. Our phone interviews with past participants only yielded four completed surveys. Parents completing the interviews liked how hands-on the session was and how the kids did most of the cooking; however, they noted that sometimes their kids were too picky for the food or that timing of the classes was not always convenient. We hope to have made an impact by showing the kids and their parents that cooking can be fun, adventurous, and taste good even if it’s healthy. ChopChop was a good reminder to me just how eager almost all kids are to jump right into healthy eating if you can make it fun and tasty.

Conclusions

Due to limitations from the COVID-19 pandemic, we learned many of the benefits and challenges of utilizing an online virtual cooking platform for the first time. First, we especially enjoyed how we were still able to keep the virtual classes interactive, and we also saw how it could be possible to have a very large audience participate in a single class if desired. We were also so appreciative that all the parents joining were so helpful with the set up and cooking, and particularly with the cleanup they had to do in their own kitchens. One challenge was that though we were able to provide ingredient bags for each participant to pick up, the larger recipes required quite a bit of ingredient separation- it may be helpful to choose recipes that aren't too complex for the virtual classes that require individual packaging. Though the in-person classes would keep the participant size limited, it was fun to see the kids make friends with others while learning the importance of teamwork to complete their recipes. Through the surveys, we saw how difficult survey response can be, and now that we've resumed classes, I would aim to have these surveys filled out at just after the class while we have the participants' attention. Moving forward, we have plans for upcoming classes at the TAC Learning Kitchen, and we also aim to continue classes at BPNN in possibly both the virtual and in-person formats. We hope these classes can continue both in-person and possibly virtually with a few modifications. As the classes grow, we'll aim for more partnerships in the community, with one goal of teaming up with the local public schools.

Acknowledgements

Dr. Ally Couture, Maggie Gleason, BPNN, TAC Learning Kitchen

Jeremiah Shaw, MD

Projects Completed During Residency:

Community Health Learning Experience:

Antiracism Education and Advocacy

Scholarly Project:

Integrative Medicine Alerts:

The term integrative health is becoming increasingly popular but may still be foreign to many people. It is the idea of promoting health and meaningful healing in a person by including any number of evidence-based modalities from classic Western medicine to ancient healing practices. The idea is simple but can still seem abstract or out of reach for many people. I contributed to Integrative Medicine Alerts, a project that seeks to provide simple, easy to read summaries of the latest literature to both providers and everyday people. The more research is known, the more we can integrate all forms of healing into comprehensive treatment plans.



To my partner Hannah Baker: thank you for your love and support, I could not have done any of this without you.

To my parents Rose Mary Shaw and Joseph Shaw: endless gratitude for all you have given me. To my co-residents who have become my family: while our paths may spread our family across greater distance over the next couple of years, we will always, ALWAYS be a family!



For Jeremiah Shaw family medicine is a responsibility to deliver equitable care such that health becomes accessible for all. Jeremiah is from Yellow Springs, OH. He earned his undergraduate degree in biomedical science and his medical degree from The Ohio State

University. In medical school, Jeremiah chaired the Columbus Free Clinic steering committee which allowed him to advocate beyond basic healthcare for the underserved to addressing deep barriers to health. During his time on the committee, the free clinic expanded to include a free refill pharmacy, full EMR integration, improved social work and behavioral health services, specialist care, legal counsel, and an onsite food pantry. Jeremiah is also interested in integrative medicine in the holistic care of both patients and physicians. As president of the Students for Integrative Medicine, he promoted yoga, meditation, relaxation stations, difficult discussion groups, and the creation of a wellness room to encourage access to integrative health. His medical interests also include community medicine, obstetrics, women's health, population health, advocacy, and care for the underserved. Jeremiah enjoys outdoor activities, running, yoga, meditation, piano, and anything that keeps him inspired and imaginative.

Antiracism Education and Advocacy

Jeremiah Shaw, MD

Background

In the spring of 2020, the attention of the nation and the world was centered on the very public murders of George Floyd, Breonna Taylor and so many others. There was anger, frustration, sadness, pain and of course a burning desire to change the systems that led to such gruesome realities. Of course, these racist systems had been in place for generations, but the renewed attention they were getting generated energy that felt like real change could happen. The Madison community was similarly outraged and energized, as was our family medicine department and residency. As residents there was a sense of responsibility, to serve our community beyond just the clinic walls in which we regularly practice. We set out to take a more active role in our community, as well as to educate ourselves and address the racial history that exists within the past and present of medicine.

Objectives

As the name suggests, the goals for this experience are twofold: education and advocacy. We recognize that we have been complicit in upholding racist and colonial ideals in medicine. Our goal was to educate ourselves and our colleagues by learning the history of organized medicine while simultaneously unlearning such racist ideals that were taught as standard practice. While education is key, it is also important to translate our energy into meaningful action that involves and impacts our community.

Methods

We worked as a group to find resources to teach and learn from one another about systemic racism and strategies to unwind it. We were intentional to not just practice activism in a bubble, and so made sure to show up to where activism was happening in our community at protests, marches, and other organizational events. By showing up, we met community leaders who were willing partners and excellent guides, sharing with us their lifetime of experience in this work. We focused on centering their voices to support their efforts while being sensitive to the needs of the community.

Results

Our group met regularly to learn and work together on projects. We learned through DEI microlearnings, shared podcasts and other resources. We also made space to process the trauma that the world was experiencing together. Our partner was Harambee Village, a community organization of birthing professionals who serve underrepresented women and families through the pregnancy experience. Our initial projects were geared towards supporting their efforts generally, by doing legwork for them as they expanded their own brick and mortar center for pregnancy care. We also offered our skills as health professionals by speaking on panels to pregnant parents to dispense health information such as campaigns to increase COVID vaccination in pregnancy. Finally, we facilitated the implementation of vot-ER rollout into our residency clinics, a program for fast and easy voter registration.

Conclusions

Being a part of antiracist efforts has been some of the most meaningful work of residency. It was humbling to work with such amazing community partners and empowering to not just provide medical care to the community, but to be a part of that community. While I often felt out of my depths due to inexperience, I learned that by centering the voices and experiences of those who do this work every day, we were able to create meaningful impact in the community. It was key to listen to the community leaders about the type of efforts that would be helpful, rather than attempt to provide something we thought they needed. It was also extremely important that we showed up, to meet the partners, to join in the community, and to do the work. While we did not have a formal learning curriculum, it was easy to share as a group the things we were learning together. A third purpose also emerged: support for one another as we processed the trauma that we witnessed. Time constraints lessened our momentum and it became important to have time carved out within our residency to pursue this work. The residency demonstrated its commitment to us by providing time and space during the lunch hour and next year during seminars for us to continue this important work. With the support of the administration and dedicated time, this group will continue to provide a space for residents to take action for change and be a part of the community we serve.

Acknowledgements

I deeply appreciate the partnership and guidance of Harambee Village especially leaders including Tia Murray and Uno Jones, as well as the mentorship of Drs. Lashika Yogendran, Tom Hahn, and partnership with Drs. Caroline Hensley, Allie Wolf, and Nina Piazza.

Andrew Sheehan, DO

Projects Completed During Residency:

Scholarly Project:
OMT 4 MD

Community Health Learning Experience:
Verona 20/20:

Verona 20/20 is a physician- and resident-led program to help guide patients in positive lifestyle changes to help manage common chronic medical problems like obesity, hypertension, and diabetes. It usually consists of an exercise activity, followed by a healthy meal, and checking in on specific patient goals and progress. Unfortunately, due to COVID we were prohibited from holding this program in any capacity over the past two years. However, I have used my time to give future participating residents insights into planning sessions, community resources, and tips and tricks to create a successful program in the future.



I want to first say thank you to my to my partner, Tana, my sister, Mary, and my dad, John, for all their love and support during residency. Secondly, I want to thank my amazing co-residents for creating a supporting, fun environment to grow and learn in. Last, a thank you to the faculty at the Verona Clinic for all their hard work teaching and supporting the residents.



Andrew (A.J.) Sheehan brings empathy and attentive listening to each patient to build a strong, trusting relationship that allows patients to open up about their physical and mental health. He attended St. Olaf College and earned his degree in English.

He earned his medical degree from Des Moines University College of Osteopathic Medicine. While in medical school, A.J. was awarded the Osteopathic Manipulative Medicine (OMM) Teaching Fellowship which allowed him to spend an extra year in medical school caring for patients in the OMM clinic and teaching the OMM course to junior medical students. From this, A.J. developed a strong passion for medical education and advocacy. He is a strong advocate for mental health, has worked to de-stigmatize mental health issues for patients and contributed to a task force with the Iowa Medical Society on combating physician burnout. A.J. is also interested in sports medicine. His hobbies include hockey and other sports, reading and writing, cheering on the Badgers and the Packers, and spending time with his partner Tana and their dogs, Enzo and Brody.

OMT4MD
University of Wisconsin Department of Family Medicine
and Community Health, Madison

Thoracic Spine
(Module 4)

Department of Family Medicine
and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

1

Objectives

- Review clinically relevant anatomy of the thoracic spine
- Review the respiratory-circulatory model and implications for somatic dysfunction of the thoracic spine
- Learn assessment for somatic dysfunction of thoracic spine
- Perform ME, soft tissue, and myofascial release to treat somatic dysfunction of the thoracic spine

Department of Family Medicine
and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

2

Readings

- OTLG: Chapter 4: Somatic Dysfunction Diagnosis
 - Please read the thoracic and lumbar spine section
- OTLG: Chapter 11: Muscle Energy Techniques
 - Please read Thoracic T1-T5 and Thoracic and Lumbar T6 - L5 sections
- BMMS: Chapter 6: Thoracic Spine (pages 64 - 86)
- BMMS: Chapter 7: Thoracic Cage
 - Please read soft tissue technique (pages 102 - 105)
- *Optional reading:*
 - FOM chapter 39: Thoracic Regions and Rib cage (pages 528-541)

Department of Family Medicine
and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

3

Thoracic Vertebrae

- Facets face backwards, up and lateral (BUL)
- Theoretically would allow for a lot of freedom of motion
- But motion is significantly restricted by rib cage

Articular facets (BUL)

Department of Family Medicine
and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

4

First Rib

- Broad, flat
- Articulates only with T1
 - Costovertebral AND costovertebral articulations
- Connects to body of manubrium

Department of Family Medicine
and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

5

Thoracic Inlet

- Area created by T1 and the first rib in conjunction with the clavicles
- Houses important structures including
 - Subclavian artery and vein
 - Brachial plexus
 - Common carotid artery
 - Internal jugular veins
 - Lots of lymphatics
- 1 of 4 important transitional areas in the body
- Covered superiorly by Sibson's Fascia

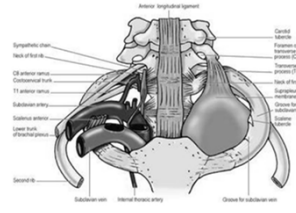
Department of Family Medicine
and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

6

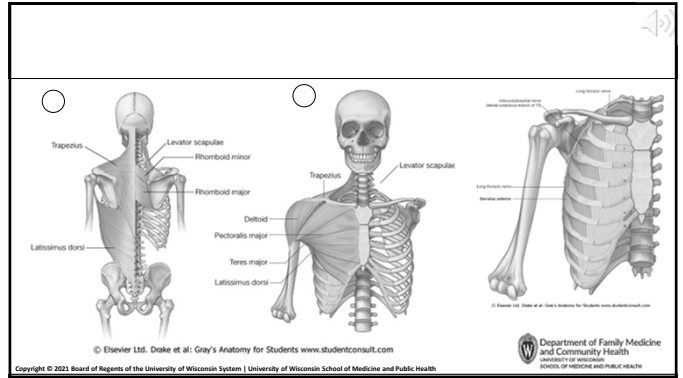
Sibson's Fascia

- Extension of the suprapleural membrane
- Functional cervico-thoracic diaphragm



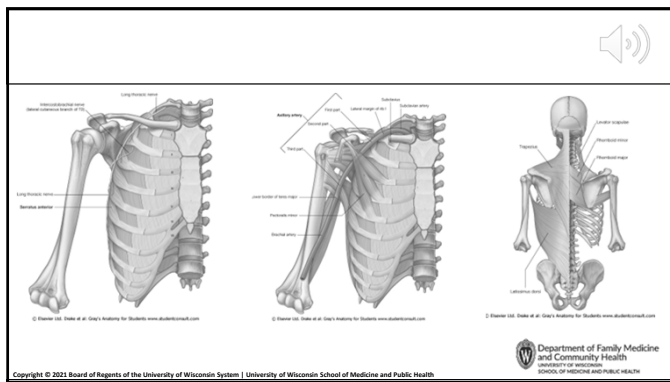
Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

7



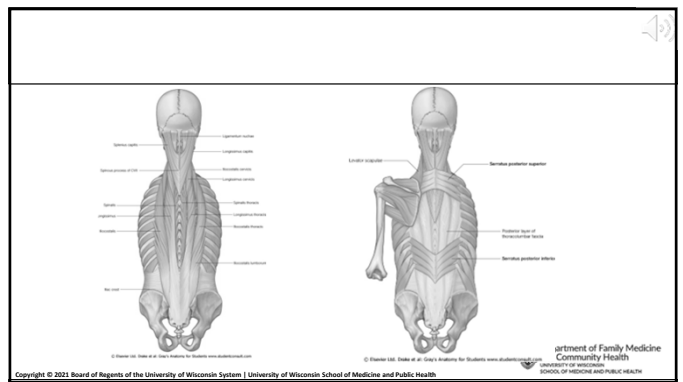
Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

8



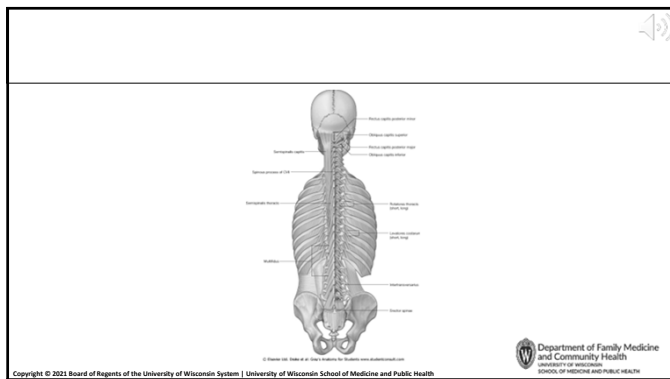
Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

9



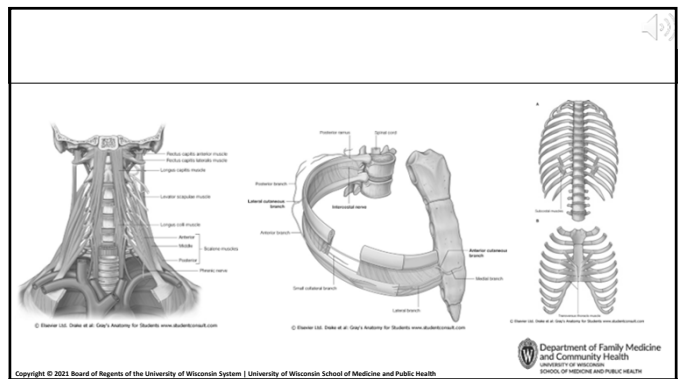
Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

10



Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

11



Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

12

Landmarks

- T1 SP
- T3 SP – Spine of scapula
- T7 SP – Inferior angle of scapula
- T12 – 12th rib

© Elsevier Ltd. Drake et al: Gray's Anatomy for Students www.studentconsult.com

Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

13

Rule of 3's (approximate)

- T1 – T3 SP at same level as TP
- T4 – T6 SP ½ segment inferior to TP
- T7- T9 SP 1 segment inferior to TP
- T10 - T12 SP at level of TP

Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

14

Thoracic Vertebral Motion

- Expresses both type 1 (neutral) and type 2 (non-neutral) mechanics
- Neutral, sidebending and rotation to opposite directions
- Non-neutral (aka flexed or extended), sidebending and rotation to the same direction
- Example Diagnoses: T4 Flexed, rotated right, sidebent right (T4 FRrSr)
– OR T2-5 Neutral, rotated right, sidebent left (T2-5 NRrSl)

Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

15

Motion at the Thoracic Inlet

- Motion at T1 can exhibit both Type 1 and type 2 mechanics
- Side-bending is influenced by rib 1
- Need to document both T1 findings and Rib 1 findings
- Example: T1 F RrSr, Rib 1 elevated on L

Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

16

Remember, it's not just about musculoskeletal pain...

2010	2016
<p>RESEARCH</p> <p>Efficacy of osteopathic manipulation as an adjunctive treatment for hospitalized patients with pneumonia: a randomized controlled trial</p> <p>Donald R. Noll¹, Brian F. Degenhardt², Thomas F. Morley³, Francis X. Blais⁴, Kari A. Horoz⁵, Kendi Hense⁶, Jane C. Johnson⁷, David J. Patel⁸, Scott T. Stoll⁹</p>	<p>Multicenter Osteopathic Pneumonia Study in the Elderly: Subgroup Analysis on Hospital Length of Stay, Ventilator-Dependent Respiratory Failure Rate, and In-hospital Mortality Rate</p> <p>Donald R. Noll, DO Brian F. Degenhardt, DO Jane C. Johnson, MA</p>

- MOPSE study
- 406 patients aged >50 in hospital with pneumonia
- OMT vs. Light touch vs. standard care
- OMT: Reductions in LOS (all) and in-hospital mortality
– LT group with benefits vs. standard care as well

Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

17

MOPSE OMT Protocol

- 15 minutes, twice daily:
 - Thoracolumbar soft tissue
 - Rib raising
 - Doming of the diaphragm myofascial release
 - Cervical spine soft tissue
 - Suboccipital decompression
 - Thoracic inlet myofascial release
 - Thoracic lymphatic pump
 - (Pedal lymphatic pump)

Department of Family Medicine and Community Health
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

18

The Five Model Theory of Osteopathic Clinical Philosophy

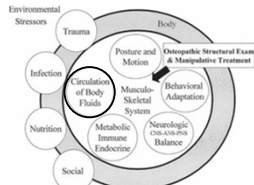


Figure 1-1 Osteopathic philosophy of health displayed as the coordinated activity of five basic body functions, integrated by the musculoskeletal system, adapting to environmental stressors. Evaluation and treatment of the musculoskeletal system is performed in light of its ability to affect not only the five functions but also ultimately the person's own ability to adapt to internal and external stressors.

19

A swamp or wetland?



A swamp or a wetland?

20

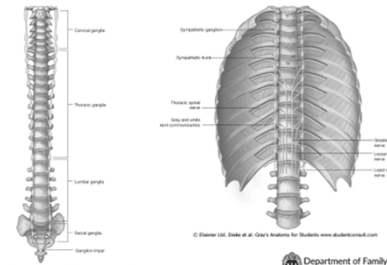
Respiratory – Circulatory Model

- Breathing is not just about gas exchange
- Lymphatic and venous return relies on proper respiration
- Somatic dysfunction -> lymphatic and venous congestion -> lack of arterial supply -> disease

21

Sympathetic Chain

- Lies just anterior to the costovertebral joints, immersed in much fascia (*not pictured*)



22

Viscerosomatic reflex regions

- T1-T4 Head and neck
- T1-T6 Heart and lungs
- T5-T9 Upper abdominal viscera
- T10-T12 Ileum, kidneys, gonads, right colon, appendix

Improving somatic dysfunction will improve visceral function!

23

Lab Outline (all pages refer to BMMS)

- Diagnosing segmental dysfunctions of thoracic spine (page 69)
- ME treatment of T1-T4 dysfunctions (pages 80-81)
- ME treatment of T5-T12 (pages 82-83)
- Diagnosis of inhalation and exhalation ribs (pages 100-101)
- Rib raising soft tissue and MFR (pages 108-109)
- ME treatment of inhalation and exhalation ribs (pages 110 -121)
- Doming of the diaphragm MFR
- Thoracic lymphatic pump

24

Pearls

- Visualize anatomy with precision
- Touch to know (*thinking, seeing, feeling fingers*)
- Be grounded and aware of the space behind you



Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

25

References

- Chila, Anthony. *Foundations of Osteopathic Medicine 3rd Edition*. LWW, 2010. Print.
- Nelson, Kenneth, and Thomas Glonek. *Somatic Dysfunction in Osteopathic Family Medicine, 2nd edition*. LWW, 2014. Print.
- Rowane, Michael, and Paul Evans. *Basic Musculoskeletal Manipulation Skills: The 15-Minute Office Encounter*. American Academy of Osteopathy, 2012. Print.
- Savarese, Robert G. *OMT Review 3rd Edition*. Legis Press, 2003. Print.
- Snider, Karen, and John Glover. *Atlas of Common Counterstrain Tenderpoints*. ATSU - Kirksville College of Osteopathic Medicine, 2014. Print.



Copyright © 2021 Board of Regents of the University of Wisconsin System | University of Wisconsin School of Medicine and Public Health

26

Laura Shingleton, DO

Projects Completed During Residency:

Community Health Learning Experience:
Supporting Pregnant and Parenting Teens

Scholarly Project:

Paravaginal Delivery in a Primiparous Woman:

This case report was an interdepartmental effort by John R. Poehlmann, MD, Laura Shingleton, DO, and mentors in the UW Departments of Obstetrics and Gynecology and Maternal Fetal Medicine. It describes a rare event of paravaginal delivery through the lateral perineum. This occurred without pre-existing risk factors, and the delivery was managed by Laura Shingleton and a UW FM community provider. The resulting laceration and subsequent wound infection was repaired by John Poehlmann and the obstetrics team. This case presents an opportunity to consider management of a rare but significant complicated delivery and management of resulting atypical laceration.



What continues to drive Laura's passion in medicine is learning about people's stories and taking a holistic view of their life and health. Laura grew up in Baltimore, MD and attended Johns Hopkins University, where she studied the Writing Seminars and Russian. She earned a master's degree in

the biological sciences from the Drexel University College of Medicine. Prior to starting medical school, Laura moved to Xela, Guatemala without knowing Spanish and had to quickly learn how to communicate in a new language and culture. She took the lessons learned during this experience with her to Maine, where she earned her medical degree from the University of New England College of Osteopathic Medicine. While in medical school, Laura volunteered in Bolivia and studied HIV mortality. Laura is inspired by the work of family medicine because of the capacity to develop strong relationships with patients that are built in the context of both health and disease. Laura is interested in working with people of all ages and has strong interests in osteopathic manipulative treatment and working with underserved communities. Laura enjoys outdoor adventures with her husband, running and hiking, cooking, playing with their dog Percy, and spending time with family and friends.



Deepest thanks to my parents, Mark, Mark's family, and my residency colleagues and faculty for your support and guidance.

Supporting Pregnant and Parenting Teens

Laura Shingleton, DO

Background

This learning experience provided the opportunity to support and teach young women students at East Capital High School about pregnancy, women's health, and parenting topics in real time as they themselves navigated these major life chapters in the context of completing highschool. This has been a longstanding community project within the UW Madison Family Medicine department and what used to be titled SAPAR, now CHP; it was exciting and meaningful to contribute to an established need. None of the work would have been possible without Jessie Loeb and the fabulous support staff of the childbirth, parenting and human health wellness program.

Objectives

The primary goal of the learning experience was two fold; one to provide an educational forum for the young women to learn about prenatal/pregnancy related health topics as well as parenting, and also to create a supportive and open environment for the students to connect with each other and with healthcare providers. As residents, we worked as a team to guide discussions, both by way of formal teaching and through more free-form discussion of whatever topics were of interest to the students. This occurred both via Zoom and in person, and it was the in person sessions that stimulated the most discussion among the students.

Methods

The strategies utilized to accomplish this learning experience were organizational in coordinating times and topics among the resident team. Additionally, strategies in virtual teaching and group discussion guidance and active and open listening were essential in fostering a group dynamic that empowered students to share and participate in the classes.

Results

The consequences of this activity are both abstract and concrete. What remains hard to define as its impact on each individual young woman as well as the group, it is all different. What the students have shared with us before is how they appreciate knowing that we as residents are there for them. That they can come to us with a question. That identification of representing presence and a resource is powerful. The more concrete result is the students' continued enrollment and matriculation in highschool in the context of pregnancy and parenting. The important perspective to consider is that this activity is better defined as an exchange: as residents and teachers we have had

the privilege of learning from a group of determined and impressive young women and they have helped to teach us how to be better physicians to all of our teenaged patients.

Conclusions

This community health learning project has been an opportunity to learn from and contribute to a true partnership between a community defined area of need, a school based group, and a resident/physician team. We learned how challenging it can be to navigate logistics of this type of work in the context of scheduling of clinical practice, as well as the pandemic specific curve-balls and teaching via Zoom! I would encourage future residents to dive head on into this project if they have any interest in working in women's health and with adolescent populations, as it has been truly fun and meaningful work. Continued next steps will be establishing a way to ensure continued UW resident involvement.

Acknowledgments

A huge thank you to Lee Dresang, Jessie Loeb, Melanie Hellrood, Ana Pearson, and all of the other prior residents, and those who helped to build and support this community project.

Neal Smith, MD

Projects Completed During Residency:

Scholarly Project & Community Health Learning Experience:

Basic Life Support for Obstetrics (BLSO) Training
Pilot for Rural EMS in Wisconsin:

The UW Health Belleville Clinic and the Belleville EMS identified obstetrical care as a knowledge gap for EMS crews. UW Family Medicine Residency faculty, residents, and Belleville EMS collaborated to provide obstetrical training to EMS crews from surrounding rural communities in Spring 2021. We used the AAFP's Basic Life Support in Obstetrics (BLSO) training curriculum. The course also allowed resident instructors to become certified instructors in presenting this material. We presented the results of the training to the 2021 WCRGME Rural & Community Medical Educators Conference and Poster Fair Presentation in Fall 2021.



Neal Smith is from Verona, WI and takes great honor and humility in the responsibility he has to care for patients. Neal earned his degree in community health education from the University of Wisconsin – La Crosse. He went on to serve as a health extension

agent in the Peace Corps in Cambodia. He provided health education on many topics, including childhood nutrition and sanitation. Neal returned to Wisconsin to attend medical school at the Medical College of Wisconsin Central Campus. As a member of the new campus, he helped establish new student groups on campus, including the cultural competency and medical Spanish student group. While in Wausau, he worked with the Marathon County Child Development Agency to develop and implement a project to identify and address the barriers to receiving dental health care for children enrolled in Head Start in Marathon County. Neal has strong passions for community medicine, mental health, and advocating for the needs of rural underserved patients. Neal is always looking for opportunities to play soccer, disk golf, and to go downhill skiing.



Thank you to Melanie for being there for me through thick and thin. I can't imagine how I could've gotten to this point without you. Thank you to our families who have sacrificed so much to help us achieve our goals. And thank you to the DFMCH staff/faculty and all those at Belleville clinic who have helped me grow so much in the past few years.

Basic Life Support for Obstetrics (BLSO) Training Pilot for Rural EMS in Wisconsin

Neal Smith, MD

Background

The UW Belleville Family Medicine Clinic was contacted by Patrick McDonnell, Belleville EMS Training Officer, in December 2018 regarding concerns around lack of obstetrical knowledge and lack of resources to provide training in this area. Less than one half of rural women live within a 30-minute drive to the nearest hospital offering perinatal services (Rayburn et al 2012). Therefore, rural EMS are more likely to find themselves providing care in obstetrical emergency situations.

Objectives

- 1) Present a pilot training program for rural EMS organizations to gain basic competency in emergency obstetrical care
- 2) Identify additional opportunities to collaborate between faculty and residents and EMS organizations to meet unmet community need

Methods

Two residents in the UW Rural Health Equity Track collaborated with Patrick McDonnell and Ann Evenson, MD of the UW Department of Family Medicine to determine the best format for providing obstetrical training. We determined the BLSO (Basic Life Support in Obstetrics) course would be an ideal format to present the material. BLSO is a program through the American Academy of Family Physicians to improve the management of normal deliveries as well as obstetric emergencies. It would also provide an opportunity for residents to serve as instructors and obtain experience teaching these obstetrical skills.

Results

There were 12 participants from five rural EMS crews, six resident instructors, and two faculty from the UW-Madison Family Residency Program involved in a one day BLSO course. Pre and post test assessment from the participants showed an almost universal increase in comfort levels in managing different obstetrical emergencies. Surveys completed by participants showed an appreciation for hands-on instruction. One major criticism of the course was the emphasis on medications and covering topics outside the scope of EMTs and paramedics. Also, as a result of the event the resident instructors became certified instructors of Advanced Life Support in Obstetrics (ALSO).

Conclusion

It is absolutely critical for our emergency medical personnel to feel comfortable and adequately prepared for potential deliveries or obstetrical emergencies that lie in the field. We were able to directly provide training in this area and increase comfort level. We disseminated the results at the WCRGME Rural & Community Research Spotlight Poster Fair on September 30, 2021. We have two residents currently focused on rural EMS training for their longitudinal community health learning experience. These residents plan to extend the invitation to host another BLSO course and design or lead other case-based training with surrounding rural EMS crews.

Acknowledgements

A special thank you to Nick Squires for creating the EMS training project and allowing me to join the project after all his hard work.

Rayburn WF, Richards ME, Elwell EC. Drive times to hospitals with perinatal care in the United States. *Obstet Gynecol* 2012;119:611–6. [PubMed] [Obstetrics & Gynecology]

Basic Life Support for Obstetrics (BLSO) Training Pilot for Rural EMS in Wisconsin

Neal Smith MD, Nicholas Squires MD, Ann Evenson MD, Patrick McDonnell, Jillian Landeck MD

BACKGROUND

- UW Belleville Family Medicine Clinic contacted by Patrick McDonnell, Belleville EMS Training Officer, in December 2018 regarding concerns around **lack of obstetrical knowledge and lack of resources to provide training in this area.**
- To date, there are very few examples locally or statewide of training being offered by clinics to local EMS.
- Less than 1/2 of rural women live within a 30-minute drive to the nearest hospital offering perinatal services--> need for rural EMS to have competency in providing emergency OB care

RESULTS

- 12 participants (both EMT and paramedics) from 5 rural EMS crews, 6 resident instructors, and 2 faculty from the UW-Madison Family Residency Program involved in one day long training.
- Course was very well received by participants.
- Pre and post-test assessment showed almost **universal increase in comfort levels in managing different obstetrical emergencies.**
- Appreciation for hands-on instruction.
- A **criticism of the course was the emphasis on medication management**, covering topics outside the scope of EMT's and paramedics.

DISCUSSION

- It is critical for our emergency medical personnel to feel comfortable and adequately prepared for the challenges that lie in the field. We were able to directly address this area of perceived weakness in obstetrical care by providing hands on training.
- BLSO training is a good model to meet the needs of training rural first responders and emergency personnel. However, the BLSO curriculum is designed with a variety of different trainees in mind in both prehospital and hospital settings. It may provide added benefit by including additional trainees, such as nursing and physician students, to provide additional context to obstetrical scenarios.

METHODS

- Two residents in the UW Rural Health Equity Track (RHET), collaborated with Patrick McDonnell and UW faculty, Ann Evenson MD, to determine the best format for providing obstetrical training and determined the BLSO (Basic Life Support in Obstetrics) course would best meet their needs.
- BLSO is an AAFP program to improve the management of normal deliveries as well as obstetric emergencies. The course was held on 5/15/21.

NEXT STEPS

- We hope that this training will serve as a framework to host further training sessions with EMS.
- Four current residents are interested in rural EMS training for their longitudinal community health learning experience.
- **We plan to offer to host another BLSO course and design or lead other non-OB case-based training with rural EMS groups over the next 1-2 years.**

Thank you's

Patrick McDonnell and Belleville EMS ALSO/BLSO Course Instructors
UW Family Medicine ALSO/BLSO instructors
EPIC
UW Department of Family Medicine and Community Health

RESOURCES

Rayburn WF, Richards ME, Eiwell EC. Drive times to hospitals with perinatal care in the United States. *Obstet Gynecol* 2012;119:611–6. [PubMed] [Obstetrics & Gynecology]



Course Instructors: Drs Anne Drolet, Nicole Altman, Ann Evenson, Danielle Hartwig, Neal Smith Lashika Yogendran, and Lee Dressang

Gregory Starsiak, DO

Projects Completed During Residency:

Community Health Learning Experience:
Verona Press Columnist

Scholarly Project:

Is There a Role for Anticoagulation Following
Arthroscopic Knee Procedures to Prevent VTE?:

This FPIN question was to gather more information about the risks and benefits of anticoagulation with arthroscopic knee repairs. Ultimately, there is no strong evidence that thromboprophylaxis is effective in preventing thromboembolic events in adults with undefined risk factors following knee arthroscopy although there are increased odds of venous thromboembolism after arthroscopic knee procedures in patients with known risk factors for venous thrombosis.



Gregory (Jake) Starsiak thrives on meeting people from diverse backgrounds, learning their stories, and advocating for their care. Jake grew up in New Berlin, WI and attended the University of Minnesota – Twin Cities, earning a degree in biology. Jake went on to volunteer with Americorps in Boston,

MA. In Boston, he learned firsthand how to be a community advocate and how to focus on all aspects of healthcare. Jake earned his medical degree from the Kansas City University of Medicine and Biosciences College of Osteopathic Medicine. While in medical school, Jake also earned an MBA in Healthcare Leadership from Rockhurst University. Jake is interested in osteopathic manipulative medicine, sports medicine, mental health, and prenatal care. He is also interested in community health and advocacy, global health, and medical practice management. In medical school, Jake was part of a group that provided group-based family nutrition education to combat childhood obesity. He was also the president of his class, where he learned how to be a leader in medical education and emphasize mental health and wellbeing for medical trainees. While in residency, Jake served as the chief resident of the Verona Clinic and continued to engage with his community by becoming a columnist for the Verona Press newspaper and a team physician for high schools throughout the Madison area. After residency, he will pursue a primary care sports medicine fellowship with OhioHealth in Columbus, OH. Outside of medicine, Jake enjoys hockey, soccer, running, and playing with his dog. He also enjoys travel, roadside attractions, storytelling, museums, inventing games, and lake life.



Erin Hammer - Thank you for your mentorship and guidance in working on our FPIN as well as my pursuit in a sports medicine fellowship. You are an exceptional resident advocate, tremendous educator, and a total inspiration. Verona Clinic - Thank you to all the faculty, staff, and residents for making my experience one to remember. Thank you for making me into the physician that I am today. Coming to work at our clinic feels like I am coming to be with my medical family. Co-Residents - We came into this program as 18 individuals and we are leaving as a class of 18 outstanding physicians and friends. "Friends make the good times better and the hard times easier". I am proud to call you my colleagues and ecstatic to call you my friends.

Verona Press Columnist

Gregory Starsiak, DO

Background

As a resident physician in the Verona community during the COVID pandemic, it can be hard to connect with patients outside of the four walls of the office. Becoming a columnist for the local newspaper was a way to reach the surrounding Verona population and provide them with up to date medical information that was pertinent to their lives. Using patient populations in clinic, I was able to gather motifs in primary care issues and concerns while reaching out to colleagues about misconceptions in healthcare to target the needs of our community. One community partner specifically was the chief editor of the Verona Press, Jim Ferolie who provided extensive insight on the readers of the newspaper.

Objectives

This community experience I was trying to accomplish was to find ways to educate the local community while staying engaged in their care. My goal was to address misconceptions in health care and bring to light the benefit of primary care. Another goal was to create positive lifestyle changes to benefit their overall well-being and make longitudinal impacts on my patient's health.

Methods

Throughout my columnist experience, I would write about pertinent related topics in regards to the seasons of the year. One article about creating S.M.A.R.T. goals was timed to be released with the new year while people were creating resolutions. Another article about tick bites was released in the summer time during peak tick season. Some topics such as the benefits of osteopathic manipulation for pain treatment were met with overwhelming excitement as readers of the newspaper sought out these services at the UW Verona clinic. Other articles were about concussion management and creating actionable goal setting to create positive lifestyle changes to benefit their overall health.

Results

The Verona Press Newspaper was created in 1965 and now reaches approximately 2,000 weekly readers throughout the greater Madison area. Verona as a town continues to grow and has a population over 13,000. Therefore, my articles had a substantial impact on the surrounding area. These articles inspired patients to seek out certain aspects of primary care. Specifically, an article about osteopathic manipulation for pain control fostered several patients to seek out UW Verona Clinic services. Personally, I had numerous patients state they read my articles in the newspaper which ultimately created an immediate patient connection.

Conclusion

I learned that consistency can make a tremendous impact on the communities we serve. I took time and had multiple edits to adjust my writing style to adequately communicate with my targeted audience. Learning how to shift from academic writing to newspaper columnist was a challenge on its own. In the future, I would encourage columnists to create a poll of the needs of the community

to better address medical misconceptions within the community we serve. Next action steps include face to face interaction with the local readers at Verona Press sponsored events.

Acknowledgements

Dr. Mark Matusak and Dr. Mehwish Moinuddin for continuing our relationship with the Verona Press. Additionally, I would like to thank Jim Ferolie, Regional Executive Editor, for guiding my editorial writing style and helping me connect with the greater Verona community.

Nicholas Sullivan, DO

Projects Completed During Residency:

Scholarly Project:

Improving Family Medicine Resident Comfort with Managing Perinatal Opioid Use Disorder

Community Health Learning Experience:

Information Visualization (InfoViz) to Improve Pain Communication Between Providers, Interpreters, and Patients with Limited English Proficiency:

Northeast Clinic is home to a large Hmong-speaking population. The Hmong language lacks terms translatable to common English pain descriptors. We aimed to improve culturally competent care by evaluating the implementation of the InfoViz tool for Hmong-speaking patients. We assisted Maichou Lor, PhD, with her study. After study encounters, we abstracted specific data from providers' notes on characterization, diagnosis, and treatment, comparing intervention and control groups. Data collection is ongoing. We anticipate that implementation of a culturally appropriate, standard scale will lead to improved patient satisfaction, diagnostic accuracy, and treatment appropriateness.



Thank you first to my parents, who have been my biggest sources of strength, having never stopped believing in me and encouraging me to follow my dreams. To my siblings, JP, Keri, and Danny, thank you for always keeping me humble, making me laugh, and putting up with my stories. To my fellow residents, I am incredibly grateful for you all. We are forever bonded as the generation that trained during the pandemic. It has been a joy, and I'm immensely proud to be your colleague and friend. Last but not least, thank you to my patients for your patience (haha wordplay!), openness, vulnerability, and trust in me as a new physician. You will continue to be my greatest teachers, and to be your doctor is an incredible privilege.



Nicholas (Nick) Sullivan grew up in Naperville, IL. He studied exercise science and Spanish at Creighton University. While at Creighton, he worked as a patient advocate and interpreter in a federally qualified health center where he worked to overcome

existing healthcare inequities and learned that quality healthcare is more than just physical health. Nick attended the Kansas City University of Medicine and Biosciences College of Osteopathic Medicine to earn a master of arts in bioethics as well as a medical degree. As an osteopathic manipulative medicine (OMM) fellow, Nick spent a year teaching junior medical students physical exam skills, clinical medicine, and OMM while learning skills in teaching methods and adult learning theory. Nick participated in medical trips to the Dominican Republic and Guatemala, where his Spanish improved and he developed a passion for caring for Hispanic and Latino communities. Nick is drawn to family medicine by the breadth, continuity, and comprehensiveness of care he can provide to his patients. His specific interests include full spectrum medicine including OB, newborn, and pediatric care, nutrition and wellness, and bioethics and social determinants of health. Nick enjoys running, basketball, tennis, board and card games, and cheering on the Green Bay Packers and the Creighton Bluejays. He also enjoys reading, trying new restaurants, and sampling coffees.

Improving Family Medicine Resident Comfort with Managing Perinatal Opioid Use Disorder

Nicholas Sullivan, DO; Anne Drolet, MD; Alyssa Bruchlman, MD; Jillian Landeck, MD

1. Abstract

Background: As the incidence of opioid use disorder (OUD) rises, we are also seeing an increase in perinatal OUD and neonatal opioid withdrawal syndrome. However, there remains an inadequate amount of maternity care providers trained and comfortable with providing this care. Family medicine training programs can address this disparity with curriculum integration to address this knowledge and comfort gap.

Methods: Surveys were distributed to residents to assess general comfort in managing OUD as well as in the perinatal and newborn setting. Electronic health record (EHR) tools were created alongside an educational presentation delivered during resident seminars. Residents completed a post-survey following this presentation.

Results: Residents expressed increased comfort with managing perinatal OUD after the presentation. Residents also reported managing low volumes of patients with adult OUD in general.

Discussion: Our findings suggest a simple curricular change has a large impact on resident knowledge and comfort. The overall effect was likely dampened by overall inexperience with managing OUD. Future efforts should focus on longitudinal and sustainable resident education to maintain these skills throughout residency and into practice, as well as similar interventions to increase faculty comfort and experience.

2. Background

The prevalence of perinatal opioid use disorder (OUD) has mirrored the incidence of opioid use at large over the past 20 years, exhibiting a 4-fold increase from 1999-2014, and nearly doubling from 2010-2017. (Cerdá et al, 2020). In Wisconsin, the trend is worse, with the rates of maternal opioid-related diagnoses tripling from 2010-2017. In the same time, the prevalence of neonatal opioid withdrawal syndrome (NOWS) in Wisconsin has doubled, incurring increased morbidity and mortality as well as increased health care costs and newborn hospital length of stays (Hirai et al, 2021), (Lisonkova et al, 2019), (Strahan et al, 2017)(Atwell et al, 2016). Currently, the recommended treatment of opioid use disorder during pregnancy includes agonist pharmacotherapy with methadone or buprenorphine (Jones et al, 2008), (ACOG Committee Opinion 711). Emerging data suggest non-inferiority and safety of the buprenorphine-naloxone combination product for pregnant persons as well (Debelak et al, 2013), (Link et al, 2020).

Pregnant patients seeking treatment for opioid use disorder are less likely than nonpregnant patients with OUD to have an appointment with a clinician who prescribes buprenorphine (Cerdá et al, 2020). A national survey of recent family medicine (FM) residency graduates found that roughly 10% of respondents were waived to prescribe buprenorphine. Of these providers, only 35% practiced maternity care in any setting (St. Louis et al, 2020). The University of Wisconsin-Madison Family Residency program includes a robust perinatal care curriculum, with a standard fifteen weeks of inpatient obstetrics experience. Since 2019, the Drug Addiction Treatment Act (DATA) X-waiver training has been incorporated as a standard part of the curriculum for first- and second-year residents. However, there remains limited standardized experiences to specifically address perinatal opioid use disorder.

3. Methods

In February 2021, a 14 question needs assessment survey was conducted to assess resident comfort in both general buprenorphine prescribing as well as in the pregnancy care setting. Questions focused on perceived comfort with prescribing buprenorphine and number of patients previously managed with the medication. Residents were also asked their preferred method to receive information. Majority of questions were on a five-point Likert scale with additional space for comments. The scale ranged from 1 (extremely uncomfortable) to 5 (extremely comfortable).

Results from this survey were used to create a one-hour educational presentation to help address these perceived knowledge gaps. This was presented at the senior resident and intern didactics. Additionally, note templates (H&P, labor and delivery, newborn progress notes) were created in the electronic health record to serve as a guide for providers treating the patients. Note templates were shared with residents during the lectures. A 12 question follow-up survey was sent to current residents after these education sessions, focusing on comfort with managing OUD in different phases of perinatal care as well as accessibility and utility of templates.

This project is characterized as a quality improvement project under 45 CFR 46.102(d) and did not require Institutional Review Board review.

4. Results

The initial survey had a total of 27 resident respondents. Most residents (17/27) reported no previous experience prescribing buprenorphine and the average resident comfort level was 2.22 on a scale of 1 (least comfortable) to 5 (extremely comfortable). See Table 1 for resident comfort in different levels of perinatal and neonatal care. 77.78% of residents reported wanting to learn more about these topics via didactics and 59.26% of residents wanted to learn via standardized templates or checklists.

See Table 2 for resident comfort in different levels of perinatal care on the initial survey as well as after the educational sessions. There was an increase in perceived comfort with

buprenorphine prescribing in all categories after the lecture series, with the largest changes noted in labor and delivery and postnatal care.

In open-ended comments, residents reported feeling uncomfortable with the high-risk nature of pregnancies affected by OUD and potential complexity of care. One respondent also expressed concern about having never prescribed for any patients previously.

Table 1. Resident Experience in Managing Patients with Buprenorphine Treatment		
	Residents surveyed in February 2021(N=27)	Residents Surveyed in January 2022* (N=19)
1-5 patients	37.5%	36.8%
6-30 patients	3.1%	5.2%
30-50 patients	0%	0%
51-100 patients	0%	0%
100+ patients	0%	0%
I have not prescribed to any patients	59.4%	57.8%
*These are not matched data sets, with residents having graduated/started the program in between survey distribution		

Table 2. Perceived Comfort with Buprenorphine and Opioid Use in Different Phases of Perinatal Care in Resident Physicians			
	Initial Survey in February 2021*	Follow Up Survey in January 2022*	Change
Prenatal Care	2	2.52	+0.52
Labor and Delivery	2.85	4.43	+1.58
Postnatal Care	2.67	4.29	+1.62
Newborn Care	3.77	4.81	+1.04
*These are not matched data sets, with residents having graduated/started the program in between survey distribution			

5. Discussion

Given the rise and impact of opioid use disorder on maternal child health combined with the lack of access to perinatal providers trained and comfortable with OUD treatment, we sought to introduce and evaluate curriculum focused on the management of pregnant people with OUD. There is a need for more family medicine physicians to be prepared when they encounter this patient population, both in training and post-graduation. The increased perceived comfort with the care of OUD in the follow-up survey suggests that a simple curriculum can still have a meaningful impact on provider comfort. The most notable increases were in labor and delivery and hospital postpartum care. The presentation content was focused on inpatient management, given that all FM residents have a shared labor and delivery and newborn care experience, and outpatient management occurs in more varied settings.

Notably, resident comfort in treating newborns with opioid withdrawal syndrome was highest at baseline among the phases of perinatal care and remained highest following the presentations (Table 2). Prior to this initiative, residents had already been caring for neonates undergoing the Eat, Sleep, Console protocol for NOWS on inpatient pediatrics services. Both the Finnegan Neonatal Abstinence Scoring System and Eat, Sleep, Console approaches to treatment of neonates with NOWS have stepwise interventions based on objective clinical findings, which limits clinical ambiguity for learners. (Grossman et al 2018). This baseline level of experience as well as algorithmic approach to NOWS care are likely responsible for the high level of resident comfort.

One limitation of this study is the short interval follow up. Longitudinal retention and follow-up data has yet to be collected. This was a resident-led initiative, and family medicine residencies are limited to three years. Background research, development, and implementation of this project amid the coronavirus pandemic lasted for 2.5 years. We plan to re-evaluate this curriculum on an ongoing basis going forward to determine if additional curricular changes are needed.

Another significant limitation is the baseline limited resident experience with opioid agonist pharmacotherapy for the treatment of adult patients with opioid use disorder in general. Only 8/19 of resident respondents had any prior experience prescribing buprenorphine in their practices. While all resident respondents had either satisfactorily completed, or were in the process of completing, the DATA X-Waiver Training, opportunities for clinical experience to this point have been lacking. While this was a resident-led, peer-to-peer initiative, we expect that an increased number of X-waivered faculty providers, application of similar case-based training, and increased comfort and confidence among faculty is also necessary to increase experience for resident physicians.

The results from these surveys are promising. Given all residency programs incorporate didactic learning, we believe that similar case-based presentations and templated notes in the electronic health record would be adaptable to different didactic models. We hope that future surveys show longer term retention and comfort with the presented information. Additionally, continued evaluation and needs assessment among our patient population is warranted. We anticipate perinatal OUD will be an increasingly encountered clinical situation given the continued opioid epidemic. Concurrent faculty education and training would be an appropriate intervention as

well, which could further expand patients' access to care as well as resident exposure to caring for this patient population. With the breadth of family medicine residency training encompassing perinatal and newborn care, and care for patients with substance use disorders, family medicine physicians and residents are well positioned to address the disparity in access to health care for patients experiencing pregnancy and opioid use disorder concomitantly. Further, this can progress towards a more integrated, colocated treatment model, which has been suggested to lead to decreased rates of premature delivery and shorter hospital stays than nonintegrated treatment models (Goodman et al, 2020). Creation and implementation of a fully integrated perinatal-neonatal-addiction care model may not be imminent given the needs for ongoing family medicine workforce training, but we remain encouraged about the potential to achieve this in the future.

6. Sources

- Atwell KA, Weiss HB, Gibson C, Miller R, Corden TE. Neonatal Abstinence Syndrome and Maternal Substance Use in Wisconsin, 2009-2014. *WJMJ*. 2016;115(6):287-294.
- St. Louis J, Eden AR, Morgan ZJ, Barreto TW, Peterson LE, Phillips RL. Maternity Care and Buprenorphine Prescribing in New Family Physicians. *The Annals of Family Medicine* Mar 2020, 18 (2) 156-158; DOI: 10.1370/afm.2504
- Cerdá M, Krawczyk N. Pregnancy and Access to Treatment for Opioid Use Disorder. *JAMA Netw Open*. 2020;3(8):e2013899. doi:10.1001/jamanetworkopen.2020.13899
- Strahan AE, Guy GP, Bohm M, Frey M, Ko JY. Neonatal Abstinence Syndrome Incidence and Health Care Costs in the United States, 2016. *JAMA Pediatr*. 2020;174(2):200–202. doi:10.1001/jamapediatrics.2019.4791
- Jones HE, Martin PR, Heil SH, et al. Treatment of opioid-dependent pregnant women: clinical and research issues. *J Subst Abuse Treat*. 2008;35(3):245-259. doi:10.1016/j.jsat.2007.10.007
- Committee Opinion No. 711: Opioid Use and Opioid Use Disorder in Pregnancy. *Obstet Gynecol*. 2017 Aug;130(2):e81-e94. doi: 10.1097/AOG.0000000000002235. PMID: 28742676.
- Lisonkova S, Richter LL, Ting J, et al. Neonatal Abstinence Syndrome and Associated Neonatal and Maternal Mortality and Morbidity. *Pediatrics*. 2019;144(2):e20183664. doi:10.1542/peds.2018-3664
- Hirai AH, Ko JY, Owens PL, Stocks C, Patrick SW. Neonatal Abstinence Syndrome and Maternal Opioid-Related Diagnoses in the US, 2010-2017. *JAMA*. 2021;325(2):146–155. doi:10.1001/jama.2020.2499
- Debelak K, Morrone WR, O'Grady KE, Jones HE. Buprenorphine + naloxone in the treatment of opioid dependence during pregnancy-initial patient care and outcome data. *Am J Addict*. 2013;22(3):252-254. doi:10.1111/j.1521-0391.2012.12005.
- Link HM, Jones H, Miller L, Kaltenbach K, Seligman N. Buprenorphine-naloxone use in pregnancy: a systematic review and metaanalysis. *Am J Obstet Gynecol MFM*. 2020 Aug;2(3):100179. doi: 10.1016/j.ajogmf.2020.100179. Epub 2020 Jul 3. PMID: 33345863.

- Goodman DJ, Saunders EC, Frew JR, Arsan C, Xie H, Bonasia KL, Flanagan VA, Lord SE, Brunette MF. Integrated vs nonintegrated treatment for perinatal opioid use disorder: retrospective cohort study. *Am J Obstet Gynecol MFM*. 2022 Jan;4(1):100489. doi: 10.1016/j.ajogmf.2021.100489. Epub 2021 Sep 17. PMID: 34543754.
- Grossman MR, Lipshaw MJ, Osborn RR, Berkwitt AK. A novel approach to assessing infants with neonatal abstinence syndrome. *Hosp Pediatr*. 2018 Jan;8(1):1-6. doi: 10.1542/hpeds.2017-0128. PMID: 29263121.

Morgan White, MD

Projects Completed During Residency:

Community Health Learning Experience:
Future Family Medicine Physician Program

Scholarly Project:

Better Aligning Health Needs and Student Career Choice: Approaches we are Taking to Promote Family Medicine as a Specialty:

In this presentation given at the 2022 STFM Medical Student Education Conference, we presented efforts at the medical school and residency levels to promote family medicine. In this lecture-discussion session, we provided background on the approaches we have identified and engaged the audience in a discussion to share their perspectives and ideas, with the goal to help the presenters and participants further develop initiatives at their institutions.



Morgan White sees family medicine as a platform to address healthcare disparities affecting underserved communities, with a particular emphasis on the African-American population. Morgan is from Crystal Lake, IL and earned her undergraduate degree in molecular,

cellular, and developmental biology from Yale University. She went on to earn her medical degree from the University of Michigan Medical School. While in medical school, Morgan served as president and treasurer of the Black Medical Association. She has committed herself to addressing issues affecting the healthcare needs of the black community and supporting the educational pipeline to train more black doctors. Morgan forms deep relationships with each of her patients, from birth through old age, in sickness and in disease prevention. For Morgan, medicine is more than just physical conditions and treatments; it is about relationships, values, and creating communities that promote health. Morgan enjoys cheering for the Michigan Wolverine football and basketball teams, playing tennis, cooking, and taking scenic walks.



Thanks to everyone who has helped me along the way! Thanks to God, my family, my friends, and my residency faculty. Also, huge shout-out to my 17 other co-residents: I couldn't imagine doing residency without all of you and I am going to miss you all!

Future Family Medicine Physician Program

Morgan White, MD

Background

It is widely accepted that significant health disparities exist between different socioeconomic groups. Even when these differences (*income, insurance status, etc*) are accounted for, significant health disparities persist for certain racial and ethnic groups. In 2003, the Institute of Medicine (IOM) released the *Unequal Treatment* report, which advocated for the recruitment of people of color as healthcare policymakers, administrators, providers, educators, and students¹. Despite various efforts and initiatives, provider-to-patient populations remain largely asymmetric throughout the country.

Looking at our local community, 73.6% of Madison residents identify as white, 14.6% identify as a race/ethnicity that is considered underrepresented in medicine, and a further 9.0% identify as Asian². If we then take a look at our DFMCH faculty demographics, we see that 85% of faculty identify as white and only 5% of department faculty identify as URM. While the percentage of patients who belong to a URM racial/ethnic group more than doubles those of faculty, this number likely underestimates the asymmetry present at the individual DFMCH clinics that are physically located in the more diverse areas of Madison. This is particularly concerning for the future of the diversity of the department, particularly in regard to residency faculty, as 50% of residency faculty completed their residency here at UW-Madison. This number increases to 68% of residency faculty if we include those who either attended medical school or residency here.

With the above background, Estefan Beltran, Patricia Tellez-Giron, Tom Hahn, and I have worked over the last two years to develop a pathway program that would provide family medicine focused mentorship and clinical experiences to underrepresented minorities in medicine.

Objectives

- Provide a comprehensive mentorship experience including advising, shadowing, networking.
- Provide extensive shadowing experiences to expose URM premedical and medical students to primary care centered on diverse patient populations.
- Encourage medical students and undergraduates to consider family medicine as a career, particularly training at the UW-Madison FM program.
- Prepare pre/medical students to become competitive applicants for medical school/residency.
- Establish a replicable format that may be implemented across other specialties of interest and other programs across the country.

Methods

We have recruited faculty and resident mentors who are either URMs or work with a diverse patient population and can provide specific clinical experiences to students. We are currently looking for ways to integrate into the Phase 1 Preceptor Program so that URM students who have an early identified interest in family medicine can be matched with a preceptor mentor who is part of our program. We have sought partnerships and advice from many local resources including: DFMCH community health leaders including Shelly Shaw and Jennifer Edgoose, UW SMPH Office of

Medical Student Education, UW SMPH Office of Multicultural Affairs, and Access Community Health Centers. There are many other pathway programs available within the UW Health system including RUSCH, BEAM, and the Ladder program to name a few, however we aimed to create a pathway program that emphasized family medicine as a future career direction. We plan to hold large group events that will provide mentorship in clinical rotations, preparing a family medicine application as well as networking events.

Results

We will be launching the Future Family Medicine Physician Program in the Summer of 2022 with DFMCH financial and administrative support. The results of our project will be seen in the years to come as we are able to study the effects our program has on URM mentorship and UW URM matching rates into family medicine. We have also established FFMPP as a new CHLE project for residents to participate and help organize events. As URM mentorship was a passion of mine coming into medical school, it feels extremely rewarding to have a product that will hopefully be an enduring program within our department.

Conclusions

Establishing a URM pathway program takes an extraordinary amount of work and time to develop. I learned that doing so in a large organization, like a medical school, takes many meetings with many different departments and stakeholders and concessions need to be made along the way. Now that the initial groundwork has been laid, the focus will be on having a first successful year of the program and creating a program that has staying power within the department.

Acknowledgements

- FFMPP Team members: Estefan Beltran, Tom Hahn, Patricia Tellez-Giron
- DFMCH: Jennifer Edgoose, Shelly Shaw, Bill Schwab, Ildi Martonffy, Dave Rakel, Kirsten Rindfleisch, many others.
- SMPH: Mark Beamsley, Christa Pittner-Smith, Manuel Santiago
- Access Community Health Centers
- Funding: Brillman Endowment Funding

References

1. Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care, Smedley BD, Stith AY, Nelson AR, eds. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington (DC): National Academies Press (US); 2003.
2. U.S. Census Bureau (2019). Population Estimates Program (PEP) Madison, Wisconsin. Retrieved from Link