2022-23 Scholarly Activity and QI Work

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Class of 2023

MISSOULA

Philip Anuta DO

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Katilyn Lucas DO

Stephen Reale MD

Taylor Simmons MD

Jonathan Rhea DO

Barbara Steward DO

Class of 2023 Scholarly Activity Work

FMRWM SCHOLARLY WORK **RESIDENT**

Name: Ben Merbler, DO

QI 2023: Overhaul of Patient Education Resources at PHC: There were several aims to this project. The first was to take a full inventory of the patient education handouts available at PHC and scan those documents into a digital space. The next was to determine which hardcopy materials were necessary to keep in clinic and which could be moved to the Wiki. A provider survey was sent out to help answer this question. Key materials were identified and in the future, those will be the sole paper resources available during clinic. The remainder of these resources/forms will be available to print on the Wiki. My hope is that going forward, a resident will serve on this committee in an advisory/QI to offer provider input about changes and possible improvements to this system.

QI 2022: Creation/Optimization of Joint Injection Templates for Use in Orthopedic Clinic: Created three ECW Templates for large joint injections with Dr. Heid. These were loaded onto her computer for use in Ortho clinic in an effort to standardize documentation and improve efficiency in note writing. The templates were also made available to all ECW users.

QI 2021: Measuring Improvement in Mood with Guided Meditation

Psychedelic Assisted Therapy Parts 1 &2, Friday Morning Medical Conference, 2023

Didactics: Diagnosis and Treatment of Celiac Disease, 2022

Didactics: Primary Care Management of Patient's with an Ostomy, 2021

Didactics: Management of Migraine and Tension Headache in Primary Care, 2021

Journal Club: Acupuncture for Cervical Spondylosis Related Neck Pain, 2023

Journal Club: MDMA for treatment of refractory PTSD, 2022

Journal Club: Concordance Between Blood Pressures in the SPRINT trial and routine practice, 2021

Wilderness Medicine: Trauma Assessment in Wilderness Medicine, 2020

FMRWM SCHOLARLY WORK **RESIDENT**

Name: Kati Lucas, DO

TEACHING/PRESENTATIONS

Presentation title: Cervical Lymphadenopathy
Brief summary of presentation: Case presentation at the Pediatric Case Conference
Date presented: 5/26/23

Presentation title: Gender Affirming Care
Brief summary of presentation: RHEDI presentation
Date presented: 1/17/23

Presentation title: Headaches
Brief summary of presentation: Didactic presentation
Date presented: 10/25/22

Presentation title: HIV PREP/PEP
Brief summary of presentation: Didactic presentation
Date presented: 1/25/23

Presentation title: Gender Affirming Care/Documentation
Brief summary of presentation: GVHC All-Staff Meeting presentation
Date presented: 1/17/23

Presentation title: Diversity and Inclusion
Brief summary of presentation: RHEDI didactic
Date presented: 4/6/22

Presentation title: GERD and PUD
Brief summary of presentation: Didactic presentation
Date presented: 2/22/22

Presentation title: Abdomen CT Review
Brief summary of presentation: Didactic presentation
Date presented: 2/2/22

FMRWM SCHOLARLY WORK **RESIDENT**

Name: Jackie Ordemann, MD, MPH

CONFERENCE PRESENTATIONS

***Project Title**:* Adverse Childhood Experiences: Prevention and Downstream Management in Primary Care

Details of the project: Friday morning medical conference presentation drawing on experience from my QI project from R2 year of residency and research on ACEs from my masters of public health work. Focused on implementing screening for ACEs in adult and pediatric patients and addressing positive screening tests.

Outcome: Successful presentation. Attendees were engaged and had a lot of questions at the end. Someone who works on ACEs in the community asked to meet afterwards which I did.

Reflections: It was meaningful to share what I have learned over 7 years of caring a lot about this topic. It was helpful for me to put all of this information into one presentation and synthesize everything that I learned from being part of a rollout of ACE screeners for pediatric patients across Maine primary care clinics during my MPH work as well as my takeaways from screening adults for my QI project during R2 year.

~Date project completed: 3/10/2023

***Project Title**:* How to Strategically Solve a Problem

Details of the project: Presentation at MAFP Big Mountain Medical Conference about resident QI work alongside co-residents Alec Kerins and Cecilia Weeks. My part of the presentation included discussion of my QI work on ACEs screening and active scheduling management.

Outcome: Well received presentation viewed by physicians throughout the state.

Reflections: It was helpful to both reflect on my completed QI project about ACEs and to receive positive feedback on my ongoing QI project about active scheduling management.

~Date project completed: 1/27/2023

***Project Title**:* Altered Mental Status in a 16 Month Old

Details of the project: Pediatrics Case Conference at Community Medical Center presented to pediatrics attendings, residents, and students. Based on a case of meningitis that I saw while on my pediatrics rotation during R2 year of residency.

Outcome: Positive feedback from pediatrics attendings.

Reflections: This was a presentation on the most complex case I saw while on my pediatrics rotation. It was helpful to put together the presentation because it involved learning more about long-term outcomes of meningitis and hyponatremia in very sick children among other things.

~Date project completed: 2/4/2022

TEACHING/PRESENTATIONS

Presentation title: Postpartum Care

Brief summary of presentation: Created a choose your own adventure style presentation on nine common postpartum problems and had residents rank from least to most comfortable then presented on topics they were least comfortable with. Topics included postpartum bleeding, incontinence, perineal recovery, and more.

Date presented: January 2023

Presentation title: Inflammatory Bowel Disease

Brief summary of presentation: Powerpoint presentation reviewing diagnostic framework for chronic diarrhea, red flag symptoms, and diagnosis/treatment of IBD.

Date presented: August 2022

Presentation title: Abortion Advocacy and Resources

Brief summary of presentation: Created a thorough resource with ideas for advocacy and resources for patients which I provided to residents. Allowed time during didactics to look through and learn as well as spend time doing advocacy work if they chose to.

Date presented: July 2022

Presentation title: Trauma Informed Language in Women's Healthcare

Brief summary of presentation: Briefly discussed trauma informed care and then did an activity with RHEDI residents where we sorted various language into trauma informed and not trauma informed categories and then discussed.

Date presented: March 2022

Presentation title: Wolf-Parkinson-White Syndrome

Brief summary of presentation: Discussion of ECG findings of WPW syndrome as well as patient presentation and treatment.

Date presented: January 2022

Presentation title: Neurology - Atypical Headache Cases

Brief summary of presentation: Powerpoint presentation on headaches other than tension and migraine type. This included medication overuse, cluster headaches, pseudotumor, and trigeminal neuralgia. Also had a discussion of red flag symptoms and diagnostic schema for headaches.

Date presented: August 2021

Presentation title: Inpatient Infectious Disease Cases

Brief summary of presentation: Powerpoint presentation of several infectious disease cases I had seen in the hospital including sepsis of unknown origin, cellulitis, and endometritis.

Date presented: March 2021

FMRWM SCHOLARLY WORK **RESIDENT**

Name: Stephen Reale, MD

PUBLICATIONS

***Project Title**:* Removing penicillin allergies from the charts of patients at low- and very low-risk of true allergy by direct oral amoxicillin challenge

Details of the project: I became interested in penicillin allergy testing after hearing a podcast on how the vast majority of people reporting such allergies are not actually allergic and these false allergies are costing patients and the healthcare system a lot of money. I gathered information on the prevalence of this allergy at Partnership Health Center and worked with a local allergy specialist to devise a protocol to safely risk stratify and test low-risk patients for this allergy so that it might be removed from their charts. Published in Montana Family Physiican.

Outcome: This project was halted just prior to implementation out of safety concerns.

Reflections: Undertaking this project taught me a lot about the prevalence of false allergies to penicillin, its impacts, both medical and financial, on patients, prescribers, and the system, and I came out of it with a protocol I would feel comfortable using with my own patients in future practice.

~Date project completed: May 9, 2022

CONFERENCE PRESENTATIONS

***Project Title**:* Warmth, Sympathy, and Understanding: Humanism and the Art of Medicine

Details of the project: I have always highly valued the humanistic side of medical practice and made it a point to incorporate strategies highlighting it into my everyday clinical practice. Many people I work with enjoy hearing about some of my practices and so, for my Friday Morning Medical Conference, I decided to share these practices, and a bit about humanism in medicine in general with the wider audience.

Outcome: This presentation was a huge success. I was told before the presentation that the presentation had generated more interest leading up to it than many other presentations and afterwards that it was the most watched talk of the entire year. I was asked to give this talk again to the incoming intern class at FMRWM and have been asked to come back next year and give another Friday Morning Conference on a similar topic.

Reflections: I really enjoyed assembling and giving this talk as it focuses on a subject I feel is underappreciated by practitioners and sorely missed by patients. I am looking forward to giving it again and talking on a similar topic next year. This topic has unexpectedly become my niche over the last year and it appears to be a fruitful one for me to continue to define a role for myself in.

~Date project completed: December 16, 2022

***Project Title**:* Pencils, Daggers, and Abe Lincoln: An Overview of Rheumatology Radiology

Details of the project: This was a topic that I selected out of a limited selection for didactics but it struck my interest because it incorporated my enjoyment of visual learning with an area of medicine I find challenging. I collected several examples of radiology findings that are unique to various rheumatologic conditions and then used an audience engagement platform to involve viewers as we explored some of the more common and interesting findings of rheumatologic processes in a variety of imaging modalities. I gave this talk at the winter meeting of the MAFP in early 2022, where it was also very well received, with some reviewers calling it the best lecture of the conference.

Outcome: The presentation was a success.

Reflections: I learned a lot about both rheumatology and radiology. Also, as this was my first real presentation in front of a non-resident audience in residency, it taught me a lot about how to give a presentation to a larger audience with more varied experience.

~Date project completed: January 28, 2022

TEACHING/PRESENTATIONS

Presentation title: HOME BP Journal Club

Brief summary of presentation: My third year journal club presentation reviewed a paper discussing a home management online platform for blood pressure monitoring. I reviewed the methods, results, and conclusions and, though the study itself wasn't very impactful, was able to include a section on an interesting topic in clinical medicine that was more meaningful, inspired by the study.

Date presented: October 27, 2022

Presentation title: Trans Care Basics and Resources

Brief summary of presentation: See below. Given again at a PHC provider meeting.

Date presented: October 7, 2022

Presentation title: Trans Care Basics and Resources

Brief summary of presentation: For didactics, I wanted to spend some time researching a topic I often felt unsure of, as did many of my colleagues and preceptors care of transgender patients. I used several reputable institutional resources and distilled the most commonly asked about information into one presentation. This presentation was grounded in two cases, one of a transgender male and the other a transgender female, and discussed medical, surgical, legal, and psychological aspects of care.

Date presented: August 10, 2022

Presentation title: Abdominal x-ray didactic

Brief summary of presentation: An FMRWM didactic featuring a case based approach to a series of abdominal radiographs, each with a different standardized approach. I helped the group through each unique systematic reading method and then had a final case for them to apply the method of their choice.

Date presented: May 24, 2022

Presentation title: Pediatric hyperthyroidism

Brief summary of presentation: At the end of my inpatient pediatrics rotation, I gave a presentation on the management of new onset hyperthyroidism inspired by a patient I saw. I discussed pathophysiology and natural history and then presented a novel treatment algorithm based on my literature review. The final section was about the necessity of treatment and the duration of treatment through discussing the likelihood of remission.

Date presented: April 29, 2022

Presentation title: Exercise: Is More Better?

Brief summary of presentation: For my Journal Club presentation second year, I picked a paper I had heard about looking at how much exercise is really needed to achieve clinically meaningful outcomes, individualized for each patient. This presentation presented four cases of people with various cardiovascular risk profiles and talked about the duration and type of exercise each one needed to perform to obtain benefit. I also reviewed the methods, results, and conclusions of the study.

Date presented: April 21, 2022

Presentation title: Endocrine: Adrenal/Pituitary Potpourri Cases

Brief summary of presentation: A didactic presentation for FMRWM, this presentation started with a refresher on the physiology of the HPA axis and then followed a case-based approach to a number of cases highlighting various dysfunctions of these glands.

Date presented: October 1, 2021

Presentation title: Lung Cancer Screening Journal Club

Brief summary of presentation: For my journal club presentation first year, I covered the new USPSTF guideline that lowered the age cutoff for lung cancer screening. This was an interesting paper in that its conclusions were based off of computer modeling rather than clinical trials. I reviewed the methods, results, and conclusions with a particular focus on the dangers of overscreening.

Date presented: May 20, 2021

Presentation title: Radiology Cases: Rheumatology

Brief summary of presentation: See above. Originally given as an FMRWM didactic presentation.

Date presented: April 22, 2021

OTHER

Project Title*:* Thinking Ahead: Increasing Advance Care Planning

Details of the project: My third year QI project, this was an effort to increase advance care planning among my patients. I did this, originally, by trying to discuss ACP at Medicare wellness visits to increase the amount of ACP documents on file. I then pivoted to asking talking to all patients about it at annual visits. The intervention included discussing various facets of ACP with patients and opening the door for future conversation.

Outcome: While I did not increase the number of ACP documents on file for my patients, I did succeed in having many more ACP conversations with patients.

Reflections: I learned a lot about ACP and patients with this project, mainly that people are very uncomfortable talking about death. I first had to pivot my project because I wasn't getting enough Medicare wellness visits for the kind of data I needed and no one was coming back with completed paperwork. I then realized that the paperwork wasn't the important outcome but the conversation was, so I changed my measure to the number of times I had the conversation and then saw an improvement. This project greatly improved my skill at discussing ACP with patients and taught me a lot about what the more valuable parts of that process are

~Date project completed: May 9, 2023

***Project Title**:* Removing penicillin allergies from the charts of patients at low- and very low-risk of true allergy by direct oral amoxicillin challenge

Details of the project: See above. Originally my second year QI project.

Outcome: See above.

Reflections: See above.

~Date project completed: May 9, 2022

***Project Title**:* Mindfulness Beyond Daily Meditation

Details of the project: My first year QI project was about incorporating more mindfulness into my routine by adding in quick mindfulness meditations. I then tracked my mindfulness based on a validated questionnaire and was surprised to see that it did actually improve over time and was not as impacted by the rotation I was on as much as I expected.

Outcome: This was a successful project is that I have not quite maintained to the level I was doing it during the study.

Reflections: This project really surprised me because I did not necessarily notice a big difference in myself over the study period but it seemed I did have an improvement in my mindfulness. This taught me a lot about myself as I don't typically systematically track the effects of various things I do in life but I found this very interesting. I do wonder about the significance of the results, though, if I did not notice a difference. Perhaps it would be worth it to track some external perception as well in the future.

~Date project completed: May 7, 2021

FMRWM SCHOLARLY WORK **RESIDENT**

Name: Jonathan Rhea, DO

CONFERENCE PRESENTATIONS

***Project Title**:* Friday Morning Medical Conference - Managing Hepatic Steatosis in the Primary Care setting

Details of the project: NAFLD is the most common cause of liver failure in the United States and continues to increase in prevalence. I wanted to review current evidence and guidelines for screening and any treatments that are available.

Outcome: This was a successful presentation with positive feedback from providers in attendance and remains an area of ongoing interest of mine.

Reflections: It was helpful to take a deeper dive into a topic that I frequently encounter with my patients and to feel more comfortable discussing this topic with learners. It also improved my confidence with managing this diagnosis in my patients.

~Date project completed: 1/6/2023

TEACHING/PRESENTATIONS

Presentation title: *Effect of Physical Therapy vs Arthroscopic Partial Meniscectomy in People With Degenerative Meniscal Tears: Five-Year Follow-up of the ESCAPE Randomized Clinical Trial.* JAMA Network Open, 2022 Jul 1;5(7). Journal Club Presentation. Family Medicine Residency of Western Montana.

Brief summary of presentation: Journal Club Presentation at FMRWM reviewing a recent study on conservative vs surgical treatment of meniscus tears

Date presented: 11/2022

Presentation title: *Association of beta blocker use with survival and pulmonary function in patients with chronic obstructive pulmonary disease: a systematic review and meta-analysis.* Eur Heart J. 2020 Dec 7;41(46):4415-4422. Journal Club Presentation. Family Medicine Residency of Western Montana.

Brief summary of presentation: Journal Club Presentation at FMRWM reviewing beta blocker use in patients with COPD.

Date presented: 8/2021

Presentation title: *Efficacy and safety of lowering LDL cholesterol in older patients: a systematic review and meta-analysis of randomized controlled trials*. Lancet. 2020 Nov 21;396(10263):1637-1643. Journal Club Presentation. Family Medicine Residency of Western Montana.

Brief summary of presentation: Journal Club Presentation at FMRWM reviewing the safety and efficacy of statin use in older patients.

***Date presented*:** 5/2021

Presentation title: Insulin Initiation and Titration in the Outpatient and Inpatient Setting. Didactics Presentation. Family Medicine Residency of Western Montana

Brief summary of presentation: Presented at didactics on insulin use and titration.

Date presented: 1/2023

Presentation title: Interpretation of ABGs. Didactics Presentation. Family Medicine Residency of Western Montana

Brief summary of presentation: Gave a lecture and then worked through various ABG interpretation cases with residents and faculty.

Date presented: 8/2022

Presentation title: EKG Pattern Recognition. Didactics Presentation. Family Medicine Residency of Western Montana

Brief summary of presentation: One component of our EKG BSQ requires residents to earn a passing score reading online EKG's. I provided background information on EKGs and worked with residents on using this website

Date presented: 8/2021

Presentation title: Subtle EKG Signs of Ischemia. Didactics Presentation. Family Medicine Residency of Western Montana

Brief summary of presentation: Gave a lecture on subtle signs of ischemia on EKGs and worked through cases with residents.

Date presented: 1/2021

FMRWM SCHOLARLY WORK **RESIDENT**

Name: Rachael Schmidt, MD

CONFERENCE PRESENTATIONS

***Project Title**: The "Obesity Problem" — Weight Bias in Medicine. Friday Morning Medical Conference*

Details of the project: This was an hour long presentation on the prevalence of weight bias within the medical field as well as the very real effects this has on patients.

Outcome: Completed

Reflections: *While conducting research for this project, it became readily apparent that more needs to be done from a medical education standpoint regarding weight bias in medicine. In addition there are many avenues in which we can be advocating more for our patients as providers. Overall the feedback I received regarding this presentation was positive, though there is still plenty of work to be done so that more providers are aware of the implicit and explicit biases they carry.*

Date project completed: March 31, 2023

TEACHING/PRESENTATIONS

Presentation title: *Hypo/Hyperthyroidism: Cases, Laboratory Evaluation and Interpretation*

Brief summary of presentation:*This was a 45 minute long didactic presentation that reviewed patient scenarios for both hypo and hyperthyroidism. The presentation was interactive throughout through the use of PollEverywhere.*

Date presented: May 23, 2023

Presentation title: *Complications in Abortion Care: Simulations*

Brief summary of presentation:*This is a simulation day for both the staff at Blue Mountain Clinic and the FMRWM RHEDI residents where myself, along with co-resident, Taylor Simmons, simulate possible complications in abortion care including perforation, hemorrhage, syncope and over sedation*

Date presented: May 10, 2023

Presentation title: *Evaluation and Treatment of Sleep Apnea*

Brief summary of presentation:*This was a 45 minute long didactic presentation that reviewed the evaluation and treatment of sleep apnea along with troubleshooting use of CPAP machines with patients.*

Date presented: December 7, 2022

Presentation title: *Effect of Intramuscular vs Intra-articular glucocorticoid injection on pain among adults with knee osteoarthritis*

Brief summary of presentation:*This was a presentation for Journal Club within the Family Medicine Residency of Western Montana where data is presented on an article of interest and discussion is had around the relevancy this article has on our practice.*

Date presented: August 11, 2022

Presentation title: *Immune Thrombocytopenia. Pediatric Case Conference*

Brief summary of presentation:*This was a presentation for the pediatric case conference at Community Medical Center where a patient case from my preceding pediatric inpatient medicine month was discussed in detail along with reviewing standards of care*

Date presented: April 1, 2022

Presentation title: *Lung Nodules and USPSTF Lung Cancer Screening*

Brief summary of presentation: *This was a 45 minute long didactic presentation that reviewed the analysis of lung nodules as well as the USPSTF recommendations for lung cancer screening.*

Date presented: December 21, 2021

Presentation title: *Ambivalence in Pregnancy: RHEDI Didactic presentation*

Brief summary of presentation: *This was a 45 minute long didactic presentation for participation in the Reproductive Health Education in Family Medicine track. This presentation reviewed how to address pregnancy ambivalence with patients.*

Date presented: December 16, 2021

Presentation title: *Evaluation of Hearing Loss*

Brief summary of presentation: *This was a 45 minute long didactic presentation that reviewed the evaluation and treatment of hearing loss in the outpatient setting.*

Date presented: May 13, 2021

Presentation title: *Does Subclinical Hypothyroidism Add Any Symptoms?*
The American Journal of Medicine 2021; 134(9): 1115-1126

Brief summary of presentation:*This was a presentation for Journal Club within the Family Medicine Residency of Western Montana where data is presented on an article of interest and discussion is had around the relevancy this article has on our practice.*

Date presented: April 1, 2022

Presentation title: *Effect of e-Cigarettes Plus Counseling vs Counseling Alone on Smoking Cessation. JAMA 2020; 324(18):1844-1854*

Brief summary of presentation:*This was a presentation for Journal Club within the Family Medicine Residency of Western Montana where data is presented on an article of interest and discussion is had around the relevancy this article has on our practice.*

Date presented: January 28, 2021

OTHER

***Project Title**: Piloting a Tele-PrEP Program for Rural Montanans*

Details of the project: This is a project that was started in 2021 where, along with PHC leadership and the state government funding we were able to launch a pilot pilot a tele-PREP program for rural Montanans. We had frequent meetings with a physician and other staff members in California who have already created a similar program.

Outcome: This project remains a work in progress. This year we worked to fine tune the logistics of scheduling patients, drafted templates for these visits to ensure timely and efficient documentation and follow up, and with the valuable contributions from PHC staff established workflows and strategies for sending and receiving labs to various laboratories around rural Montana. We were able to launch the pilot program in the winter of 2022 and enroll the first patient in the program in early 2023. We ultimately only had one patient enroll during this initial pilot program and due to unforeseen circumstances the patient discontinued our services before subsequent follow up was obtained.

Reflections: Though our project did not meet its goal, we did learn a lot through this process. We learned about the difficulties of creating a new workflow at a large organization with many different stakeholders as well as the importance of implementing pilot programs — especially when the coverage area is as large as the state of Montana. The time needed to track down labs, ensure they are faxed to the correct facility, and ensure patient follow up was much more extensive than originally anticipated. Our first patient ended up being a fairly complicated case – and even though they ultimately ended our services it was involved and required troubleshooting throughout. Although our project was not completely successful, we will be able to apply the skills and experiences we gathered during this project to future projects.

~Date project completed: May 2023

***Project Title**: Reduction of Documentation Time Through the Use of the Templates Created Within PhraseExpress*

Details of the project: Acknowledging that documentation makes up a large portion of the time a provider spends on a patient encounter, my goal was to reduce the documentation burden through the use of clinic templates.

Outcome: The average post-visit documentation time spent per encounter was relatively unchanged despite the intervention. However, the average number of templates used with each encounter increased and I found it was easier preparing for clinic and my notes were much more consistent across encounters. In addition, though not objectively measured, I observed multiple benefits of QuickPhrase usage as I grew to use it more and more including improved ease navigating annual wellness visits, increased use of screening tools such as those used to screen/evaluate for various conditions, improved monitoring of chronic health conditions and higher quality after visit summaries.

Reflections: Despite these improvements, it was admittedly disappointing to discover I had not significantly diminished the amount of time I spent documenting after clinic. When reflecting on this, I found interruptions such as prescription refills, paperwork, chart review, warm-handoffs, messages, emails and many other environmental factors account for a significant amount of time that is not charting or seeing patients.In addition, with inefficient EMRs the time spent on simple tasks such as ordering labs, entering referrals, or prescribing medications adds up rapidly across a clinic day.

My most significant take away from this experience is that implementing templates is not enough to reduce the burden of charting on providers. If the primary objective is to improve physician wellness, then the whole system that that provider practices in must be considered.

~Date project completed: May 2022

***Project Title**: Regular Exercise and Sleep Quality in a First Year Resident*

Details of the project: It is already well understood that both exercise and high-quality sleep are critical to professional, emotional, and physical well-being. Given time restraints, it can be a challenge for medical residents to get adequate amounts of both sleep and exercise. With this project, I wanted to see the effects that exercise had in my sleep quality. Throughout my intern year I increased the number of days a week to three times a week where I achieve at least 30 minutes of dedicated exercise to improve my percentage of restful sleep and sleeping heart rate dip.

Outcome: Over a total of 37 weeks, there were an average of 2.22 workouts in a week with an average percent restful sleep of 70.56% and percent heart rate dip of 10.4%. The results of this study showed no statistically significant change in either my percent restful sleep or heart rate dip with increase in exercise frequency.

Reflections: Although exercise did not have an effect on the primary measures of this study, I still gained valuable insights into my own behavior and personal health. I realized that I am far more likely to exercise when I am held accountable by either family, friends, or an exercise log. Secondly, although not measured, I can say with confidence that my overall health and mood is improved when physical activity is a part of my life. Although exercise takes up valuable time in the day, it improves the quality of the free time I do have.

~Date project completed: May 2021

FMRWM SCHOLARLY WORK **RESIDENT**

Name: Melanie Scott, DO

Title: 2022 Updates to CHF Guidelines

Brief summary: Reviewed the 2022 CHF Guidelines and summarized the 10 new updates

Date: February 1, 2023

Title: Obstructive Lung Disease

Brief summary: Reviewed diagnosis and treatment of obstructive lung diseases

Date: December 7, 2022

Title: Osteopathic Manipulative Therapy

Brief summary: Presented at Friday Morning Medical Conference at St. Patrick's Hospital reviewing the history of OMT as well as various types of treatments and what can be treated.

Date: December 2, 2022

Title: Shared reading and risk of social-emotional problems

Brief Summary: Reviewed a journal article titled Shared reading and risk of social-emotional problems

Date: October 13, 2022

Title: Self-managed abortion

Brief summary: Reviewed the topic of self-managed abortion

Date: October 5, 2022

Title: Pediatric EKGs

Brief summary: Reviewed important differences in pediatric EKGs compared to adult EKGs in a self-directed module.

Date: March 16, 2022

Title: How to predict/prevent refeeding syndrome in Eating disorders

Brief summary: Reviewed risk factors for refeeding syndrome as well as predictive and prevention strategies.

Date: March 3, 2022

Title: Well Child Care

Brief Summary: Reviewed Yale Pediatric Case Studies regarding well child care

Date: October 13, 2021

Title: Association of Therapies with Reduced Pain and Improved QOL in Patients with Fibromyalgia

Brief summary: Journal article review titled "Association of Therapies with Reduced Pain and Improved QOL in Patients with Fibromyalgia"

Date: October 28, 2021

Title: Inpatient COPD Management

Brief summary: Reviewed guidelines and treatment of COPD in the hospital

Date: May 25, 2021

Title: Pregravid contraceptive use and fecundability

Brief summary: Journal article review titled “Pregravid contraceptive use and fecundability”

Date: April 21, 2021

FMRWM SCHOLARLY WORK **RESIDENT**

Name: Taylor Simmons, MD

CONFERENCE PRESENTATIONS:

***Project Title**:* Opioid Use Disorder and Medication Assisted Treatment in Pregnancy

Details of the project: Logan Health OB Grand Rounds presentation on opioid use disorder in pregnancy. Goals were to review the definition of OUD, as well as discuss the effects of opioids on pregnancy and outcomes, treatment of OUD, and unique needs of ante/intra/postpartum care.

Outcome: successfully completed

Reflections: This presentation was a good opportunity to review the current literature in support of using buprenorphine or methadone for treatment of OUD in pregnancy as well as ways to manage pain in labor/postpartum and emphasize the safety and benefits of breastfeeding in this patient population. It stimulated a discussion with other providers on ways we can care for this population better within our own community.

~***Date project completed:*** March 16, 2023

***Project Title**:* Reproductive Health Care: Conversations Between Healthcare Providers and their Patients

Details of the project: Friday Medical Conference as a joint presentation with Dr. Paddock (FMRWM faculty) & Dr. Weeks (R2) on contraceptive updates including emergency contraception, STI treatment updates, self-managed abortion, and trauma informed care in the primary care setting

Outcome: successfully completed

Reflections: We covered a lot of information in a short amount of time, exposing many to updates in the world of reproductive health. In the future, one could consider a follow up lecture spending more time on the nuances of new contraceptive options or going into depth on details of self-managed abortion, trauma informed care, STI updates, etc.

~***Date project completed:*** January 27, 2023

***Project Title**:* Trauma Informed Care

Details of the project: Presentation at the Montana State Conference of Medical Assistants with the goal to understand the trauma effects on health and the basic principles of interacting with patients in a trauma informed way using case examples and prompting questions to elicit audience participation.

Outcome: successfully completed

Reflections: I appreciated the opportunity to speak to a mixed group of both seasoned and new medical assistants on trauma informed care given the need for all patient facing staff to be versed in the approach and their role in actively preventing retraumatization of patients.

~***Date project completed:*** April 23, 2022

TEACHING/PRESENTATIONS:

Presentation title: Levonorgestrel vs Copper IUD for Emergency Contraception

Brief summary of presentation: FMRWM journal club presentation to review New England Journal of Medicine article showing levonorgestrel IUD as non-inferior to copper IUD for emergency contraception

Date presented: September 8, 2022

Presentation title: **OB Preconception Counseling**

Brief summary of presentation: FMRWM didactic presentation reviewing importance of chronic disease management, medication safety, overall health optimization, and One Key Question

Date presented: August 24, 2022

Presentation title: Review of NASH and Cirrhosis

Brief summary of presentation: FMRWM didactic presentation with independent/partner study reviewing selected journal articles and practice guidelines with 30 questions to guide learning

Date presented: August 3, 3022

Presentation title: Community Acquired Pneumonia in Children

Brief summary of presentation: FMRWM AFP journal club with rapid evidence review for diagnosis and treatment of community acquired pneumonia in children

Date presented: February 16, 2022

Presentation title: Systematic Review on Titration of Antidepressants in Major Depression

Brief summary of presentation: FMRWM EBM journal club to review evidence that states lack of benefit in terms of efficacy or tolerability of flexibly titrating up dosage over fixed dosage of SSRIs when initiating therapy for depression

Date presented: October 6, 2021

Presentation title: Reproductive Justice: Overview of and Divergent to Abortion Care

Brief summary of presentation: RHEDI presentation that reviewed differences between reproductive rights and reproductive justice and discussed evidence-based outcomes when access to abortion is restricted; presentation in the context of legalization and criminalization SB8 law passed in Texas at the time

Date presented: September 22, 2021

Presentation title: EKG review: manifestations of LVH

Brief summary of presentation: FMRWM didactics presentation to review pathophysiology and common EKG diagnostic criteria for left ventricular hypertrophy

Date presented: August 4, 2021

Presentation title: ENT Radiology Case Review

Brief summary of presentation: FMRWM didactics presentation to review radiology cases primarily related to adult ENT infections in urgent care and primary care, chosen by common conditions and "don't miss" diagnoses

Date presented: June 3, 2021

Presentation title: Treatment Interventions to Maintain Abstinence from Alcohol in Primary Care

Brief summary of presentation: FMRWM journal club to present a systematic review looking to determine the most effective interventions in recently detoxified, alcohol dependent patients for implementation in primary care

Date presented: June 3, 2021

QUALITY IMPROVEMENT:

Project Title: "Diabetes Management Templates for GVHC," R3 Clinical QI Project

Details of the project: Standardize documentation for diabetes visits by creating a template in eCW for Greater Valley Health Center. Use surveys given to providers before and after implementation to measure how often they were documenting all diabetes screening pertinent information as well as satisfaction with the templates.

Outcome: successfully completed with implementation of the template for clinic providers to utilize

Reflections: A future QI project could consider making further adjustments of the template with incorporation of feedback received on surveys from after implementation, including trying to pull in lab data from the EMR or carry forward information automatically from one note to the next.

~***Date project completed:*** July 2022 – June 2023

Project Title: "Longitudinal C-section Experience," R2 Curricular QI Project

Details of the project: Create an opportunity to increase volume and exposure to surgical OB by developing a structure where, when there are no residents on the OB service or when the resident on service is not interested in surgical OB, residents interested and available can participate in scheduled C-sections and be available for back-up call for indicated, non-scheduled C-sections. Assess increased volume of C-sections obtained to determine utility.

Outcome: Remains a work in progress to determine utility of system to maximize learning experience

Reflections: This was challenging to balance with the variability in when C-sections would occur with the demands of other rotations and whether I would be available or not. The volume I obtained in attempt was not significant, but I think it is worth the effort if not to gain more volume, at least to increase rapport with our community OBs and emphasize interest in OB.

~Date project completed: March 2022 – July 2023

Project Title: "Well Child Templates for Greater Valley Health Center," R2 Clinical QI Project

Details of the project: Improve efficiency and standardize anticipatory guidance for well child examinations by creating well child check templates (newborn to 17 years old) for Greater Valley Health Center. Use surveys given to providers before and after implementation to measure time on documentation and perceived confidence in hitting important markers of anticipatory guidance.

Outcome: successfully completed with implementation of the template for clinic providers to utilize

Reflections: This was a tedious process working to create numerous templates in a finicky EMR system, but it was rewarding to create something the providers found much more user friendly than what was previously available. It also seemed to increase confidence in providing age-appropriate anticipatory guidance.

~Date project completed: July 2021 – June 2022

Project Title*:* "Cold Shower Therapy: Improving Stress Resilience," R1 Self-Improvement QI Project

Details of the project: Cold water therapy has long been used to relieve pain, decrease inflammation, and stimulate the nervous system. Studies have examined the benefit cold water can have on increasing metabolism, improving circulation, and boosting the immune system. It is theorized that exposing the body to a stressor and training the nervous system to respond calmly to that stressor creates a positive adaptation response for other stressful encounters. The aim of this project was to improve the adaptation response to stress and increase stress resilience by taking a 3-5 minute cold shower every day for two months, paired with controlled breathing exercises, while recording perceived stress level weekly.

Outcome: I successfully completed my cold shower experiment with 97% adherence, and I am still doing cold showers to this day.

Reflections: I have grown to love my cold showers and wake up craving them most days. As uncomfortable as they can be in the moment, I feel energized, awake, stimulated, refreshed, and ready to start my day. I recommend the effort for the reward!

~Date project completed: July 2020 – June 2021

FMRWM SCHOLARLY WORK **RESIDENT**

Name: Barbara Steward, DO

TEACHING/PRESENTATIONS:

Presentation title: Diagnosis and Presentation of CHF.

Brief summary of presentation: Discussed diagnosis and presentation of CHF including some treatment options for CHF. Presented this via a question/answer session- jeopardy.

Date presented: February 17, 2021

Presentation title: EKG review

Brief summary of presentation: Discussed SVT and sinus tachycardia and how to read them on an EKG.

Date presented: 12/15/2021

Presentation title: Preoperative Evaluation

Brief summary of presentation: Discussed preoperative evaluation including necessary labs, imaging, physical exam, medications and verbiage to use in notes to assess risk of operation.

Date presented: Wednesday, December 22, 2021

Presentation title: Irritable Bowel Syndrome- Jeopardy

Brief summary of presentation: Discussed Irritable Bowel Syndrome including pathology, causes, subtypes, treatment, prognosis. Turned this into a jeopardy game with questions concerning this topic.

Date presented: August 3, 2022

Presentation title: M&M Case

Brief summary of presentation: Presented an M&M case concerning a pregnant patient I took care of in the ICU- she ended up having an aortic dissection, pre-e with severe features, methamphetamine intoxication and underwent c-section and aortic dissection repair.

Date presented: Wednesday, February 8, 2023

OTHER:

Project Title*: Reach out and Read*

Details of the project: I chose this project because of the importance of early literacy especially for the vulnerable populations we serve through our clinic. ROR provides a book at every well child check from ages 6 months to 5 years old. We don't have a program like this in place out GVHC. ROR is part of a larger health initiative to provide a literacy rich environment to our clinic as we can decide to offer other educational services (such as monthly story hour, literacy rich corner, etc..) As an individual who loves to read and know that early reading helped with my comprehension and drive for life, I feel this is a great opportunity to provide our clinic and our patients.

Outcome: Currently, still a work in progress. We do have the funding, just getting everything into place.

Reflections: Did have some barriers to initiating this project. I brought this project idea to the head of GVHC back in Spring of 2022 and it was approved then. At that time there was discussion of GVHC wanting me to do some wellness projects to help fund ROR. This would have added on a lot more planning, stress and extras that probably were not needed. There were also some barriers due to different schedules/health issues, etc., caused a delay in getting this project up and going.

And then there was the concern of keeping the program going once I graduated. GVHC did hire a new care coordinator who was a prior teacher who has willingly and excitedly accepted the position of continuing this project once I graduate as well as helping me with some of the fine details of getting this project initiated. There is also training that needs to be done with every individual (physician, NP, PA) who will be offering books during well child checks- it is a short training but is still a barrier to individuals with already overloaded schedules.

~Date project completed: Still in progress.

Class of 2023 QI Work

QI PROJECT

Names: Phillip Anuta, DO & Jonathan Rhea, DO

Title: *Empowering patients by improving patient education*

Problem: Our EHR lacks an easy way to provide standardized information to patients about their new diagnosies. This information is often conveyed verbally, however there is a limited amount of time to explain in a normal patient encoutner and many of our pateints also have low health literacy. Studies have shown that 40-80% of the medical information patients are told during office visits is forgotten immediately, and nearly half of the information retained is incorrect. Examining random charts from the last year suggests we have not provided detailed written instructions including explaning disease process, lifestyle information, and return precautions in the majority of our visits.

Aim: We identified 10 common diagnosis that patients would benefit from improved instructions/information. Over a month we will develop written disease summaries that include information about the disease, lifestyle modifications, treatments, expecations and return precautions with the goal of providing this to as many relevant patient encounters as as possible.

Key measures for improvement: Improvement was measured by determining if written disease summaries were provided in after visit summaries via random chart audits during the period of Jan 1st - April 30th. We collected pre-intervention data from a random sampling of encoutners prior to 12/1.

Method: We identified 10 common diagnosis and within ECW created standardized macro phrases with detailed written information about the disease, lifestyle modifications, treatments, expectations and return precautions.

The 10 diagnosis were:

- COPD
- Major Depressive Disorder
- Type 2 Diabetes
- Essential Hypertension
- Generalized Anxiety Disorder
- IBS
- Bacterial Vaginosis
- Low Back Pain
- GERD
- High Cholesterol

Phillip created MACROs (quick text) within ECW so that simply typing the macro shortcut-phrase ‘ibs’ or ‘bv, backpain, gerd, cholesterol’ then holding ctrl + space would populate the entire standardized information to that disease. Jonathan created his standardized phrases using word processing software and pasted them into his AVS. Over the course of 4 months, patients presenting for a relevant encounter pertaining to the above diagnosis were provided this standardized hand-out via ECW after visit summary. Not every eligible patient received this information, but an attempt was made to provide the print-outs to as many patients as we remembered to. A random sampling of pre-intervention visits and post-intervention visits were randomly chosen assuming they had a pertinent diagnosis, and compared.

Analysis and interpretation: In examining a combined total of 34 pre-intervention visits (17 encounters from each Jonathan and Phillip) that included at least 1 diagnosis listed in our ’10 common’ versus 34 post intervention visits, there was a clear delineation between the groups. The pre-intervention group received some form of standardized information 11.7% of the time (4 patients out of 34) where the intervention group received this information 68% of the time (23 patients).

Strategies for change: Providing a standardized diagnosis summary form to patients can help augment the information conveyed during a patient encounter and serve as a reference for patients after the visit. Having a method to quickly upload these summaries in a reader-friendly format is important if this method of communication is to be effectively and efficiently utilized. Although it took effort to create these forms, it proved useful to quickly attach the information to the after-visit summary. Other EMR such as Cerner, EPIC have a large database of such specific diagnosis forms, however such database does not exist in ECW.

Effects of change: Having a detailed, yet relatively brief standardized diagnosis summary that was easily accessible to upload in visit summaries proved very valuable. Once the work of creating the summaries and the MACRO shortcuts was done, it was extremely quick to upload these into the visit summaries. While we were not able to survey patients to assess the impact of providing this information, numerous studies have shown improved outcomes with increased patient education.

Lessons learned: ECW presents specific challenges when it comes to creating standardized information for specific diagnosis, especially formatting a standardized text that is easy to read with bullet points and paragraphs. The ECW MACRO (quick text) method was very effective in creating paragraphs and lists compared to the 'dot phrases' commonly used in the ASSESSMENT/PLAN window during encounters. Having these common diagnosis summaries should continue to be useful for future ECW users at PHC.

QI PROJECT
Name: Ben Merbler, DO
Title: *An overhaul of patient education resources at PHC*

Problems: Over the course of my time in residency, I have often been frustrated with the overwhelming amount of paper resources and patient education handouts scattered throughout clinic. My frustrations stem from the fact that the most useful handouts are often out of stock, while handouts that have far less utility are always available (presumably because they are rarely accessed). Furthermore, there is a significant amount of inconsistency between the handouts available on the East and West side of the clinic.

Aim: Between January and May of 2023, in conjunction with several members of the PHC staff, I began an effort to enhance the quality and utility of the available patient education handouts at Partnership Health Center.

Key Measures to Improvement: A pre-intervention survey was created and given to PHC healthcare providers. The goal of this survey was to assess provider awareness and use of the currently available patient education resources in our clinic. I hoped to use this information to improve access to the most popular resources, standardize availability between the East and West side of clinic, and move all non-essential resources to the PHC wiki page. My initial plan had been to send out a post-intervention survey, however, due to the logistical challenges of making some of these changes by May 2023, this project is still ongoing and will continue to be a work in progress for the remainder of this year.

Process of Gathering Information: The pre-intervention survey asked providers to consider several questions. The questions were used to determine what percentage of providers used patient education handouts (46%), what percentage of providers felt they had a reasonable awareness of available resources (44%). Additionally, I asked survey participants to consider what resources the felt were missing form clinic, as well as to reflect on what resources they had observed us to be frequently out of stock. From the survey responses, the main takeaways were that providers felt that advanced care planning resources (POLST, 5 Wishes), Birth control options, and MSK related stretching handouts were often out of stock. Additionally, it was a widely held opinion that it would be useful to have access to hard copies of patient education handouts for a new diagnosis of chronic conditions such as hypertension and type 2 diabetes.

Strategies for Change: In an effort to improve some of these areas of concern, a team of PHC employees was put together to begin work on some of these issues. Over the course of the last several months, a full inventory of PHC handouts has been taken, and each of these handouts has been scanned into our system. The eventual aim is for seldom used handouts to be transitioned to the PHC wiki. Additionally, we are working on a system to make sure that we have a supply of commonly used handouts available when we run out of the copies that are stocked on the walls. Lastly, I was able to find some excellent patient education handouts on diet/lifestyle modifications for a new diagnosis of hypertension and type 2 diabetes that will be added to both the wiki and will be made available as hard copies on both sides of clinic.

Lessons Learned: The main lesson learned through this project was just how long it takes to make changes in such a large clinic. Although certainly possible, it was not nearly as simple as I had initially predicated. Even things as simple as stocking additional handouts somewhere in clinic require approval from administration in an effort to make sure that available space is utilized in the most efficient way possible. I am optimistic that over the next year, the changes above will be very positive for PHC. It was discussed at our final meeting that it would be great for a resident to be a member of the aforementioned committee on patient education resources/handouts, and I will work to find someone to assume this role for the coming year.

QI PROJECT

Name: Kati Lucas, DO

Title: *Effects of a clinic-wide Gender Affirming Care (GAC) Toolkit, consisting of masculinizing and feminizing informed consent documents, cheat sheets for labs and follow-up timing, and acceptable hormone ranges/lab interpretations, on rates of appropriate follow-up care for those on HRT.*

Problem: Greater Valley Health Center does not have a system in place for GAC. Patients receive slightly different care depending on their provider's preferred resource/reference. Specifically, there are no written handouts, ways to share resources, nor informed consent documents. All of this makes cross coverage more difficult as well.

Aim: To increase the access of a uniform "Gender Affirming Care Toolkit" to GAC providers at GVHC by 100% within 2 months; to increase consistency between each patient receiving Gender Affirming Care within 2 months; to increase the knowledge among support staff about timing of follow-up and lab screenings within 2 months.

Key measures for improvement: Number of providers who utilize the Toolkit once published; number of GAC patients who receive written documentation/informed consent for hormone therapy; incidences of appropriate follow-up and lab evaluations for those receiving GAC.

Process of gathering information: Data regarding use of a clinic wide Toolkit was obtained via surveys before the intervention and voluntary completion of online questions after Toolkit was released from the 5 GAC providers.

Analysis and interpretation:

	Prior to Intervention	After Intervention	Difference
Clinic-wide Toolkit	0	5	100% increase
Consistency between patients	3 (out of 5 providers were using Cedar River information)	5 (all 5 now have access to the same toolkit and are using it instead of Cedar River)	40% increase
Staff knowledge of follow-up and lab screening timing	0 (out of 7 MA/RN/LPN's who regularly support the 5 GAC providers)	7 (all have accessed the new toolkit and share the same information as GAC providers)	100% increase

Strategies for change: A short, in-person presentation about the Toolkit was provided to all GAC members and their support staff. It will be published formally on the clinic's letter head and placed in the online "vault" for everyone to access.

Effects of change: The interventions have affected how GAC providers at GVHC provide care to their patients and created a uniform treatment plan for their staff and cross-cover providers to provide consistent care as well. The increases of all three measures were significant at 100% increased access to a clinic-wide toolkit, 40% increased consistency of information provided to patients, and 100% increased knowledge among support staff of FU and lab screening plans.

Lessons learned: Implementing a uniform tool for providers and staff to use has been beneficial but it is difficult to know how this will continue to impact current practices and a follow-up study should be considered in 6-12 months. Information gathering pertaining to the GAC patients themselves will be valuable information to have in the future to see if the benefits of the toolkit extend past the providers and support staff. It would be interesting to see if making an easy-to-access, uniform treatment plan for GAC patients would encourage some additional providers at GVHC to start providing GAC (a few have stated they don't provide GAC because they never learned how).

QI PROJECT

Name: Jackie Ordemann, MD, MPH

Title: *Active Schedule Management to Improve Quality of Care, No Show Rate, Continuity, and Provider Satisfaction in Clinic*

PROBLEM: In our busy FQHC, there are daily challenges with frequent no shows and lack of appointment availability for follow up. This problem is further challenged by the stresses of residency including the clinic visits quota required by the ACGME and the demands of other residency rotations which require time away from clinic leading to stretches of time with very limited appointment availability. At baseline the no show rate at PHC for non-resident providers is around 10% and for 3rd year residents is around 15%. It is also very common for there to be no "established patient" appointment slot open within the needed follow up time on resident schedules. In the traditional system where our PSRs scheduled follow up visits, patients were often scheduled with other providers or lost to follow up due to lack of appointment availability. I hypothesize that this leads to lack of continuity, increased no shows, and decreased quality of care.

AIM STATEMENT: Beginning in July 2021, I will use active scheduling management to try and improve no show rate, continuity of care, quality of care, and provider satisfaction in my clinic. I define active scheduling management as self-scheduling and/or proactively sending a message to my PSR to schedule a future visit should the timeframe not yet be available as well as asking my RN panel manager to follow up with any established patients who have no-showed. By self-scheduling I am able to bypass scheduling rules followed by PSRs to schedule my patients in any appointment type (not only "established patient" but also "new patient", "same day", etc.) or double book patients as I feel appropriate. In order to evaluate the impact of this intervention, I will use Azara DVRS to compare no show rate and continuity of care between March 2022 and March 2023. I will use CMS metrics A1C >9 or untested, blood pressure control, colorectal cancer screening, and cervical cancer screening within the same time frame as a proxy for quality of care. As a comparison I will also collect the same metrics over this time for my R3 class and non-resident PHC providers. Finally, I will qualitatively compare my satisfaction in the clinic before and after making this intervention.

KEY MEASUREMENTS FOR IMPROVEMENT:

1. No show rate (usual provider)
2. Continuity of care (4 cut provider to PCP)
3. A1C >9 or untested (usual provider)
4. Hypertension controlling high blood pressure (usual provider)
5. Colorectal cancer screening (usual provider)
6. Cervical cancer screening (usual provider)
7. Informal pre- / post- provider impressions of satisfaction in clinic

PROCESS OF GATHERING INFORMATION: The metrics listed above as 1 thru 6 were collected from Azara DVRS. The percent of patients meeting the criteria were collected monthly for the trailing year March 2022 through March 2023. Trailing year data includes all visits for one year prior to the stated month. The intervention began in July and was conducted to the best of my ability with every patient I saw, therefore TY March thru June 2022 represents pre-intervention while TY July 2022 thru March 2023 incorporates the effects of active scheduling management.

ANALYSIS AND INTERPRETATION: Changes in continuity of care, no show rate, and the quality measures (A1C >9 or untested, blood pressure control, colorectal cancer screening, and cervical cancer screening) are represented in figures 1 thru 6 below. Arrows on each graph show the timing of the start of the intervention.

There was a clear improvement in my continuity of care with patients improving from my patients seeing me 61% of the time to 84% of the time over this period (Figure 1). At the time of the intervention beginning the continuity rate rose from 67% to 78% and then continued to rise throughout the year which feels likely related to this intervention. With

active scheduling management my continuity rate mirrored that of the non-resident PHC providers. Of note, my fellow R3s also saw a rise in continuity of care at a slower rate over the same time period which may be partially attributed to increased time in the clinic and increased experience with the system. I also think that shortly after I adopted this system and advertised how much I liked it, multiple other residents started to self-schedule as well including at least 2 of my fellow R3s and so this may also contribute.

My no show rate did not show substantial change during the period of the intervention though did fluctuate between 10% and 12% during this time (Figure 2). It appeared that immediately after I started active scheduling management the no show rate rose from 10 to 12% and this may be because patients who would not have scheduled follow up were scheduled without intention to come to another visit. It is also possible that this is just due to normal fluctuation.

In terms of quality improvement, there were clear improvements with diabetes management (figure 3) and blood pressure management (figure 4). This makes sense as good visit-to-visit follow up can make a big difference in these contexts since the impact of interventions can be seen every 3 months for diabetes and weekly or monthly for high blood pressure. For diabetes, my patients' diabetic control improved from 50% before the intervention in July 2022 to 30% by March 2023 which is on par with the other R3s and PHC providers. For hypertension, the percent of patients with normal blood pressure improved from 51% July 2022 to 65% by March 2023 which surpassed that for the other R3s and the PHC providers.

There was no clear improvement in the two cancer screening metrics, colorectal cancer (figure 5) and cervical cancer (figure 6). This makes sense as these need to be done yearly to every 10 years for colorectal cancer and every 3 to 5 years for cervical cancer screening and so it would be less likely to see change over the course of months to a year.

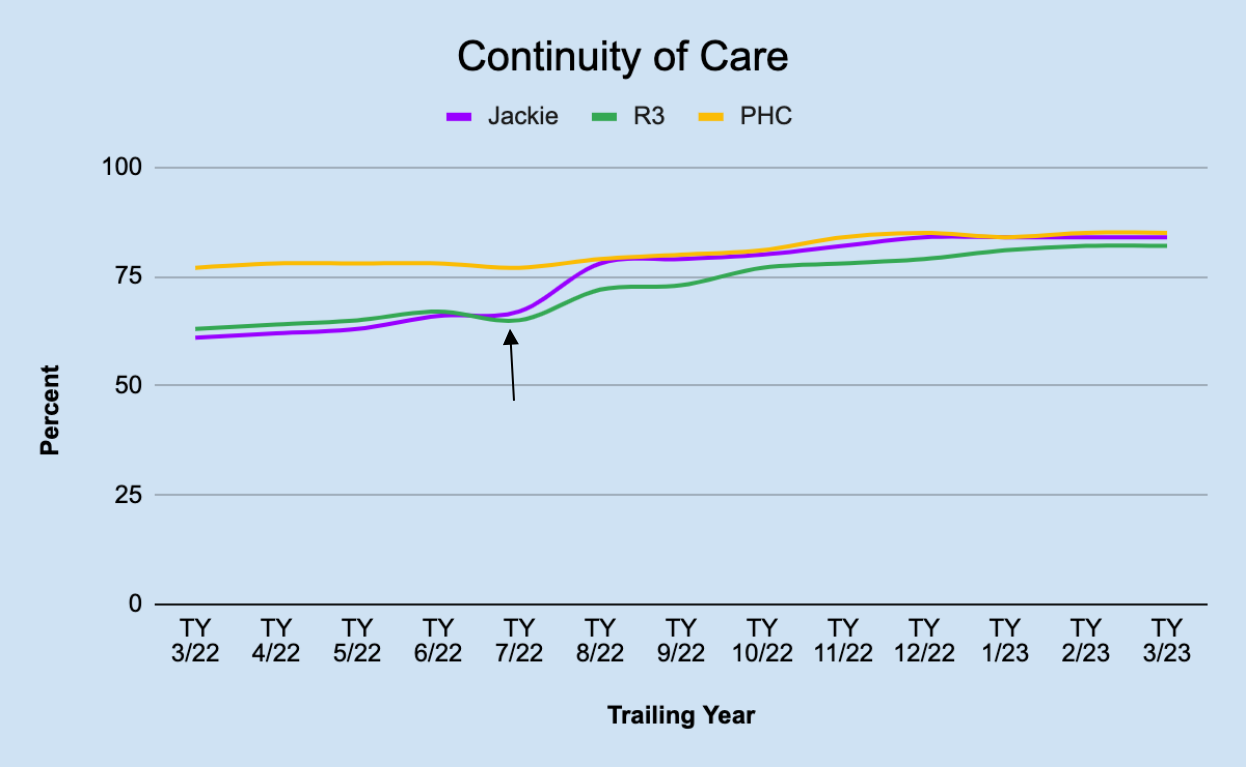


Figure 1. Percent of the time that my patients saw me for visits in the period from trailing year 3/22 to 3/23.

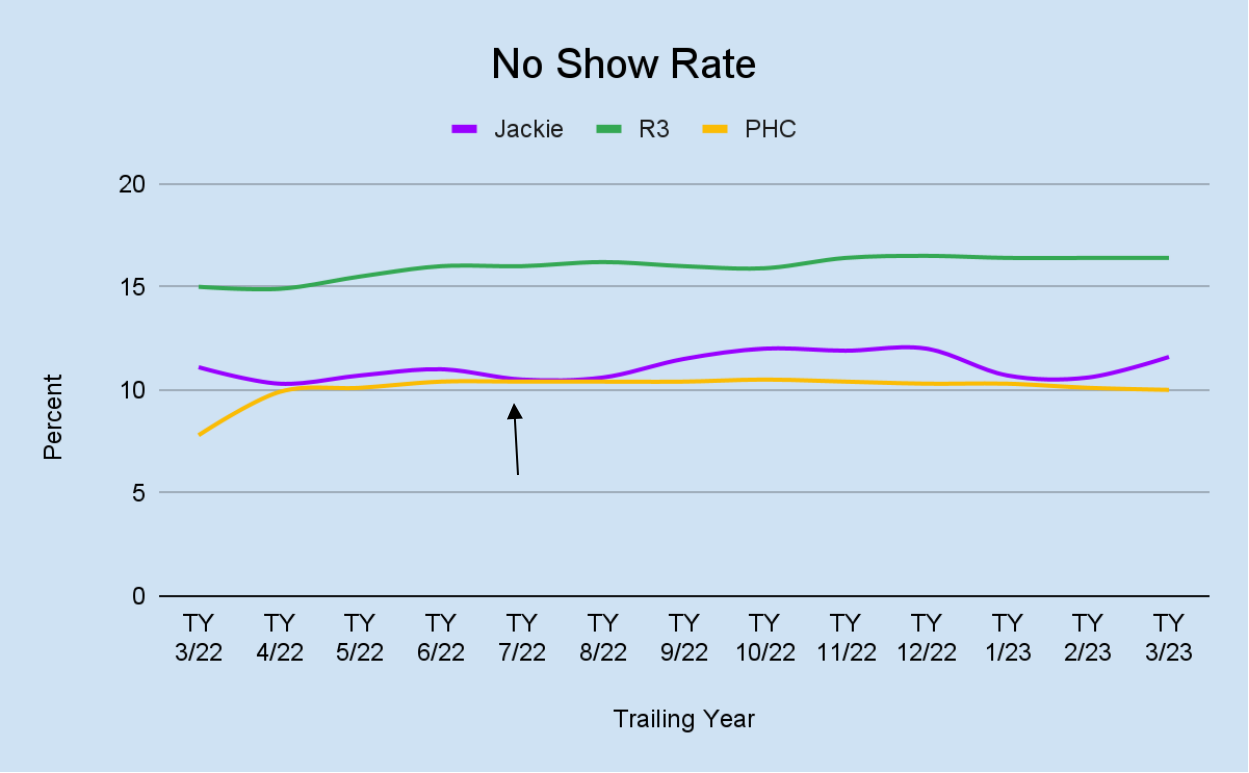


Figure 2. Percent no show visits over the period from trailing year 3/22 to 3/23.

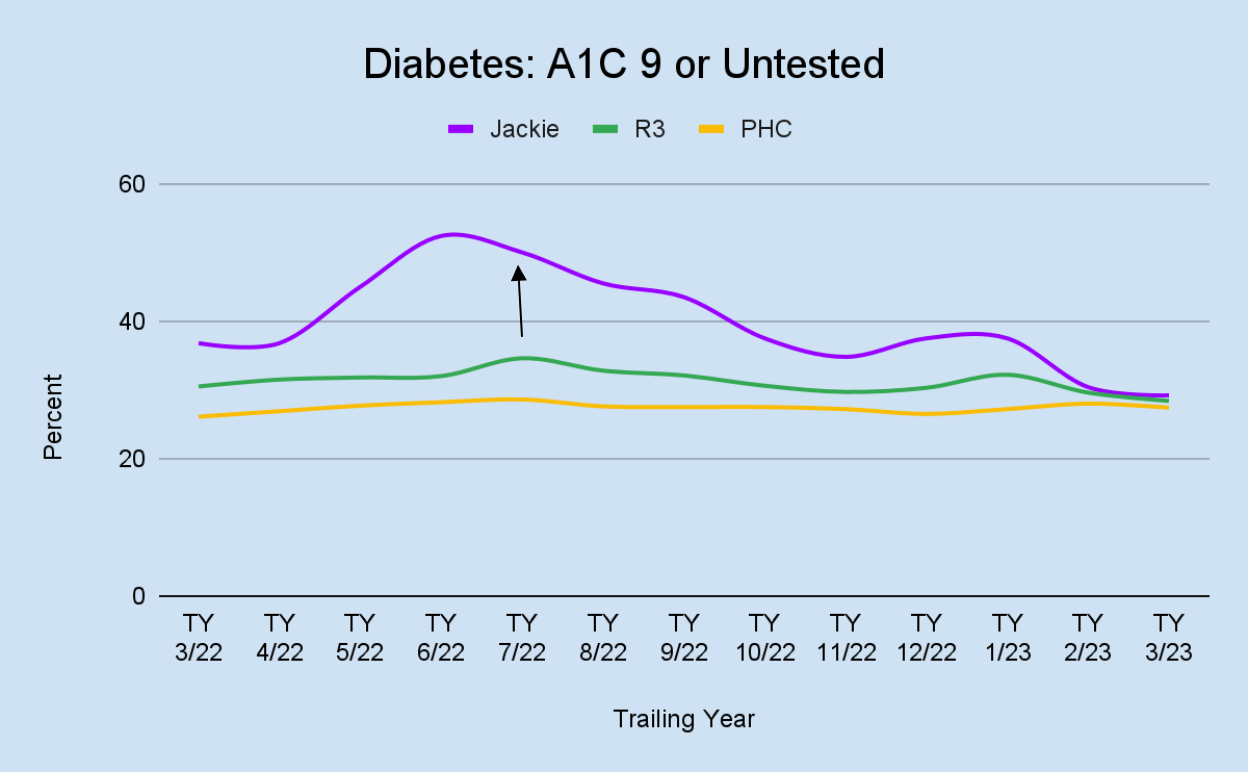


Figure 3. Percent of my assigned diabetic patients with A1C greater than 9 or untested over the period from trailing year 3/22 to 3/23.

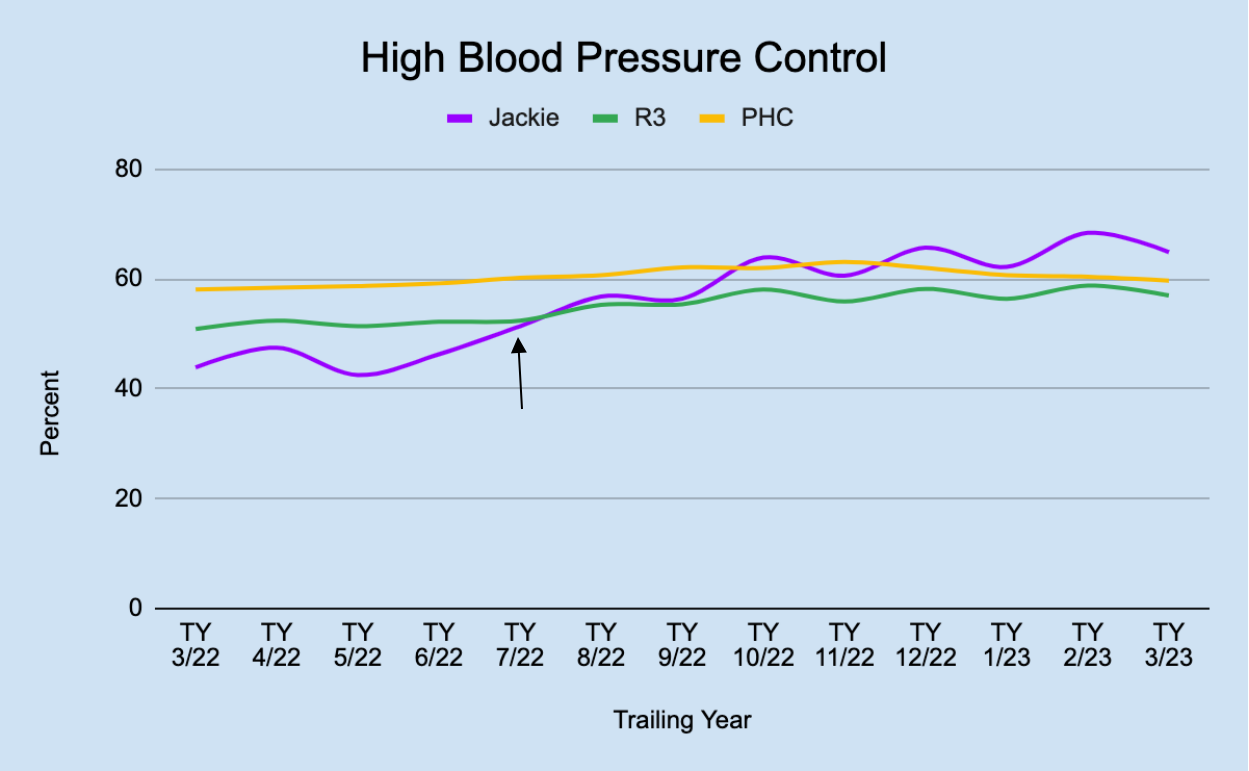


Figure 4. Percent of my patients with blood pressure at goal (<140/90) at their most recent appointment during the period from 3/22 to 3/23.

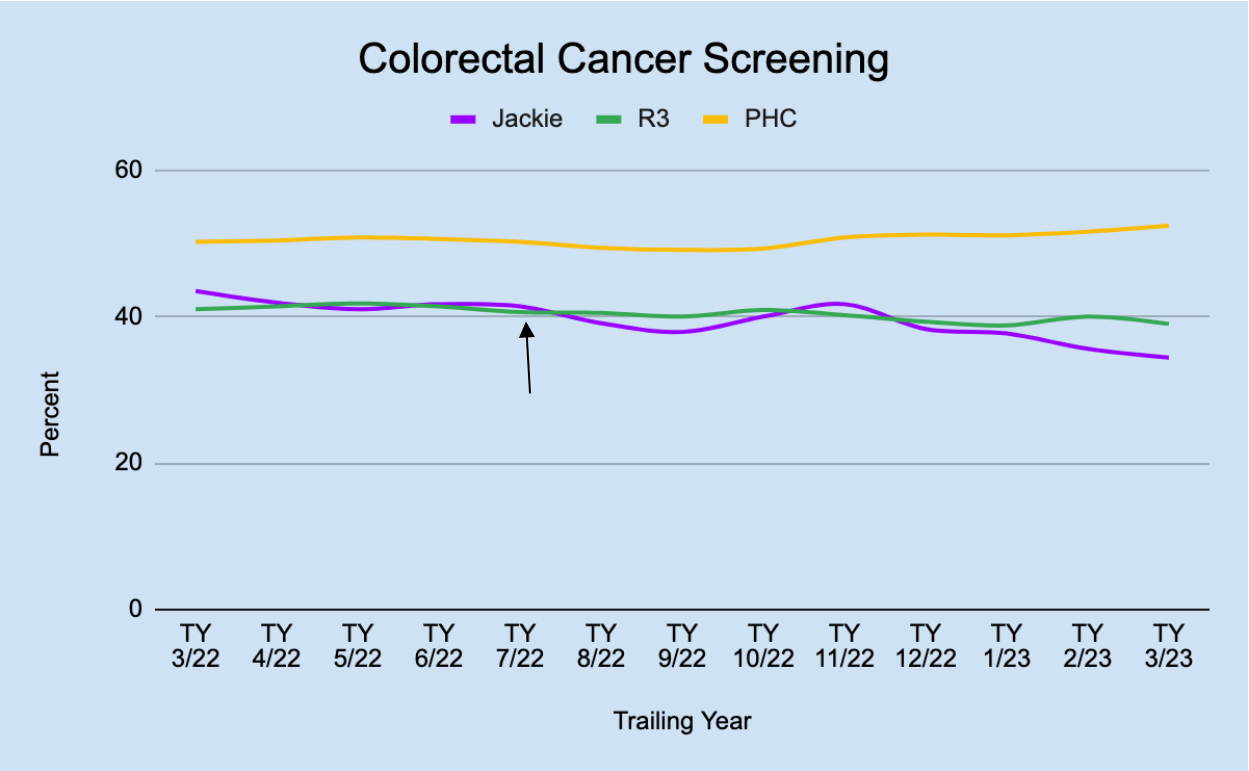


Figure 5. Percent of my patients over age 45 who are up to date on colorectal cancer screening between the trailing year 3/22 and 3/23.

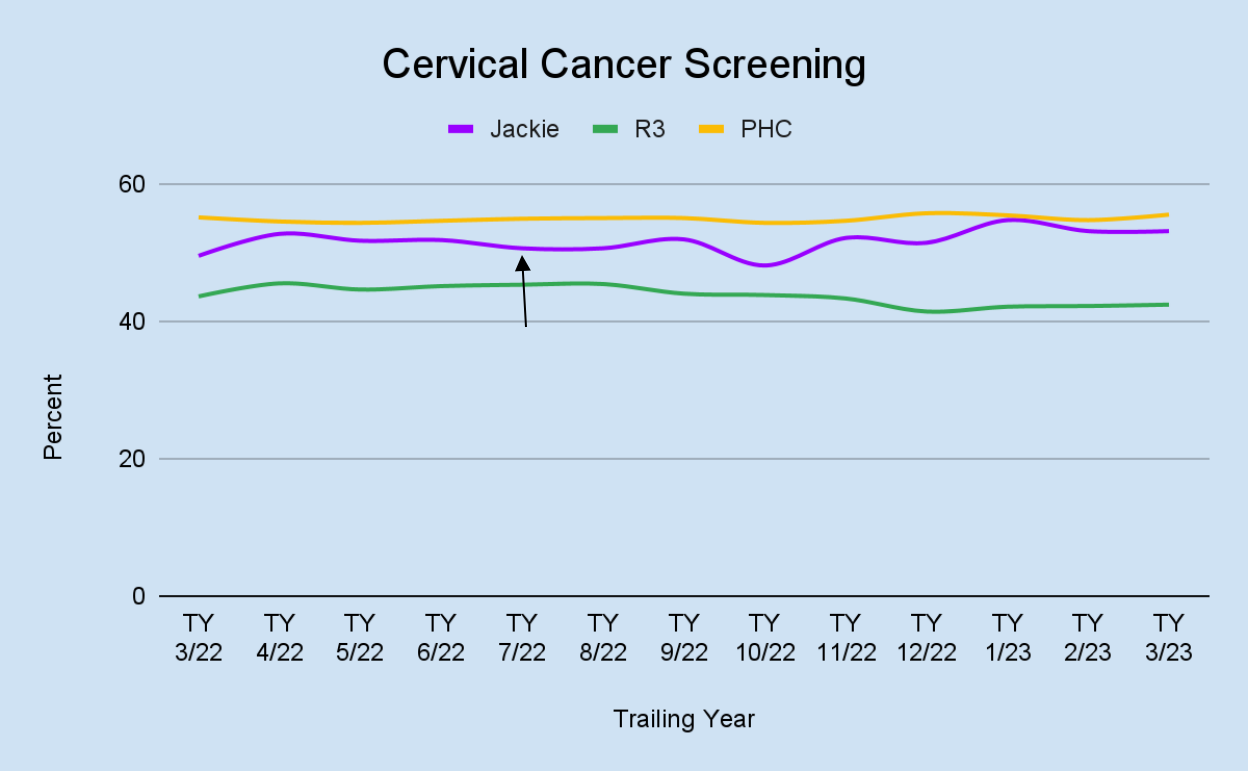


Figure 6. Percent of my female patients over age 21 who are up to date on cervical cancer screening between the trailing year 3/22 and 3/23.

Finally, I did look qualitatively at my satisfaction in clinic in June 2022 prior to beginning active scheduling management and then again in March 2023 afterwards. Below in table 1 are some of my notes before and after. Some of the improvements could have to do with my growth as a physician over this time including improved time management and medical knowledge. It could also have to do with having more time available in clinic due to decreased precepting requirements. However, I feel that I noticed a difference almost as soon as I started active scheduling management and so think that these changes are largely attributed to this.

BEFORE	AFTER
- Clinic schedule felt out of my hands - Was seeing lots of other people's patients or new patients in spaces where I could have been following up with my patients - Frequently being inappropriately double booked or booked in my huddle - Stressed in clinic	- In control of schedule and panel - More efficient - Visits more focused because agenda partially set at the last visit - Patients happy to schedule in the room with me - Less double booking and more appropriate double booking when it happens - Happy in clinic - Getting to know my patients better - Look forward to seeing patients - Notes done earlier

Table 1. Subjective assessment of my efficiency, connectedness to patients, and overall happiness in the clinic.

EFFECTS OF CHANGE: Active scheduling management had an overall positive effect on nearly all outcome measures. The biggest impacts were improved continuity of care and improvements in conditions that require regular follow up such as diabetes and hypertension. There was less improvement in no-show rate and annual screenings. There was also a very meaningful impact on my happiness and efficiency in the clinic. This is something that I will absolutely carry forward into practice.

LESSONS LEARNED:

1. Active scheduling management was easy to implement in the clinic, especially with help from my RN panel manager.
2. Efficiency was actually improved by taking time at the end of the visit to schedule the next visit because a preliminary agenda could be set for the upcoming visit.
3. Continuity with my patients was significantly improved by implementing active scheduling management.
4. Conditions such as diabetes and hypertension which require regular monitoring were most positively impacted.
5. Active schedule management was subjectively very positive for me and my patients.

QI PROJECT
Name: Stephen Reale, MD
Title: *Thinking Ahead: Increasing Advance Care Planning*

Problem:

- Nearly seven out of ten Americans say they would prefer to die at home (Kaiser Family Foundation (KFF) 2017) while, in reality, seven out of ten Americans die in a hospital, nursing home, or long term care facility (CDC 2005).
- Only one in nine Americans (11 percent) say they've ever had a serious conversation about their wishes for end-of-life medical care with a doctor or other health care provider, including 22 percent of those ages 65 and over (KFF 2017).
- The vast majority of Americans (92 percent) say they would be at least "somewhat comfortable" talking with a doctor or health care provider about their end-of-life medical wishes, including two-thirds who say they would be "very comfortable" doing so (KFF 2017).
- Advance care planning (ACP) is something I struggle to incorporate into my practice, primarily due to concerns about time.
- In my previous practice model, I had not discussed ACP once in the 2.5 years of practice prior to undertaking this project, despite it being an interest of mine.

Aim:

- Original (November 2022): Get ACP documents on file for at least 10% of my patients over age 65 before May 2023 through brief discussion and handing out documents at all annual wellness visits and scheduling one month follow up before the patient leaves the room.
- Revised (January 2023): Introduce the idea of ACP in at least 50% of my annual wellness visits for patients over age 18 before May 2023.

Key measures for improvement:

- Originally, the percentage of my patients over age 65 for whom an ACP document was on file at Partnership Health Center (PHC).
- Revised to percentage of visits with patients over age 18 with preventative or Medicare wellness billing code that also included billing code for ACP.

Process of gathering information:

- With the assistance of the PHC Quality Improvement team, I obtained a list of my patients over age 65 who have ACP documents on file.
- Subsequently, I obtained lists of the number of visits billed with preventative health (for patients over age 18) or Medicare wellness visit codes that did and did not have ACP codes billed at the same time.

Analysis and interpretation:

Table 1. Original baseline ACP information for trailing year November 2022

Number of my patients over age 65	Number of my patients over age 65 seen by me in the last year	Number of my patients over age 65 seen by me in the last year who had a dedicated preventative visit in the last year	Number of my patients over age 65 seen by me in the last year who indicated they have an ACP document	Number of my patients over age 65 seen by me in the last year who indicated they have an ACP document that PHC has on file
48	23	5	3	1

Table 2. Revised baseline ACP information for trailing year January 2023

Number of my patients over age 18	Number of my patients over age 18 seen by me in the last year	Number of my patients over age 18 seen by me in the last year who had a dedicated preventative visit in the last year	Number of my patients over age 18 seen by me in the last year who had a dedicated preventative visit in the last year that also included an ACP code
423	210	30	0

Table 3. Post-intervention ACP information for trailing year May 2023

Number of my patients over age 18	Number of my patients over age 18 seen by me in the last year	Number of my patients over age 18 seen by me in the last year who had a dedicated preventative visit in the last year	Number of my patients over age 18 seen by me in the last year who had a dedicated preventative visit in the last year that also included an ACP code
433	219	33	6

Strategies for change:

- Meeting with palliative care specialists to discuss effective information gathering strategies and deciding on what information was most useful
- Inclusion of an ACP item in my preventative visit template
- Having preprinted informational materials available to hand out at preventative visits

Effects of change:

- Discussion of ACP sufficient to warrant a billing code improved from 0% of preventative visits to 18%
- Percent of patients with ACP documents on file did not change (data not shown)

Lessons learned:

- Despite what statistics suggest, the vast majority of my patients were reluctant to talk about ACP and had a wide range of emotional reactions to the conversation, from apathy to anger.
- Having a conversation about this topic may be challenging, but getting wishes in writing is even more challenging.
- Patient acceptance of and engagement with this topic depends to a large degree on how the provider approaches it. The most effective approach for me was a gradual transition from supportive people in one's life to who might be a decision maker to having talked to that person or having thought about decisions and the existence of paperwork and then, if someone has not really thought about ACP, to values followed by distribution of educational handouts and scheduling a follow up appointment.
- Younger and healthier patients seemed more willing to have these conversations than older and more ill patients, perhaps because it was less threatening and more abstract.
- Sometimes, paperwork such as advance directives and POLST forms are not necessary, particularly if a person's wishes align with state legal defaults (i.e. spouse as decision maker and full code). In these instances, pressing for official documents to be completed had greater potential for harm to the physician-patient relationship than benefit to for clarity.
- With the infinite and unpredictable variety of emergency healthcare situations, it is far more helpful for both patients and doctors to have an excellent relationship and thorough understanding of the patient's values that can be flexibly applied to the unexpected emergency rather than a generic POLST that a patient may not actually want applied in a particular situation were they able to understand the options but are unable to do so.

QI PROJECT
Names: Rachael Schmidt, MD & Sienna Foxton, DO
Title: *TelePREP Pilot Program*

***Problem*:** There is limited accessibility in Montana for pre-exposure prophylaxis for HIV, particularly in rural areas. In addition, perceived stigma may act as a barrier for individuals to seek care. This leads to underutilization of this safe and effective medication.

AIM: In order to increase access to pre-exposure prophylaxis (PrEP) for HIV for residents of rural Montana, we will implement a telePrEP pilot program at Partnership Health Center (PHC) which would allow for the prescribing and monitoring of PrEP via telemedicine visits. We aim to provide telePrEP services for at least 5 residents of rural Montana before July 2023.

Key Measures for Improvement: Increased access to HIV pre-exposure prophylaxis by utilizing telehealth services for 3-6 residents of rural Montana by July 2023.

Process of Gathering Information: This project was adopted from Dr. Nick Zakovich, a 2022 graduate of the residency program. In the year prior he, along with faculty and PHC staff laid the groundwork for this project including securing funding for the project, establishing a patient outreach strategy, drafting a medication assistance workflow, and troubleshooting ways to schedule patients in a confidential manner.

Planning meetings were held roughly once per month and participants included faculty and residents from the Family Medicine Residency of Western Montana, staff from Partnership Health Center, and a consultant from Stanford Children's Hospital and the San Francisco Department of Public Health who had experience establishing programs like this in the past. These meetings were held to discuss the multiple moving parts required to implement a telemedicine based service including recruiting patients through public outreach, new-patient intake, scheduling logistics, funding for visits and lab testing, procurement of the regular labs required for safe PrEP administration, and ensuring safe follow up for all patients engaged in the program.

Analysis and Interpretation: One tele-PrEP patient who established with Dr. Schmidt

Effects of Change: This year, we worked to fine tune the logistics of scheduling patients, drafted templates for these visits to ensure timely and efficient documentation and follow up, and with the valuable contributions from PHC staff established workflows and strategies for sending and receiving labs to various laboratories around rural Montana. We were able to launch the pilot program in the winter of 2022 and enroll the first patient in the program in early 2023.

We ultimately only had one patient enroll during this initial pilot program and due to unforeseen circumstances the patient discontinued our services before subsequent follow up was obtained.

Lessons Learned: Overall, this project faced a lot of different challenges that prevented us from meeting our goal. It is extremely difficult to implement a new program in an organization as large as PHC, especially with multiple different groups in different states and time zones. Most of the planning meetings involved talking through details that were not foreseen during the initial project proposal including how to order and collect labs remotely, who would be in charge of following up on remote labs, insurance coverage of services, and how to keep information confidential, especially for minors. Given that these patients will be in remote locations throughout the state of Montana, they will likely be using multiple different labs and possibly the service of a mail order lab, such as Molecular Labs. It was felt that there needed to be a nurse care manager position to request lab results from many different labs throughout the state, follow up on lab results, and triage patients.

Additionally, we were limited by various aspects of the EHR used at PHC as well as the online scheduling platform. Our facilitator felt that it was important for patients to be able to schedule appointments online to reduce barriers to making appointments, but at PHC we do not have the capacity for new patients to schedule appointments online. This forced us to create a complicated workflow that depended on one specific team member to complete a variety of tasks prior to setting up the initial patient visit. It would be better if we could have come up with a plan that did not rely so heavily on one team member.

Third, there are financial hurdles that a project of this scale presents. The first grant was written by the program manager, but with the anticipated expiration of said funding, efforts will need to be continued to ensure this service can be offered. In addition, finances will need to be set aside for marketing/advertising to recruit patients as recruitment was minimal through this pilot process. Lastly, there is an acknowledgement that telehealth visits are not compensated as much as in-person visits. This can produce some difficulties in the future when considering this program's feasibility long-term.

Though our project did not meet its goal, we did learn a lot through this process. We learned about the difficulties of creating a new workflow at a large organization with many different stakeholders. We learned about preexisting options for mail in labs through companies as well as ways to troubleshoot long-distance patient treatment and lab monitoring. This project highlights the importance of implementing pilot programs – especially when the coverage area is as large as the state of Montana. The time needed to track down labs, ensure they are faxed to the correct facility, and ensure patient follow up was much more extensive than originally anticipated. Our first patient ended up being a fairly complicated case – and even though they ultimately ended our services it was involved and required troubleshooting throughout. In addition, given the limited enrollment of patients in this program, the outreach strategy could be broadened to capture a broader patient base. Although our project was not completely successful, we will be able to apply the skills and experiences we gathered during this project to future projects.

QI PROJECT
Name: Melanie Scott, DO
Title: *Increasing cervical cancer screening with reminders*

Problem: There is not a standardized way to let patients know that they are due for cancer screenings. Typically, they have to come in for an appointment and then we let them know that they are due for screening tests. I wanted to evaluate another way to let patients know ahead of time to see if this would increase the number of patients that complete these screenings. For simplicity I used the pap smear for cervical cancer screening as my target. Per the NIH, only 73.5% of women aged 21-65 were up to date on their cervical cancer screening. Only 64.2% of women in this age range were < 200% of the federal poverty level. According to the CDC, Each year in the US, about 13,000 new cases of cervical cancer are diagnosed and about 4,000 women die of this cancer. Hispanic women have the highest rates of developing cervical cancer, and Black women have the highest rates of dying from cervical cancer.

AIM: Increase the number of my continuity patients that are up to date on cervical cancer screening by at least 30% by developing a script, calling patients directly, and scheduling them over 3 months.

Key Measure for Improvement: The percentage of patients who are up to date on cancer screenings – my goal is to increase the starting percentage by at least 30%.

Process for gathering information: I will use Azara DRVS, which is a data reporting and analytics program that our clinic uses to track various patient data including cancer screenings. I will run a report specifically on my patient panel to see the percentage of patients that are up to date. I will get a list of the patients who the system reports as not up to date. I will then look into each patient's chart to confirm that they are not up to date. I will then use a script and call the patients from this list. After the 3 month period, I will then pull the data from Azara DRVS to see the new percentage of patients that are up to date on cervical cancer screening.

Analysis and Interpretation: According to Azara DRVS, I had 103 patients that met criteria for cervical cancer screening. Of these 103, I removed anyone that was up to date (screening every 3 years from 21-29, every 5 for 30-65 if normal cytology, HPV negative). I also removed anyone with a history of hysterectomy (not for cancer). I also removed anyone who had self-reported an up to date pap smear from an external source in my previous encounters. I also removed anyone who was not actually my patient (I had never seen them, they had left the clinic, they had an appointment scheduled by the ER/hospital but no-showed). After this, I had 35 patients who met my criteria for receiving a phone call. I decided that I would start calling in February and my measuring period would run from March-May. Using this panel of patients, my starting cervical cancer screening rate was 66%. Looking at these 35 patients who received a phone call, 8 patients went on to have pap smears after this list was created. Of those 8 patients, 1 of them occurred during the data collecting phase. 7 of them updated their pap smear prior to this due to having an appointment with me and I discussed with them there. During this time period with 8 additional patients getting pap smears, this increased the cervical cancer screening rate up to 74%.

Effects of Change: Overall I don't think that my intervention was very successful. I was able to capture 1 person who got the phone call and then got a pap smear.

Lessons Learned: I think that this could be an effective tool to use to get more cancer screening. I think some of the challenges that I faced were that I had very limited clinic time during this window that I did not look at prior to starting this project. I also had several patients that were called that did not have voicemail boxes set up or that were full. I think that this was also too small of a period of time to test. I think another challenge of my particular patient panel was that several of these patients were unhoused and I am not even sure if we have their correct phone number. I think overall the number of patients in my panel that are up to date for cervical cancer screenings is on track with the national averages (from 2019, pre-covid). I would be curious to know the during COVID numbers since many people were not going to preventative visits during that time. I do think that further investigation to figure out how to capture more

people for their cancer screenings is needed. I think some kind of notification system would increase this – I am not sure the best way to do this though. Online notification may be helpful, but not everyone uses the online portal. Phone calls can be helpful, but again not everyone keeps the same number or keeps voicemail accessible. A mailed reminder may work, but addresses change. During this study, I did see the impact that talking with patients about the pap smear had. Of the 35 patients that were due, I saw 10 of them in clinic. 7 that I talked with about this scheduled and received pap smears. I think that this highlights the importance of discussing cancer screenings with patients.

QI PROJECT
Name: Taylor Simmons, MD
Title: *Kalispell Longitudinal Surgical OB Experience*

PROBLEM: An excess of vaginal and C-section deliveries occur without resident involvement at Logan Health in Kalispell. The volume of deliveries fluctuates significantly and may not be high when a resident is on their two week OB rotation. For residents interested in surgical OB, a higher volume of C-sections are needed to gain the necessary skills in preparation for fellowship or practice.

AIM: The purpose of this experiment is to give residents who are interested in surgical obstetrics the opportunity to gain more experience by participating in scheduled C-sections outside of their dedicated OB rotation. Success of the experiment will be determined by added volume of C-sections numbers gained.

Timeline: Experiment started 3/2022 and continued through 5/2023

KEY MEASURES FOR IMPROVEMENT: Measures of success will be documented by recording the additional number of C-sections as well as the additional contact with community OB/GYNs.

PROCESS OF DATA GATHERING: C-sections gained outside of regular OB rotations were recorded as well as additional experiences offered by the community OB/GYNs.

DATA ANALYSIS: I performed or assisted on five extra C-sections during this timeline. I was offered to participate in ECVs and induction of labor.

DATA INTERPRETATION: Some of the C-sections obtained outside of OB rotations required rearranging my clinical schedule to accommodate the experience. Some were able to be completed without needing to be excused from other clinical duties, as they were after hours or on weekends. There were many times I was called to assist but could not be excused to participate.

EFFECTS OF CHANGE: The volume of C-sections obtained through this experiment was not high. However, it did have a significantly positive effect on my relationship with the OBs. It showed willingness to put in extra time and did seem to make them more amenable to letting me do the entirety or majority of the C-section. They would also call to see if I was available to help with other procedures like ECVs or an induction of labor. I became the point of contact for any resident assistance needed and helped arrange C-section assists if I wasn't available.

STRATEGIES FOR CHANGE: Keys for success include making sure to look at your schedule far enough in advance and make sure it is clear with the OB/GYN providers when you are available to help with scheduled C-sections or when you are willing to be on call for non-scheduled C-sections.

LIMITATIONS: There were limited times when I was on a rotation where my schedule allowed me to be present at scheduled or unscheduled C-sections. This is also in the context of the fact that the majority of the year, there is another resident already on the L&D floor expected to participate in C-sections. The availability of the interested resident is also limited by the need to be in continuity clinic consistently and meet clinic patient encounter numbers.

LESSONS LEARNED AND NEXT STEPS: It was challenging to balance the variability in when C-sections would occur with the demands of other rotations and whether I would be available or not. The volume I obtained in the experiment was not significant, but I think it was worth the effort if at least to increase rapport with our community OBs and emphasize interest in surgical OB. For OB interested residents, I would encourage them to continue this experiment to see how we can maximize numbers and be involved in as many deliveries as possible in Kalispell.

QI PROJECT
Name: Taylor Simmons, MD
Title: Diabetes Management Templates for GVHC

PROBLEM: There is currently no standardized, readily available template for diabetes visits at Greater Valley Health Center (GVHC). For chronic diseases like diabetes that affects a multitude of organ systems, there are standard screening expectations. It can be hard to remember them or keep track of management during diabetes visits. Part of the goal of documentation is to effectively communicate information to colleagues as well as remind yourself what needs to be done at the next visit, but without a standard process of documentation, information can be lost or difficult to find.

AIM: Standardize documentation for diabetes visits by creating a template in eCW for Greater Valley Health Center. Use surveys given to providers before and after implementation to measure how often they are documenting all pertinent diabetes screening information.

Timeline:

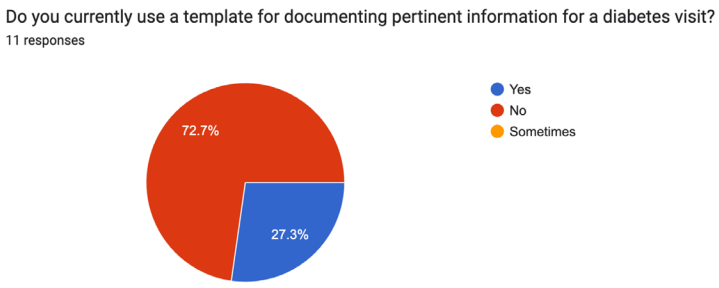
- Pre-surveys sent out: 11/16/22
- Pre-surveys collected 12/1/22
- Templates created and distributed by 12/11/22
- Templates used 12/11/22 - 3/1/23
- Post-surveys sent out: 3/1/23
- Post-surveys collected: 4/15/23
- QI write up due 5/26/23
- Activity showcase 6/14/23

KEY MEASURES FOR IMPROVEMENT: Success of the project will be determined by provider surveys to measure how often providers are documenting all pertinent diabetes screening information as well as satisfaction with the templates and perception of improved communication between providers.

PROCESS OF DATA GATHERING: The pre-surveys were obtained from all providers at GVHC. Google Forms was utilized for the surveys. Then the template was created in a test patient encounter, and the providers were notified via email when it was available. The providers had over three months of template use prior to taking the post-survey.

DATA ANALYSIS:

<u>PRE-SURVEY:</u>



If yes, who made the current template? And what do you think of it? If sometimes, what dictates if you use it or not?

3 responses

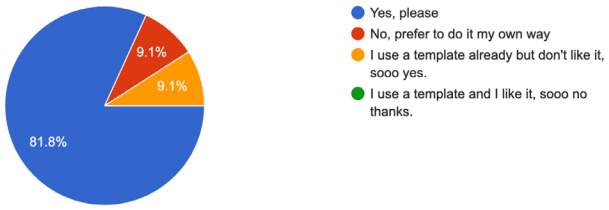
Myself and it's just for phrases so I would love to have a different template that fills more things out

I made it, could be improved

myself

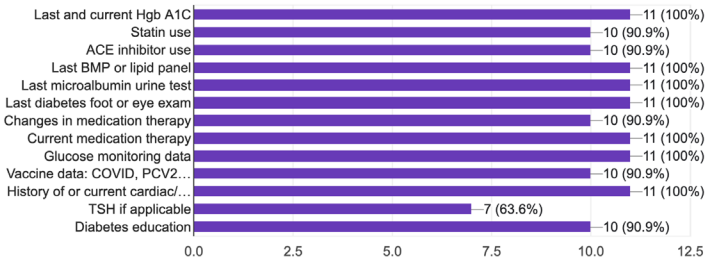
If you don't use a diabetes template, do you wish there was a user friendly one available for ease of documentation?

11 responses



Select all that apply for pertinent diabetes related information:

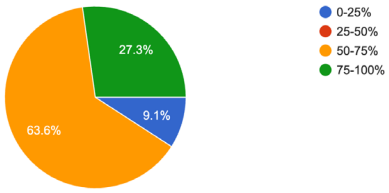
11 responses



Diabetes pertinent information includes last and current Hgb A1C, statin use, ACE-i use, last BMP/TSH/lipid panel, last microalbumin, last foot/eye exam, changes in medication therapy, current medication therapy, glucose monitoring data, vaccine status, complications of diabetes, and diabetes education need.

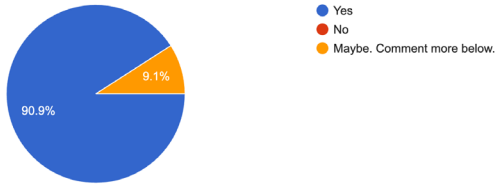
How often do you estimate you are documenting all pertinent diabetes related information at each visit?

11 responses



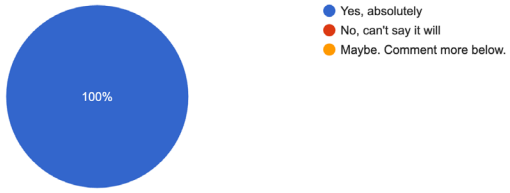
Do you think the creation of a template will help you keep track of standard management of diabetes?

11 responses



Do you think standardizing a template will help with finding information as well as effective communication between providers?

11 responses



What things are most important to you when thinking about creation of a diabetes template?

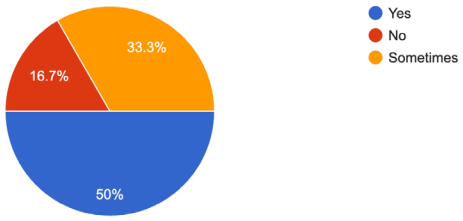
11 responses

- Helping keep track of labs/medications and A1C progress
- Comprehensiveness
- Convenience and all pertinent information available.
- clear organization, not too wordy, easy to find what looking for by skimming
- If patient is due for eye exam, foot exam, on statin, etc.
- The important things are all listed above. In addition, it would be helpful to have a section for previous medications (for example, "tried metformin ER 500 mg BID but could not tolerate GI side effects," etc).
- Efficiency, not missing things
- Ease of use and obtaining all pertinent info for 3 month followup visits
- I will easily find relevant information and as a guide to recalling all questions/ issues

POST-SURVEYS:

Are you using the new template titled "DM TEMPLATE 2022"?

6 responses



If no, why not? If sometimes, what dictates if you do/don't?

3 responses

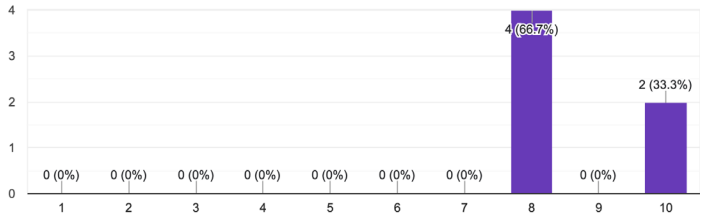
I don't feel that it saves me time based on my own documentation workflow

I have one I had previously made, and I sometimes just forget!

i forgot about it. I am so sorry.

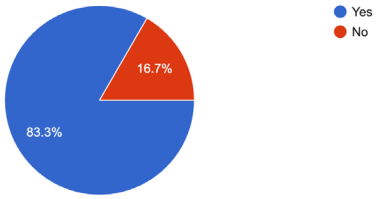
Scale of 1-10, how user friendly is the new template?

6 responses



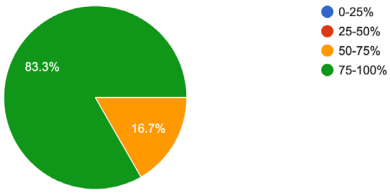
Do you think the template includes all pertinent diabetes information?

6 responses



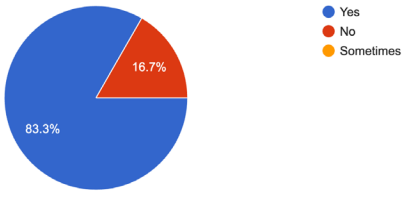
If using the template, how often do you estimate you are NOW documenting all pertinent diabetes information?

6 responses



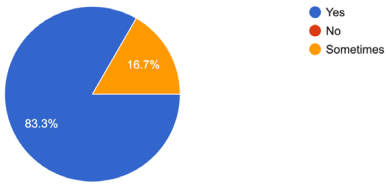
Do you think the template has helped you keep track of standard diabetes management?

6 responses



Do you think the template has facilitated effective communication between providers regarding diabetes management?

6 responses



What would you change about the template?

6 responses

- Just adding something about last eye exam
- Automatically pulling forward prior labs
- Nothing
- Nothing!
- nothing. It was great when i used it.
- Would be great (although extra) to have a section for barriers to blood sugar control (like declines to see DM education, can't get approved for CGM and too busy to check sugars 4x/day, other medical condition prevents exercise, low health literacy makes it hard to engage about connection between diet and sugars, etc etc).

Other comments:

4 responses

- Template has been really helpful thanks for taking the time to create it!
- I think using it might change how I document more in A/P than HPI. I have generally been happy with how I currently document though which is why I haven't used it
- i liked it when i used it and will start using again. Thank you so much. Susie
- I'm not sure if it's facilitated effective communication between provider re: DM management because I've only used it for my patients who follow with me and I don't think I've seen others' patients who have used the template yet.

DATA INTERPRETATION: Only three out of eleven providers were using a template for diabetes visits prior to creation of this new template. Unanimously everyone wanted a user friendly template to improve communication between providers. The majority estimated they were documenting all pertinent information 50-75% of the time, with 9% saying only 0-25% of the time. Important aspects of a template per the participants included keeping track of labs and screening measures, ease of use, and comprehensiveness. Over 83% of providers were using the new diabetes template after creation either all the time or part of the time. It was rated as 80-100% user friendly and the vast majority thought it included all pertinent information. After implementation, providers felt they were documenting all pertinent information 50-75% (majority) of the time or 75-100% of the time (minority). Over 83% of providers felt it helped facilitate communication and helped them keep track of standard diabetes management.

EFFECTS OF CHANGE: Overall, the majority of providers felt the template was user friendly, included all diabetes pertinent information, helped improve communication between providers, and assisted in tracking diabetes related information.

STRATEGIES FOR CHANGE: It was important to remind providers on how to find the template and to add it to their favorites in order to get them to use them regularly. Some providers already had templates they were using or said this template didn’t work for their workflow. I sent out multiple emails to encourage participation in the survey process.

LIMITATIONS: Only six of twelve responded to the post-survey, whereas eleven of twelve providers responded to the pre-survey. This limited the post-survey data and could mean it does not necessarily represent the whole of provider opinions. One of the downsides of this particular template in eCW is that it does not easily pull forward information from prior visits. It is most useful for a new diabetes visit, and then with future encounters with the same patient, it is easier to pull forward your prior note that included the new template with the data already collected.

LESSONS LEARNED AND NEXT STEPS: Through this process, I learned about the process of template creation, the value of provider input and feedback, and the utility of well constructed templates to improve provider communication. A future QI project could consider making further adjustments of the template with incorporation of feedback received on surveys from after implementation, including trying to pull in lab data from the EMR or carry forward information automatically from one note to the next.

QI PROJECT

Names: Barb Steward, DO & M. Bryce Roberts, DO

Title: *Home Visits to Improve Healthcare Access*

PROBLEM: Many patients suffer not only from healthcare related conditions but also socioeconomic conditions prohibiting them from accessing adequate healthcare. These conditions include lack transportation, lack of adequate DME (i.e. wheelchairs, walkers, supplemental oxygen), lack of financial resources to purchase medications or other treatments, etc.. This project sought to assess whether house calls really improve access to healthcare for patients who suffer from these conditions. Inability to access to healthcare was defined as patients who are unable to see a physician in the clinic for any reason including lack of transportation and/or a medical/physical inability to leave their home.

AIM: To improve access to healthcare through home visits

TIMELINE: December 2022 to May 2023

METHODS: Patients who were identified as unable to access healthcare were offered home visits. These visits were conducted by a resident and MA. After the visit, the patients were given a survey asking the following 5 "yes or no" questions:

1. Is it difficult for you to see a doctor in the clinic?
2. Do you think you would see a doctor more frequently if they offered house calls?
3. Do you feel that house calls have improved your access to a doctor?
4. Do you feel that house calls have improved your overall health?
5. Did you find this home visit a valuable experience?

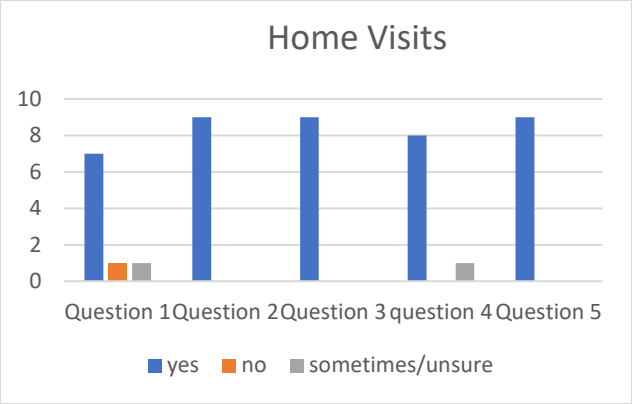
After the visit, the Resident Physicians completed a short "yes or no" survey as below:

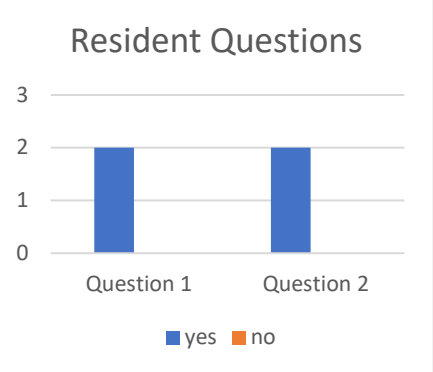
1. After your home visit, do you feel you have a better understanding of barriers affecting your patient's health?
2. Do you feel offering home visits allows better access to healthcare for your patients?

KEY MEASURES FOR IMPROVEMENT: Percentage of patients who answered "Yes" to any of the aforementioned questions.

PROCESS OF GATHERING INFORMATION: Doctors, nurses, and medical assistants identified patients with an inability to access healthcare for any reason and referred them to the home visit program. These patients were then called and offered healthcare via a home visit. The patients that elected to be part of the program were then scheduled for a home visit. After the home visit was completed, they were given the post visit survey. The results of each survey were compiled and evaluated.

ANALYSIS AND EVALUATION: 9 home visits were conducted over 6 months by physicians from Greater Valley Health Center (GVHC). The responses to the patient and resident survey questions are charted below:





Based on the above results, most patients 78% (7/9) indicated that seeing a doctor in the clinic was difficult for them, one patient responded it wasn't difficult for them, and another responded that it was sometimes difficult for them. 100% of patients indicated that home visits improved their access to healthcare. All nine patients reported that they would see a doctor more frequently if home visits were offered, and 8/9 stated that the home visit improved their overall health while one patient responded, "I haven't ever been this unhealthy, so, I don't know." All patients stated that the home visit was a valuable experience. Both resident physicians were also noted to answer "yes" to both questions on the post visit survey for every visit.

BARRIERS TO SUCCESS: Scheduling arrangements were the largest barrier to program implementation as most of the visits required 40 minutes to 1 hour of visit time combined with 30 minutes to 1 hour of travel time. This difficulty in scheduling was so severe in one patient's case that they ultimately required EMS transport to the ED and ultimately passed away, an event which may have been prevented if a home visit could have been coordinated sooner.

EFFECTS OF CHANGE: As a result of this project, we were able to increase healthcare access for a few of our homebound patients.

LESSONS LEARNED: This was a small study, but arguably had a significant impact for our homebound patients. It should be noted that the results of this study were biased towards patients that elected to have a home visit and thus likely had a favorable view of home visits prior to enrolling in the study. Implementing a home visit program could be an effective strategy for improving access to care for a vulnerable patient population that lacks the ability or means to receive care in an office setting.

Class of 2024

MISSOULA

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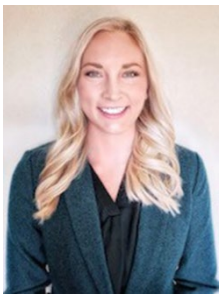
Rebecca Sharar MD

Kara Francis MD

Cecilia Weeks MD

Alec Kerins MD

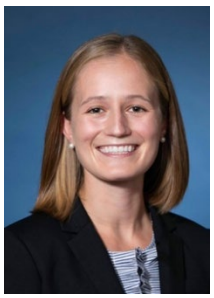
KALISPELL



Sarah Davis DO

Travis Kinane DO

Emilie McIntyre MD



Jennifer Selland MD

Bryce Roberts DO

Class of 2024 QI Work

QI PROJECT

Name: Sarah Davis, DO

Title: *Key concepts to Quality Care for patients with intellectual and developmental disabilities (IDD)*

PROBLEM: There is limited dedicated education/training provided across many medical specialties on caring for individuals with IDD. This can often lead to lack of confidence amongst staff and providers in their own abilities to care for these individuals and in turn can lead to decreased quality of care.

AIM: To improve quality of care provided to patients with intellectual and developmental disabilities at GVHC.

KEY MEASURES FOR IMPROVEMENT: Overall improved staff/provider confidence level in caring for patients with IDD in order to improve the care we provide and introduction of attainable changes that can be made in clinic.

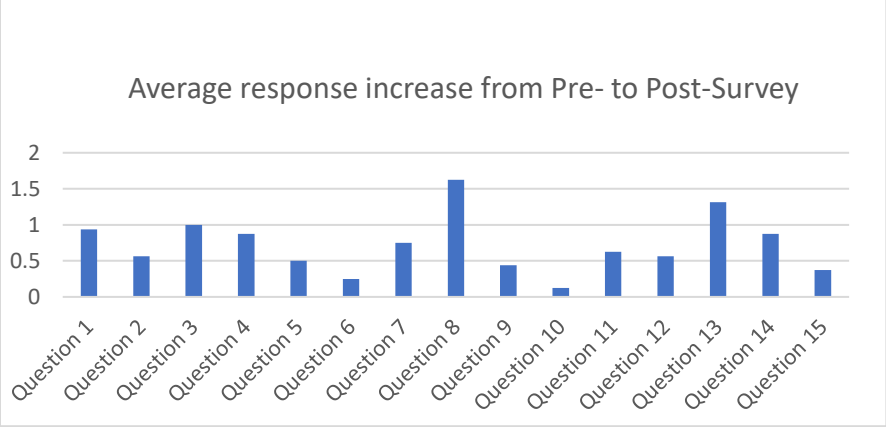
METHODS/PROCESS OF GATHERING INFORMATION: A power point presentation was given at GVHC All Staff Meeting on March 21st, 2023 on the "Keys to Quality Care" for patients with intellectual and developmental disabilities. A pre- and post- survey (using a Likert scale) was distributed to attendees to measure staff and provider's level of comfort and perceived competency when interacting with and caring for patients with intellectual disabilities both before the presentation and after.

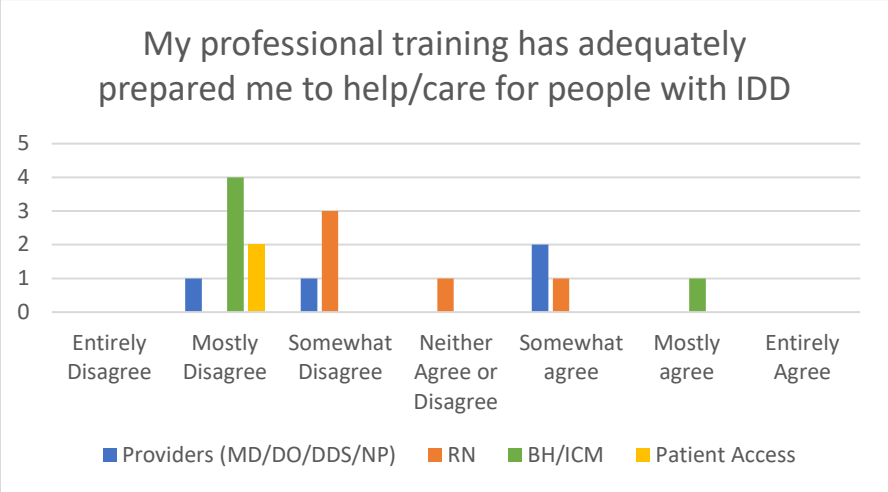
There were sixteen participants at the GVHC all staff meeting who attended the lecture AND filled out both the Pre- and Post- lecture surveys. Of the 16 individuals who participated, 4 were medical or dental providers (2 MD/DOs, 1 NP, 1 DDS), 5 were RN/LPN, 5 were behavioral health specialists and/or integrated care managers and 2 were Patient Health Info/Patient Access specialists, and the data was organized by splitting participant surveys into these four staff/provider categories. The surveys both had the exact same core 15 questions that were asked before and after. The pre-survey contained a few additional questions regarding more demographic information including: the participant's role/position at GVHC, training or credentials, and their previous personal experience with interacting with individuals with IDD (including having a family member, friend or acquaintance with IDD, prior volunteer or work experience, or little to no prior experience). The post-survey included few short answer questions at the end inquiring about most valuable thing learned from the presentation, what they would like to learn more about in the future, and barriers to potential improvements to care at our clinic in their opinion.

ANALYSIS AND EVALUATION: (Please see attached surveys to reference for questions)

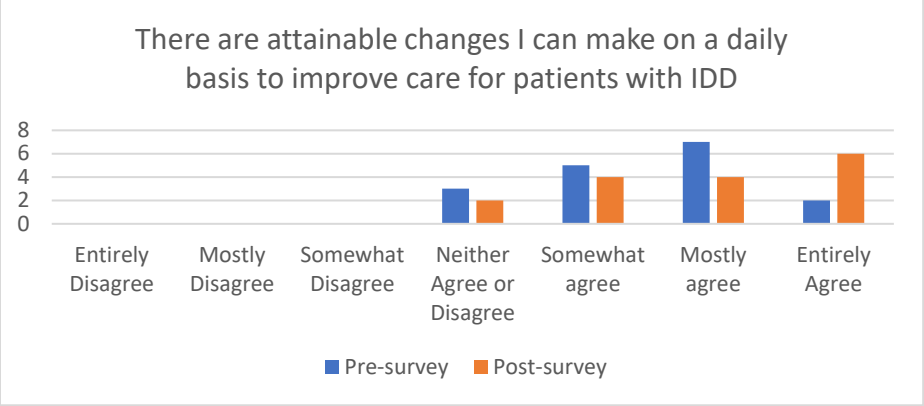
There were many ways the data could be interpreted, and provided excellent insight for future projects, however I chose to focus the evaluation to a few key aspects of the findings for the purposes of this project.

The graph below depicts the average change in responses prior to the presentation to after. A value of 1 represents an increase to the next response towards Entirely Agree on the Likert scale (for instance an increase of 1 may be from and overall average response from participants as "Somewhat agree" for a particular question" to an average of one response above, "Mostly agree" after the presentation). The response to several questions improved nearly 1 or more measures on the Likert scale after attending the presentation. The questions that appear to have had the most improvement after the presentation were question 8, 13 and 3, indicating that participants felt more comfortable about the physical accommodations some patients with IDD may require and how best to provide these, they felt more confident in their ability to avoid making assumptions about the abilities of patient with IDD, and they felt more confident in their overall ability to help/care for people with IDD when they come into clinic. The question with the least amount of change from Pre- to Post-survey response was question 10, which discusses the importance and need to pay attention to details such as affect, body language and behavior when assessing patients with IDD, but this was however because most everyone strongly agreed with this state before and after the presentation.





The graph above demonstrates the results for question 1, which asks if the participants prior training/education has prepared them to care for patients with IDD, that most participants somewhat/mostly disagree. This supports the original proposed problem and need for additional education and training in this domain. Those that mostly disagreed were among patient access specialists and behavioral health/ICM participants, amongst those who reported having more training were providers and nurses, though still few agreed.



The graph above demonstrates participants responses to question 15 prior to the presentation (in blue) and after the presentation (in orange). Overall post-survey responses were slightly improved indicating that participants may have learned things they can implement into their daily practices to help improve the clinic experience and care for these patients.

LESSONS LEARNED: There were many conclusions that were able to be drawn from the data, and will be helpful to guide future efforts, not all were able to be addressed here in this brief summary. Overall, the results support the original hypothesis that healthcare professionals often feel they have not received enough formal training in regard to caring for individuals with IDD. Many domains did show slight improvements after receiving the presentation, however this is just a limited exposure to topics that were able to be presented in a slideshow during a short verbal presentation, continued efforts must be made to make significant impact in improving the quality of care for these individuals. The short answer questions also demonstrated common themes in the most valuable things learned from the presentation included ways staff/providers can better prepare ahead of time for visits, more about assist and communication devices, and generalized awareness for the unique needs they might face. Common responses to what participants would like to learn more about included more resources that are available to these patients, practice guidelines such as screenings. The largest barriers they face are time and lack of exposure/experience working with this population.

STRATEGIES FOR CHANGE AND IDEAS FOR THE FUTURE: The following proposed strategies are ways I will focus efforts in the coming year:

- If there is staff interest, I will consider providing lunch time presentations on high yield topics regarding care for those with IDD.

- Can also consider preparing virtual/written resources to provide and send to staff, that way they are able to look through these when time permits rather than having to attend additional in person lectures

- Will help make staff aware of volunteer opportunities/community events to help gain familiarity with working with this population if interested.

- Continue discussions with administration and management about small attainable changes we can make in clinic to best serve this population

- Can consider an interactive event allowing self-advocates and families to teach and interact with us

QI PROJECT

Name: Kara Francis, MD

Title: *Increasing discussion of contraception among patients who are refugees*

PROBLEM: Missoula, like many cities across the country, has a growing number of residents who arrive as refugees. In 2022, the International Rescue Committee (IRC) resettled 159 people in Missoula[1]. The vast majority of these individuals receive their medical care at Partnership Health Center. As health care providers, this presents unique challenges and opportunities.

In my experience, the initial refugee exam visit is challenging, largely due to time contraints. This is compounded by a language barrier and use of the phone interpreter. As a result, the visit is often reduced to a few key items. Unfortunately, discussions of contraception are frequently overlooked until subsquent visits. In discussions, with Stefano Zamora, RN, the refugee program coordinator at Partnership, he reported that he often encounters patients who admit that, while they do not desire pregnancy in the near future, they have never discussed this with their care provider. In the past, items to discus in the new refugee visit are, to some extent, laid out by the refugee coordinators and put into the note template prior to the visit, but contraception was not included in this intake process. This represents a missed oportunity to further reproductive autonomy and health equity among a typically underserved population.

AIM STATEMENT: Increase documented discussions of contraception for all new refugee patients of child bearing age and with a uterus by 20% between January and April 2023. To accomplish this, I will work with our refugee coordinators to incorporate questions around family planning into their intake process and add a field to the visit templates to help remind providers to include the discussion.

KEY MEASUREMENTS FOR IMPROVEMENT: Pre- and post-intervention measurement of the percentage of refugee establish care visits in which there was a documented discussion of contraception. Including only patients of child bearing age and with a uterus.

PROCESSS OF GATHERING INFORMATION: Baseline data was gathered from a chart review of the past 2 years (2021-2022) of all new refugee visits. These were distilled to the inclusiong criteria: patients with a uterus and of child bering age. The chart for the first visit of each included patient was reviewed to see if a discussion of family planning occurred.

Starting in January 2023, the refugee coordination team added a field to all patients meeting inclusion criteria, to remind the provider to discuss contraception. All new refugee visits were again reviewed from January-April 2023 and the percentage of first visits that included a discussion of family planning was again calculated. This was compared to the baseline data.

ANALYSIS AND INTERPRETATION: As displayed in table 1, from 2021-2022, 110 patients who were newly arrived refugees were seen at Partnership for an intial visit. Of these, 28 patients met inclusion criteria. In the first visit for these individuals, contraception was discussed in 8 visits, or 29%. Most commonly, this discussion took some form of the commonly used language, “do you desire pregnancy in the next year.” If the response to this was no, a conversation of options for contraception would ensue. If yes, a conversation of pre-conception counseling often ensued. However, clearly, the majority of visits did not include any discussion of family planning. Although impossible to determine from chart review alone, I suspec the most likely reasons family planning discussions were not included were time constraints, the majority of visits included more than 3 problems discussed, and possibly the belief that there may be cutural taboos around contraception discussions. Of note, when individuals were asked about plans for future fertility, the majority stated they did not desire pregnancy in the near future and were either already using some form of contraception or would be interested in discussing contraception.

In the intervention period, the refugee coordination team included a reminder to dicuss contraception in the previsit planning section of the note for a new refugee visit. Although, at the start of this project the intent was to include an automatic contraception discussion section within the new refugee note template, this updated template has yet to be

released. Thus, the discussion reminder must still be free texted in to each visit. During this intervention period, a total of 2 patients met inclusion criteria. Both of these visits, or 100%, included a family planning discusssion.

Again, with chart review alone it is difficult to discern whether these discussions were triggered by the reminder in the pre-visit note section. Additionally, with a very small sample size in both the baseline group and the intervention group, this data is not statistically significant. Howver, I have since seen one new refugee patient, and did find the remindere helpful and was able to include a discussion of contraception in theis visit. Nevertheless

	Baseline Data- All new refugee patients 2021-2022		Study Period Data- Jan 2023- Apr 2023
TOTAL VISITS	110		4
MEET INCLUSION CRITERIA	28		2
CONTRACEPTION DISCUSSED	8		2
PERCENT	28.6%		100%

Table 1- outcome data comparing percent of new refugee patient visits in which contraception was discussed in the baseline period and the study period. Inclusion criteria: patients with a uterus and of childbearing age.

EFFECTS OF CHANGE: A limited number of patients who are refugees resulted in small sample sizes and thus limited data. The data from the study period does demonstraate a dramatic improvement in the number of new refugee visits in which contraception was discussed. However, with onle 2 patients included it the study period, no conclusions can be drawn at this time. I am hopeful that over time, the addition of a reminder to discuss cotraception will result in more patients captured in the first visit.

LESSONS LEARNED

- As a clinic, we frequently miss the opportunity to discuss family planning with new patients who are refugees. This is likely due to myriad reasons but I suspect time contraints and possible fears of cultural barriers are the primary deterents
- In putting together the modified new refugee visit template, I reviewed several resources that provide helpful information on contraception in numerous languages. One resource, from Reproductive Health National Training Center (RHNTC) was provided to our refugee coordination team in several languages common amongst our patients. And example, in Dari is shown below. We are attempting to provide links to this resource in the new refugee visit template

آله داخل رحم LNG IUD	۲ در ۱۰۰	داخل رحم گذاشته میشون	الی ۸ سال	قطره ای؛ اندک؛ نبود قاعدگی/عادت ماهوار	در جریان جابجا کردن ناراحت کننده میباشد	بدون استروجن؛ ممکن درد قاعدگی کاهش یابد
آله داخل رحم COPPER IUD	۸ در ۱۰۰		الی ۱۰ سال	ممکن سبب شدت و طولانی شدن قاعدگی شود		بدون هورمون؛ ممکن درد قاعدگی کاهش یابد
غرس	۵ در ۱۰۰	دربازوجابجا میگردد	الی ۳ سال	قطره ای؛ اندک؛ نبود عادت ماهوار		بدون استروجن؛ ممکن درد قاعدگی کاهش یابد

LNG IUD	.2 out of 100	Placed inside uterus	Up to 8 years	Spotting, lighter or no periods	Some discomfort with placement	No estrogen May reduce cramps
COPPER IUD	.8 out of 100		Up to 10 years	May cause heavier, longer periods		No hormones May cause cramps
IMPLANT	.05 out of 100	Placed in upper arm	Up to 3 years	Spotting, lighter or no periods		No estrogen May reduce cramps

Figure 1- Portion of a contraception guide from RHNTC in Dari with the English version for reference

- Change in a large organization, like Partnership Health Center, is slow. Designing and releasing a new refugee visit template takes numerous steps with different players involved. This does not occur in a matter of days, as I initially assumed. It is helpful to take this into account with any future interventions.

1. Serbin, B. A. (2022, November 15). *Missoula refugee resettlement on track for busiest year ever*. missoulian.com. https://missoulian.com/news/local/missoula-refugee-resettlement-on-track-for-busiest-year-ever/article_6f1d63ea-ffc2-59da-a223-93b30b6ffdb1.html

QI PROJECT

Name: Alec Kerins, MD

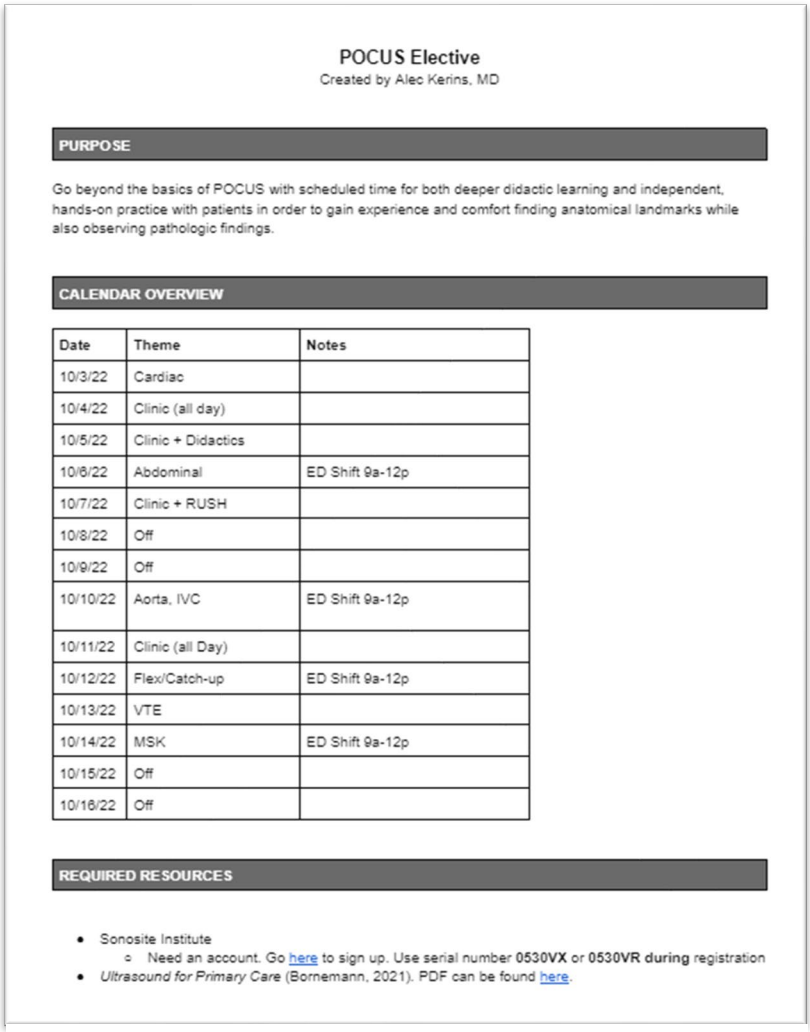
Title: *Increasing Opportunities to Learn and Practice Point of Care Ultrasound*

PROBLEM: The use of Point of Care Ultrasound (POCUS) has become a integral part of the evaluation and treatment of many conditions in the primary care setting. We are lucky at FMRWM to have ready access to ultrasound machines, but do not currently have a

AIM: Creating a competency-based POCUS elective that is easily adaptable to any resident interested in more practice with POCUS.

IMPROVEMENT MEASURE: Improvement was measured by successful creation and implementation of a POCUS elective.

PROCESS OF GATHERING INFORMATION (ie Planning and Implementing the Elective): Since this QI project has a curricular focus for improvement, the process of gathering information really entailed the planning and implementation of the elective. In planning the elective, I chose to focus on broad body systems one-at-a-time throughout the week. I made this decision in order to provide a lot of flexibility in specific scans I could work on during each system. During the 2-week time period, I planned to spend about half the time doing didactic learning through reading, online modules/videos and the other half practicing on individuals in the Emergency Room (Image 1). The didactic time was structured using various print and web-based resources (Image 2). Time spent scanning patients was done in the Emergency Room. Organizing this needed to be done weeks/months in advance, though I imagine it will become easier once more people take the POCUS course. The ideal plan was to practice the scans I had spent didactic time learning/reviewing the day prior, though this didn't always turn out to be the case. Scanning was often times dictated by the different pathology within the ED, though patients were very willing to be practice models for just about any scan I asked to complete.



POCUS Elective

Created by Alec Kerins, MD

PURPOSE

Go beyond the basics of POCUS with scheduled time for both deeper didactic learning and independent, hands-on practice with patients in order to gain experience and comfort finding anatomical landmarks while also observing pathologic findings.

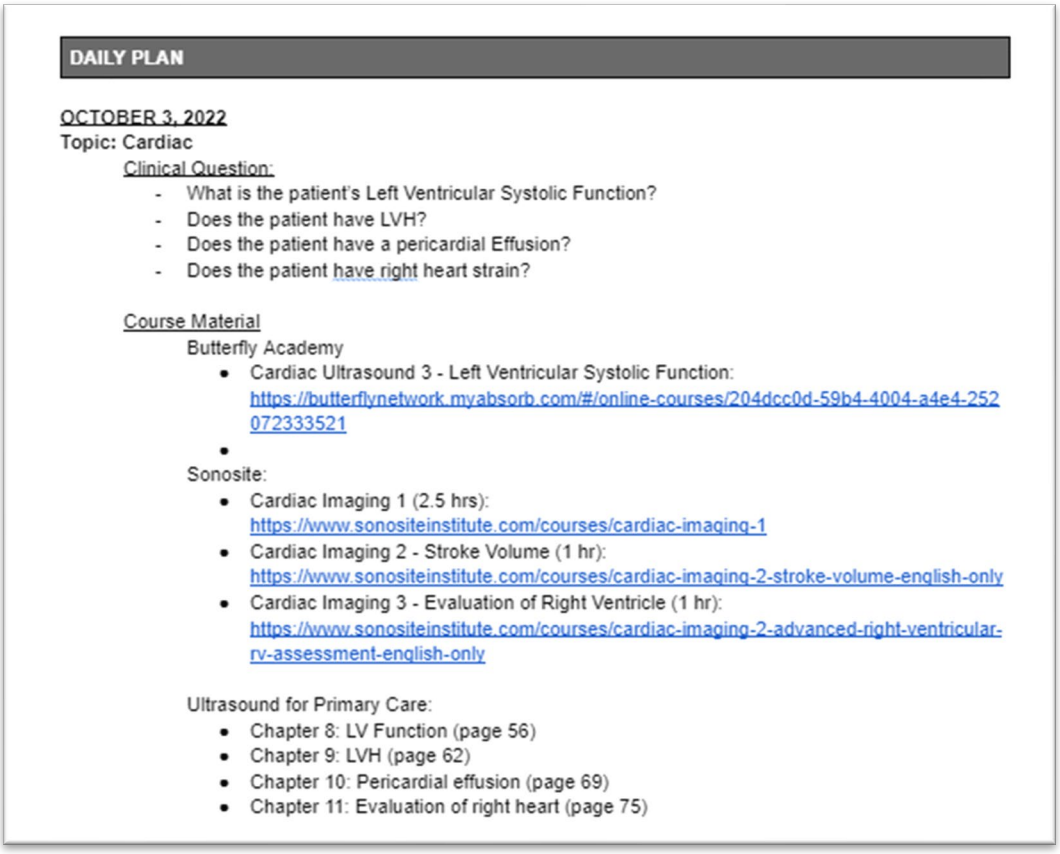
CALENDAR OVERVIEW

Date	Theme	Notes
10/3/22	Cardiac	
10/4/22	Clinic (all day)	
10/5/22	Clinic + Didactics	
10/6/22	Abdominal	ED Shift 9a-12p
10/7/22	Clinic + RUSH	
10/8/22	Off	
10/9/22	Off	
10/10/22	Aorta, IVC	ED Shift 9a-12p
10/11/22	Clinic (all Day)	
10/12/22	Flex/Catch-up	ED Shift 9a-12p
10/13/22	VTE	
10/14/22	MSK	ED Shift 9a-12p
10/15/22	Off	
10/16/22	Off	

REQUIRED RESOURCES

- Sonosite Institute
  - Need an account. Go here to sign up. Use serial number **0530VX** or **0530VR during** registration
- *Ultrasound for Primary Care* (Bornemann, 2021). PDF can be found here.

Image 1: Screen shot of POCUS Course outline indicating overall schedule of the course



DAILY PLAN

OCTOBER 3, 2022
Topic: Cardiac

Clinical Question:

- What is the patient's Left Ventricular Systolic Function?
- Does the patient have LVH?
- Does the patient have a pericardial Effusion?
- Does the patient have right heart strain?

Course Material

Butterfly Academy

- Cardiac Ultrasound 3 - Left Ventricular Systolic Function: https://butterflynetwork.myabsorb.com/#/online-courses/204dcc0d-59b4-4004-a4e4-252072333521
-

Sonosite:

- Cardiac Imaging 1 (2.5 hrs): https://www.sonositeinstitute.com/courses/cardiac-imaging-1
- Cardiac Imaging 2 - Stroke Volume (1 hr): https://www.sonositeinstitute.com/courses/cardiac-imaging-2-stroke-volume-english-only
- Cardiac Imaging 3 - Evaluation of Right Ventricle (1 hr): https://www.sonositeinstitute.com/courses/cardiac-imaging-2-advanced-right-ventricular-rv-assessment-english-only

Ultrasound for Primary Care:

- Chapter 8: LV Function (page 56)
- Chapter 9: LVH (page 62)
- Chapter 10: Pericardial effusion (page 69)
- Chapter 11: Evaluation of right heart (page 75)

Image 2: Detailed daily didactic agenda/outline including resource used for learning

ANALYSIS AND INTERPRETATION (ie How'd it go?): Overall, I felt the course went well. Having access to patients with active pathology confirmed by alternative imaging allowed for a good accuracy checkpoint given I was not being provided in-the-moment feedback. For example, if a patient had a pulmonary effusion seen on chest xray, I would attempt to confirm the presence with ultrasound. The Providers in the Emergency Room were not only happy to have me see their patients, they were also frequently able to provide some scanning feedback which was an added bonus.

Practice	Scan	Competencies	Initial Rating	Final Rating	Change?
Cardiac	Basic Echocardiograph Skills	Detection of pericardial effusion: subxiphoid view			
		Assessment of global LV contractility to assess systolic function: parasternal long/short, apical four-chamber views			
		Measurement of IVC to approximate volume status: size and respiratory variation in subxiphoid view			
	Advanced Echocardiograph Skills (optional)	Calculation of ejection fraction			
		Regional wall motion abnormalities			
		Diastolic dysfunction			
		Left ventricular mass for LV hypertrophy			
		Valvular abnormalities: Mitral/aortic regurgitation and stenosis			
Trauma	Trauma	FAST exam			
		Hemopericardium (subxiphoid)			
		Assess for pneumothorax: assess lung sliding and M-mode variation			
		Assess for hemothorax: free fluid above diaphragm, visualization of thoracic spine			
Aorta	Aorta Basic Skills - AAA screening vs diagnosis	ID vertebral shadow, aorta, IVC, iliac bifurcation with proximal, mid, and distal imaging views			
		Scan from xiphoid to umbilicus in transverse and longitudinal views to assess for fusiform vs saccular aneurysm and proximal iliac artery aneurysm; Evaluate for intramural thrombus			
		Use of doppler waveform imaging/color doppler			
	Aorta Advanced Skills (optional)	Proximal aortic root aneurysm or dissection			
		Abdominal aortic dissection			

Image 3: Screenshot of AAFP Competencies one could use to do self-assessment.

The schedule for the 2 weeks was too ambitious. In retrospect, I should have narrowed the focus in order to walk away feeling like I am more proficient with certain scans. In 2016, the AAFP endorsed a set of POCUS curriculum guidelines that were drafted by individuals at the Contra Costa Family Medicine Program. These guidelines have since been revised and include a comprehensive list of ultrasound scans family medicine graduates should be proficient in. Rather than choosing body systems to work on throughout the course, I think the learning would have been richer had I used these AAFP competencies to guide my priorities (Image 3). In the future, it would make more sense for participants to scroll through the competencies and self-rate (scale 0-5, 0 indicating no prior experience with the scan and 5 indicating complete confidence with performing and interpreting the scan).

EFFECT OF CHANGE: After completing this elective, the program now has a framework by which a more robust elective can be created. Furthermore, the providers in the Emergency Room were very willing to allow me to scan patients and I suspect they will continue to be enthusiastic for others within the program to do the same.

LESSONS LEARNED (Summary):

- Time scanning patients proved to be the most beneficial use of time.
- Planning based on body systems proved to be a bit too lofty with not enough specificity/structure to what exactly I wanted/needed to improve upon – I have since started using the AAFP POCUS Curriculum Guideline (as outlined above) to help with this. I would revise the initial step of the elective to have participants do a self-assessment based on competencies outlined in the AAFP. This could be improved even further if participants then did the self-assessment again following the elective to evaluate growth.
- My initial resources did not utilize Butterfly Academy (which all residents within the program have access to). I have since used this resource almost exclusively for learning new scans and would recommend integrating videos/tutorials from this resource into the curriculum
- Practicing in the Emergency Room is an ideal setting as patients often are waiting for diagnostic data to return and frequently have other types of imaging (other than ultrasound) completed which I found to help with review of pathology
- Having a dedicated faculty/preceptor to review scans with and provide in-the-moment feedback would be ideal

QI PROJECT
Name: Travis Kinane, DO
Title: *OMT*

Abstract: Effect of exposure to new Osteopathic techniques during a conference and the likelihood that residents incorporate the learned techniques into their practice.

Problems: Need for improved Osteopathic skills to feel comfortable providing Osteopathic Manipulation Treatment (OMT) to patients during clinic visits. OMT is a fundamental skill that Osteopathic medical students learn during our four years of training. Many DOs picked a residency program where we could continue to learn OMT and improve our healing craft.

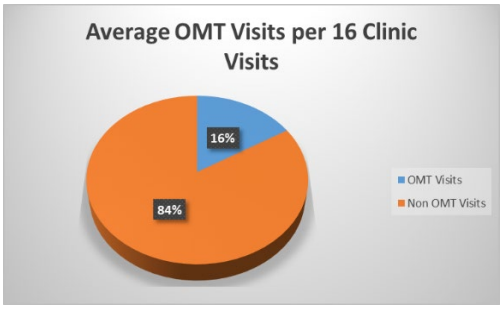
Aim: To evaluate if residents who attended a conference continued to use the OMT learned techniques on patients during outpatient visits.

Key Measure for Improvements: Five residents attended a two-day Fascial Distortion Model (FDM) conference in October 2022—the percentage of residents who participated in the conference then used the learned OMT in their practice.

Process of Gathering Information: Text messages were sent to each resident who attended the conference asking three questions. Five residents attended the conference, and each responded to the questionnaire.

1. Are you still using any of the FDM techniques taught in the conference?
2. Would it be helpful to have more opportunities to learn OMT that are built into our curriculum?
3. If you see 16 patients on an average clinic day, how many of them do you treat with OMT?

Resident	Question 1	Question 2	Question 3
1	yes	yes	3
2	yes	yes	3
3	yes	yes	2
4	yes	yes	2
5	yes	yes	3



Analysis and Interpretation: Every resident who attended the OMT conference is interested in learning more about OMT and has incorporated the new OMT techniques taught into their practice. I also looked into what percentage of patients per 16 visits we treat with OMT. On average, 2.6 patients per full clinic day receive OMT. With how much we use OMT in our daily clinic, this should be more of a focus in our curriculum, and there should be more opportunities for us to further our OMT skills.

Strategies for Change: Over the last year, our osteopath residents have advocated for improving our osteopathic training. We have developed an osteopathic track with clear goals, an OMT chief to help advocate for OMT learning opportunities during curriculum meetings, and have started resident-run OMT didactics.

Effects of Change: Our continued interest has helped us learn OMT at a training program without any DO-trained faculty. On average, the osteopathic residents who attended the conference use OMT on 16% of their patients. This is a large percentage of patient encounters, and with no continuing education in this area is a missed opportunity for something that will be used in our practice.

Lessons Learned: 100% of residents who attended an OMM conference incorporated the new techniques into their practice. Continued advocacy and more opportunities are needed to refine our OMT skills.

QI PROJECT

Name: Emilie McIntyre, MD

Title: *Implementation of a prenatal checklist to standardize obstetric care*

Problems: Prenatal care, while individualized for every patient, is protocolized for standard measures. These include lab tests, imaging, immunizations, and risk factor assessments that are carried out in every pregnancy for every patient. These factors are documented throughout the pregnancy, upon admission to Labor & Delivery, and during postpartum care. Certain lab results and risk factors may inform prenatal care and/or inpatient management of laboring patients and their infants. In Kalispell, we use different EMR systems for prenatal care in clinic and on L&D, requiring re-documentation of these protocolized measures upon admission to L&D. In an effort to streamline L&D admission, as well as to communicate a patient's prenatal history to providers other than the PCP who may take care of a patient during pregnancy, I have created a prenatal checklist that is updated throughout pregnancy.

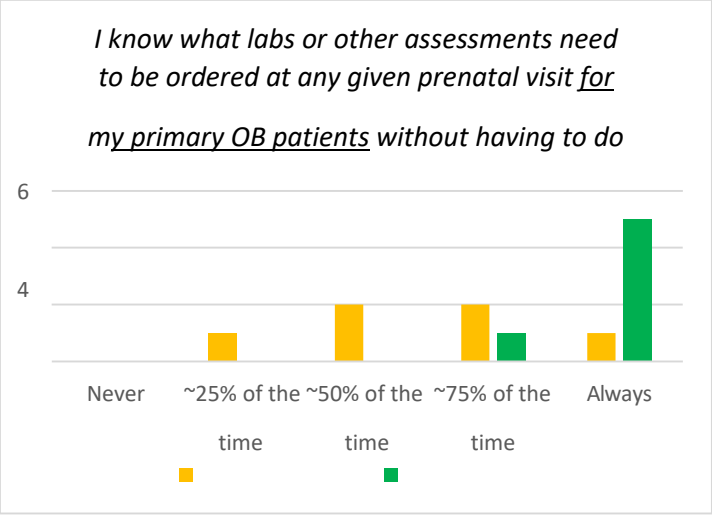
Aim / key measures for improvement:

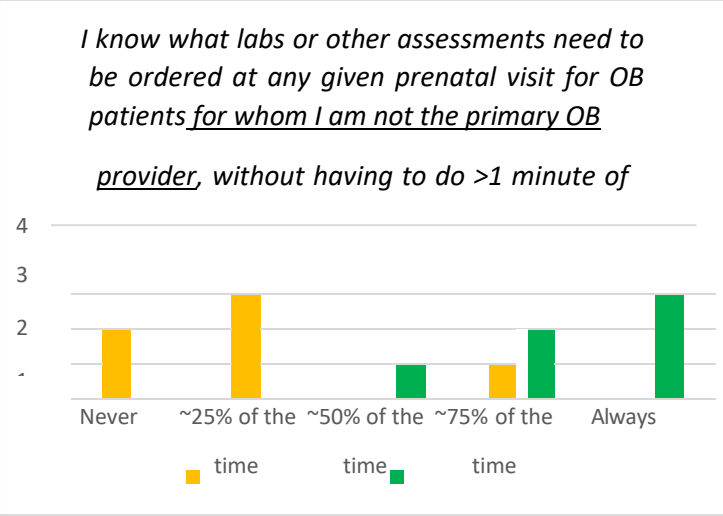
Via implementation of a standardized prenatal checklist, my goals are:

- To increase the number of residents reporting that they take no more than one minute figuring out what standard prenatal labs / assessements need to be ordered at any given prenatal visit by at least 50% within 1 month.
- To decrease the number of residents reporting that they take more than five minutes to review and document a patient's protocolized prenatal care history in their admission H&P by at least 50% within 1 month.

Process of gathering information: Kalispell residents were surveyed prior to and after implementation of a prenatal care checklist. Surveys primarily focused on the amount of time they take to understand and document a patient's standardized prenatal care items.

Analysis and interpretation:

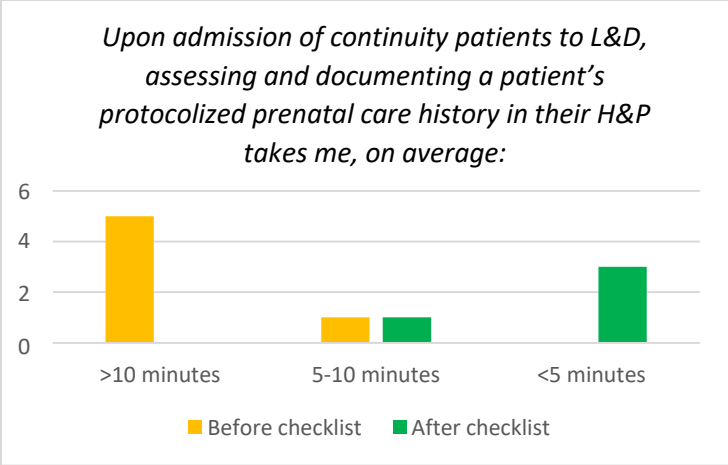




- For one's own primary OB patients, residents taking no more than one minute of chart review at visits to know what standard labs or assessments need to be ordered increased from 16.7% to 83.3% after implementation of a prenatal care checklist. When seeing another resident's OB patients, this increased from 0% to 50%.

- When admitting a continuity OB patient to Labor & Delivery, residents taking more than five minutes to review and document their protocolized prenatal care history decreased from 100% to 25% after implementation of a prenatal care checklist.

- Notably, two of the six residents had not admitted any continuity patients to Labor & Delivery after implementation of the checklist so their data is missing for before-and-after comparison.



Strategies for change: A standardized prenatal care checklist was added to all current prenatal patients' charts in eCW. As of the time of implementation, the checklist read as follows:

-- EDD: *[date] by LMP c/w_wk U/S /_wk U/S, [not] c/w LMP, etc*
-- Risk factors:
-- ASA 81 mg:
-- Blood type:
-- Ab screen:
-- 1st tri CBC:
-- Rubella:
-- HIV:
-- Syphilis:
-- Hep B:
-- Hep C:
-- GC:
-- CT:
-- Hx of genital HSV:
-- Aneuploidy screen:
-- Carrier screen:
-- Pap:
-- Urine cx:
-- Anatomy U/S:
-- GTT:
-- 3rd tri CBC:
-- Rhogam:
-- Tdap:
-- Flu:
-- COVID:
-- GBS:
-- Latest assessment of fetal position:
-- Specialist consults:

Effects of change: Within one month of use, there has already been a dramatic improvement in time taken to review and document standardized prenatal care items. Residents and faculty have unanimously requested to continue using this checklist for prenatal care. Our clinic's prenatal care RN will be using the checklist to guide chart review as well, and our IT specialist is looking into whether eCW may be able to pull lab results into this protocol so that OB providers have to spend less time manually documenting it. While not a primary outcome assessed above, more residents reported

actively reviewing prenatal labs (via this checklist) when seeing another resident's patient in clinic than they did prior to the checklist's rollout, when more residents reported assuming that a patient's primary OB provider had been up to date on these items.

Lessons learned: Currently eCW, as well as the more scattered apperance of the OB chart within it, are frustrations among residents due to the time ineffeciency inherent within them. It appears that a standardized checklist has been able to improve resident time efficiency (as well as faculty time efficiency, which also improved but was not a primary outcome given n = 1).

Ultimately the broad goal of the checklist is to reinforce protocolized prenatal care to ensure that nothing is missed for our patients, as well as to minimize the time spent understanding and documenting a patient's prenatal assessment. The rate of identifying missed prenatal care items was beyond the scope of this project, though it is my hope that using this list will reduce the likelihood of that occurring given its new presence within the patient chart.

With the help of feedback from other residents and faculty, the checklist has evolved to include another item ('Labor preferences') and will continue to evolve based on ongoing feedback from colleagues. Feedback thus far includes requests for an item detailing antenatal surveillance indicated (and the plan for such), need for re- screening for STI's in the 3rd trimester, and clarification around language about 'Risk factors.'

QI Project
Name: Jennifer Selland, MD
Title: *Trans-Affirming and Gender Diverse Medical Care at PHC – Updated Provider Resources*

PROBLEM:
Access to trans-affirming medical care, including trans-affirming surgery, remains limited in rural areas due to structural and institutional barriers. Multiple recent studies have shown that access to trans-affirming care is associated with a decrease in mental health disparities among trans and non-binary people and positive psychological effects[1,2]. As the need for trans-affirming care in the Missoula community has been increasing, so has the need from PHC providers to provide hormone replacement therapy (HRT) for trans-affirming care.

AIM:
Having a patient on hormone therapy comes with challenges – more frequent follow-ups, need for medication adjustments, and frequent hormone monitoring. Additionally, the decision to start hormone therapy is not without risk, and providers who provide this type of trans-affirming care to patients need to fully understand the risks and benefits and be able to explain these to patients. I aim to compile a resource that will aid PHC providers in providing hormone therapy and hopefully ease some of the seemingly extra workload that comes along with it.

KEY MEASURES FOR IMPROVEMENT:
Provider confidence with prescribing FtM and MtF hormone therapy, provider confidence of risks and benefits of hormone therapy, increased conversation between providers and patients about the risks of hormone therapy, and ease of utility of accessing PHC trans-affirming hormone therapy guidelines.

PROCESS OF GATHERING INFORMATION:
Assessing the need – A survey was sent out to FMRWM faculty and residents, as well as PHC providers, asking for input on what sorts of resources would empower providers to feel comfortable and confident in providing full-spectrum trans-affirming and gender diverse care. There were 31 total respondents to this survey and responses were anonymous. It was an 8-question survey and took approximately 4 minutes for respondents to complete.

ANALYSIS AND INTERPRETATION:
Survey Response - Risk/benefit discussions around HRT – are they happening?
- When a patient is HRT naïve [figure 1]
- When a patient is new to the provider but already on HRT (either at PHC or transferring from an outside clinic) [figure 2]

Figure 1

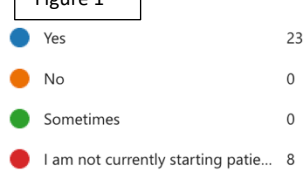
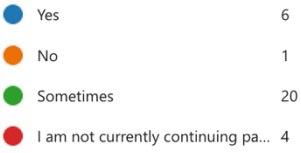
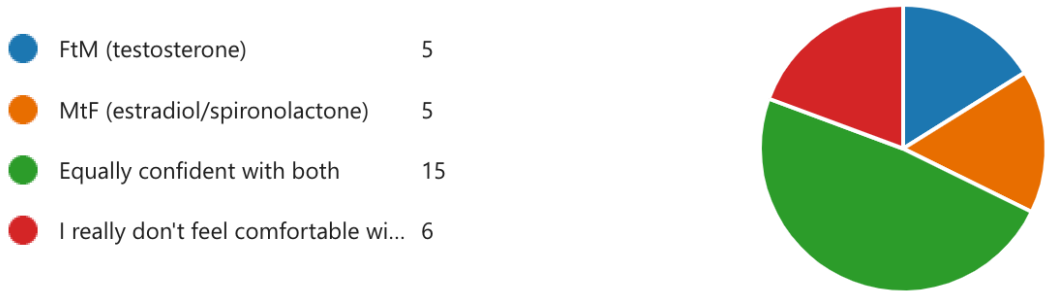


Figure 2



Survey Response - Provider confidence overall:
- Assessed a scale from 1-10 (with 1 being no confidence at all, and 10 being full confidence/no questions or concerns at all), providers were asked how confident do you feel about counseling patients about the risks and benefits of trans-affirming HRT?
    - Average answer was a 5 out of 10 (31 respondents)
- Assessed on a scale from 1-10 (with 1 being no confidence at all, and 10 being full confidence/no questions or concerns at all), how confident do you feel about prescribing and monitoring trans-affirming HRT?
    - Average answer was a 6.83 out of 10 (31 respondents)

Survey Response - What type of hormone therapy are providers most confident with, or none?:



Survey Response - When asked about areas relating to trans-affirming and gender diverse medical care that you feel you would benefit from having in a concise resource that is easily available in your daily practice – the top answers were, in order:

1. Spironolactone dosing and when to start
2. Testosterone dosing and monitoring
3. Estradiol dosing and monitoring
4. Risks of testosterone therapy
5. Puberty blockers for transgender and gender diverse youth
6. Risks of estradiol therapy
7. Fertility options for transgender people

Based on these results, providers who are choosing to provide hormone therapy for trans and non-binary people are routinely having risk/benefit discussions with patients if they are the ones initiating their hormone therapy for the first time. These discussions dramatically decrease when a patient is being continued on hormone therapy, despite not knowing what the initial risk-benefit discussion may have been. I did not include a question that asked whether or not providers who responded "sometimes" to this question were asking patients about their understanding of the risk of hormone therapy first. Additionally, providers feel more confident on average about prescribing and monitoring hormone therapy (6.83 out of 10 average confidence) than they do about counseling patients about the risks and benefits of hormone therapy (5 out of 10 average confidence). There is an equal split between providers comfort with FtM and MtF hormone therapy. Additionally, in the response section for what providers would benefit from, there were a few responses that stated concerns with HRT as treatment for gender dysphoria, citing a lack of evidence behind hormone therapy and long-term data on harm. Given the above responses, I am working on creating a guide for providers to help them make an individualized, informed decision on hormone therapy with their patients and easily dose/monitor these hormones. I also hope to further explore new evidence behind hormone therapy and outcomes of it on the transgender and non-binary communities, so I can make sure that all providers have this information in an accessible way.

EFFECTS OF CHANGE:

I hope that the guide I have created for providers can be a quick reference for prescribing and monitoring hormone therapy. I also hope that the patient hand-outs regarding the risks of hormone therapy I have created will serve as a guide for providers during these conversations, as well as something for patients to take home so that they can make an informed decision about what is best for their health. I plan to continue this QI project next year, as it was such a large undertaking and came with a significant amount of scholarly research, so I hope to be able to share my guide and hand-outs with providers this summer 2023 once they are finalized, and then get feedback on them and assess their impact on clinical practice.

LESSONS LEARNED:

Trans-affirming and gender diverse medical care is a growing area of medicine, and primary care providers are frequently asked to support patients in either gender transitioning or non-binary affirmation by prescribing HRT. It is challenging to find a concise, user-friendly guideline in a quick search to support providers in this practice. Throughout

my work, I looked at multiple resources, and found some variation in recommendations for practice or guides with abbreviated information. It took much longer than I had anticipated to pull it all together. This is an evolving area of medicine, making it all that much more important that patients are making informed decisions about their care. Please see below for the references and resources that I utilized in my research.

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3. *Guidelines for the Primary and Gender-Affirming Care of Transgender and Gender Nonbinary People*. UCSF Transgender Care. https://transcare.ucsf.edu/guidelines
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6. *Practical Guidelines for Transgender Hormone Treatment*. Boston University. https://www.bumc.bu.edu/endo/clinics/transgender-medicine/guidelines/
7. *Gender Dysphoria/Gender Incongruence Guideline Resources. Endocrine* Society. https://www.endocrine.org/clinical-practice-guidelines/gender-dysphoria-gender-incongruence

QI PROJECT
Name: Rebecca Sharar, MD
Title: *Helping Residents Inform Rural Training Site Selection*

Problem: FMRWM residents are required to complete at least two core rural rotations during their training. There are ten core rural sites (Anaconda, Browning, Dillon, Hamilton, Lewistown, Libby, Plains, Polson, Ronan, St. Ignatius), and five additional charter sites (Ennis, Sheridan, Deer Lodge, Stevensville, Eureka). Both the clinical and social experiences at these sites vary greatly. Residents are asked to rank their preferred site prior to the academic year but are not given any materials other than hospital websites to inform their selections.

This poses a challenge, particularly for incoming residents, as details about the resident experience at each of these sites are shared by word of mouth.

Different residents have different priorities when choosing rural rotations, which may include housing ("Are families/pets allowed to stay?"), clinical training ("What is the scope of practice? What specialties are available? What are work hour expectations? What procedural opportunities are there? How inclusive of a work environment is it?"), social experience ("Are there opportunities outside of work to engage with the community? Are there other learners there?" What activities are nearby?").

Aim: To help better inform resident selection of rural training sites I will collect data on the resident experience at 60% of our core rural sites and make these data available to residents to reference when ranking site selections in the future.

Key Measures for Improvement: The primary outcome measure is the percentage of core rural sites with at least one resident review completed.

Process of Gathering Information: The survey was disseminated to residents in a message on Slack. Nineteen responses ("reviews") were collected, and at least one response was submitted for each of the ten core rural sites.

Analysis and Interpretation: Table 1 shows the number of responses for each rural training site. A total of 19 responses were collected. At least one resident response was collected for each of the ten core rural sites. An additional response was collected for ambulatory pediatrics in Butte, a rural option for completing our ambulatory pediatrics rotations. No responses were submitted for any of the five charter sites.

Site	**# of Responses**
Anaconda	1
Browning	1
Butte (peds)	1
Dillon	1
Hamilton	1
Lewistown	4
Libby	3
Plains	2
Polson	1
Ronan	3
St. Ignatius	1
Total responses	**19**

Strategies for Change: The survey was sent en masse to current residents. In the future, residents would complete the survey right after completing a rural rotation. Survey responses are automatically populated into a Google Sheet, with the intention of making this living document accessible by all residents.

Effects for Change: While many rural training sites were only reviewed a single time, resident-driven data were collected for 100% of the core rural rotation sites. Having more information about the clinical and social experience at each of these sites should help residents make more informed choices when ranking their rural training sites in the future.

Next Steps and Lessons Learned: This project is a stepping stone for future investigation into how to better support residents during rural experiences. The intent of this project is to collect data indefinitely, by encouraging each resident to complete the brief survey after each of their

rural rotations. These data are to be available to all residents to access and review when making their rural site selection. While the data are currently populated into a Google Sheet, chief residents or rural training track residents could consider cultivating a living document summarizing experiences by site, although this would require some active upkeep.

Additionally, I was surprised that I received at least one response for each of our core sites given the little effort I put into disseminating the survey. I plan to continue encouraging residents to complete the survey in an effort to expand the sample size and capture more resident experiences, understanding that one experience does not necessarily represent everyone's experiences at a certain site.

In the future my goal is to send out the survey to a resident just after completing the rotation so that the dataset continues to grow. Of note, submissions are time stamped, in an effort to acknowledge that these experiences are dynamic.

A limitation of the project is the brevity of the survey; currently the survey only evaluates scope of practice, procedural experience, work hours, call expectations, and housing, with additional room for open-ended comments. In the future, consider augmenting the brief survey with additional questions about resident priorities that are identified by this year's faculty project. It would also be reasonable to evaluate the resident perceptions of the utility of the database, in an effort to understand if the database is helping to achieve the aim of better informing resident rural site selection.

QI PROJECT

Name: Cecilia Weeks, MD

Title: *Trauma-informed care training for medical residents*

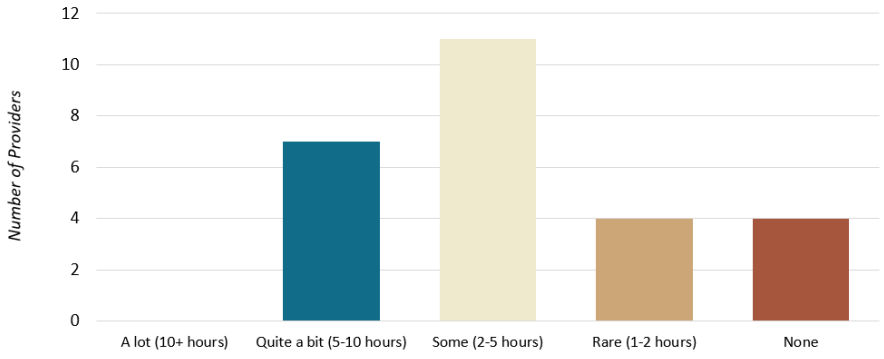
Background: A large body of research estimates that majority of the population has experienced at least one or more forms of trauma in their lives[1]. Structural factors (racism, sexism, poverty, mass incarceration) cause trauma to cluster in certain populations. Studies demonstrate higher rates of trauma among: populations with higher rates of poverty, people of color (Black, Indigenous, and Latinx), LGBTQ+ populations, and children with physical or intellectual disabilities[2]. Trauma leads to a cascade of biological changes and stress responses, which are associated with numerous chronic illnesses. These changes include: changes in limbic system functioning (atrophy of hippocampus most prominent), hypothalamic–pituitary–adrenal axis activity changes with variable cortisol levels, neurotransmitter-related dysregulation of arousal and endogenous opioid systems.[3] Trauma-informed care is an organizational framework to ensure providers have a basic understanding about how trauma can affect families and communities as well as individuals, how to recognize the signs and symptoms of trauma, how to apply a trauma-informed approach, and how to resist re-traumatization for clients/staff (preventing inadvertently creating stressful/toxic environments interfering with recovery).

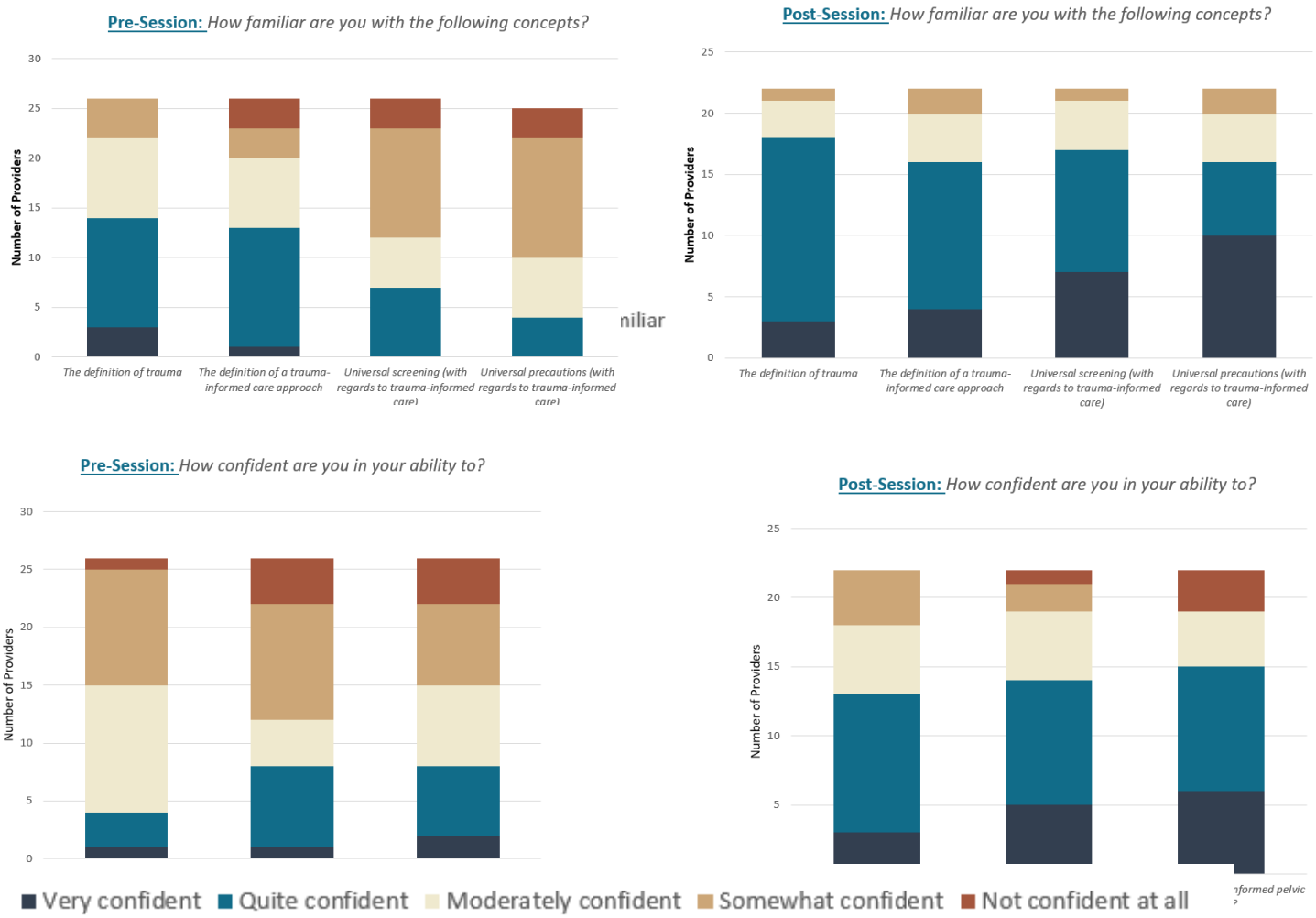
Aim: To assess baseline knowledge around trauma-informed care before and after a 45-minute session with pre- and post-surveys

Data collection: Data was collected via an anonymous and optional survey administered online via Qualtrics. Residents completed pre- and post-surveys after a 45-minute session on trauma-informed care with a specific focus on performing a trauma-informed physical exam.

Analysis: Data was collected over two sessions occurring during didactics. In total, twenty-six respondents completed the pre-survey and twenty-two respondents completed the post-survey. This included residents, faculty, medical students, and pharmacy students. There was significant variation in the amount of exposure participants had to education regarding trauma-informed care (Figure 1). Overall, providers' familiarity with topics related to trauma-informed care improved after taking the session (Figure 3). Additionally, providers' confidence in providing trauma-informed care improved across multiple domains after taking the session (Figure 3). Most providers felt they were "likely" or "very likely" to change part of your clinical practice (physical exam, etc) based on the session (>90%).

Figure 1. How much formal training have you had on trauma-informed care principles during your medical training (ex. lectures, electives, podcasts, books, etc)?





Sources:

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4. Elisseou S, Puranam S, NandiM. A novel, trauma-informed physical examination curriculum for first-year medical students. MedEdPORTAL. 2019;15:10799.

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Class of 2025 QI Work

QI PROJECT

Name: Emily Balon, MD

Title: *For the Love of Learning: Access to Past Educational Materials*

Problem: Residency is about learning and growth, but time dedicated to basic learning is often diminished by long hours and a lack of time carved out to review educational materials. Furthermore, the materials covered on Thursday Journal Club (JC) or Friday Medical Conference (FMC) are scattered about in separate emails, creating another barrier to learning outside of the time dedicated for those two events.

Aim: To foster love of learning by creating resources to make past JC and FMC learning material easily accessible.

Key Measures for Improvement:

1. How likely that Resource A would increase likelihood of referring back to past JC articles?
2. How likely that Resource B would increase likelihood of (re)watching past FMC recordings?

Gathering Data: After creating Resource A (a Google Doc with the list of JC articles covered, including hyperlinks to the publication) and Resource B (a Google Doc with the list of FMC presentations given, including hyperlinks to the recordings of those presentations), I created a Google form. Questions asked on the form included: (1) average JC/FMC attendance, (2) how often materials were reviewed if not in attendance, (3) likelihood of using resource A/B to refer back to past materials if resources were embedded in weekly chief email, and (4) if you responded unlikely, what barriers prevent you from accessing the materials.

Analysis and Interpretation: The Google Form was filled out by 17 residents, which equates to a 59% response rate. Attendance was rated on a scale of 1-5 with 5 being most frequent; more frequent attendance (rating of 4-5) was 59% for JC compared to 29% for FMC (Figure 1). Regarding review of past material, over 50% of respondents said they never revisited JC articles or watched past FMC recordings (Figure 2). For both JC and FMC, 1 respondent felt they would be 'very likely' to, and 4 respondents felt that they would 'most likely,' refer back to past materials if Resources A/B were embedded into the weekly chief email (Figure 3). More respondents said they were 'unlikely' to review past FMC materials than JC materials, 7 vs. 4, even with the resources. Lack of time was a notable barrier for those who felt that they might not access Resources A/B, more so than lack of interest; however, lack of interest was still present for 18-35% of respondents.

Limitations: This QI project did not gather data after a change was implemented, but rather gathered data on the perceived likelihood of whether or not the change would create a difference. Due to this, my project does not measure a direct effect of the resources I created, but the potential effects.

Outcomes: The potential to increase resident's likelihood of accessing past materials is, in my mind, worth the minimal effort continuing to update Resources A/B by pasting in the past week's links to the Google Docs and embedded the Google Doc links into the weekly chief email. As such, I will be using the data I gathered via this QI project to pitch the addition of adding the links to the chief email.

Future Steps: Though not the focus of this project, and not displayed in this write up, I also gathered data on Wednesday Didactics, as compared to JC or FMC, in order to determine if it might be worthwhile to create a similar resource with past didactic material. At the time of this project's inception, didactics were not yet being recorded. However, now that they are, it would be very simple to create a parallel sort of resource with links to past didactic recordings.

Figure 1. Reported attendance to Journal Club (blue) and Friday Medical Conference (orange).

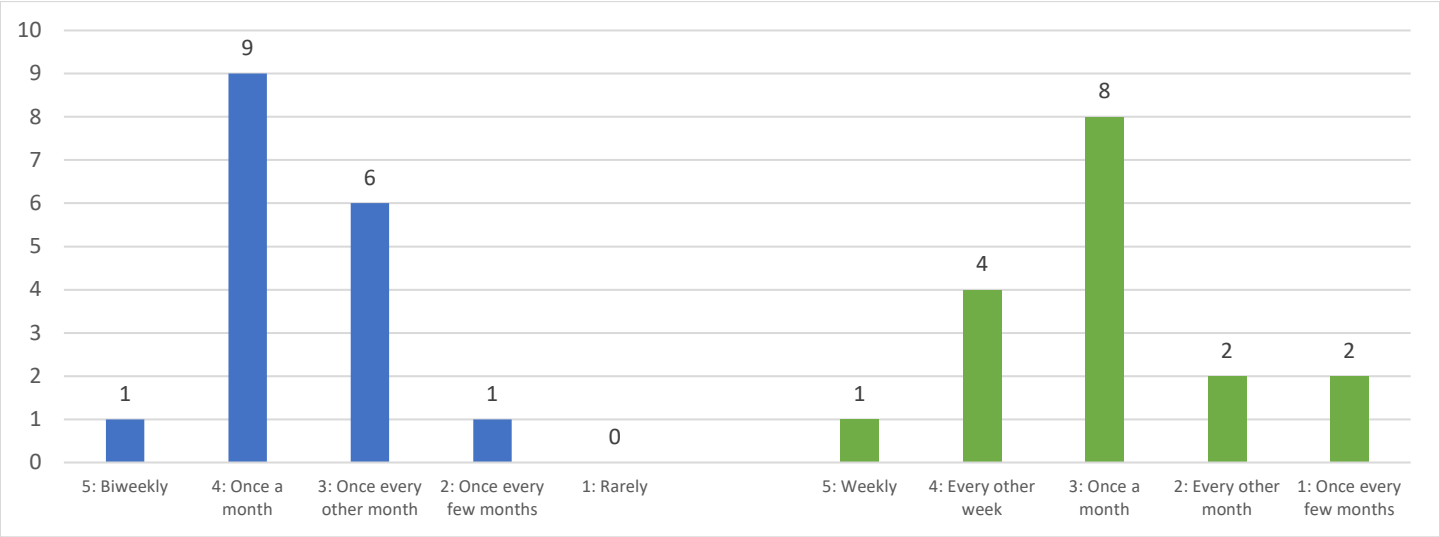


Figure 2. Frequency of reviewing past Journal Club articles (blue) or watching past Friday Medical Conference recordings (orange)

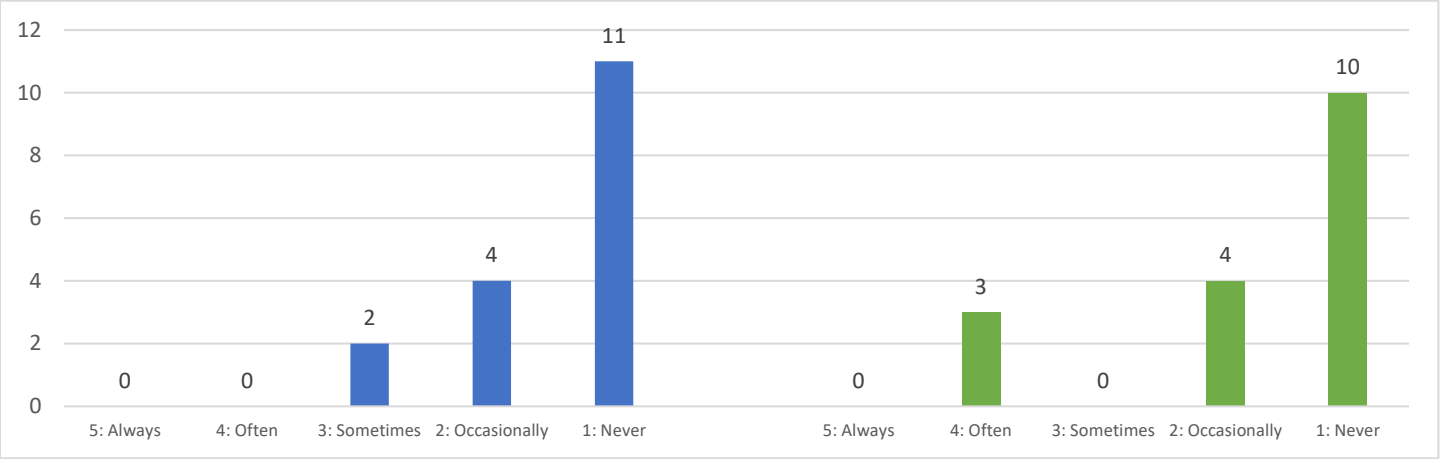


Figure 3. Likelihood of referring back to past JC articles (blue) or past FMC recordings (orange) if resources were embedded in weekly chief email.

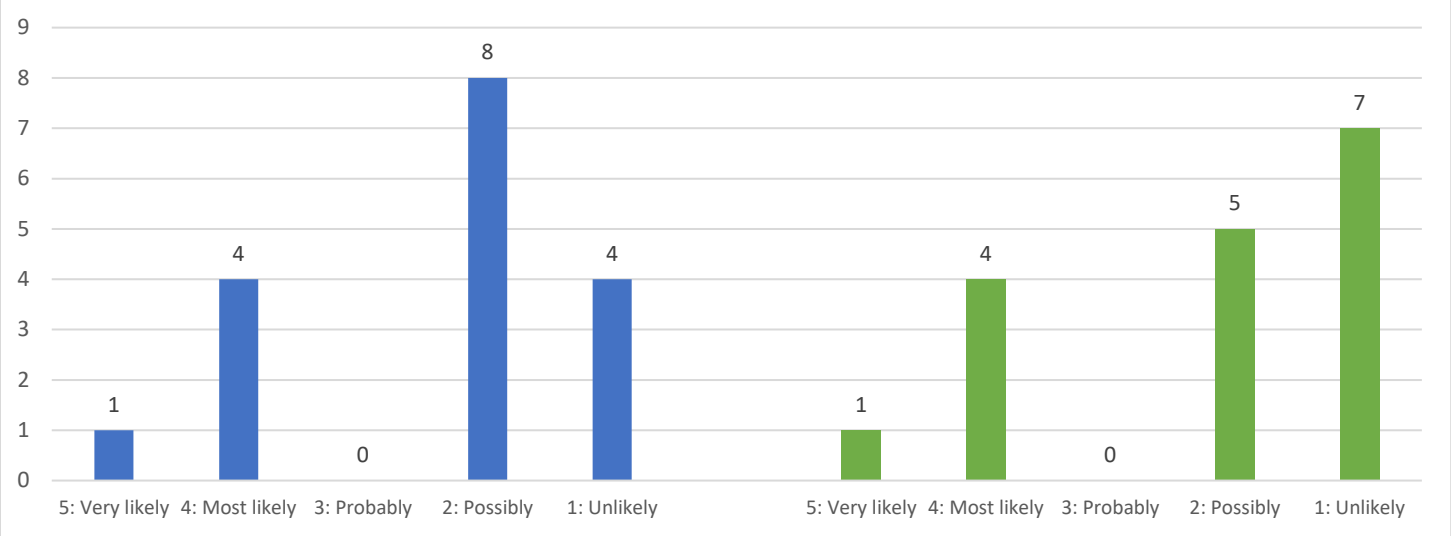
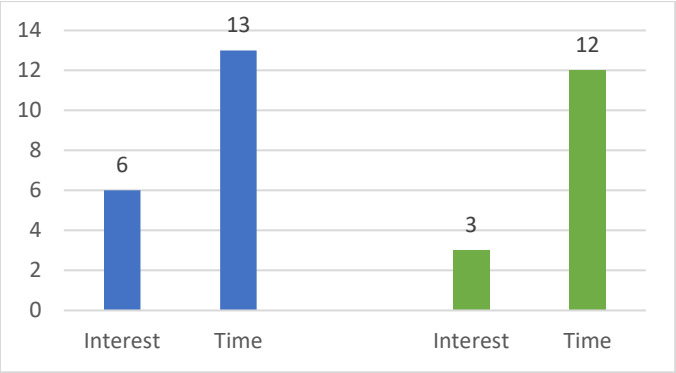


Figure 4. Barriers to using Resources A/B to refer back to materials for JC (blue) or FMC (orange).



Respondents comments added under 'other:'

- I would attend all Journal clubs if I was on rotations that I had free time those hours (recently was on OB, had some med teams on medicine). It's also less than biweekly because there's a lot of times with none, like summers and winter "break" I missed a bunch of opportunities. I'm not interested in all the topics.
- Lots of FMMC topics I'm not interested in. I like to see the ones that faulty and residents present!

QI PROJECT

Name: Nick Booker, DO

Title: *Moody meals: The endeavor to spend time in the kitchen to improve my well-being*

Problem: The road to residency is time consuming. Over the years, I have fallen into the habit of eating food that is easily obtained to save time; this has continued into residency. Due to this, there are not many home cooked meals in my household. We lean heavily on frozen foods including buffalo chicken tenders and pizza. We order doordash multiple times a week.

Background: While I have always relied heavily on take out and frozen foods, I have found my way into the kitchen from time to time to actually cook. I have noticed that my mood seems to be improved while I am cooking. However, I tend to fall back into the thought process that using frozen food or take out is better for my mental well being because it gives me extra down time to unwind since there is no time intensive prep time involved. I wanted to use this project as an opportunity to show myself that cooking meals does improve my mood.

Aim: To improve my mood by making a home cooked dinner once a week for four weeks.

Key Measurements for Improvement: Overall mood on a scale of 1-10 to with 1 being a terrible mood and 10 being a great mood.

Process of Gathering Information: I had a portion of my intern year schedule where I had a four week time intensive rotation, Obstetrics, followed by a four week less time intensive rotation, Electives. I split my four experimental "cook" weeks into the first and third week within each of these rotations. I used the second and fourth week of each rotation as control weeks.

My four week elective was cut short due to the birth of my son. I only had one week of actual elective time to collect data. In order to have consistency in my "elective" data, I restarted the four week process for the less time intensive rotation "electives" once we were home for the hospital.

I chose to assess my mood on Thursdays On Thursdays, I would take an internal inventory of my mood on a scale of 1-10 prior to beginning the dinner process. The dinner process was either ordering food, preheating the oven, or preparing a home cooked meal. I would then order, heat up or prepare my food followed by another internal inventory of my mood immediately before eating.

Analysis and Interpretation:

Table 1: Mood Inventory pre and post dinner process. Mood inventory scored 1-10 where 1 is a terrible mood and 10 is a great mood. Cook weeks were weeks I cooked a meal. Control weeks were weeks I ordered food or made frozen food. The dinner process was the time between ordering food, starting the oven, or beginning cooking until right before the first bite of food.

	Cook Weeks		Control Weeks	
Rotation	Pre-Dinner Process	Post Dinner Process	Pre-Dinner Process	Post Dinner Process
OB	4	7	5	6
OB	5	7	4	4
Family Leave	6	9	5	7
Family Leave	5	8	6	6

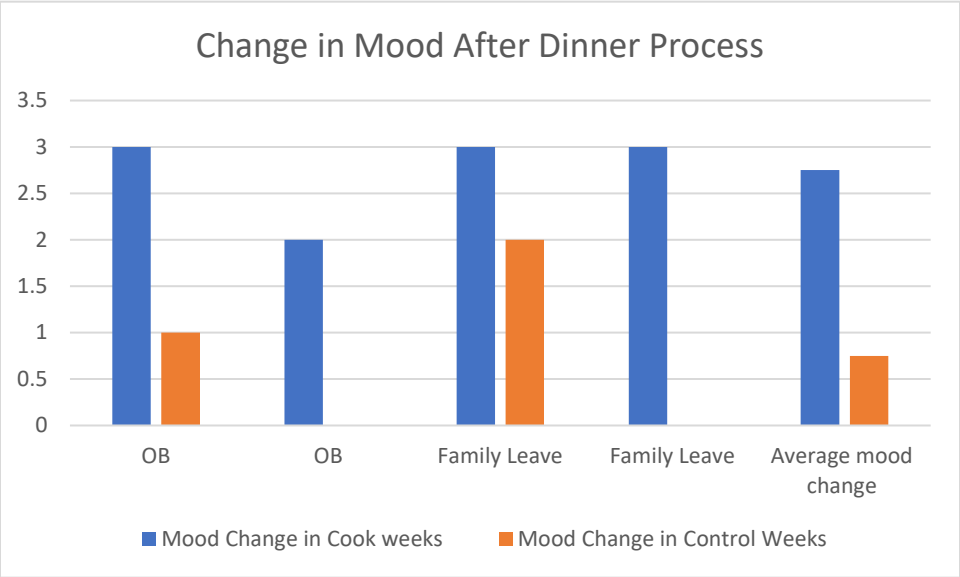


Figure 1: Change in Mood After Dinner Process. Mood inventory from post dinner process subtracted by mood inventory from pre-dinner process. Cook weeks were weeks 1 and 3, control weeks were week 2 and 4 in both OB and family leave My mood improved more frequently and by a larger amount when I cooked my meals compared to when I ordered out or made frozen food.

Strategies for Change: I chose the meal I was going to make one week ahead of time. For cook weeks, I used recipes I had never used before. I read through the directions once prior to going to get ingredients. I purchased the ingredients, or frozen food, the weekend prior. At the start of the dinner process, if it was a cook week, I would re-read the directions, gather the ingredients and make the meal; if it was a control week, I would order the food or pre-heat the oven.

Effects of Change: Making home cooked meals did correlate with an improved mood. My mood improved with cooking regardless of if I was on a time intensive rotation or on family leave. There did seem to be a larger improvement in my mood during family leave.

Lessons Learned/ Discussion: During this process I learned that cooking does seem to improve my mood more than utilizing frozen foods or ordering out. I did use brand new recipes for this process, which were new and exciting for me. My mood may be less positively impacted as I repeat recipes in the future. This project made me view the dinner process in a different light. Instead of viewing cooking as a chore, I was viewing it as an act of wellness, a purposeful act I was doing to improve my overall mood, the thought that this was for my well-being could have positively skewed my data. It could also suggest that savoring activities could be have a positive impact in my mood in the future.

I noticed that I was not using my phone for texting, phone calls or social media while I was cooking; whereas I was on my phone almost exclusively while waiting for a delivery or for a pizza to be made in the oven. Therefore, phone use may be a confounding variable that altered my mood. I also noticed during this project, that my mood would improve if my wife was making a homemade meal, regardless of if I was on OB or on family leave; I did not formally do a pre-dinner inventory during these times. The aroma of homemade foods could be a confounding variable that improves my mood as well. Overall, my mood did improve when I cooked, but my improvement in mood was likely contributed to by my lack of phone time and the positive aromas coming during meal prep. I plan on using this data to continue improving my mood by making home cooked meals, and will be more mindful of the impact of screen time on my overall mood in the future. I will also work on savoring activities I am doing for myself as this seemed to have a positive impact on my mood during this process as well.

QI PROJECT
Name: Ilana Buffenstein, MD
Title: *Well-Being John Malkovich*

Problem: Residency is a challenging process, both intellectually and emotionally. Movies represent a useful creative outlet, and positively impact our quality of life.

Rationale: Growing up, I always watched foreign and art films with my family. As a college student, I continued to explore this interest as an English/film major. In medical school, I continued to try to watch movies, however this often fell on the backburner. Although I loved film, I stopped making it a priority. Moving into residency (and to a town with the Roxy movie theater!), I hope to bring movies back into my life.

AIM Statement: My goal was for this project was to see if my overall sense of wellbeing correlated with the number of movies I watched in a week. Secondary goals were: to watch at least 1 movie per week, and for my wellbeing score to hopefully be between 60 and 100% over the course of the duration of this project.

Information Gathering: Every Sunday, I intended to measure my wellbeing score on a scale from 0 to 100. To improve blinding, I charted my wellbeing score on Excel, and my movies watched on the Letterboxd movie tracking app. Difficulties in information gathering included: occasionally forgetting to log my wellbeing score, or later remembering and logging it on days other than a Sunday. Potentials for confounding included: time- and labor-intensive rotations versus being on vacation, life factors, whether I was watching movies by myself or with other people, at home or at the Roxy, and content/quality of the movies themselves.

Results:

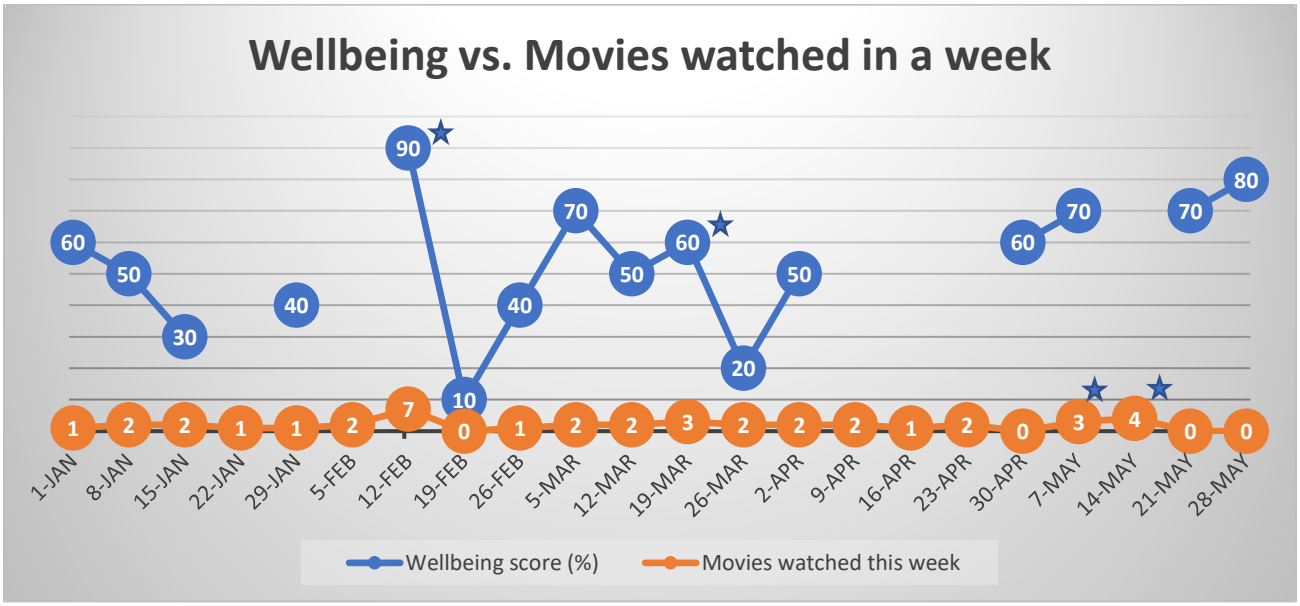


Fig. 1: Wellbeing score vs. Movies watched in a week
★ on vacation

Movies Watched	
The Banshees of Inisherin (1/6)	The Fly (3/17)
Eo (1/11)	Cruising (3/19)
Daisies (1/14)	Dead Ringers (3/20)
Beau Travail (1/19)	Princess Diaries (3/25)
Singin in the Rain (1/21)	The Matrix (3/28)
In the Mood for Love (1/26)	Lost in Translation (3/29)
Boogie Nights (2/2)	Luck of the Irish (4/4)
Twilight (2/5)	Grand Budapest Hotel (4/5)
Twilight: New Moon (2/5)	Koyaanisqatsi (4/9)
Twilight: Eclipse (2/12)	Gattaca (4/15)
Twilight: Breaking Dawn Pt 1 (2/12)	Phantom of the Paraside (4/22)
Before Sunrise (2/13)	Thirteen (4/23)
American Beauty (2/13)	Showing Up (4/29)
The Devil Wears Prada (2/14)	The Usual Suspects (5/10)
Twilight: Breaking Dawn PT 2 (2/15)	Fight Club (5/10)
Possessor (2/15)	eXistenZ (5/11)
Living (2/27)	Mulholland Drive (5/15)
Cocaine Bear (3/10)	Annihilation (5/19)
Shrek (3/11)	The Terminator (5/20)
Videodrome (3/16)	The Terminator 2: Judgement Day (5/21)

Table 1: Movies watched

Discussion: My average wellbeing score over the course of this project (for weeks where I remembered to chart it) was 53.1%; my average # of movies watched per week was 1.8. There was a strong correlation between number of movies watched and whether I was on vacation at the time. There was a loose correlation between my number of movies watched and wellbeing score – for example, my wellbeing score was the best on the week of 2/12, which was also the week I watched the most movies – however, I was also on vacation this week, and the trend did not continue throughout the academic year. Alternately, I watched no movies the weeks of 5/21 and 5/28, yet my wellbeing score was in the 70-80% range.

Lessons Learned: Though I did not meet my goals of watching a movie a week or my average weekly wellbeing score being > 60%, this project still kept me motivated to watch movies – I also would have probably been watching all these movies anyways, so it fit in pretty seamlessly with my life! Overall, this project provided a helpful weekly self-check-in and helped me reflect on the important role that movies play in my life.

QI PROJECT
Name: Julie Eggleton, MD
Title: *Impact of Contemplative Activities on Mindfulness and Mood*

Problem: This year brought many new changes as I transitioned into residency and became a first time parent. Though these changes, I wanted a sustainable method of positively influencing my mood and maintaining mindful engagement, both at work with patients/colleagues and at home in my personal relationships.

Aim: To improve overall mood and mindfulness through contemplative activities such as meditation and journaling. Goal to do at least 15 minutes per day of these activities at least 3 days per week.

Key Measures for Improvement: Mood as measured subjectively using daily check-in on Daylio app and mindfulness using Mindfulness Attention Awareness Scale (MAAS) questionnaire. MAAS scale is helps quantify mindfulness during everyday experiences over 15 questions with a 1-6 ranking where 1 is considered a low score, 6 is a high score.

Process of data gathering: Track mood and habits daily through the use of Daylio app. This app allowed me to subjectively rank my mood as: awful, bad, meh, good, or amazing. Additionally, I used this to track my habits including how often I engage in reflective activities (journaling, meditation, yoga) of interest. Mindfulness will be measured before, during, and after the study using a 15 question Mindfulness Attention Awareness Scale (MAAS) survey to compare overall changes in mindfulness.

Analysis and Interpretation: The sample and testing period was 139 days, starting December 1st, 2022 and ending April 18th, 2023. December 2022 was used to establish a baseline where contemplative activity routines were not modified. Efforts to increase mindfulness meditation started on January 1st, 2023.

Overall moods were ranked on a 1 through five scale; 1 = *awful*, 2 = *bad*, 3 = *meh*, 4 = *good*, and 5 = *amazing*. The baseline period found the average mood to be 3.5 out of 5. Once contemplative activity interventions began (with the goal of engaging in an activity at least three days a week), the average mood increased to 3.8 out of 5. **Figure 1** shows the distribution of moods experienced over the baseline and test period when mindfulness activities were practiced. During the twelve week period from January to mid-April, the three times/week goal for mindfulness meditation activities was achieved for eight weeks. It should be noted however that as the study period progressed, mindfulness meditation increased to at least four times per week for the last five weeks (**Figure 2**).

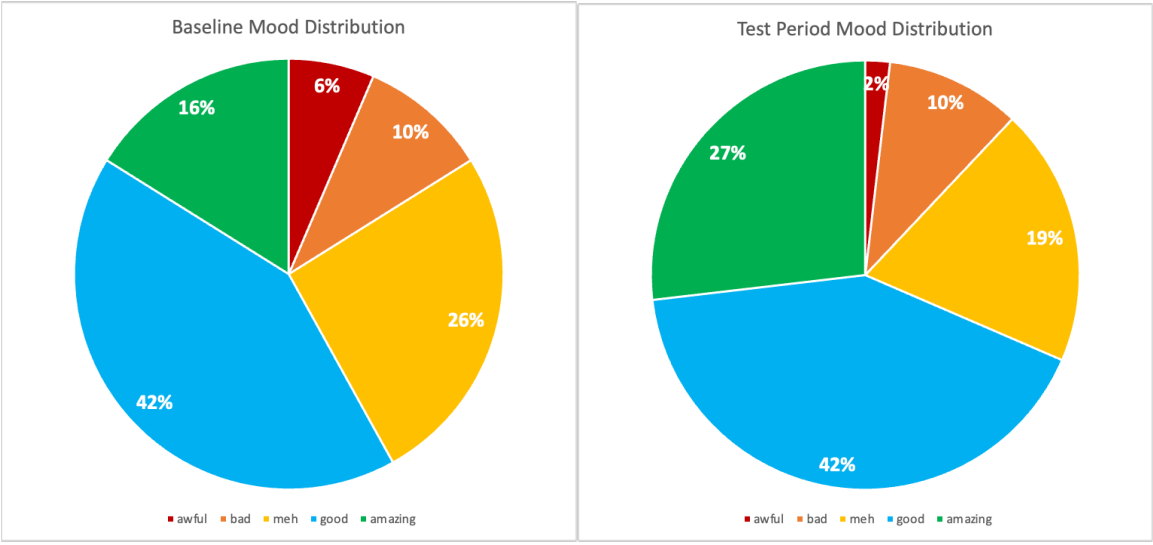


Figure 1: Baseline and Test Period Mood Distribution

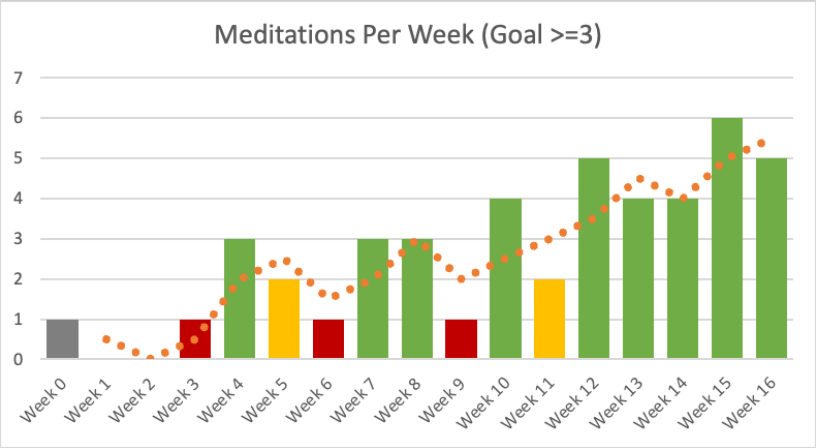


Figure 2: Activities Per Week

(Note, Weeks were measured Sunday through Saturday. Week 0 started 12/1/2022 and was a partial week and is therefore colored gray)

Additional analysis was performed to determine the distribution of moods on days where activities of interest occurred. It was found that 82% of days with mindfulness meditation ranked either *good* or *amazing,* with only 18% of days ranked as *meh* or *bad,* and no days ranked as *awful* (**Figure 3**). While it is difficult to determine if these days were better due to contemplative activities or whether *meh* or *bad* days were less conducive to engaging in interventions (due to lack of time, energy, etc) these results were interesting and were worth mentioning.

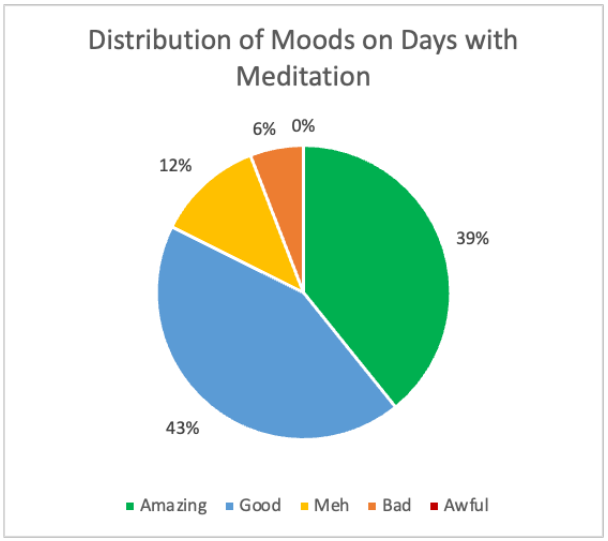


Figure 3: Distribution of Moods on Days with Mindful Meditation Activities

The MAAS scoring and measurements also show a statistically supported increase in mood and day-to-day experiences. The MAAS test was conducted three times; December 2022, February 2023, and April 2023. Scores increased over time from 31/90 in December, to 45/90 in February, and 55/90 in April, which is 34.4%, 50%, and 61% respectively (**Figure 4**).

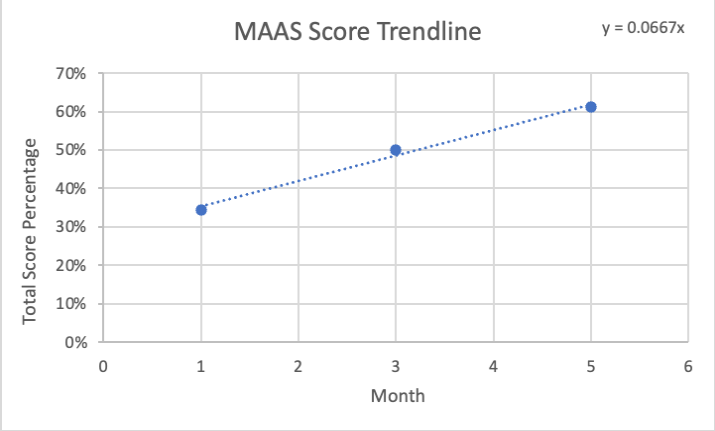


Figure 4: MAAS Score Trendline

It should be noted that this study relied entirely on self-reporting with no blinding, which alters the study's validity, and that there may be other confounding variables not measured that also impact mood. However, Pearson Correlation analysis showed r=+0.3 which is a positive correlation between the intervention and better subjective moods.

Lessons learned:

- Taking time to engage in meditation or reflective activities appeared to improved my mood on the days I participated as well as increasing mindfulness overall in day-to-day experiences. I found utilizing the Daylio app to reflect on my day and mood to be easy to complete. Though it was not being measured, this simple action of reflection each day has been grounding. Both the contemplative activities and reflecting on my day are relatively easy and fast interventions that I feel I will be able to continue during residency and beyond.
- Although it was not the aim of this project, I also tracked my physical activities (such as hiking, exercise, walking my dog) during this same period of time. Days where I engaged in physical activity (particularly outdoor physical activity) also correlated with a positive mood ranking. This was surprising to me as the mood tracking occurred during winter season which meant weather was typically cold or snowing. While this was not the aim of the project, the results were notable and outdoor physical activity is an easily replicable experience that may boost my mood.

QI PROJECT

Name: McKenzie Keeling-Garcia, DO

Title: *Pursuing professional passions and associated effects on PCP stress*

Problem: Residency and professional life is busy and demanding, and it is easy to lose sight of the topics that I am passionate about within medicine such as obesity care. I wanted to explore if increasing the proportion of patients that I discuss obesity with helped me to feel more fulfilled professionally.

Aim: To increase my wellness measured by the Primary Care Stress Checklist by increasing the frequency of patients I discuss obesity with by 10% by May 2023.

Key Measures For Improvement: My professional wellness as a PCP as measured by my score on the Primary Care Provider Stress Checklist (PCP-SC) collected once in January 2023 and again in May 2023, approximate percentage of patients I discuss obesity with.

Process of Gathering Information: PCP-SC scores were collected by my filling out the PCP-SC prior to increasing the estimated proportion of patients who I discussed obesity with and filling it out again after the increase.

Proportions of patients who I had discussed obesity with was estimated by me after reviewing my patient panel.

Analysis and Interpretation:

Month	**PCP-SC Score (0-100)**	**Percentage of Patients**
January	27	10%
May	59	12%

Table 1: PCP-SC Scores and approximate percentage of patients I discussed obesity with in January and May.

Strategies for Change: I included nutrition and movement categories in my preventative care templates, also attempted to discuss these in problem focused visits if I felt that they were relevant to the presenting complaint.

Effects of Change: I did succeed in discussing obesity more frequently throughout the spring, however this did not lead to an improvement in PCP-SC score, in fact my PCP-SC score increased over the study period.

Lessons Learned: While increasing the focus on my professional passions did subjectively improve my confidence and my perceived ability to enable positive change in patients' lives, it did not meaningfully increase my wellness measured by the PCP-SC.

It seems likely that events outside of my professional life impacted the scores on the PCP-SC both positively and negatively.

QI PROJECT

Name: Neha Malhotra, MD

Title: *The Effect of Exercising Three Times a Week on Overall Stress Levels*

Problem: Residency is high stress for many reasons and I want to work on strategies for decreasing stress and anxiety. Exercise is well known to reduce stress overall and has many other health benefits, and has been something I've wanted to work into my routine for a long time.

Aim:

1. To have a 23% decrease in anxiety by exercising three times a week over the course of 12 weeks.

2. To identify my most frequent barriers to exercise.

Key Measures for Improvement: Stress level were quantified using the Hamilton Anxiety Rating Scale (HAM-A). A 5 point decrease is approximately equal to 23% decrease in starting anxiety. This tool was chosen over other anxiety questionnaires because it focuses on mental stress as well as physical symptoms of tension.

Exercise was defined as any intentional physical activity that was 30 minutes or more. This was deliberately vague in an effort to build the mental habit of exercise/activity without the added pressure of exercise parameters. I did not schedule particular times nor days of the week to exercise, as my schedule would fluctuate base on rotation schedule. Instead I would plan at the beginning of the day to exercise and identify barriers if I was not able to complete a workout.

Process of Gathering Information: I completed a HAM-A prior to starting the project and then at two week intervals over 12 weeks of the intervention. If I did not exercise despite planning and preparing for a workout, a secondary survey was filled out with the reason this did not happen. This survey tool was created by me prior to initiation of the intervention and listed the reasons I speculated would be most common. Survey choices were as follows: Physical Fatigue, Dehydration, Hunger, Weather, and Other (fill in).

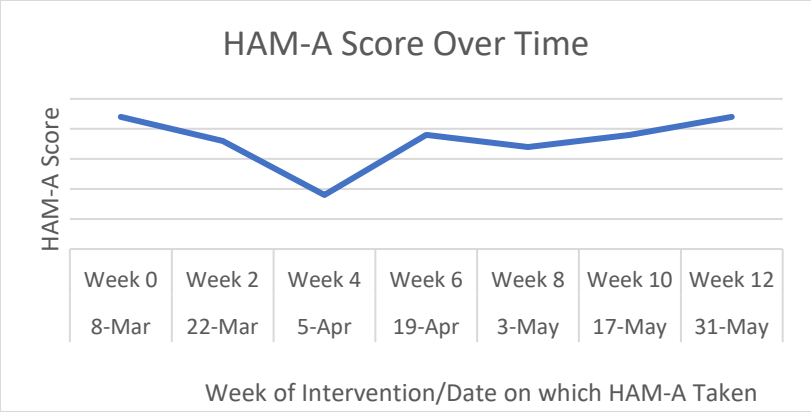
Analysis/Interpretation

Fig. A: The overall trend in the data shows a dip in anxiety levels around week 4, but a return to pre intervention baseline by the end of the intervention. Overall, the HAM-A scores did not drop an average of 5 points. This was not a successful intervention.

Possible external factors that may have contributed to this result include rotation schedule, weather, changes in sunlight, and other factors. However, while this objectively may have been an unsuccessful intervention, there are other subjective changes I noticed. These included the positives of building exercise into my schedule and identifying which kinds of exercise are most personally rewarding.

Individual HAM-A question trends also provided insight into typical stress symptoms. For example, the greatest fluctuations tended to be in questions 1-6. Questions 8, 12, and 14 were always rated at 0. This gave me better data of what kind of physical and mental symptoms of stress I tend to experience.

Figure A:



Trend of HAM-A scores throughout the intervention period. Exact numerical score was omitted based on comfort level around sharing this information.

Fig. B: Most frequent barrier to exercise was dehydration followed by Hunger. I found I was most surprised that Weather (snow, ice) was not a major barrier to exercise. This was my first major winter and I predicted more difficulty getting to the gym safely and/or not wanting to leave the house when it is cold. This was not the case.

Figure B:

	Physical Fatigue	Dehydration	Hunger	Weather	Other
Frequency of response	3	6	4	0	2

Frequency of each cited reason for postponing physical activity. "Other" answers include: "Too much work" and "on vacation".

Effects of change:

1. No quantifiable effects of intervention. Subjectively, I noticed better identification of physical symptoms of tension. I also noticed an increased understanding of what kind of exercise is most personally rewarding.

2. I did gain an understanding of most frequent barriers exercise- dehydration and hunger.

Lessons learned: Stress and anxiety are multifactorial issues. While the results of this data did not show a major decrease in anxiety, it did help build a habit into my routine and add another tool for building resiliency.

To address the second project to identify barriers, it is evidenced that the most common reason behind skipping an exercise session was dehydration during the day. This was followed closely by not eating enough food during the day. These results could be used to run another PDSA cycle to optimize exercise goals (For example: Does setting multiple "drink water" alarms on workout days lead to more completed workouts).

QI PROJECT
Name: Moriah Murray, DO
Title: *Impacts of Consistent CPAP Adherence on Subjective Wellbeing*

Aim: Observe the correlation, if any, between regular CPAP use and items like sleep quality, mood, stress levels, physiologic measures like BP.

Goal: Use CPAP 5/7+ nights a week for at least one month

Key Measures for Improvement:

Sleep quality/quantity: I wear a FitBit constantly and am able to observe sleep quality and quantity through that data.

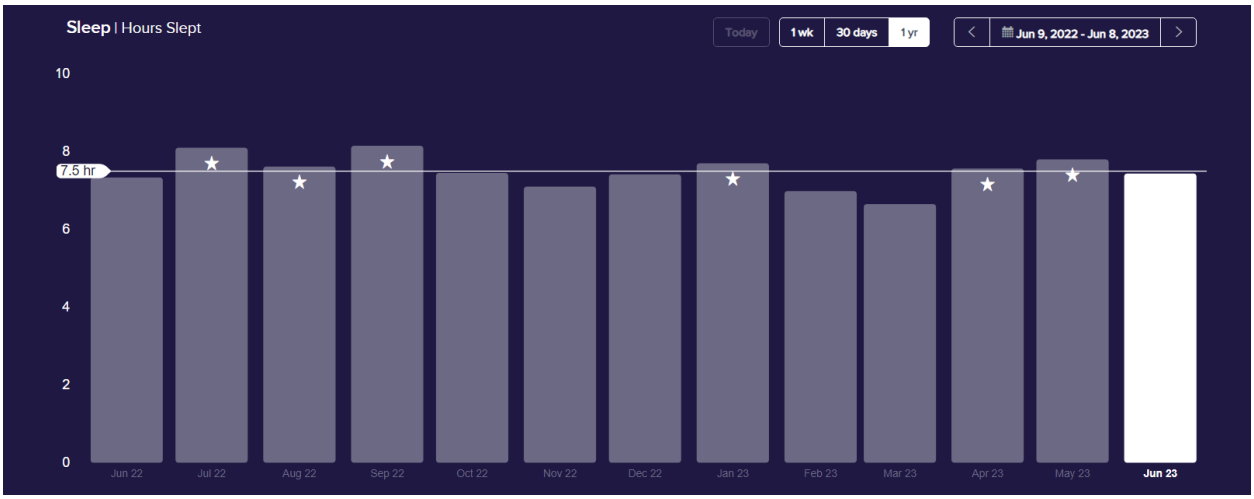
Stress levels: I will use HRV/readiness/stress management type measures from my FitBit data.

Exertional/exercise tolerance: tasks able to do, distance walked, days required to recover.

Mood: subjective improvement/rating.

Outcomes: I may have met my goal but I no longer have the data to prove it, and I fell off the wagon subsequently. Initially I had phenomenal adherence, 7/7 days a week for a few weeks – but then things crashed and burned at a certain point, largely due to a number of external stressors. I would come home and fall asleep unintentionally without having even eaten dinner – much less putting a mask on my face.

Sleep: No change – in hours slept or in quality.



Blood pressure: I no longer need a med I used to need before getting my autoimmune disease into almost-remission and starting using CPAP (at least sometimes). I have normal BPs at all doctor's appointments now.

Heart rate: I take a new medication for this that I started in February, so that is a confounding factor. It is not one that affects BP, however, and being normotensive is a change isolated to this year/that happened before February.

Exercise tolerance: I have been using a walker rather than a wheelchair at work for several months now. I did a full clinic day without any mobility aids last week. I went to the AWLS course in February and was able to snowshoe and hike, something I had never done (for snowshoeing) and hadn't done in earnest in at least a year (for hiking). There were consequences, physically, but much less so than before. This one is more likely attributable to the new medication, but could be from both. I did use CPAP consistently at that point as well.

Stress: My heart rate variability has improved/increased, quite a bit. It does not seem to correlate with medication initiation OR with CPAP use, which is interesting.

Mood: No substantive improvement.

Challenges/Lessons Learned:

CPAP Data: My app only provides data for the last month – everything before April 30th is gone. If I wanted to repeat this I would need to transfer the data to a secondary recording place. I admittedly have not used it since April 30th due to reasons noted below and inability to get back in the habit afterward.

Use while camping: I was on vacation for the first two weeks of May and spent that time almost exclusively outdoors. I have a large portable power bank I could theoretically plug it into, but the effort and weight/room just wasn't worth it in the scheme of things.

Confounding factors: There are many. Isolating which one did what is difficult.

Habit maintenance: Building/rebuilding a habit is much, much more difficult than maintaining an existing one.

QI PROJECT

Name: Connor Rogan, MD

Title: *Sleep and subjective afternoon energy levels*

Problem: Sleep is one of the key tenants in the surgical residency mantra "eat when you can, sleep when you can, don't 'mess' with the pancreas." While this was more important to live by during my surgical internship, all residency programs come with similar challenges; sleeping quantity and quality on busier more demanding rotations, making complex and safe medical decisions on the demanding rotations on little sleep, when to eat on said rotations, finding the free food. Nobody wants their doctor to be sleep deprived and making medical decisions for them, but this is the expectation we are to live by during residency.

Background: The 80 hour workweek was one of the most recent rule changes to combat resident fatigue, but even this correlates approximately to 14 hour days 6 days a week if working the maximum (those extra 4 hours will get laundered, the hours are "averaged over 4 weeks"). This leaves 10 hours in the day to travel to and from work, eat dinner, exercise, talk to your family, and sleep. The variety of rotations in family practice residency range from normal human work hours to kissing the cheek of the 80 hour mark, the longest on paper being 72 hours, not including charting time after hours, studying, or "free time" between morning and evening shifts. Sleep is often on the back burner with the afternoon slump often hitting harder than usual.

Aim: Sleeping a minimum of 7 hours nightly will lead to an overall improvement in my subjective energy levels in the afternoons within 2 months (2 rotations).

Key measures for improvement: Hours of sleep obtained each night. Subjective sleepiness scale (SSS), a binary measure of retrospective afternoon energy levels as measured that same day in the evening. Was I tired this afternoon? Yes or no.

Process of data gathering: Sleep hours were measured nightly (for 20 nights, 10 on a medicine block, 10 on ambulatory pediatrics) by a Garmin Instinct smart watch, and the data recorded. I then registered an answer with the SSS later that evening.

Analysis and interpretation: The first tier of data is total sleep hours taken during my inpatient medicine block, the last 10 days of the rotation. Average hours slept were 6.575, with 70% of the days registering a 'yes' on the SSS. The following 10 days were taken on an ambulatory pediatrics rotation. Average hours of sleep on that rotation are 7.675, with only 30% of the days registering a 'yes' on the SSS. Plugging the data into a simple T-test gives a P value of 0.002, suggesting that hours of sleep may in fact correlate to subjective sleepiness levels in the subsequent afternoon.

Strategies for change: My sleep habits are tied to balancing residency hours, family time, and my children waking me up at 2AM for reasons that are beyond me. Ideally, I would time my bedtime to 7-8 hours before I plan to wake up for work the next morning. The time would be variable depending on the rotation, which takes away from consistencies relating to family time, and children's bed times. Ultimately, I was not able to do this, and continued with a consistent bed time with variable waking time depending on my schedule the following day.

Hours	PM tired?	% of days
6	yes	70
6.25	yes	
6.25	no	
7	yes	
6.5	yes	
6.5	no	
6.25	no	
6	yes	
6	yes	
9	yes	
7.5	yes	30
7.5	no	
7	no	
8	no	
7.75	yes	
7.5	no	
8	yes	
8	no	
7.5	no	
8	no	

Effects of change: It does appear that hours slept correlates well to sleepiness the following day. I have heard of one study, that I can no longer find, that suggests based on cognitive testing that sleeping less than 6 hours per night is near the equivalent of staying up all night. I was not able to make changes for other extraneous reasons, but it is reassuring knowing that if I were able to sleep more each night I would likely not be as tired the following afternoon.

Lessons learned: Sleep is important, but when medical training is demanding so much you have to sacrifice something. I will probably continue to sacrifice sleep time over family time, even in light of the statistics above. Someday I will have a more consistent schedule, hopefully, and can put this knowledge to practice.

QI PROJECT
Name: Emily Young, MD
Title: *Increasing Letter Writing to Increase Mood*

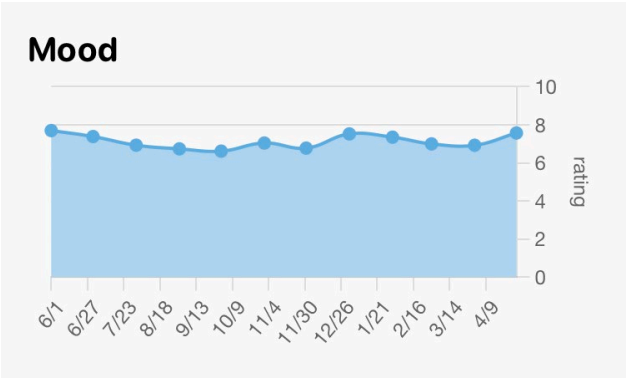
Problem to be Addressed: My mood has felt lower since starting residency, which could be in part due to increased time spent on work with less free time and moving several thousand miles from friends and family, which has limited my social connection. Additionally, I have neglected my letter writing practice since starting residency; since high school I have written dozens to hundreds of letters per year.

Aim: Write, address, stamp, and mail at least two letters per week from December 2022 through April 2023 to increase my daily mood by increasing my reflective and gratefulness practice and strengthening relationships with friends and family who live far away.

Key Measures for Improvement: Increase my daily mood average on the My Data Helps application from a low of 6.2 for the month of October to 7.2 by April.

Process of Gathering Information: I am enrolled in the Intern Health Study through the University of Michigan from the middle of June, 2022 until June 2023. I was already logging my daily mood for this project through their app, My Data Helps. For letter writing data, I logged the number of letters written each day in my Notes application on my phone.

Analysis and Interpretation: In the month of October, my mood was at its lowest at an average of 6.2/10 for that month. After implementing my plan in December, my mood increased to 7.8/10. December was the month I wrote the most number of letters (51). By April, my mood had decreased to 7.1/10. April was also my month with the fewest number of letters written (9). There is a significant confounder here, which was the number of hours I worked each month, depending on what rotation I was on. March and April both consisted of 70-hour weeks while I was on OB and inpatient medicine. I did not have as much time for letter writing or many of the other things outside of work that boost my mood, so this may reflect correlation more than causation.



	Average Mood	Letters Written	Average Days Between Letters
October	6.2	Not recorded	Not recorded
December	7.8	51	9
January	7.7	22	7.8
February	7.4	13	9.3
March	7.2	24	5
April	7.1	9	6.3

Strategies for Change: I realized in February that there were many days that I would not write a single letter and then I would write a series of letters over the weekend. There were several days that I had a time opportunity to write letters during downtime at work, but would not be able to write a letter because I did not have my stationary with me.

Effects of Change: Once I started to carry a ziplock with letter-writing supplies in my backpack in March, my average number of days between any letters written went from 8.7 to 5.7. This reflected my habit change from sitting down one day every (or every other) weekend to crank out replies to all the letter I'd received or thank you notes I intended to send, instead I had more days where I'd think of and write to a friend/family member. I did not quantify this, but I know that this type of letter writing is more calming, pleasant, and reflective because I do not feel the push to get letters done. Additionally, the reflective piece is substantially enhanced in this type of letter writing for me because I think about a problem or life event anew each day, rather than writing a similar update or thought repeatedly in multiple letters in one day.

Lessons Learned: There are large confounders in the way of answering whether increased letter writing increases my mood, the largest being that when I have a schedule that allows me to write more letters, I also have time to do more of everything else that brings me joy.

I write more letters when I have my letter writing supplies with me at work for the occasional downtime. Additionally, those letters are better quality: I feel less pressure to get a certain number done in a day so I write longer and reflect more.

FMRWM Faculty

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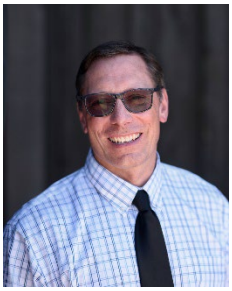

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Emma Wright, MD

Faculty Scholarly Activity

FMRWM SCHOLARLY WORK **FACULTY**

Name: Brett Bell, MD, MPH

_____

CONFERENCE PRESENTATIONS (abstracts/posters/presentations at international, national, state or regional meeting).

Project Title*: Presentation to the American College of Physicians Montana chapter meeting on Alcohol Withdrawal and Management of Alcohol Use Disorder*

Details of the project: Was asked to present at the ACP meeting about management of alcohol withdrawal and alcohol use disorder

Outcome: presentation was a success

Reflections: Interesting to reflect on how phenobarbital has fallen out of favor and is now the latest new thing in alcohol withdrawal management.

OTHER PRESENTATIONS (ground rounds, materials developed)

Project Title*: Presentation to CSKT Tribal Health on Buprenorphine treatment for Opioid Use Disorder in the Era of Fentanyl*

Details of the project: as part of the PCTE grant, was asked to present on updates on buprenorphine treatment for the CSKT Tribal Health program

Outcome: presentation was a success

Reflections: will hopefully continue to do recurring presentations for this group

Project Title*: Presentation to Clark Fork Valley Hospital on Cannabis Use Disorder and Evidence for Risks and Benefits of Cannabis use*

Details of the project: presented to providers at Clark Fork Valley Hospital

Outcome: Presentation went well and was informative

Project Title*: Presentation to St Patrick Hospital Hospitalist Group on Management of Buprenorphine and Opioid Use Disorder in the hospital – in conjunction with development of reference materials for providers on how to initiate buprenorphine treatment in the hospital*

Details of the project: Part of a continuous effort to improve the quality of care for patients with opioid use disorder in the hospital

Outcome: Success, presentation was well-received, people appreciated the materials

Reflections: would still like to continue to do more outreach and training to this group to improve the inpatient-to-outpatient connection at hospital discharge

LEADERSHIP OR PEER REVIEW ROLE

***Project Title**: Board of Directors, Open Aid Alliance*

Details of the project: selected as a member of the Board of Directors of Open Aid Alliance, a harm-reduction organization

Outcome: thrilled to be part of a fantastic organization

FMRWM SCHOLARLY WORK **FACULTY**

Name: Darin Bell, MD

PEER REVIEWED PUBLICATIONS

Project Title*: A Typology for Rural Training*; Randal Longenecker, Darin Bell, Davis Patterson

Details of the project: There is a need for standardization in the classification and nomenclature of different types of rural training models in residency education. Standardization allows for more consistent collection and comparison of research data when evaluating effectiveness of rural training and outcomes. It also allows for comparison of training processes for students to use when evaluating and selecting residency programs.

Outcome: submitted for publication.

Reflections: Model is now in use by the RTT Collaborative and is being used as the framework for several rural several rural research grant applications.

CONFERENCE PRESENTATIONS

Project Title*: Creating and Sustaining Rural Training Programs*; Laney McDougal, Ted Epperly, Darin Bell; WWAMI GME Summit October 10, 2022

Details of the project: Panel Presentation reviewing ACGME Support for residency training; Council on Graduate Medical Education recommendation to HHS on rural education; RTT Collaborative's support for rural residency programs; and rural training models in both Idaho and Montana.

Outcome: presentation delivered

Reflections: prompted good discussion and thoughts form the audience of audience members (WWAMI GME programs, and federal stakeholders.

Project Title*: Family Medicine Residency Collaboratives: A Look at State, Regional and National Approaches*; Emelia Lloyd; Russell Maier, Darin Bell; Residency Leadership Summit; March 2, 2023

Details of the project: Presentation workshop exploring different models of residency collaboratives. The goals were to help the audience identify a collaborative structure that could work best for participants' own residency program; understand the benefits in partnering with other programs; and decide on key areas for collaboration (advocacy, faculty development, faculty and resident recruitment, etc.) for their program.

Outcome: presentation delivered

Reflections: Many good questions and ideas generated for programs across the country to engage in collaboration with other programs.

GRANT LEADERSHIP

***Project Title**: PI: Enhanced Rural Access and Training*

Details of the project: 5-year HRSA Sponsored Primary Care Training and Enhancement – Rural Training in Primary Care Grant. Projects focused on nine HRSA identified areas of need and additional program specific training needs. Includes development of new rural curricula for residents (Rural Continuity Clinic, Rural Intensive Track, AI Healthcare track), rural site and faculty outreach and development, recruiting efforts, and specific training advancements.

Outcome: Completed year three of the five year grant. Majority of projects constructed and in pilot phase or progressing into maintenance phase of work. Collecting large amounts of data for future projects and research opportunities.

Reflections: Significant hurdles when working with multiple outside partners.

***Project Title**: PI: Improving Access, Training, and Recruitment for American Indian Healthcare*

Details of the project: Completed a one year extension on an original two year grant from the Montana Healthcare Foundation. Goals of the project were to improve cultural humility training and understanding for residents and practicing professionals through curricular development, as well as a new clinical training site at Tribal Health of the Confederated Salish and Kootenai Tribes. We also partnered with Tribal health to develop training for their providers in areas of need such as addiction medicine, life support certification, and explored options for providing more in-house maternal child health.

Outcome: Project completed, with successful development of resident training opportunities and ongoing partnerships for training and projects in conjunction with Tribal Health.

Reflections: Pandemic related delays necessitated an extension on this grant. There were several shifts in how to approach some of the projects that would fit better for the needs of Tribal Health.

LEADERSHIP OR PEER REVIEW ROLE

***Project Title**: Associate Director: RTT Collaborative*

Details of the project: The RTT Collaborative is a national non-profit organization, focused on developing and supporting rural training programs in medical school and rural residency programs, while helping connect students interested in rural training with those programs focused on rural healthcare.

Outcome: ongoing role

Reflections: Balancing time available with potential for growth and opportunities for programs and learners.

***Project Title**: Co-Chair – Rural Collaborative: Society of Teachers of Family Medicine.*

Details of the project: Collaborative within STFM bringing together people interested in rural medicine and training.

Outcome: ongoing role

Reflections: working on ideas to reenergize a group that has largely been inactive, while balancing time demands.

***Project Title**: Board Vice-Chair – Simulation in Motion, Montana*

Details of the project: Montana non-profit mobile simulation training organization. Travels to rural and remote areas of the state to provide high fidelity simulation training for EMS services, clinics, hospitals, and educational institutions.

Outcome: ongoing role

Reflections: organization is working on expanding training services and opportunities that are otherwise not available or cost prohibitive for rural healthcare professionals.

FORMAL COURSES

***Project Title**: RTT Collaborative Annual Meeting*

Details of the project: Organized Annual meeting of the RTT Collaborative. A national meeting bringing together rural medical educators from across the country. The spring 2023 meeting was hosted in Missoula Montana, and featured our residency program.

Outcome: Record attendance with over 200 participants from across the country

Reflections: This is an annual event and the feedback for this year's meeting was overwhelmingly positive. Lots of takeaways after coordinating and hosting for the first time.

***Project Title**: FMRWM Rural Retreat*

Details of the project: Organized an annual regional meeting for rural medical and health educators in Montana.

Outcome: Success with a diversity of educators in attendance.

Reflections: The meeting may have become too diverse to be effective for any of the target audience. Reassessing the focus for future years.

***Project Title**: Rural Program Directors University*

Details of the project: Organized and ran a monthly learning community of rural residency leadership across the country. Designed to supplement other learning opportunities for those new to rural residency education with topics focused on rural specific issues.

Outcome: ongoing program with good success for this year's cohort.

Reflections: Evaluating ways to modify the program for higher engagement and value for participants in the coming year.

***Project Title**: Life Support Courses: ACLS, PALS, AWLS*

Details of the project: Helped teach Life support courses for residents, attendings, APPs, nurses, and pharmacists, at both FMRWM and partner rural sites.

Outcome: success

Reflections: will continue

OTHER

Project Title*: Rural Residency Program Consulting*

Details of the project: Through the RTT Collaborative, have been coordinating and assisting with design and development consultations for new and developing rural residency programs.

Outcome: ongoing process. Have participated in four consultations over the last year

Reflections: coordination and provision of consultations is a highly time intensive process, but provides significant value for new and developing programs

FMRWM SCHOLARLY WORK **FACULTY**

Name: Ellen Bluett, PhD

CONFERENCE PRESENTATIONS

Project Title*: Suicide Safe Care*

Details of the project: Participated in a Train the Trainer model last year. I have been able to now provide 3 trainings in this domain, including at the annual rural retreat

Outcome: I was asked to provide additional training out our Deer Lodge rural site.

Reflections: Individuals in the medical community are hungry for more training in this area. I am happy to support our communities by reviewing the evidence based steps for suicide safer care.

OTHER PRESENTATIONS

Project Title*: Psychedelic Assisted Therapy Part 1 & 2*

Details of the project: Completed a grand round series on psychedelic assisted therapies along with Ben Merbler, MD (PGY3).

Outcome: It was well received by the community. We received many questions and follow-up emails.

Reflections: I really enjoyed synthesizing all that I learned in my certificate program to provide education around psychedelic assisted therapies. It is important to communicate to medical providers the up-to-date research as this is an ever growing field and many patients are interested in it as an avenue for treatment.

GRANT LEADERSHIP

Project Title*:* **Sequenced Treatment Effectiveness for Posttraumatic Stress**

University of Washington Department of Psychiatry & Behavioral Sciences

Division of Population Health

Details of the project: I am in charge of the coordination and implementation of PCORI funded "Comparative Effectiveness PTSD Trial of Sequenced Pharmacotherapy and Psychotherapy in Primary Care" at our community health center. The primary aim of this study is to learn whether providers in primary care clinics should recommend medications or written exposure therapy to treat posttraumatic stress. In addition, for patients who do not respond to the first treatment, we want to determine what treatment providers should recommend next.

Outcome: Actively recruiting

Reflections: This year has been more difficult to recruit patients. Without universal screening for trauma or PTSD it is nearly impossible to identify patients who would be eligible for the study.

***Project Title**:* **SBIRT for Eating Disorders**

Details of the project: Overseeing an award through the PCTE (Primary Care Training Enhancement) grant to train primary care providers in screening, brief intervention and referral to treatment for eating disorders. This project will take place during this academic year.

Outcome: Currently in the planning phase of a workshop/didactic series for residents, faculty and potentially our rural partner sites.

LEADERSHIP OR PEER REVIEW ROLE

***Project Title**:* University of Washington ALACRITY Center- Community Board Member

Details of the project: UW ALACRITY center is an (NIMH-funded interdisciplinary team working to improve access to and use of evidence-based psychosocial interventions in non-traditional care settings. They host annual meetings for their board members to learn about works in progress and projects being designed. Board members offer insight into the feasibility of these projects in real-world settings.

Outcome: Continue to serve as a board member.

Reflections: This center is unique in the breadth of topics they fund and projects they support. There are some very creative and motivated researchers trying to improve evidenced based psychosocial interventions in health care.

***Project Title**:* University of Washington Practice Research Network (WPRN)- Steering Committee Member

Details of the project: WPRN is an incredible resource/learning environment for WWAMI programs. I am serving on the steering committee (year 3) providing feedback and input on practice based research projects.

Outcome: Will continue to sit on the committee. I love participating in this committee, it is a very practical way to engage in research without the heavy lift of doing your own original study.

Reflections: I find this to be a very valuable role in my continued pursuits to engage in research/scholarly work.

OTHER

***Project Title**: Psychedelic Assisted Therapy Certificate Program*

Details of the project: I completed a year-long certificate program in psychedelic assisted therapies through the California Institute for Integral Studies- the first formal training center in the country. The goal of the certificate program is to acquire knowledge about the research being conducted on psychedelic medicines and train to be a therapist working in this domain

Outcome: Graduated May 2023

Reflections: There is huge potential for psychedelic medicines in treating mental health conditions that have often failed other traditional forms of therapy. The program was incredible with the leading researchers leading the sessions. As part of this training I also received partially certification through the MAPs organization.

FMRWM SCHOLARLY WORK **FACULTY**

Name: Tim Caramore, MD, MS

CONFERENCE PRESENTATIONS

***Project Title**:* Presentation, "7 Articles to Know from 2022" - Montana Academy of Family Physicians Winter Conference

***Details of the project**:* This has become more or less an annual presentation for me. As in years past, preparing this presentation involved review of titles from sources like *American Family Physician*, Daily POEMs, DynaMed/McMaster Evidence Alerts and compilation of a list of articles I thought would be high impact and could immediately change practice. Scaled back from 10 to 7 articles this year.

***Outcome**:* success, presentation given.

Reflections: still easy to fill an hour with 7 rather than 10 articles. This presentation generates great audience engagement and is a rich learning experience for me.

OTHER

***Project Title**:* FMRWM Journal Club

Details of the project: I continue to oversee the recurring, mainly every-other-week journal club experience for clinicians at FMRWM, St. Pat's, and other scattered organizations in western MT.

Outcome: success. Consistent participation from FMRWM and growing number of alumni, rural prceptors, etc.

Reflections: setting article selection criteria and presentation expectations has ensured consistent quality with each session. Most articles offer potential to change or at least refine clinical practice.

FMRWM SCHOLARLY WORK **FACULTY**

Name: Robert Cruikshank, MD

PUBLICATIONS

Project Title*:* Taking a Walk on the Wild Side: Wilderness Medicine Training at the Family Medicine Residency of Western Montana

Details of the project: Jeff Walden and I co-authored this article which describes and history and nature of the wilderness medicine training curriculum at FMRWM.

Outcome: This was published in the spring issue of the Montana AFP Journal.

Reflections: It was easier and more fun than I would have guessed to write this article and hopefully it encourages others to get involved with learning or teaching wilderness medicine.

CONFERENCE PRESENTATIONS

Project Title*: STI Update 2023: Ten things you need to know*

Details of the project: I was interested in learning more about syphilis since there has been a spike in the incidence of this in Montana and there was also a need for more conference speakers.

Outcome: I presented to about 50 providers at the MT AFP Big Sky Winter Conference in February 2023 in Whitefish, MT. The presentation was well received. There wasn't a lot that was truly new in the past year outside of Monkey Pox so I spent much of the time reviewing what is known and current care recommendations. I could have spent some time discussing Ureaplasma urethritis as there was interest in knowing more about this.

Reflections: It takes a lot of time to create a good presentation but it was worth it and I will want to present again at some point in the future.

FORMAL COURSES

Project Title*: Wilderness Life Support*

Details of the project: Jeff Walden, Darin Bell and I were the course instructors for the 16 hours of instructional time focused on acquiring hands on skills in wilderness medicine. We demonstrated numerous backcountry medicine skills including stabilizing fractures, stopping bleeding, packaging and transporting patients, and supervised team based care for many backcountry medical scenarios.

Outcome: 14 residents and faculty took the course. The course feedback was very positive.

Reflections: We plan to offer the WLS course every 18 months. It was an enjoyable and valuable experience for the instructors and the learners. The food and housing costs were too high, so we'll be looking for a less expensive venue for next time. We additionally needed to navigate how best to incorporate a learner with a disability, which required some forethought and communication but went well.

OTHER

***Project Title**:* More POCUS! Further incorporation of point-of-care-ultrasound at the Family Medicine Residency of Western Montana

Details of the project: FMRWM faculty and residents are interested in having more training on POCUS. We had a team based scavenger hunt for POCUS findings in clinical practice with some educational support for residents and faculty.

Outcome: Time barriers in clinic made it difficult to achieve a high volume of POCUS use, but faculty felt more confident in supervising POCUS exams.

Reflections: Dedicated faculty teaching time may enhance faculty skills. SIM and didactic based POCUS learning was well received by the residents.

FMRWM SCHOLARLY WORK **FACULTY**

Name: Samantha Greenberg, MD

CONFERENCE PRESENTATIONS

***Project Title**: Beyond Developmental Milestones: Family Centered Well Child Care in the 1st Year of Life.* MT AFP Winter Conference, Whitefish MT, Jan 18, 2023. Audio also published through AudioDigest.

***Project Title**: Early Pregnancy Loss Management in Primary Care.* MT AFP Winter Conference, Whitefish MT, Jan 20, 2023.

OTHER PRESENTATIONS

Caring for peripartum patients in primary care. GVHC Peer Review. Kalispell, MT. Oct 11, 2022.

IBD in pregnancy: Case Presentation. MOMS Project ECHO, virtual via Billings Clinic. November 8, 2022.

Parental mental health and well child care: Screening for PMADs in pediatric visits. Logan Health Pediatric Grand Rounds, Kalispell, MT. May 4, 2023

FMRWM SCHOLARLY WORK **FACULTY**

Name: Kerry Haney, PharmD

PEER REVIEWED PUBLICATIONS

***Project Title**: Ensuring equity: Pharmacogenetic implementation in rural and tribal communities*

Details of the project: Multi-year Pharmacy student research project involving investigation of Pgx testing. Frontiers in Pharmacology 9.2022 DOI: 10.3389

Outcome: Interviews completed and paper successfully published.

Reflections: Maintaining project momentum during COVID was a challenge, but the researcher team was able to complete the work and publish.

CONFERENCE PRESENTATIONS

***Project Title**: Update on Cholesterol Management (presentation)*

Details of the project: Recent Drug Developments annual CE seminar for UM Skaggs School of Pharmacy March 2023.

Outcome: Presentation was well received as a helpful update for lipid therapies.

Reflections: These types of hour long presentations can take quite a bit of prep time and usually require materials submission well before conference date for CE processing.

LEADERSHIP OR PEER REVIEW ROLE

***Project Title**: College of Health IPE Steering committee, co-chair*

Details of the project: This committee is comprised of health training program unit representatives across UM/Missoula College. The group works to foster collaborations on campus for IPE training of students and coordinates workgroup efforts to develop IPE activities.

Outcome: This group has been successfully working together since 2016 to meet unit accreditation standards relating to IPE, sustaining efforts despite global pandemic, and continuing to revise and develop new training opportunities.

Reflections: This year I will be rotating out of the role after serving a 2 year term.

***Project Title**: College of Health IPE didactics workgroup, co-chair*

Details of the project: This workgroup aims to create and offer IPE training opportunities in the didactic portion of curricula.

Outcome: This group has been successfully working together since 2016 to meet unit accreditation standards relating to IPE, sustaining efforts despite global pandemic, and continuing to revise and develop new training opportunities.

Reflections: We will be managing leadership transitions and updating offerings for AY 23-24

FORMAL COURSES

***Project Title**: IPE Practice Skills – 1 credit*

Details of the project: This course was redeveloped and offered synchronously via Zoom in Fall and Spring semesters of AY22-23. It was a collaboration with MSU, UM and AHEC.

Outcome: We successfully re-envisioned and revised the course to offer it to UM/MSU students.

Reflections: Another MSU faculty member will be recruited for 2023-2024. Faculty stipends will significantly help with sustainability of the course through AHEC support. Course offerings will be continued to be revised now that using Zoom rather than online modules or f2f format.

***Project Title**: Friday Morning Medical Conference - 1 credit*

Details of the project: This seminar course is hosted by Western MT AHEC. Students from a variety of health professional disciplines have enrolled and taken this class since 2018.

Outcome: Successfully offered since 2018 and was held virtually during the pandemic.

Reflections: Collaborations with WMT AHEC have continued to be successful to offer college level credit for attending and participating in class discussion and post-class reflection.

***Project Title**: Annual Fall and Spring IPE seminars*

Details of the project: These 3 hour learning activities have been offered since 2018 on the UM campus. We typically have students from several university systems in Western Montana attend either in-person or

virtually to participate. Student numbers have ranged from 130-250 students from 6-7 disciplines.

Outcome: These trainings are a large UM collaborative effort by the IPE didactics group and hosted by the COH and MTGEC. They continue to be a unique training opportunity in our state.

Reflections: As the pandemic ended, this year we transitioned from offering trainings solely virtually to a hybrid model again.

***Project Title**: IPE Faculty Retreat Spring 2023*

Details of the project: Annual retreat planned by COH Steering committee co-chairs.

Outcome: The IPE faculty champions meet in June 2023 for faculty development topics and future planning for 2023-2024.

Reflections: Support from MTGEC and COH makes these retreats possible. An late spring/early summer date is a productive time for faculty to meet during the academic year.

FMRWM SCHOLARLY WORK **FACULTY**

Name: Emily Heid, MD

CONFERENCE PRESENTATIONS

***Project Title**:* Three presentations. Joint Hypermobility, Impairment ratings of the lower extremity, and Establishing an IME business

Details of the project: I was a presenter at the American Academy of Orthopaedic Surgeons Annual Workers' Compensation Conference in Nov. 2022

Outcome: Success.

Reflections: I learned that public speaking is a learnable skill and to try even if I am afraid. I was able to translate the teaching skills I have developed as a preceptor into teaching a different audience/different format.

LEADERSHIP OR PEER REVIEW ROLE

***Project Title**:* Peer Reviewer for the journal of the American Orthopaedic Foot & Ankle Society (Foot & Ankle International)

Details of the project: I have been a long term member of AOFAS and when they put out a request for volunteers several years ago I put in my name and was selected.

Outcome: I don't always get it right but I learn something every time.

Reflections: I really enjoy this activity as it has made me a more discriminating reader of the medical literature. It has taught me great appreciation for the hard work editors put in when choosing material to publish.

FMRWM SCHOLARLY WORK **FACULTY**

Name: Amy Matheny, MD, MPH

PUBLICATIONS

***Project Title**:* Founding editor for the MAFP magazine, *Montana Family Physician* (2019 to present)

Details of the project: As editor of *Montana Family Physician*, I coordinate and edit content for this quarterly communication of the Montana Academy of Family Physicians. Editions highlight Montana family medicine clinical, policy, and practice management updates and the MAFP's work and value to members.

Outcome: We have completed 17 editions thus far with great feedback from MAFP members on the value of this regular communication from the chapter with updates relevant to our specialty across Montana.

Reflections: This has been a great project with which to stay engaged with MAFP and provide value to my fellow family physicians across the state.

CONFERENCE PRESENTATIONS

***1) Project Title**:* SOCIETY OF TEACHERS OF FAMILY MEDICINE ANNUAL CONFERENCE, Tampa, FL, 5/1/23 "Implementing the ABFM National Journal Club in Residency Programs: Insights from Five Pilot Programs", co-presenter/panelist

Details of the project: In 2021 I wrote a proposal for FMRWM to be one of a small cohort of family medicine residencies nationally to take part in a pilot through the American Board of Family Medicine to incorporate the new ABFM Journal Club resource in our educational program. We worked to include these articles as high quality selections for FMRWM journal club, with an increase from around 25 to 50% of articles presented coming from the ABFM NJC collection between the 2021/2022 and 2022/2023 academic years. Upon review of attendee surveys, it was noted that it was two times more likely that at least 50% of attendees intended to make changes in their practice based on articles reviewed from the ABFM NJC resource compared to articles from other high quality sources. FMRWM also created a mechanism for attendees to claim CME credit for attendance, and advertised this to graduates and members of our rural network. We also worked to advertise this resource through the MAFP magazine and CME conferences.

Outcome: Our program's implementation was identified among the top 5 innovative approaches nationally within the pilot group, and we were selected to be part of the panel presenting this project at the STFM Annual Conference.

Reflections: This project has been an excellent way to continue to put FMRWM on the map nationally as a program of excellence, not only in rural education, but evidence-based medicine education. ABFM NJC has provided an even more valuable collection of articles that are relevant and practice-changing for our residents and faculty.

***2) Project Title**:* MAFP BIG MOUNTAIN MEDICAL CONFERENCE, Whitefish, MT, 1/25/23

"Guideline Update Potpourri", January 25, 2023

Details of the project: I presented this as a follow-up of a similar guideline update presentation from the year prior that received good reviews from attendees for its usefulness and applicability.

Outcome: I received positive feedback again for the value of this session, including a review of a new hypertension guideline from the AAFP, the new diabetes treatment guideline updates from the ADA and the AACE, navigating the two

updated PrEP guidelines, and reviewing resources pertinent to USPSTF guidelines related to pediatric mental health screenings.

Reflections: I have enjoyed delivering lectures for a number of years now at the MAFP Whitefish CME conference. With each passing year I feel I am growing in my sense of what is useful and relevant for my colleagues, and I continue to appreciate this opportunity to grow in this realm of teaching.

OTHER PRESENTATIONS

1) Project Title*:* INTERPROFESSIONAL EDUCATION SEMINAR, UNIVERSITY OF MONTANA, Missoula, Montana, December 2022, April 2023

"Culture of Safety"

Details of the project: For a number of years I have assisted with a presentation regarding "Culture of Safety" in health care for the UM interprofessional education seminary course. This is in collaboration with Dr. Kerry Haney, who is one of the lead professors of the course.

Outcome: Worked on a slightly new format for the 2022/2023 presentations as this was the first time I have presented virtually. The presentation was modified, and a case was used from the IHI open source cases to reflect on an interprofessional case of a patient with an adverse outcome.

Reflections: It has been great to take my own learning in teaching concepts of patient safety to a new, interprofessional student audience above and beyond the residents with whom I work every day. It is great to collaborate with my interprofessional pharmacy colleague on this class.

2) Project Title*:* Partnership Health Center Provider Education Meeting, 3/21/23

"Guideline Update Potpourri"

Details of the project: I was asked to re-present my MAFP CME conference talk referenced above locally for the provider group at our clinic.

Outcome: Similar to as noted above.

Reflections: It is always a great opportunity to share a presentation with multiple audiences to enhance learning and knowledge for more colleagues.

GRANT LEADERSHIP

1) Project Title*:* Western Montana Area Health Education Director

Details of the project: I have served as the director of WMT-AHEC since July 2021, where I serve as the PI of multiple grants related to our work, including our core AHEC grant as well as additional supplemental grants. The work of AHEC spans career awareness programs, AHEC Scholars certificate program for health professions students in training, coordination of the Missoula WWAMI program, Continuing Education programming, Behavioral Health Workforce Education and Training program, Regional Health Equity Taskforce and Leadership, and various other supports for health professions students and professionals in practice.

Outcome: This has been a very enriching organization of which to be a part which help extends my own contribution to health professions workforce development beyond my day-to-day work in the residency. I work with an excellent staff who are passionate about all of their individual realms and who contribute in countless ways to enhance health professions training in our region.

2) Project Title*:* Co-Primary Investigator for the HRSA PCTE-RTPC Grant (Primary Care Training Enhancement – Resident Training in Primary Care)

Details of the project: I have continued as a co-PI on this grant awarded to FMRWM from HRSA. This is a five-year, 2.5 million dollar federal grant funding a variety of initiatives to enhance and expand training that supports rural as well as American Indian and Alaska Native populations, including research into curricular impacts on future practice patterns (7/2020 to present).

Outcome: Our grant team has had a number of successes of the first three years of this project, including successful pilot and implementation of our rural continuity clinics as well as our Rural Intensive and American Indian Health Tracks. We have brought Drew Babcock on to our residency team through this grant to enhance our relationships and service to AI/AN communities in Montana. Our program's ability to expand simulation training, ultrasound equipment, and other training opportunities have been funded through this grant's activities. We have also started to evaluate the data of our various surveys of residents, graduates, and employers to start to understand trends of the impact of our program curriculum.

Reflections: The FMRWM PCTE-RTPC grant has been an exciting opportunity to explore the work of a HRSA grant and to partner with University of Montana faculty from other departments to work on research questions and future scholarly work. We are learning a lot about our program impact while expanding learning opportunities in the process.

LEADERSHIP OR PEER REVIEW ROLE

1) Project Title*:* Montana Academy of Family Physicians Board of Directors

Details of the project: As a long-time board member and past chapter president, I have continued to be engaged with the Montana Academy of Family Physicians through the Board of Directors. I will be taking on the role of Secretary/Treasurer as of June 2023. I have also worked on various advocacy issues from the state to national level, and work to support leadership development and education content for MAFP members.

Outcome: I have been an engaged member of the Board with minimal missed meetings over the years, working to continue to support leadership development within our board for the future.

Reflections: I have been involved with the MAFP Board since 2013 and hope to continue involvement with the Board and MAFP magazine. I hope to find additional ways to be involved in family medicine advocacy at the state and national level.

2) Project Title*:* American Board of Family Medicine In-Training Exam Review Committee, July 2022

Details of the project: I was invited to join the ITE Review Committee for review of the 2022 exam. This connection with ABFM stems from prior involvement with the CKSA questioning writing group a number of years prior.

Outcome: This was a great experience to have a better understanding of how the ITE exam is put together, and to build my skill in reviewing and writing high quality test questions. This hopefully also helps me to contribute to the structure of our curriculum to continue to have strong ITE performance for our program.

Reflections: I would like to continue future involvement, although this year's meeting coincides with our Community and Culture Retreat. This is another opportunity to get our program some national experience and recognition in the Family Medicine community.

OTHER

Project Title*:* Promotion to Clinical Assistant Professor in the Department of Family Medicine, University of Washington School of Medicine.

Details of the project: I was due for my routine review for promotion and upon review of updated CV and scholarly activity, the promotion was granted.

Outcome: Successful as above.

Reflections: It's great to have the connection to a home medical school that our program has within the UW FMRN.

FMRWM SCHOLARLY WORK **FACULTY**

Name: Elizabeth Paddock, MD, FAAFP

CONFERENCE PRESENTATIONS

1-Neurology Cases in Primary Care. Montana Academy of Family Physicians Annual Winter Conference. Whitefish Montana. January 2023.

2- Reproductive Health Care: Conversations between Healthcare Providers & their Patients. Presentation with Drs Taylor Simmons MD and Cecelia Weeks MD. Western Montana AHEC Friday Medical Conference. January 2023.

3-Point of Care Ultrasound. Utility in the Outpatient Primary Care Office. Lunchtime learning presentation to Bozeman Health Primary Care Clinicians. With Dr Dan McCarthy DO. November 2022.

I always appreciate how giving a presentation allows me to solidify my knowledge.

OTHER PRESENTATIONS

FMRWM Journal Club: Medication Management of Painful Diabetic Peripheral Neuropathy. December 2022.

Article: Relative Efficacy and Safety of Pharmacotherapeutic Interventions for Diabetic Peripheral Neuropathy: A Systematic Review and Bayesian Network Meta-Analysis. Asrar et al. Pain Physician 2020; 23: E1-E14.

LEADERSHIP

1-FMRWM Faculty QI Projects.

New this year we have introduced faculty QI projects. This is a great way for most faculty to work together on projects they have been meaning to start; get AAFP PI credit and focus on some FMRWM priorities.
Projects this year included Resident rural rotations, POCUS, Tele health Prep and hospital discharge process.

2-Resident QI presentations at the Winter MAFP conference.

I am very proud that this was able to happen. 3 resident projects were presented at the MAFP conference in January with the goal of introducing small achievable projects to family physicians around Montana.

FORMAL COURSES

FMRWM Point of Care Ultrasound Course.

Co-lead with Dr Jeff Walden MD. 2 day introduction to point of care Ultrasound. August 2022.
This is a 2 day robust introduction to POCUS. This is always an enjoyable course with eager engaged learners.
For 2023 we are looking to revamp the hands on components of the course to be more structured.

OTHER

WPRN Survey Research Panel.

As a member of the panel I receive surveys from researchers who are interested in feedback from clinicians in community-based primary care settings in the WWAMI region.

FMRWM SCHOLARLY WORK **FACULTY**

Name: Jennifer Robohm, PhD, MPH

CONFERENCE PRESENTATIONS

Project Title: Climate Change and Health: Moving the Elephant Out of the Living Room and into the Family Medicine Residency Curriculum.

Details of the project: Workshop presented at the STFM Annual Conference (May 2023) in Tampa with several physician colleagues (Bhargavi Chekuri, Nancy Newman, and Monica DeMasi).

Outcome: Positive feedback from participants, who found the action planning document and "toolkit" that we provided very helpful.

Reflections: This was a collaborative effort that helped me to connect with the 2 leads of the STFM Planetary Health Collaborative and feel re-energized about climate-related work.

Project Title: Climate change: Role for behavioral scientists?

Details of the project: Workshop presented at the 43rd Forum for Behavioral Science in Family Medicine (September 2022) in Chicago.

Outcome: Success.

Reflections: Afforded me the opportunity to connect with an audience member (Nancy Newman, MD) who has now become a collaborator.

OTHER PRESENTATIONS

***Project* Title:** Climate Change in the Family Medicine Residency Curriculum: Next Steps.

Details of the project: Virtual presentation for a Program Directors' meeting for the WWAMI network of family medicine residency training programs (October 2022) in Seattle.

Outcome: Shared findings from my study of climate change in the WWAMI curriculum and brainstormed with PD's about 'low-hanging fruit' within their programs.

Reflections: Opportunity to meet Cecilia Sorensen, MD, Director of Columbia's Global Consortium on Climate and Health Education and try to build momentum within the WWAMI network.

Project Title: Climate Change and Grief: Turning Grief and Anxiety into Activism.

Details of the project: Member of panel for climate event (April 2022) sponsored by the Tamarack Grief Resource Center in Missoula.

Reflections: Opportunity to talk about climate and mental health with a lay audience.

LEADERSHIP OR PEER REVIEW ROLE

***Project Title**:* Co-Lead, WWAMI FMR Network Climate & Health Interest Group

Details of the project: With Melissa Roop, MD, of the Boise program, I've helped to create a collection of curricular resources and a listserv within the network.

Outcome: slow start, partly due to scheduling challenges.

Reflections: we're hoping to do a Faculty Development didactic to spur more awareness and buy-in.

***Project Title**:* Board Member, Montana Health Professionals for a Healthy Climate

Details of the project: Ongoing opportunity to provide outreach, education, and advocacy around MT.

Outcome: Educated legislators, offered a first-annual conference in Helena, and participate in a number of related initiatives (e.g., EPA Flags Program).

Reflections: I appreciate my colleagues and their commitment. Several are providing testimony in the 'Held v. Montana' case, which may help to provide a legal precedent within the courts. We're also going to be able to bring the Flags program to the Creamery and Seeley Lake clinics to help patients monitor air quality during wildfire season.

FORMAL COURSES

Project Title: Climate Change, Mental Health, and Resilience.

Details of the project: Seminar presentation for "Introduction to Climate Change" undergraduate course (October 2022), University of Montana.

Outcome: *s*uccess. Helped me appreciate how much some UM college students are struggling around the climate crisis.

Reflections: this experience has spurred me to develop an undergraduate course by the same name, to be offered (tentatively) in Spring 2024.

OTHER

Project Title: Climate Certificate Program

Details of the project: 10-day training program through the California Institute for Contemporary Studies (CIIS), fall 2022

Outcome: completed, utilizing some of CME funds.

Reflections: great chance to learn more about climate psychology and possible applications within residency training and the community. Afforded the opportunity to develop a lovely community of like-minded professionals around the country.

FMRWM SCHOLARLY WORK **FACULTY**

Name: Rob Stenger, MD

CONFERENCE PRESENTATIONS

Project Title*: Panelist MMA Annual Meeting – Medical Education in Montana*

Details of the project: I was a panelist on a plenary session at the MMA annual meeting.

Outcome: completed

Reflections: It was interesting to hear the perspectives of the two proposed medical schools and how they conceptualize UME in our state in the future.

OTHER PRESENTATIONS

Project Title*: Preparing for the SOAP – Panelist FMRN Brown Bag*

Details of the project: I was a panelist on brown bag session for FMRN programs on preparing for the SOAP

Outcome: completed

Reflections: none

LEADERSHIP OR PEER REVIEW ROLE

Project Title*: Montana GME Council*

Details of the project: I'm the current vice chair of the MT GME council which is a voluntary group of stakeholders in the state with a mission to promote GME expansion in Montana.

Outcome: The council remains a productive dialog among stakeholders and also a way to keep group members focused on Graduate Medical Education. The Council has been successful in obtaining and maintaining a state investment in residency training.

Reflections: We have set a broad goal to double PGY1 GME slots in MT in the next 10 years. I think there will be challenges in keeping this goal as medical schools start and expand.

Project Title*: Missoula City-County Health Board*

Details of the project: I'm the current physician board member of our city-county health board. ***Outcome:*** It has definitely been a winding down year after covid, with the health department getting back to normal operations, and considering more routine issues like water quality, air quality and the community health improvement plan.

Reflections: None, I enjoy this role!

***Project Title**: WWAMI Family Medicine Residency Network Salary and Program Surveys*

Details of the project: I'm working as an advisor to the FMRN staff who conduct the salary and program surveys that WWAMI programs use for internal benchmarking.

Outcome: We were hoping to publish some data from the survey last year, but the integrity of our data was not robust enough for that purpose. We made some significant changes to the surveys which will hopefully make them easier for programs to complete and yield higher quality data.

Reflections: Data from the FMRN is one of the best sources of data nationally on the cost of training FM residents and the structure of residency programs.

FMRWM SCHOLARLY WORK **FACULTY**

Name: Jeff Walden, MD

PRESENTATIONS:

- "Residents as Teachers" section; presented to FMRWM residents
- Friday Medical Conference -_Refugee and Newcomer Healthcare
- Aug 25-26 POCUS Workshop
- Sept 28: "Job Search 101: Your Search and Interviewing Skills"
- Oct 5: Acute, Unstable Vital Signs presentation: FMRWM Didactics
- Oct 12: Wilderness Med Didactic: Lightning Prevention and Treatment
- Feb 22: "In-office Evaluation and Management of Concussion."
- March 28: FAST Didactic - SIM lab

PROFESSIONAL EXPERIENCE:

- Sept 15 - 18: Fall Winter Wilderness Weekend – coordinator and presenter
- Feb 23-26: Instructor, AWLS

PUBLICATIONS:

Cruikshank R, Walden J. "Wilderness and Family Medicine."
Montana Academy of Family Physicians Journal. Published April 2023

Walden J. "Memory Sticks – A Humorous Reflection on Teaching in Medicine."
Family Medicine. Accepted for publication June 3, 2023.

FMRWM SCHOLARLY WORK **FACULTY**

Name: Emma Wright, MD

PEER REVIEWED PUBLICATIONS

***Project Title**:* Childhood Vaccination Practices and Parental Hesitancy Barriers in Rural and Urban Primary Care Settings Albers, et al. Published in the Journal of Community Health, April 2023.

Details of the project: I worked with a team in the epidemiology department at UM that was exploring childhood vaccination patterns in Montana. I was excited about this work because I care deeply about immunization as a tool for health and the controversy throughout the pandemic has heightened my concern about threats to this tool. We started the project before the pandemic and were able to include data on COVID vaccine patterns as well.

Outcome: Published online in the Journal of Community Health.

Reflections: It was so valuable to work with a team on this process. I learned a lot about public health research and survey creation. It helped me understand the value of a physician's perspective in this kind of research rather than having it be only public health driven.

Project Title: What are effective interventions for recurrent yeast vaginitis?

Details of the project: Help Desk Answer done during the faculty development fellowship.

Outcome: In progress. Written and submitted, passed methods review, pending editorial review.

Reflections: This was a lengthy process and not one that I would necessarily pursue again.

OTHER PRESENTATIONS

***Project Title**:* Family and Community Medicine Longitudinal Curriculum Development

Details of the project: This was a presentation at the fellowship of the work that I did this year on developing the Family and Community Medicine Rotation.

Outcome: Presentation complete, curriculum still a work in progress.

Reflections: Working with a partner was invaluable on this project to keep momentum and gain other perspective. If you are thinking of doing surveys, get the IRB approval early so that you can use data to present to others.

OTHER

***Project Title**:* Faculty Development Fellowship

Details of the project: For WWAMI Network Faculty, yearlong fellowship.

Outcome: Success. Graduation May 2023.

Reflections: Very valuable experience learning with others at a similar stage of faculty journey. Has been impetus for many changes I am working on in the program.

***Project Title**:* Clinic Quality Improvement work

Details of the project: Ongoing work with the QI team at PHC and multiple small workgroups on clinic improvement.

Outcome: Ongoing.

Reflections: Looking forward to processes from the LEAN philosophy to help direct and organize this work more efficiently.

***Project Title**:* Curriculum Development

Details of the project: Development of the Family and Community Medicine rotational curriculum including goals and objectives, scheduling guide, rotational overview, and individual curricular activity descriptions.

Outcome: Ongoing.

Reflections: As above, helpful to work with a team.

***Project Title**:* Precepting Improvement

Details of the project: Motivated to improve our precepting processes. Solicited information from residents and faculty on ways that we can improve our precepting processes. Created updated precepting rules document.

Outcome: Ongoing.

Reflections: Continue to think about ways to do faculty and resident development on precepting and clinical reasoning tools.

***Project Title**:* Lab Completion and Follow-up in PrEP Visits

Details of the project: Faculty scholarly activity project in quality improvement category. Tracked lab completion for PREP care based on chart review and examined trends.

Outcome: Ongoing.

Reflections: Will use this to inform education to providers and care teams about appropriate PREP lab management.

Faculty QI Work

QI PROJECT

Names: Brett Bell, MD; Ellen Bluett, PhD; Christi Richards, MD; Rob Stenger, MD, MPH; Jeff Walden, MD

Title: *Improving Post-Hospital Coordination of Care*

Our project worked to identify areas for improvement in the discharge of Silver Team patients back to primary care at PHC, including adequate information exchange at the time of the care transition and optimal scheduling of hospital follow up appointments.

Problems: Transitions of care, especially from the hospital to outpatient settings, are a frequent cause of medical errors. Given limited appointment access available at PHC, critical transition of care appointments are often scheduled with anchor providers who are unfamiliar with the patients, rather than patients' PCPs. Individuals involved in scheduling follow up appointments often do not have the information or clinical background to determine appropriate follow up or the care team members who should be involved.

Aims:

1) To increase the percentage of hospital follow up appointments at PHC scheduled with the patient's primary care provider by 25%.
2) To optimize the timing of hospital follow up appointments and decrease no-show or cancelled hospital follow up appointments.

Key Measures for Improvement: Percentage of hospital follow up appointments scheduled with the patient's identified primary care provider.

Process of Gathering Information: The discharge process is complex and involves multiple individuals, both on the hospital side and at PHC. Given ongoing work in this area by the SPH Discharge Planners and PHC Care Managers, one of our key challenges was to understand the current workflows, the data already being collected, and the opportunities for improvement within the current process. Our goal was not to create an entirely new process or workflow, but rather to identify gaps and opportunities for improvement in the current process.

It took our team a significant amount of time to understand all facets of the current processes, meet with team members doing the work and understand the baseline data available. We gathered information primarily through meetings with the PHC Quality Improvement team, PHC RN Care Managers and SPH Discharge Coordinators.

Baseline Data ????

Analysis and Interpretation:

Through meetings with care coordination staff, we discovered a number of potential opportunities for improvement:

- Hospital discharge appointments are generally scheduled via contact between hospital discharge coordinators and PHC scheduling staff based on standardized expectations of a hospital follow up appointment within 1 week.
- Clinical staff (PCPs or RN Care Managers) are not involved in determining the appropriate timing of follow up appointments based on individualized patient factors such as medical complexity, hospital diagnoses or PCP availability.
- Care Mangers do proactively contact all discharged patients and obtain hospital discharge summaries. Sometimes additional team members (e.g. clinical pharmacy) are involved in post-discharge care.
- Key clinical and contextual information (e.g. likelihood of follow up or family support at home) is not often contained in hospital discharge summaries preventing optimal care coordination by PHC Care Coordinators during hospital to outpatient care transitions.

Strategies for Change:

Based on gathered information, we implemented two changes:

1) Providing SPH discharge coordinators with the names and contact information of PHC RN Care Managers so that they can contact care managers directly at the time of discharge to schedule hospital follow up appointments, instead of contacting the scheduling staff. PHC RN Care Managers have a greater ability to understand patients' clinical context and change provider schedules to optimize timing and provider of post-hospital discharges.
2) Developing a process and documentation template for a telephone encounter in eCW from the discharging silver team resident to the PHC RN Care Manager at the time of discharge to include critical contextual information to aid in post-discharge care coordination.

Effects of Change: Due to the length of time it took to set up meetings and gather information from various clinical team members, we did not have enough time to assess for a change in baseline data after starting to implement our interventions. Given that this project will only impact a proportion of post-hospital patients seen at PHC (those see on the Silver Team at SPH), we will likely need to rely on some short-term process measures, such as use of the TE template or analysis of post-hospital appointments of a sub-group of discharged patients for a short period of time.

Lessons Learned: The transition of care process is complex, with multiple systemic barriers and processes in place that hamper optimal care coordination and patient care.

Our project would have been quicker to implement, but ultimately less sustainable and impactful if we'd implemented something on our own without trying to coordinate with other staff.

There are multiple opportunities to improve post-hospital transitions of care and PHC is well positioned to make additional improvements given multiple staff positions dedicated to care coordination.

Care Managers value and will benefit from the knowledge and experience of providers who work in the hospital.

QI PROJECT

Names: Amy Matheny, MD, MPH; Emma Wright, MD; Kerry Haney, PharmD

Title: *Lab Completion and Follow-up in PrEP Visits*

Problems: Partnership Health Center received a grant from the Montana Department of Health and Human Services (DPHHS) to develop a program to offer PrEP telemedicine visits with a goal of reducing barriers and improving access for rural and underserved communities.

As we planned to implement this pilot of telemedicine PrEP visits, particularly for patients living in rural Montana, we anticipated that one of the biggest barriers would be coordination of timely lab draws for baseline evaluation for PrEP initiation and follow-up monitoring of PrEP therapy. There was a larger workgroup at Partnership Health Center focused on overall implementation and workflows. Our faculty team aimed to evaluate completion of recommended labs for the telemedicine-only population compared to the general PrEP patient population at Parternship Health Center. Our overall goal was to ensure a comparable standard of care regarding lab monitoring for PREP for patients seeking in-person versus telemedicine-only care.

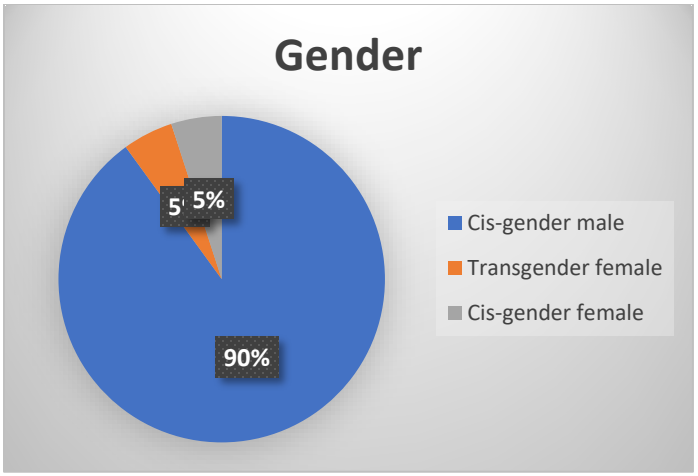
Aim: Over the course of 6 months, we aimed to assess the rate of lab ordering/review at PrEP initiation and for ongoing management for telemedicine PrEP patients and compare to the baseline lab ordering/review the routine in-person PrEP population at PHC, with a goal of ensuring that the rate is equal to or higher than the rate for patients seen in-person. We aimed to develop a standardized chart review checklist to assess lab completion and review for PrEP initiation as well as ongoing monitoring during PrEP therapy.

Key Measures of Improvement: Rate of completion of recommended labs and follow-up based on the standard for PrEP care.

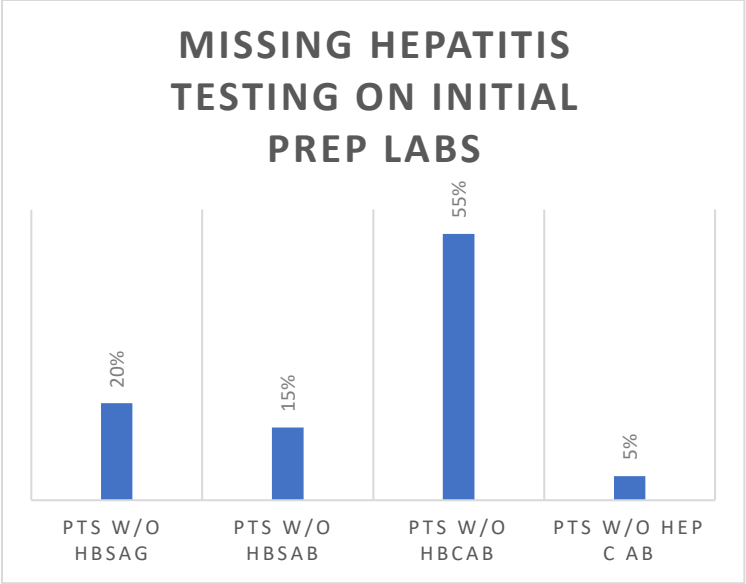
Process of gathering information: 20 patients on PrEP therapy were selected for retrospective chart review using a standardized review form. These patients were intended to be a mix of standard PrEP patients and those being seen within the PrEP telemedicine pilot. However, the pilot for PrEP telemedicine visits did not progress as expected and thus this second population was not represented in the data. There were some patients who had already been seen by telemedicine because of the COVID public health emergency.

The review form was developed by Dr. Matheny based on practice guidelines from CDC and IAS-USA (recognizing that there are some differences in these recommendations). The chart reviews were performed by Dr. Haney, PharmD. The results of the chart review were entered into a spreadsheet by the research team which we utilized to identify trends. Confidentiality was of high importance in this process so patients were assigned a number to de-identify the data when added to the spreadsheet.

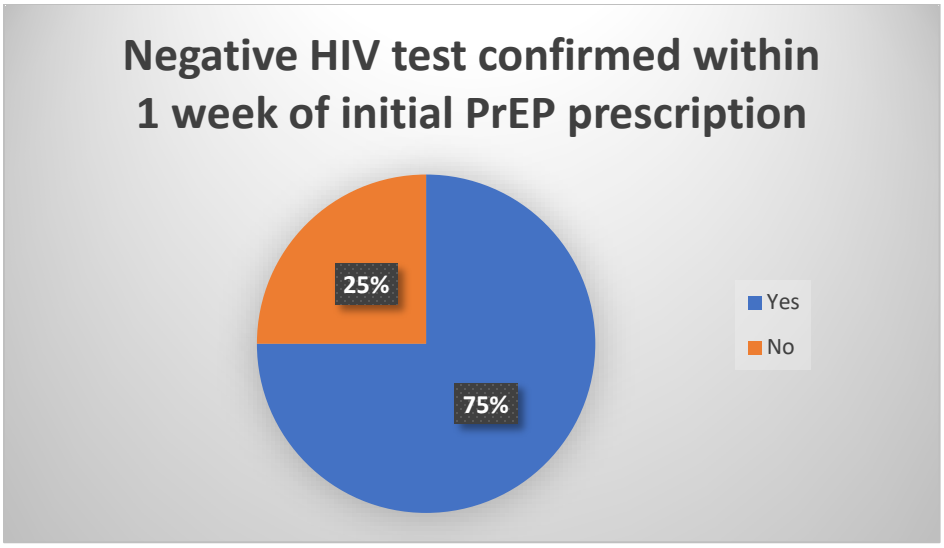
Analysis and Interpretation: The vast majority of patients in this sample were cis-gender men. All were treated with oral PrEP regimens, including 95% (19 patients) with TDF/FTC (Truvada) and 5% (1 patient) with TAF/FTC (Descovy).



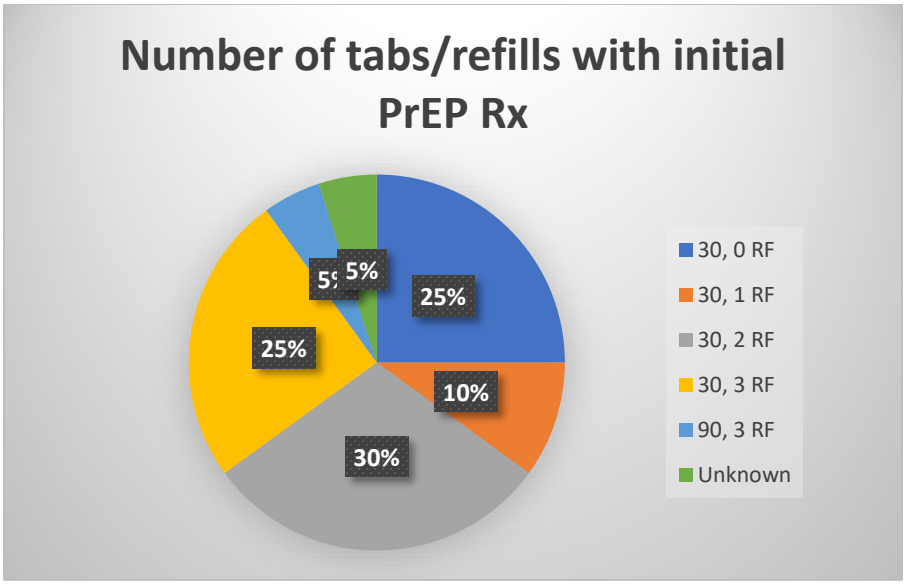
While nearly all patients had appropriate HIV testing with a 4th generation serum test at PrEP intake (with the exception of one patient with a rapid test), there was more variability in Hepatitis B panel testing among the cohort. CDC PrEP guidelines recommend a complete Hepatitis B panel, including Hepatitis B surface antigen, Hepatitis B surface antibody, and Hepatitis B core antibody. The other available PrEP guideline from IAS-USA does not specifically recommend a Hepatitis B core antibody. Confirmation of a negative Hepatitis B status is critical before starting oral PrEP as both regimens can inadvertently treat occult Hepatitis B, with a risk of a fulminant Hepatitis B flare with discontinuation of PrEP.



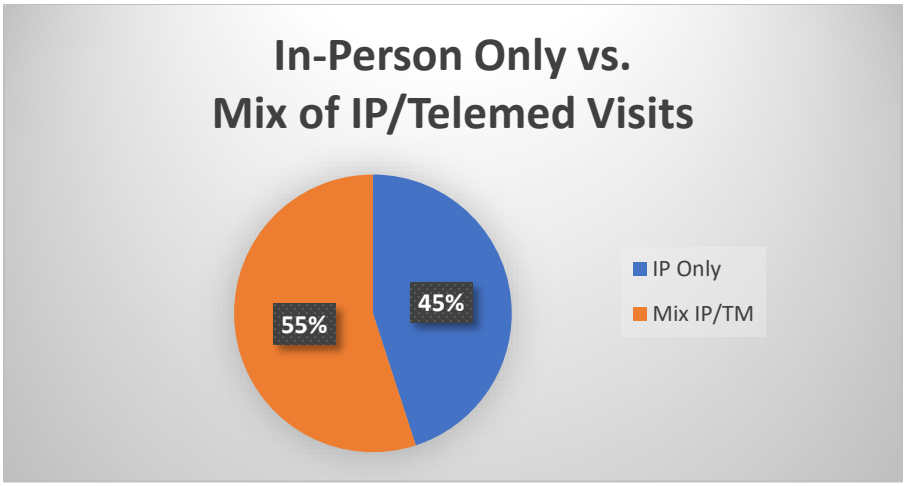
The majority of patients (75%, 15 patients out of 20) had confirmation of a negative HIV test within 1 week of PrEP prescribing. The guidelines recommend this to avoid risk of an increasing window period between risk assessment, including screening for acute HIV symptoms, at PrEP intake and PrEP initiation.



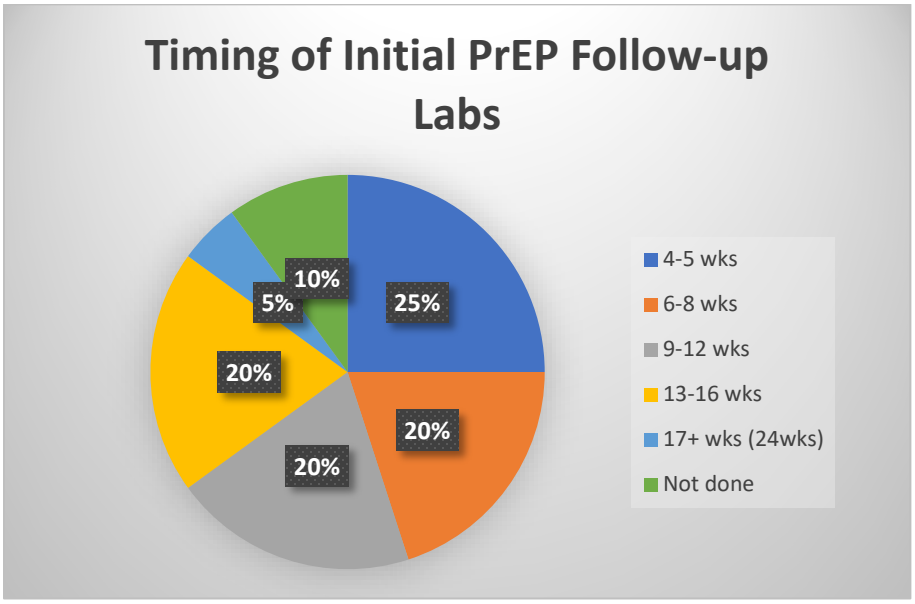
There is understandable and reasonable variation in practice regarding the number of refills provided at PrEP intake. Regardless of the number of refills, patients are recommended to have a repeat HIV test within 4 weeks of PrEP initiation, with the next interval follow-up at 3 months after that. It is worth considering how one's approach to refills in light of knowledge of the patient and their circumstances may affect the patient's follow-up for lab testing at the proper intervals. Other mechanisms (ie: RN care management, reminder calls) can help overcome follow-up barriers, but caution is advised to not provide PrEP for more refills than the routine follow-up lab intervals to avoid risk of missed HIV testing, which is required for safe prescribing.



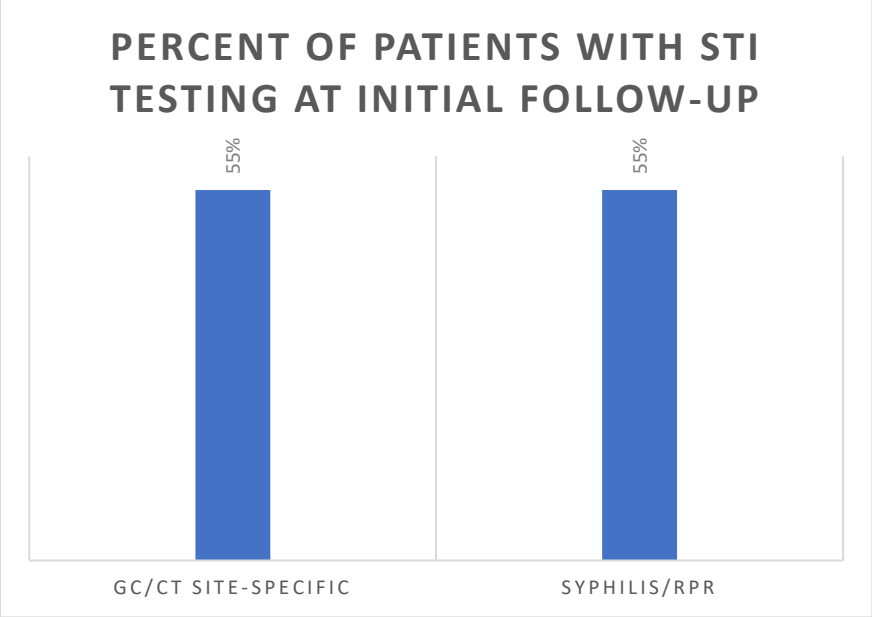
This data review project was inspired by the development of a Telemed-only PrEP pilot through Partnership Health Center. While only 2 patients established through that program, with one already discontinuing follow-up, there was already a precedent to incorporate telemedicine visits within the clinic's core PrEP patient population, especially through the pandemic. Most patients had a mix of in-person and telemedicine visits.



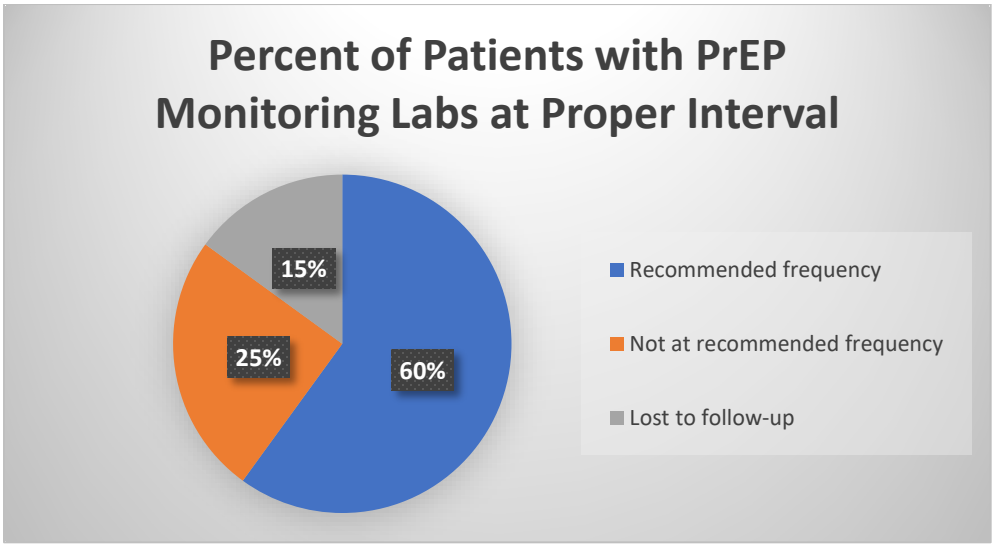
The vast majority of patients did not have initial HIV testing at the proper interval after PrEP initiation. Only 25% (5 out of 20 patients) had testing within 4 to 5 weeks. After initial PrEP prescribing, including restarting PrEP after an interval of discontinuation, patients should have repeat HIV testing within 4 weeks to ensure they were not in the window period of a new HIV infection at the time of the PrEP intake visit and labs. Patients with unknown HIV infection who continue on PrEP have the risk of developing mutations that may render TDF/FTC or TAF/FTC less, or ineffective, against HIV. One patient went as long as 6 months before initial HIV testing after PrEP initiation.



As noted above, most patients' initial PrEP follow-up labs were more than 4-5 weeks from initiation. The guidelines generally recommend repeat STI testing every 3 months for patients taking PrEP due to sexual exposure risk factors. Only a small majority of patients (55%, 11 out of 20 patients) had Gonorrhea/Chlamydia site-specific testing and Syphilis testing at the initial follow-up labs. For the patients with initial testing at less than 3 months from initiation, this may have been appropriate. For other patients at risk who were tested 3 or more months after PrEP initiation, this may have been a missed opportunity for STI screening.



Once established on PrEP, 60% (12 out of 20 patients) of patients in the initial cohort had ongoing PrEP labs at the proper interval of every 3 months. There was some variation in how many of those included a full complement of STI screening labs, but at a minimum HIV testing was completed. Still, one-quarter of patients had follow-up HIV testing at longer-than-recommended intervals.



Overall, there are a variety of areas regarding PrEP monitoring labs – including at initiation, initial follow-up, and with ongoing monitoring – where we can improve the frequency of adherence with recommended timing according to current PrEP guidelines.

Strategies for Change: This information can be presented back in general training to providers. It has identified areas in which practice should be updated. Specifically, we take note that there is not consistency in hepatitis B labs at baseline. This work may also help to inform the development and updating of templates and clinical processes. This will also aid in a more standardized approach to precepting residents in providing PrEP care.

Effects of Change: Ideally, this will lead to safer and more effective prevention of HIV infection, improved hepatitis B screening and vaccination rates, and increased detection and treatment of STIs in our PrEP patients.

Lessons Learned:

- We needed to pick a timeframe over which we were performing chart review.
- We need to be cautious in interpretation of the data due to COVID and the impacts it had on continuity of care/ follow-up.
- The current configuration of labs in our EMR may be a specific contributor to lack of consistency in provider ordering practices.
- Even when we are providing routine in person PrEP care, there are gaps in adhering to the guidelines for testing and follow-up.
- If a teleprep project were to be pursued in the future, having a robust plan for lab completion would be extremely important to ensure safe care.
- PrEP is being prescribed broadly within our large clinic and the individual providers may not be caring for large volumes of PrEP patients. This is excellent access for our patients, but also poses a challenge in keeping everyone updated on current guidelines and practices.
- It may have been useful to concurrently develop/implement a survey of providers to solicit input on where they feel that they need additional training/support.

References:

1. US Public Health Service Preexposure Prophylaxis for the Prevention of HIV Infection in the United States – 2021 Update. Centers for Disease Control and Prevention. https://www.cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf

2. Gandhi, RT, et al. Antiretroviral Drugs for Treatment and Prevention of HIV Infection in Adults: 2022 Recommendations of the International Antiviral Society – USA Panel. *JAMA*. 2023;329(1):63-84. Published online December 1, 2022.

3. Stekler, J. (2022 Dec 8). *IAS-USA Guidelines: Prevention of HIV Infection 2022 Update* [PowerPoint slides]. Mountain West AIDS Education and Training Center Program, University of Washington.

QI PROJECT

Names: Darin Bell, MD; Anne Healy, MD; Jennifer Robohm, PhD, MPH; Rebecca Sharar, MD

Title: *STUDY OF VARIABLES ASSOCIATED WITH BEST "FIT" FOR RURAL ROTATION TRAINING SITES*

Knowledge generated from a survey of variables associated with best "fit" for rural rotation training sites within a family medicine residency training program: Family Medicine Residency of Western Montana

Problem: Residents currently choose rural training sites based on "word of mouth" and can have variable experiences. Further, residents may have different needs for rural rotations. We need a more systematic way to pair residents with rural sites that will be the best "fit" for their training needs and preferences.

Aim: To identify common and varying factors that influence resident experiences on rural rotations.

Key measures for improvements: Variables which received the highest average priority ratings; variables which received the most "high priority" ratings; and variables which received the greatest number of "most important" votes.

Process of gathering information: We conducted an on-line survey of our residents to get a better sense of those variables which are most important to them when selecting a rural rotation training site. Specifically, we asked our respondents about a number of community, housing, site, supervision/precepting, and training opportunity variables that might influence their choice of a rural rotation site. Our survey instrument was designed in February and distributed over the Qualtrics platform in April 2023, and data were collected between late April and mid-May. Data were analyzed using SPSS (Version 27).

A total of 28 out of 30 residents opened the survey, but 4 did not complete it. Thus, our final sample consisted of 24 respondents (80.0%). Of those respondents, 9 (37.5%) were R1s, 10 (41.7%) were R2s, and 4 (20.8%) were R3s. A total of 15 respondents (62.5%) were female, 8 (33.3%) were male, and one respondent did not indicate their gender. (In our residency program, 8 of 30 residents (26.7%) are male.) All of our respondents described themselves as White/Caucasian. Most (83.3%) of our respondents were currently in a relationship, and 70.8% had partners who live locally. A total of 10 (41.7%) of our respondents had at least one child, and 17 (70.8%) had a pet.

Analysis and interpretation: Respondents rated how important each of the variables was to them on a 5-point Likert scale, with 1 = "High priority" and 5 = "Low priority." We also asked them which variable was "most important" to them when choosing a rural training site. We then ran frequency distributions for each variable and calculated a sample mean so that we could compare ratings across variables. Our ability to run other analyses was hampered by our small sample size.

The number and percentage of respondents who rated each variable as a "high priority" and a "low priority" appear in the table below, to give a better sense of the extremes. We also present the average rating for each variable and then use those means to rank the variables according to their overall importance to the group. Finally, we indicate the number and percentage of residents who identified particular variables as "most important" to them when choosing a rural training site (see Table 1).

Table 1. Variables which enhance "fit" for rural rotation sites

VARIABLE	n	"High Priority" n (%)	"Low Priority" n (%)	Mean (SD)	Overall Rank	"Most Important" n (%)
Community						
Closer to Missoula/Kalispell (i.e., easier drive)	24	4 (16.7%)	4 (16.7%)	2.83 (1.34)	17	5 (25.0%)
Small size (e.g., "frontier" community)	24	3 (12.5%)	0 (0.0%)	2.29 (.81)	7	
Opportunity to work with patients of diverse backgrounds (e.g., tribal members)	24	5 (20.8%)	2 (8.3%)	2.50 (1.14)	10	
Opportunity to spend time with medical colleagues outside of clinical responsibilities	24	0 (0.0%)	7 (29.2%)	3.54 (1.14)	20	
Opportunity for exposure to the community (e.g., attend powwow or high school basketball game)	24	3 (12.5%)	0 (0%)	2.75 (.94)	16	
Future job prospects (e.g., "audition" possibilities)	24	5 (20.8%)	2 (8.3%)	2.50 (1.22)	10	1 (5.0%)
Accepting of physicians not of the majority culture (e.g., BIPOC, LGBT)	24	5 (20.8%)	2 (8.3%)	2.75 (1.19)	16	
Housing						
Comfortable	23	6 (26.1%)	1 (4.3%)	2.13 (.97)	4	
Can bring my family	24	7 (29.2%)	3 (12.5%)	2.58 (1.35)	11	3 (15.0%)
Can bring my pet(s)	24	8 (33.3%)	5 (20.8%)	2.58 (1.53)	11	2 (20.0%)
No roommate(s)	24	8 (83.3%)	2 (8.3%)	2.38 (1.24)	8	1 (5.0%)
Accessible for residents with disabilities	24	1 (4.2%)	14 (58.3%)	4.00 (1.28)	25	
Site						
Familiar EMR	23	2 (8.7%)	11 (47.8%)	4.04 (1.06)	26	
Working < 60 hours/week	23	3 (13.0%)	1 (4.3%)	2.65 (1.11)	14	
No weekend work expectations	23	7 (30.4%)	2 (8.7%)	2.61 (1.30)	12	
Taking call	23	3 (13.0%)	1 (4.3%)	3.17 (.72)	19	
Interprofessional opportunities	23	2 (8.7%)	7 (30.4%)	3.57 (1.24)	21	
Other learners present	23	1 (4.3%)	9 (39.1%)	3.83 (1.03)	22	
Opportunity to work in multiple practice settings	23	4 (17.4%)	2 (8.7%)	2.43 (1.12)	9	2 (10.0%)
Specialists available on-site for referrals	23	1 (4.3%)	9 (39.1%)	4.00 (.95)	25	
Opportunities to train directly with specialists	23	1 (4.3%)	8 (34.8%)	3.91 (1.08)	23	
Accessibility for residents with disabilities	23	1 (4.3%)	11 (47.8%)	3.96 (1.22)	24	
Supervision/Precepting						
Opportunity to work autonomously	23	9 (39.1%)	0 (0.0%)	1.74 (.69)	2	1 (5.0%)
High levels of hands-on teaching from the preceptor	23	7 (30.4%)	0 (0.0%)	2.13 (.87)	4	
Training						
Procedures	22	16 (72.7%)	0 (0.0%)	1.27 (.46)	1	2 (10.0%)
Outpatient opportunities	22	4 (18.2%)	6 (27.3%)	3.09 (1.51)	18	
Outpatient peds opportunities	22	5 (22.7%)	2 (9.1%)	2.64 (1.25)	13	
Inpatient opportunities	22	5 (22.7%)	1 (4.5%)	2.27 (1.08)	6	
Inpatient peds opportunities	22	2 (9.5%)	2 (9.5%)	2.67 (1.15)	15	
ER opportunities	21	11 (52.4%)	1 (4.8%)	1.86 (1.11)	3	1 (5.0%)
OB opportunities	21	13 (61.9%)	5 (23.8%)	2.24 (1.78)	5	2 (10.0%)

Overall, site-specific variables appeared to be of relatively less importance to the group when compared to supervision/precepting, training, and housing variables. Not surprisingly, our residents clearly value rotation sits where they can work autonomously (#2) and receive high levels of hands-on teaching from their preceptors (#4). Residents particularly appreciate opportunities to gain experience in valued areas (e.g., procedures (#1), ER (#3), and OB (#5)). Conversely, opportunities to train directly with specialists or to refer to specialists on-site were of relatively low importance to our residents (#25 and #23 rankings, respectively). Some highly ranked variables (e.g., small community size (#7)) were consistent with expectations, given the mission of our program, whereas other variables (e.g., comfort of housing (#4)) were perhaps surprisingly important to our group of resident respondents.

While housing which can accommodate families and/or pets tied for an overall ranking of #11, a handful of residents deemed these variables the "most important" variable for them in terms of placement, suggesting that the absence of such housing could be a "deal-breaker". Similarly, while distance from Missoula/Kalispell had an overall ranking of #17, 5 residents (20.8%) rated "Closer to Missoula/Kalispell" as their "most important" variable, perhaps because all 5 had pets and partners who live locally. Thus distance might be another "deal-breaker" variable for that sub-set of residents whose partners are not in a position to accompany them on a rotational experience.

Strategies for change: We plan to share these findings with our residents, to help them assess their unique needs and consider more systematically what they're looking for in a rural rotation site. We will also share these findings with our rural training partners, to help them make their sites more attractive to prospective trainees. Lastly, we will devise a new rural rotation "Rural Training Site Description Form" which asks about those variables rated as top priorities by our residents, so that the rotation sites can provide relevant information to aid in the matching process.

Effects of change: This is the first step in setting up a system to better match residents with rural sites to maximize their satisfaction with the experience and meet their needs. It is possible that this knowledge will also encourage some rotation sites to adjust their offerings accordingly.

Lessons learned: These findings demonstrate that a wide range of variables influence resident preferences for particular training sites, including pragmatic ones (e.g., is it close to home? Can I bring my pet?), and training-specific ones (e.g., possibility for procedures training). Further, while certain variables are ranked higher by the group as a whole, some variables are essential priorities for sub-groups of residents, making it clear that there is no "one-size-fits-all" solution when it comes to rural training site selection. To be most helpful, our matching process will need to take both types of variables into account.

Keywords: rural training, training priorities, rotation matching process

QI PROJECT

Names: Tim Caramore, MD; Rob Cruikshank, MD; Samantha Greenberg, MD; Elizabeth Paddock, MD

Title: *More POCUS! Further incorporation of point-of-care-ultrasound at the Family Medicine Residency of Western Montana*

Problem: The Family Medicine Residency of Western Montana (FMRWM) has identified training in point of care ultrasound (POCUS) as a curricular priority. We are committed to training physicians for rural practice and feel training in POCUS is a valuable tool for rural practice. Rural primary care physicians are embracing bedside US as it enables them to provide point of care rapid assessments and organize treatment plans without having to send patients to a larger center, choose a riskier, more costly or possibly less available imaging study (ie CT scans).

The AAFP supports training in POCUS for family medicine residents, stating that POCUS may be the biggest advance in bedside diagnosis since the advent of the stethoscope (1).

However, faculty in our program have found incorporating this new technical skill into our busy daily clinical workflows challenging. The difficulty of adopting POCUS is supported by studies showing that less than 10% of physicians are utilizing POCUS in primary care (2).

At FMRWM we are using POCUS routinely in prenatal care with in-house dating ultrasounds, as well as AFI calculations and determining fetal position. We are not using it routinely for other common primary care presentations such as lung pathology, MSK, skin and soft tissue evaluations.

Faculty are excited about incorporating more non-OB POCUS into our clinical teaching in the inpatient and outpatient settings but are not confident in our skills and have found it challenging to incorporate into our own clinical practice.

At FMRWM we have access to person Butterfly IQ portable ultrasound probes and then two larger clinic based sono-site xporte systems.

Rationale: FMRWM has residents with strong interests in obtaining POC ultrasound skills. They are exposed to, and using POC ultrasound during clinical rotations- in particular ED, critical care, obstetrics and rural rotations. Our residents are coming out of medical school with exposure to and training in POCUS and desire to continue to grow these skills.

In addition POCUS is increasingly being found to be an evidence based tool that can help decrease cost of care while improving patient access and safety(3). POCUS in the hands of an experienced clinician can change a diagnosis, increase confidence in a diagnosis, or change the management plan for patients and reduce unnecessary referrals(4). For this reason POCUS is becoming a core component of many family medicine training programs and the AAFP released curricular guidelines for POCUS in residency training in 2018(1,5).

We believe most FWMRM faculty are interested in learning and applying more POCUS in their own clinical practices, but struggle with this as incorporating a new skill takes time and energy that may not be easily available in a busy clinical practice. Additionally, we believe all residents are interested in learning and applying more POCUS.

To improve faculty and resident engagement and confidence in utilizing POCUS, we developed a fun competition to encourage faculty and residents to practice using POCUS in all clinical settings.

Aim: By March of 2023 we aim to see an increase in the percentage of residents and (physician) faculty who have used POCUS for non-OB applications in the past month to 50%. In addition we also aim to see an improvement in faculty comfort overseeing resident POCUS usage.

Strategies for change:

-This will be done using a novel scavenger hunt and team based competition approach.

-For faculty we will provide additional brief POCUS training sessions.

Specifics of the planned intervention

-Residents and faculty will be divided into 5 teams and compete to complete a specific set of POCUS exams (FAST components. Pulm exam, early pregnancy with some additional bonus exams (ascites, pleural effusion, skin abscess, a gallbladder, DVT)) over a 28 day period. Individuals recorded their exams on a shared google spreadsheet.

-Several brief faculty POCUS training sessions will be incorporated into weekly faculty meetings.

Process for gathering information: Surveys of residents and faculty were completed before and after the scavenger hunt competition and faculty training sessions.

Summary of POCUS QI pre-intervention results:
There were 17 resident and 11 faculty responses, resulting in response rates of 58% and 100% respectively.

<u>POCUS use in clinic:</u>
67.9% had ever used POCUS for non-OB applications in clinic.

39.2% had used POCUS (including OB applications) more than 5 times in the prior month. Another 32.1% had used it 1-5 times.

The most common uses were gyn, skin (abscess), musculoskeletal, or bladder exams. (table 1)

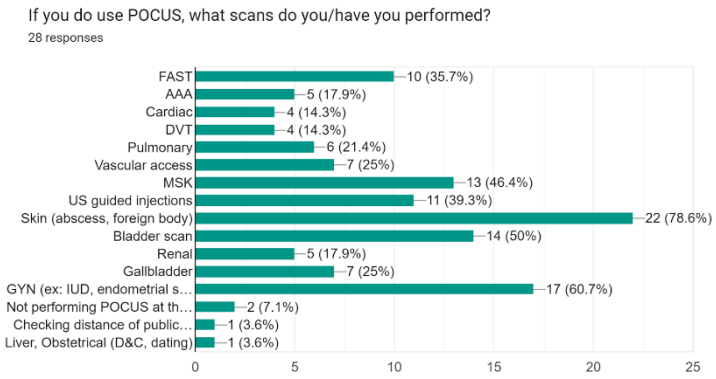
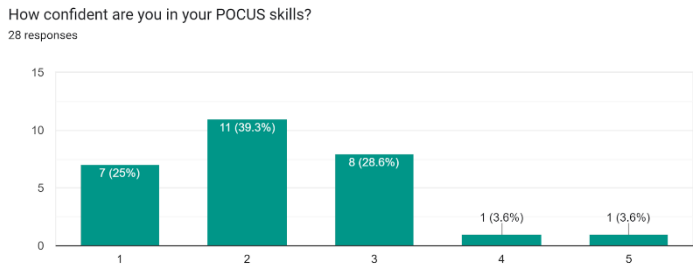
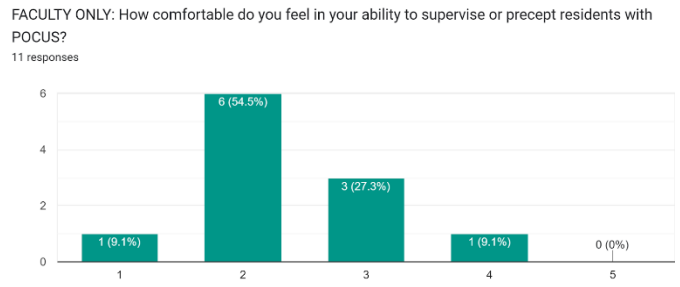


Table 1: POCUS Use Pre-intervention

<u>Barriers to use of POCUS:</u>
Lack of adequate time (85.7%), confidence and skill (85.7%), and training (78.6%) were felt to be the biggest barriers to use.

<u>Confidence:</u>
Respondents had low to moderate confidence in ability to use (all) or teach (faculty only) POCUS skills. (tables 2 and 3)





Most had learned POCUS skills through residency sponsored events and web based resources. It was felt that more dedicated POCUS training with experienced teachers would be helpful.

96.4% wanted to use POCUS more often than they currently were.

Tables 2 and 3. Confidence in POCUS Pre-Intervention

Summary of POCUS QI post-intervention results and comparisons:
There were 9 resident and 11 faculty responses resulting in response rates of 30% and 92% respectively.

POCUS use in clinic:

There was a decrease in those reporting using non-OB POCUS in clinic (67.9% down to 60%).
However 85% of responding providers (17 of 20) reported using POCUS in the past month, compared with 78% in the pre-survey (22 of 28), an increase of 7%.
The P value (A/B split test) is 0.282, trending towards a positive intervention but not statistically significant.

15% had used POCUS (including OB) more than 5 times in the past month. Another 70% had used it 1-5 times.

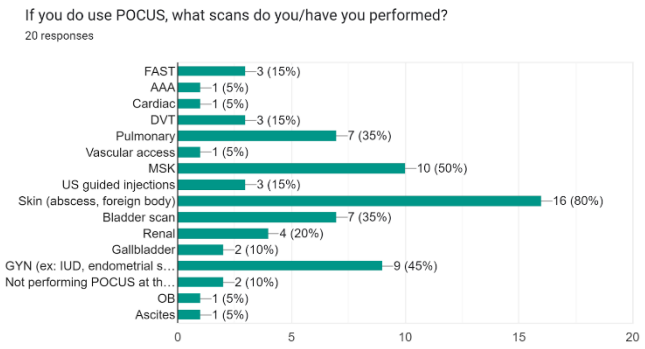


Table 4: POCUS use Post-Intervention

The most common uses were skin, gyn, MSK and pulmonary. (table 4)

Barriers to Use:

Lack of time (85%) and confidence/skill (75%) remained high. Convenience factors (i.e. accessibility of an US, if using a butterfly ensuring it is charged, gel in room etc.) moved to the 3rd most common barrier (60%) and training decreased to 45%.
Preceptor comfort as a barrier decreased from 50 to 30%

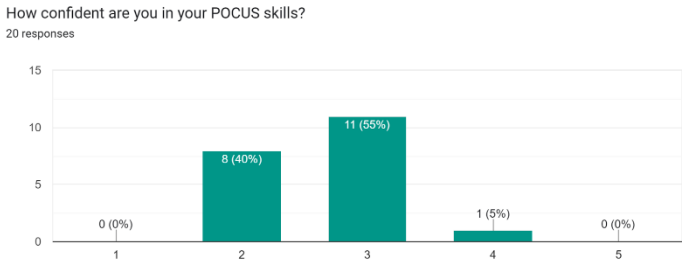
Confidence in use:

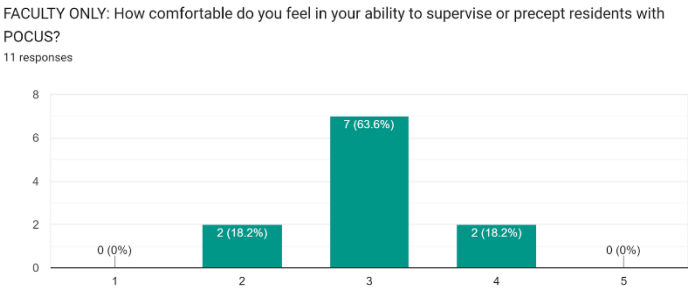
Confidence in using POCUS on a 5 point scale improved from 2.3 to 2.6 showing a positive trend however the P value (unpaired T-test) of 0.905 was not statistically significant. (table 5)

We also saw an increase in faculty comfort supervising POCUS. (table 6)

The majority of faculty responded. Confidence in using POCUS on a 5 point scale improved from 2.2 to 3.0. The P value (unpaired T-test) of 0.021 is statistically significant and a positive result.

In response to the question "Do you want to use POCUS more than you currently do?", responses were nearly 100% in both surveys.





Tables 5 and 6. Confidence in POCUS post-intervention

Analysis of Results: We met our aims of increasing POCUS use and preceptor confidence in supervising exams. The number of providers reporting using POCUS in the past month in the post survey increased to 85%, up from 78%, although a lower response rate of 47% on the post survey (vs 66% on the pre-survey) lowered the reliability of this and some other post survey results. Faculty confidence in supervising POCUS exams increased from 2.2 to 3 on a 5-point scale which is statistically significant, with 92% of faculty responding.

The barriers to using POCUS did not change significantly pre and post intervention.
85% report time as the biggest barrier which remained unchanged by our intervention, as did convenience/preparedness to do perform scans (57% pre, 60% post)
Lack of training did decrease from 78% to 45%.

We were only able to incorporate one brief hands on POCUS training session for faculty, much less than our goal of 6-8. While still inadequate, we were able to show the majority of faculty the basic uses of their butterfly IQ probes and review the fundamentals of POCUS skills.

We believe that comfort in using POCUS improved for several reasons. For faculty- the brief training session likely made using the butterfly IQ probe more approachable. For residents and faculty our POCUS challenge got people to try out using POCUS (either with butterfly IQ probes or with our larger clinic based systems) and that once one starts using the ultrasound systems it becomes clear how simple it can be to use and incorporate into patient care. We also incorporate POCUS into resident didactics routinely and during the month of our intervention we had 2 sessions that included POCUS training helping residents increase their confidence in their skills.

We were pleasantly surprised to see that POCUS was being used more frequently than expected pre-intervention. Variables of who responded, rotations residents were on, faculty away may contribute to bias in our results in both the pre-test, intervention efficacy and post-survey.

After the project 70% reported being more likely to use POCUS in practice as a result of the intervention.

The majority of respondents enjoyed this activity, and most also found it motivated use. (table 7).

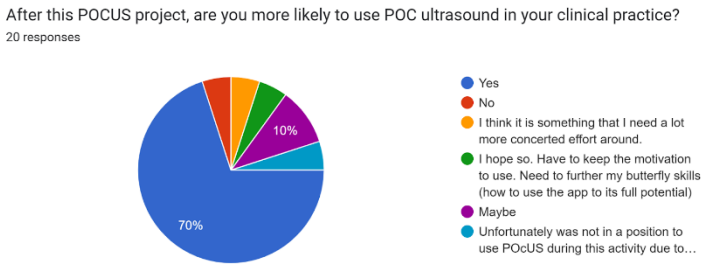


Table 7. Likelihood of POCUS use post-intervention

At this time our goals are to keep the momentum going forward with POCUS training and skill building for residents and faculty. To that end we are anticipating another PDSA cycle of this project in the next academic year. We have also worked with our program director and program manager to be more intentional about faculty POCUS training sessions and these are going to be built into the faculty meeting schedule well in advance in the next academic year.

The team competition component of this QI project did seem to significantly boost participation. Starting April 2023 Dr Paddock created monthly POCUS skill challenges- providing a few resources on a specific POCUS skill and a short quiz. Faculty and residents are encouraged to document when they have completed that specific exam with small prizes provided every 3 months. Participation has been significantly lower with this challenge compared to our team competition.

Lessons learned: Time constraints make finding time to learn POCUS skills in clinic challenging. Dedicated faculty teaching time may enhance faculty skills, going forward we need advance planning to ensure there is protected time during faculty meetings for POCUS training. SIM and didactic based POCUS learning is well received by residents and faculty. Team based competition seems to promote participation. We also believe just getting ultrasound probes into resident and faculty hands promotes confidence in and the use of POCUS in the clinic setting.

Keywords: POCUS, training

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