# 2020 SCHOLARLY ACTIVITY AND QI WORK

**Class of 2020 SA and QI projects**

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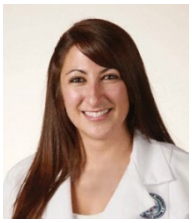
Katie Camarata DO


Charlie Jose MD


Alyssa Cowell MD


Amy Richmond MD

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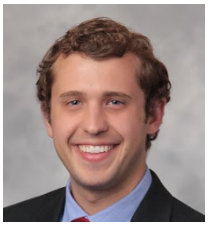
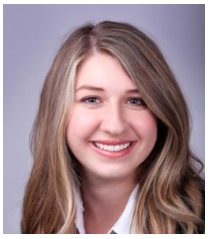
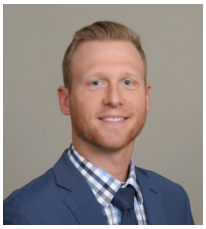

Chris Hallberg MD


Issac Billings DO


Amanda Hartman MD


Brandon Bilyeu DO


Jon James DO


Stella Seldon MD

**Issac Billings DO and Stella Seldon MD. QI WORK**

**Improving Documentation of UDS Measures at FCHC**

**Problem:**
Recording UDS measures is an important part of an FQHC's medical record. In addition to reflecting (hopefully) some form of a barometer of a patient's health status, they also serve an important role in an FQHC's finances. One of the struggles that has been voiced multiple times by residents and physicians within the Flathead Community Health Center is keeping track of UDS measures that need to be recorded for any given visit and also where and how to record them so that the ECW software can pull and track the measures so the clinic gets credit.

**Aim:**
To improve the overall confidence of practitioners in the Flathead Community Health Center Clinic of knowing what, where, and how to record UDS measures in ECW for any given visit from not confident or somewhat confident to at least fairly confident if not fully confident.

**Key Measures for Improvement:**
Overall confidence in practitioners in knowing what, where, and how to record UDS measures.

**Process of Gathering Information:**
A pre-intervention survey was conducted amongst residents and clinicians at Flathead Community Health Center which asked the following two questions :

1) In knowing what UDS measures you should be recording for any given clinic visit, would you be confident in knowing which ones should be recorded? (please circle level of confidence below)
    a. Not at all
    b. Somewhat
    c. Fairly
    d. Very
2) In knowing where in ECW to appropriately record a UDS measure so that it is appropriately tracked and counted for credit would you be confident in know where to go in ECW to record it? (please circle level of confidence below)
    a. Not at all
    b. Somewhat
    c. Fairly
    d. Very

Nine pre-intervention surveys were completed and returned to us with the following results:

| | Not at all | Somewhat | Fairly | Very |
|---|---|---|---|---|
| Question #1 | 5 | 3 | 0 | 1 |
| Question #2 | 4 | 4 | 0 | 1 |

**Strategies for Change:**
We obtained a listing of all individual UDS measures that are actively tracked and required to be reported to the federal government by FQHCs. We then created a consolidated spread sheet that fit onto one standard sheet of paper summarizing these UDS measures, subdividing them by age and gender, and listing what, where, and how they were to be recorded in ECW. Additionally, we created screen shots demonstrating the steps to get to the appropriate place in ECW to record some of the more complicated/multi step measures. These hand outs were then distributed to residents and clinicians, they were asked to review the material, then repeat the same survey done above, rating their confidence of completing the questions but this time with the handouts as a reference.

**Plan for Analysis and Interpretation:**
Will compare pre-survey and post-survey results and overall level of confidence in knowing what, where, and how to record UDS measures.

**Effects of Change:**

10 completed post-intervention surveys were collected showing the following . . .

| | Not at all | Somewhat | Fairly | Very |
|---|---|---|---|---|
| Question #1 | 0 | 1 | 5 | 4 |
| Question #2 | 0 | 2 | 4 | 4 |

**Lessons Learned:**
A one-page summary that is scannable with simple written directions of where and how to record mandatory UDS measures is an effective tool in improving practitioners' confidence in knowing what, where, and how to record UDS measures for a given visit.

**Issac Billings DO and Stella Seldom MD. Scholarly Activity Work**

**Project Title**: Intrathecal-morphine associated Hypothermia: A Case Study and Literature Review

**Details of the project:** A continuity OB patient received a scheduled repeat c-section with an unexpected and rapid development of severe hypothermia immediately following the procedure. A presentation like this had not been witnessed by any of the present FM, OB, or Anesthesiology staff present. In addition to initiation of active rewarming efforts and appropriate workup to evaluate possible differentials underlying the hypothermia, a rapid literature review was performed which found case study reports of severe hypothermia following administration of intra-thecal morphine. After ruling out to the best of our ability other potential causes it was ultimately deemed that the cause was likely from the intra-thecal morphine. The decision was made to continue active rewarming efforts and supportive care until effects of the intra-thecal morphine resolved, which did occur after ~8 hours. Considering this case was startling and significant in its presentation and felt to be secondary to a rare but possibly significant side effect of intrathecal-morphine that is not well elucidated or studied in primary literature, we felt that completion of a case study and review of the literature that was discoverable would be a valuable contribution to both our future practice in obstetrics as well to the medical community as a whole.

**Outcome**: This remains a work in progress. We currently have composed a basic script of the case, completed an in-depth literature review, and formulated this into a rough draft. Our hope is that over the remainder of this month we will be able to finalize a polished draft and submit it to be reviewed for publishing.

**Reflections:** Completion and submission of case-studies is an informative and productive academic exercise that is available and attainable by anyone in the medical field. It does not require a lab, financial backing, clearance from an ethics board, or a long-term period of logging and monitoring participants in a study. All you require is an accurate presentation of your clinical case, the access and curiosity to explore the available literature, and the willingness to thoughtfully summarize your ideas, lessons, questions, and suggestions on the subject. As a “low tech” means of contributing to the academic literature and forward progress of medicine in this country, case-studies are an accessible and practical use of time for any physician.

**Brandon Bilyeu DO. Scholarly Activity Work**

**Project Title**: Alternative Practices – Direct Primary Care Summary for Residents

**Details of Project**: I created a PowerPoint presentation giving a brief description of the Direct Primary Care model of practicing medicine. It was created to be a quick and easy resource for other residents to look at if they are interested in other practice model besides the traditional Fee-For-Service model. The layout of the presentation is meant to answer some of the more common questions a resident may be asking before becoming a primary care attending. It also contains a list of online resources that residents can go to and find more information if desired.

**Outcome**: The presentation has been created, but I encourage anyone with more information about DPC to add to the presentation.

**Reflections**: My hope is that more residents could add to this presentation or using a different format of their choosing. I am also hopeful that other alternative practice models can be added alongside this one for future residents to reference when trying to decide how best to apply their family medicine training. The DPC model is only one of many ways to practice family medicine and I think residents should get exposure to the various options out there.

## Katie Camarata DO and Jon James DO. QI Work

**PHC OMT referral QI Part 2**

**Problem:**

Our QI project was a continuation of our PGY-2 QI regarding OMT referral process at PHC. Despite efforts of last year's project to implement a smartphrase into progress notes, providers and patients often remain uninformed regarding what to expect at an initial OMT encounter. Patients may not have received adequate information regarding the nature of OMT, proper attire for optimal treatment, etc. Providers may be unaware of the reason, source, or timing of the referral, as well as previous workup/evaluation.

**Aim:**

To improve the workflow of OMT referrals for providers at PHC. By May, 2020, we will improve the preparedness of patients and providers.

**Measures for improvement:**

Our core measures were unchanged from part 1 of our project and included: the percentage of OMT sessions in which the provider was aware of the chief complaint/indication for OMT prior to the encounter; the percentage of sessions in which the patient had received appropriate workup to exclude red flag conditions such as fracture, malignancy, infection, etc.; the percentage of sessions in which the patient was aware of what OMT is; the percentage of sessions in which the patient was appropriately dressed. We gathered baseline data by conducting an initial pre-intervention survey of OMT providers. Part 2 of our project allowed us to follow up with a post-intervention survey comprised of the same measures.

**Intervention:**

During part 1 of our project (conducted during PGY-2 year) we created a smartphrase for our EHR to be used by referring providers. This smartphrase was inserted into progress notes and contained important information regarding patient education, chief complaint, and previous workup. Part 2 of our project (conducted during PGY-3 year) allowed us to conduct an appropriately timed follow up survey of our core measures after implementing our part 1 intervention. We also delivered a lecture during a clinic meeting to educate other providers and care team members about our project and OMT in general. We attempted to create an order set to improve delivery of the key information that was initially outlined in our smartphrase.

Also of note, our clinic implemented a dedicated OMT referral process that is ultimately sent to the receiving OMT provider. This was not specifically part of our project, but was mentioned as a follow up goal during part 1 of our project. We collaborated frequently with clinic leadership during the development of this referral process.

**Analysis and interpretation:**

Our survey was conducted prior to and after introducing our smartphrase. The survey was comprised of 4 questions that corresponded with our core measures. Each question had 4 possible responses: <25% of the time, 25-50% of the time, 50-75% of the time, >75% of the time. Of note, 13 providers completed the pre-intervention survey compared to 8 that completed the post-intervention survey.

Survey results for measure #1: What percentage of the time are you aware of the chief complaint/clinical indication for an OMT referral that you receive? Responses of 50% of the time or

greater actually decreased in the post-intervention survey from 54% to 38% of providers. However, the total responses of <25% decreased from 31% to 13%.

Survey results for measure #2: What percentage of the time do you feel patients have been appropriately evaluated for a complaint prior to an OMT referral? Responses of 50% of the time or greater increased just slightly from 46% to 50% of providers in the post-intervention survey.

Survey results for measure #3: What percentage of new OMT appointments is the patient aware of what OMT is? Responses of 50% of the time or greater increased in the post-intervention group from 15% to 38% of providers. Also of note, the responses of <25% of the time decreased in the post-intervention group from 46% to 13%.

Survey results for measure #4: What percentage of new OMT patients dressed appropriately for successful OMT? Responses of 50% of the time or greater increased in post-intervention group from 15% to 38% of providers.

Based on the above data, we concluded that our intervention produced positive change in the PHC OMT referral process. Particularly, patient education and preparedness appeared to have the most prominent benefit. See below for further discussion regarding limitations we encountered and potential areas for improvement and/or future project applications.

**Limitations and future applications:**

One major limitation to part 2 of our project was the unexpected impact of the Covid-19 pandemic. This caused a halt in all non-essential clinic encounters. Due to the hands on nature of OMT and close proximity to our patients, these visits were suspended during much of our project time frame. We also encountered some barriers from an IT standpoint. Despite working directly with our clinic ECW experts, we were unable to create a properly formatted order set. Despite our limitations, our survey results and verbal feedback suggest that our smartphrase created a positive change in the PHC OMT referral process. Benefits would likely continue to grow if our smartphrase became more solidified in routine workflow by all providers.

We have reflected on potential interventions for future OMT QI projects as well. Options would include the development of a telephone encounter with the desired patient information. This would be a simple way for the receiving OMT provider to search and quickly review the referral prior to seeing the patient. However, the creation of a TE would require more tedious work from the referring provider. We would also recommend incorporating nursing and/or MA staff in the distribution of OMT handouts.

**Katie Camarata, DO and Jonathon James, DO. Scholarly Activity Work**

**Project Title**: OMT Referrals

**Details of the project:** OMT providers and patients are often under-informed regarding the intake encounter for their OMT referral. Patients may not have received adequate information about the nature of OMT, proper attire for optimal treatment, etc. Providers may be unaware of the reason, diagnosis, source, or timing of the referral, as well as previous workup/evaluation for the referral. We aimed to improve the workflow of OMT referrals, with the goal of increasing appropriateness of referrals and patient's preparedness for the visit. We created a Smartphrase template for providers to follow while creating a referral that included important information for both the receiving provider and the patient, in order to provide optimal treatment to the patient. We took pre- and post-intervention surveys from OMT providers at PHC and analyzed the data. This then prompted our Interim Medical Director and some other PHC staff to create a trackable internal referral process. We did not create this process, but did collaborate with them. We attempted to create an order set that would encompass all of these workflow recommendations, however, due to limitations of our EHR, we were unable to accomplish this final goal. In addition, we held an educational session to all PHC providers where we discussed the nature of OMT, appropriate referrals, comparisons to other manual treatments, and our QI project, followed by a Q&A session.

**Outcome**: Based on the data that we collected, we concluded that our intervention produced positive change in the OMT referral process. Particularly, patient education and preparedness appeared to have the greatest improvements.

**Reflections:** Overall, based on the data and verbal feedback, we feel that we made a small difference, and also inspired other staff to coordinate efforts on the goal of improved OMT referrals. We had several barriers including technical difficulties that did not allow us to create an order set in our EMR to include both our smartphrase and the internal referral that was created by the staff. We also became limited in our progress when the COVID-19 pandemic hit and we halted all OMT visits due to increased risk.

**Katie Camarata, DO. Scholarly Activity Work**

**Project Title**: Yaktrax and Walking Pole Program

**Details of the project:** Many patients regularly exercise in the warmer seasons but do not continue this consistently through the colder seasons in Montana due to icy/snowy conditions outside and safety issues with falling. This results in decreased duration and frequency of exercise in the colder seasons. For patients with baseline mid-level mobility determined by the get-up-and-go test, I aimed to encourage patient's exercise regimen to remain unchanged in duration and frequency throughout the winter months compared to the rest of the year. With assistance of a team of behavioral health and administrative staff, I provided either Yaktrax or walking poles to use outdoors in winter conditions with intentions of meeting our aim goal. We received a grant and purchased about 30 sets each of Yaktrax and walking poles. We also provided education, safety and appropriate usage of the products. And provided patients with an exercise log to keep track of hours exercised.

**Outcome**: We did not receive a significant amount of exercise logs back from patients to create any meaningful data, but anecdotally, some patients reported that they maintained their regular duration and frequency of exercise in the winter months, and felt safe doing it! I received feedback from providers and patients who were very grateful for the donations.

**Reflections:** I would have preferred to have had more solid data to demonstrate whether we were meeting our goals or not, but in the end, the gratitude from both patients and providers seemed worth the service. In the future, I would attempt to keep better track of the patients that received the equipment and their exercise logs.

## Alyssa Cowell Lautenschlager MD. QI Work

**Increasing Interventions for Patients with Elevated Blood Pressure**

**Background information/problem:**

Hypertension is a common disease process and one that can have high morbidity/mortality if left untreated. Early intervention, including lifestyle changes, can reduce the risk of long-term complications.

**AIM Statement:**

Within one month, 90% of patients who have an abnormal blood pressure will have a plan documented that visit with increased focus on lifestyle modifications.

**Key measures for improvement:**

Blood pressure and plan documented in the Assessment and Treatment sections of the EMR.

**Process of gathering information:**

Baseline and post-intervention data was obtained through chart review by hand. One week of charts was reviewed for blood pressure measurement and documentation of plan for any abnormal values.

**Analysis and interpretation:**

Initial data was obtained by chart review. One week of patient encounters were reviewed for the baseline data. For patients without a previous diagnosis of hypertension, 87% had either a normal blood pressure or documented plan for an abnormal blood pressure reading. This increased to 92% after intervention. Of the initial patients, 0% of them had specific lifestyle changes documented as part of their plan, which increased to 50% after intervention. Secondarily, for those with a previously established diagnosis of hypertension, only 66% of those patients were either at the appropriate goal for their age or had a plan documented. After the intervention, this was increased to 100% of patients at goal or with documented plans.

**Strategies for change:**

For the intervention, I reviewed blood pressures before entering the exam room to discuss results with the patient and charted a plan if results are abnormal. The Mayo Clinic site recommendations for elevated blood pressure treatment options were used to create a template of non-medication intervention for blood pressure to easily print off for patients as a reference and to use as initial plan for treatment of elevated blood pressure readings, particularly for those without a previous diagnosis of hypertension.

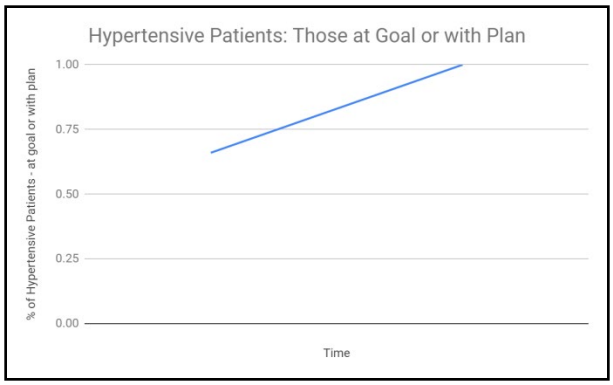
**Example Handout:**

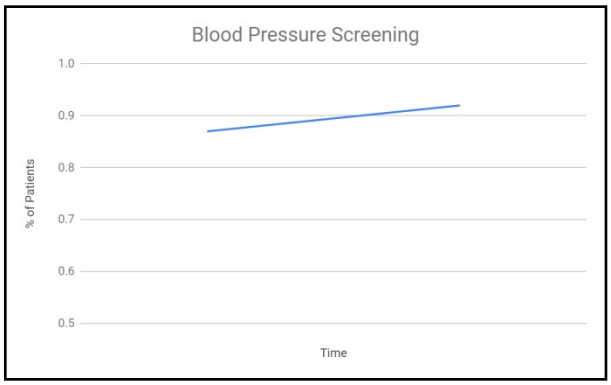
| **Summary Of Today's Visit** |
| --- |
| Elevated Blood Pressure - Lifestyle Recommendations |
| 1. Lose extra pounds and watch your waistline. Weight loss is one of the most effective lifestyle changes for controlling blood pressure. Losing even a small amount of weight if you're overweight or obese can help reduce your blood pressure. In general, you may reduce your blood pressure by about 1 millimeter of mercury (mm Hg) with each kilogram (about 2.2 pounds) of weight you lose.<br><br>2. Exercise regularly. Regular physical activity, such as 150 minutes a week, or about 30 minutes most days of the week, can lower your blood pressure by about 5 to 8 mm Hg if you have high blood pressure. It's important to be consistent because if you stop exercising, your blood pressure can rise again. Some examples of aerobic exercise you may try to lower blood pressure include walking, jogging, cycling, swimming or dancing. You can also try high-intensity interval training, which involves alternating short bursts of intense activity with subsequent recovery periods of lighter activity. Strength training also can help reduce blood pressure. Aim to include strength training exercises at least two days a week.<br><br>3. Eat a healthy diet. Eating a diet that is rich in whole grains, fruits, vegetables and low-fat dairy products and skimps on saturated fat and cholesterol can lower your blood pressure by up to 11 mm Hg if you have high blood pressure. In general, limit sodium to 2,000 milligrams (mg) a day or less. If possible, choose low-sodium alternatives of the foods and beverages you normally buy. Eat fewer processed foods.<br><br>5. Limit the amount of alcohol you drink.<br><br>6. Quit smoking. Each cigarette you smoke increases your blood pressure for many minutes after you finish. Stopping smoking helps your blood pressure return to normal. Quitting smoking can reduce your risk of heart disease and improve your overall health. People who quit smoking may live longer than people who never quit smoking.<br><br>7. Cut back on caffeine.<br><br>8. Reduce your stress or work on coping with stressors in healthier ways.<br><br>10. Get support. Supportive family and friends can help improve your health. |

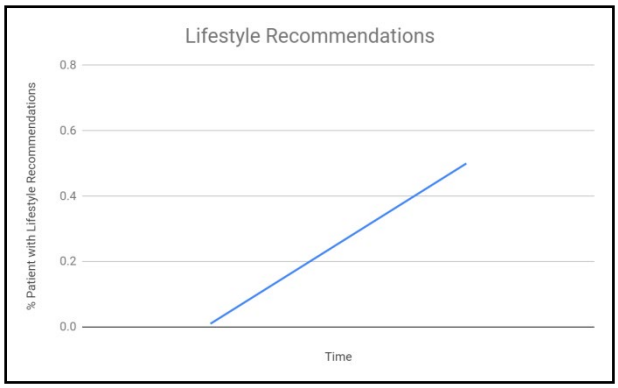
**Effects of change:**

Primary intervention: Increased percentage of patients with blood pressure screening and plan/follow-up from 87% to 92% of patients. For those patients, I was able to increase the documented recommendations for lifestyle changes from 0% to 50%.

Secondary intervention: For those with a diagnosis of hypertension, increased number of patients meeting goal blood pressure for their individual goal (based on age/comorbid conditions) or having a plan addressing their hypertension improved from 66% to 87%.




**Lessons learned:**

Patients often appreciate having alternatives to medications for treatment of chronic diseases such as lifestyle changes for hypertension/elevated blood pressure readings.

## Alyssa Cowell Lautenschlager MD. Scholarly Activity Work

**Phone Triage Project at PHC:**

The project attempted to address the deficit in phone triage protocols for nursing within Partnership Health Center. It was found that many of the staff answering patient phone calls did not feel comfortable with triage and that patients are not always triaged to the right disposition. In a patient-centered clinic, this leads to difficulties in appropriately treating patients. We created a set of twelve browse phrases for common complaints that can be accessed by PHC providers and staff to create a more uniform way of triaging patients over the phone. It also includes red flag answers that indicate an in person exam or an ER visit is recommended. (With Amanda Hartman MD).

This project remains incomplete as the Director of Nursing position in currently unfilled.

**Self-guided Ultrasound Study:**

I created a guide of ultrasound videos to enhance ultrasound interpretation skills for bedside ultrasound including echocardiography, lung ultrasound, and FAST/RUSH exams. This guide can be used by future residents to augment ultrasound learning and may offer an option for part of a self-study elective.

**Newborn examination cases:**

Cases created for morning round during obstetrics to increase the understanding of abnormal physical exam findings and follow-up plans. These cases can be added to the OB website/box for access by any residents, and can be used during morning educational topics.

**Rural Medicine:**

Trialed a new rotation in Deer Lodge and created a rotation summary for other residents to reference.

**Chris Hallberg MD. Scholarly Activity Work**

**Project Title**: Development of a Low Cost Ultrasonic Spirometer, Creation of a FMRWM OB website

**Details of the project:**

-I initially started working on the spirometer as a medical student, when I formed a non-profit organization that received $22k of funding to build an initial prototype device. The result was a device that met the FDA and American Thoracic Society (ATS) criteria for spirometers. I applied for another $23k of funding during residency and received that money to continue work on the spirometer. This work was primarily around testing the device across a broad range of conditions including variations in temperature, humidity etc.

-The FMRWM OB website involved collating dozens of resources from several different sources to create a comprehensive database for residents to allow them to access high yield information rapidly.

**Outcome**:

-The outcome of the spirometer project was unfortunate. Since initially developing the device in my 3rd year of medical school, the cost of spirometers has plummeted from several thousand dollars to several hundred dollars. As a result, the demand for the device that I created was significantly less than what it was when I started working on the project. I ultimately decided to return the $23k grant and close the non-profit. The good news is that spirometers are now much more readily available. The spirometer designs were open-sourced so that other researchers and engineers can further build on them if they so desire.

-The result of the OB project is a website that sees daily use by many residents and makes it much easier to find that one particular resource that you're looking for. I designed the website so that other users could add additional resources as they became available or update existing resources.

**Reflections:**

-While I don't see much of a future for the spirometer itself, I did enjoy the process of designing and building the device. While I could see myself working on smaller electronics projects for fun, the amount of time and energy needed to build a device is enormous. Who would want to spend extra days inside, staring at a computer screen when we live in beautiful Missoula?

-The one major addition to the OB website would be changing the files to live directly on the website and not require access to Box.

## Chris Hallberg MD. QI Project

**Project Title:** Refreshments for Waiting Patients

**Problem**

Due to a variety of circumstances, patients in resident clinics are frequently left waiting in the exam room due to providers running late, other patients requiring more immediate attention, delays due to precepting etc. Patient satisfaction surveys, and common sense, have demonstrated that waiting decreases satisfaction. Decreased visit satisfaction correlates with worse health outcomes.

**Aim**

Difference in visit satisfaction questionnaire (VSQ-9) score between the control group and intervention group of at least 10%. Baseline VSQ satisfaction scores will be collected over a one month period from people who are seen by the provider more than 10 minutes after their scheduled appointment time, for whatever reason. The intervention would involve providing these patients with a small healthy snack or drink. The VSQ-9 would then be collected. The duration of the intervention period would depend on the number of patients seen during the baseline month. The study would continue until the same number of patients included in the baseline data collection period are provided with the intervention.

**Key measures**

- Patient satisfaction as rated on an 9 question survey at the end of the visit.

**Process**

VSQ-9 surveys were administered to 12 patients who were seen 10 or more minutes after their appointment time. These surveys were provided when patients had “down time” or time in the room while the provider was entering referrals, ordering prescriptions or precepting the patient. After data from 12 patients was collected, the intention of the project was to move into the intervention phase, when patients who were being seen after the start of their appointment time would be given a healthy snack or beverage. Unfortunately, the control group data collection phase finished just prior to the advent of the coronavirus and I was unable to implement the planned intervention of providing snacks due to mask requirements and a steep decline in in-patent visits.

**Analysis**

The RAND Corporation VSQ-9 survey rates the visit from “poor” to “excellent” over 5 categories. A score of zero was assigned to “poor” and a score of 5 was assigned to “excellent.” The average visit satisfaction for the control group was 4.6 (SD 0.4). Unfortunately, as discussed above, the intervention group was not recruited due to coronavirus and therefore no comparisons can be made. However, with a visit satisfaction score as high as 4.6, it is highly improbable that a statistically significant improvement in satisfaction could be detected with such a small sample size.

**Lessons Learned**

Delivery of the surveys by the provider was not ideal as this likely skewed the ratings to be more favorable as patients are likely more reluctant to voice concerns when they feel that their provider may know it was them who had the concern. Having an MA or nurse administer the test would be more

ideal. The best option would be for patients to be given a survey to be completed at home and return via the mail however the return rates would likely be very poor.

In addition to improving the “waiting experience” of patients by providing them refreshments (like you get when you get your tires changed at Les Schwab) it would of course be productive to look into the root cause of the waiting and try to eliminate this. Even so, I think there are substantial gains to be made in the “customer service” aspects of medicine. Via their insurance companies, patients are paying us over a hundred dollars per visit, they frequently have to wait for us or their labs or behavioral health. I think it would be a kind, welcoming gesture in the least and at best could possibly improve outcomes via enhanced adherence.

## Amanda Hartman MD. QI Project

**Development of phone Triage Protocols for Nursing Staff at PHC** (with assistance by Alyssa Cowell MD)

**Problem**: The main problem addressed in this project was the deficits in the phone triage protocols at PHC. This grew out of multiple incidences where residents felt calls were triaged inappropriately or staff were not comfortable triaging.

**Aim**: Increase the comfort level of nursing staff to adequately triage patients by phone using browse phrases for eCW

**Key measures for improvement**: Scale from 1-10 measuring the comfort level of staff with phone triage, 10 is most comfortable

**Process of gathering information**: We created a four question survey which we gave to MA's, RN's and PSR's. The questions were:

1. How often are you triaging patients by phone?
2. How comfortable are you with triaging patients by phone? (Scale of 1-10)
3. What is your opinion of the barriers you face when triaging patients by phone?
4. What ideas do you have to improve the triage process?

The results of these questions were:

1. MA's anywhere from never to 5x/d, RN's anywhere from a few times per week to 10x/d, PSR's anywhere from rare to daily
2. MA's averaged a comfort level of 6/10, RN's a level of 8/10 and PSR's a level of 7/10
3. This was a free text answer and we got a variety of answers but the themes were:
    a. Out of scope/policies at PHC (in case you weren't aware, LPN's and RN's are technically the only ones who are allowed to triage)
    b. Unsure of which questions to ask, how to gauge severity of a call
    c. Lack of communication between PSR and nursing or nursing and provider
    d. Triage line being used for inappropriate transfers – refills, non-urgent, etc
    e. Patients want care over the phone
    f. No appointments available, patients inappropriately placed on nurse/nurse schedule
    g. Questions about liability behind triage
4. This was also a free text answer with the following themes:
    a. More education/training
        i. Protocols
        ii. Guidelines on specific illnesses
        iii. Questions to ask
        iv. Suicide training/crisis training
    b. Clarify the scope of practice
    c. Better workflow for transferring these calls
    d. Scheduling solutions
    e. More providers available to ask when we have a question (RN's/MA's) and more nursing to ask (from PSR's)

**Analysis and interpretation**: TBD

**Strategies for change**: We created a set of 16 browse phrases that could be accessed by any eCW user at PHC. The goal was to have these available in the text of a TE. These browse phrases guide anyone answering the phone, regardless of level of medical training, with what questions to ask and some provide answers on what to do next. This would also allow any provider who receives the TE to quickly evaluate the situation, as they would already have most of the necessary information in the TE. Ideally

these would be used by RN's and LPN's but due to the way that calls come in to clinic, MA's and PSR's are often tasked with triaging patients. They have not all had appropriate training and may not feel comfortable judging acuity of complaints. We also updated the list of "red flag" symptoms that should alert anyone triaging a patient to the acuity of the situation. This list is available to PSR's, MA's and RN's/LPN's.

**Effects of change**: TBD

**Lessons learned**: Due to eCW permissions and support needed from PHC administrators (also COVID-19), we were not able to roll out these browse phrases. They have been saved for future with the goal of doing a follow-up survey to see if these have increased the comfort level of nursing and PSR's with triage. The project also revealed several other areas that we could approach this topic to help nursing and PSR's feel more comfortable. The major theme was education about triage. A triage nurse was also hired while our project was ongoing and while this did help with the process, MA's and PSR's are still finding themselves in situations where they need to triage patients on a daily basis. Even though it is technically outside their scope of practice in their contracts, they are still finding themselves put in that situation and would welcome any help from providers in helping them to feel more comfortable. We updated the "red flag" list with help from the triage nurse but this should be updated regularly. Lastly, it is important for providers to realize that our staff does not feel fully comfortable with triaging patients and it is up to us to educate them when we can and be understanding if we do not have all the information at hand. We hope that a future resident will take this on and be able to roll out the browse phrases!

## Amanda Hartman MD. Scholarly activity Work

**OB Curriculum**

Details: The OB curriculum committee was tasked with an overhaul of the OB curriculum during my second year. We met monthly (sometimes more) to redesign the entire curriculum. We made the following changes.

- Completely changed schedule
    - Increased oversight from seniors for the interns for first two weeks of first block
    - Added in better orientation for new interns
    - Made schedule more consistent and decreased hours working overall
    - Increased clinic half days (to boost clinic numbers)
    - Distributed nights more evenly
    - Decreased extra things that were scheduled in that were busy work/not helpful (ex. Lactation)
    - Also updated daily schedule on the floor to encourage better communication with nurses and more consistent rounding with attendings, as well as to ensure that there is always morning teaching
- Created a new way to track ACGME topics
    - Increased number of simulations we participate in
    - Allows self-directed learning for a lot of topics which residents prefer
    - Allows flexibility depending on how busy the floor is day to day
    - Provides a visual way for attendings to see which topics a resident has learned or needs to brush up on
    - Emphasizes reviewing certain basic topics each block on OB
    - Provides optional topics for residents desiring additional learning.
- Created an FMRWM OB website and OB handbook so that residents can reference the material knowing that it is reliable and easily accessible

**Reflections**

From this project, I learned a lot about what goes into creating a curriculum. I do feel that the curriculum is better but there are still some areas that it could be improved upon. This curriculum will require yearly updates to maintain.

I also learned that it is impossible to make everyone happy. Support for residents is better but it is still a stressful and overwhelming rotation. It is difficult to help new residents understand how the curriculum was previously and how the changes have been beneficial.

Something else that I learned from this project was that curriculum committees cannot make meaningful change unless they meet more regularly. There is no way that we would have been able to make the changes that we did with the usual schedule of meetings.

It was nice to see that residents can make such a big change working together!

**MAFP Presentation**

Details: I was able to give my didactic presentation about hair and scalp disorders at the MAFP conference. I have never given a presentation more than once and this actually allowed me to learn the information better. I was also able to reflect on the first presentation and change the slides to make it work better before the second one. As much as I do not enjoy presenting, I know that the best way to make sure you understand something is to teach it to somebody else and I feel very comfortable with assessing these disorders now. It was also fun to make a presentation that people enjoyed.

**Panel Management**

Details: Management of my patient panel for the upcoming interns who will be taking over my patients after graduation. I updated as many charts as I could (still ongoing) and used Azara to help create some reminder TE's for patients who will need care in the upcoming months when the new interns are just getting started. This might be something for FMRWM to consider for all graduating R3s going forward.

**Charlie Jose MD. Scholarly Activity Work**

**Missoula City-County Health Department COVID-19 Drive Thru Clinic**

**Details of the project:**

- In response to the COVID-19 pandemic, the Missoula City-County Health Department (MCCHD) opened a COVID-19 Drive Thru Testing Clinic at the Missoula County Fairgrounds.
- Patients self-collect their own midturbinate swabs under the direction of a health care professional.i
- At the time of conception, midturbinate swabs were considered an acceptable alternative to the gold standard of using nasopharyngeal swabs (the CDC has since lifted nasopharyngeal swabs as the test of preference).ii
- Testing methodology and operational protocols were developed and adapted from *Tu et al.*, a study testing the use of self-collected tongue, nasal, and midturbinate swabs to identify COVID-19.iii

**Outcome:**

- Tasks performed and completed, under the supervision of Physician Consultant, Dr. Robert Stenger (categorized by CEPH Public Health Competenciesiv):

| Evidence-Based Approaches to Public Health | Public Health & Health Care Systems | Planning & Management to Promote Health | Policy in Public Health |
|---|---|---|---|
| ▪ Adaptation of testing protocols based on limited published data, with particular attention to external validity of existing methods as well as testing sensitivity and specificity<br>▪ Application of CDC guidelines and recommendations | ▪ Participation in MCCHD Incident Command System[v]<br>▪ Mobile Testing Unit protocol development for rural communities with limited testing access | ▪ Develop strategies for population-wide testing, in coordination with state and local agencies as well as community partners<br>▪ Coordinate testing kit supplies with vendors based on dynamic supply | ▪ Adaptation of testing protocols based on Governor and DPHHS orders and guidelines<br>▪ Coordination with state and local agencies as well as community partners |
| **Leadership** | **Communication** | **Interprofessional Practice** | **Systems Thinking** |
| ▪ Providing on-site medical direction for operational workflows, testing methodologies, and sample handling | ▪ Draft Health Alert Network media releases to address testing strategies and operations, for audiences of both health care providers and the general public<br>▪ Develop statements for community-generated testing questions and concerns | ▪ Participation in MCCHD Incident Command System<br>▪ Develop training presentations for RNs in midturbinate nasal sampling, PPE usage, and COVID-19 patient education | ▪ Develop strategies for population-wide testing, in coordination with state and local agencies as well as community partners |

▪ Testing site results:

| Screened* | Tested | Negative | Positive | Unsatisfactory | Pending |
|---|---|---|---|---|---|
| 876 | 525 | 511 | 4^ | 1# | 9 |

** Includes all calls from April 4, 2020 to May 27, 2020.*
*^ One positive case includes a retest of a previous positive case. Per DPHHS, does not count as a new positive case.*
*▪ Sample media leaked in-transit.*

**Reflections:**

- Drive Thru Testing Clinics can increase testing capacity and alleviate the health care burden on local hospital and clinic systems.
- Patient self-collected midturbinate nasal swab protocols confer the benefit of maximizing patient comfort while lessening the impact of PPE utilization.
- Participation as a clinical consultant allows the opportunity to apply public health competencies to real-time public health problems. Public health problems often require sound clinical guidance to maximize public health and individual clinical outcomes.

The COVID-19 Drive Thru Testing Clinic remains in operation. Next steps include working with state and local agencies as well as community partners to develop a community-wide surveillance testing strategy.

**References:**

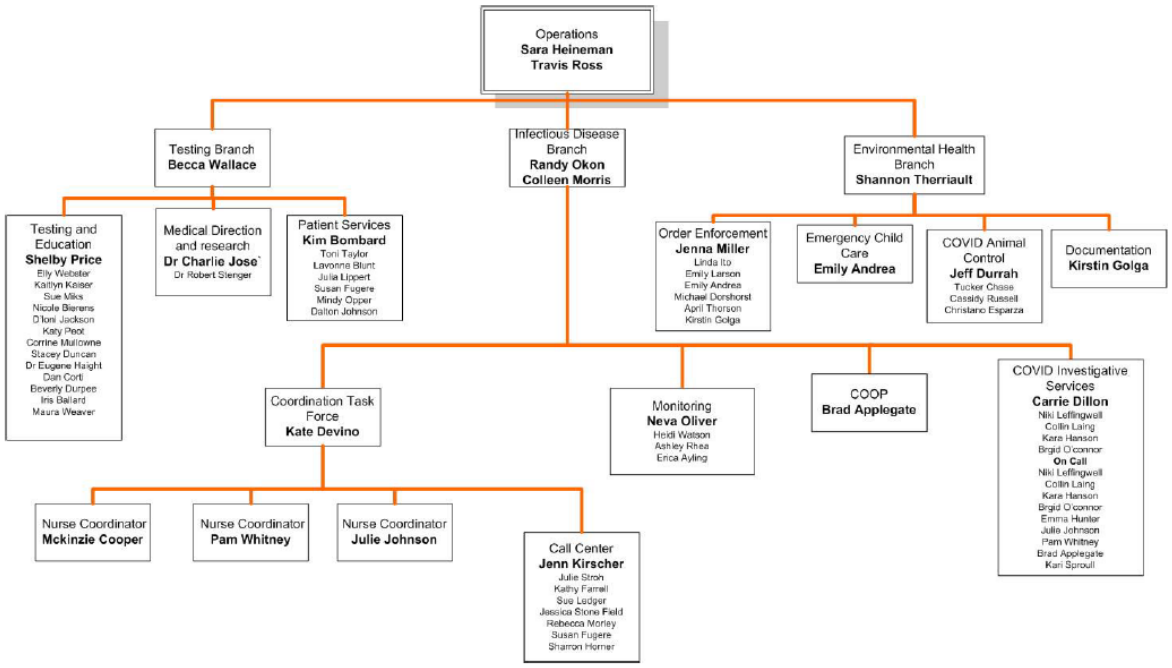

i COVID-19 Screening Protocol / Standing Order. Missoula City-County Health Department Communicable Disease Office. April 1, 2020 (updated April 16, 2020).

ii https://www.cdc.gov/coronavirus/2019-ncov/lab/guidelines-clinical-specimens.html

iii https://www.medrxiv.org/content/10.1101/2020.04.01.20050005v1.full.pdf

iv https://media.ceph.org/documents/D2_guidance.pdf

v MCCHD Incident Command System (Operations):

**Charlie Jose MD. QI Project**

Project Title: **PrEP Template**

**Problem:**
-Inconsistency with clinical documentation when starting PrEP can lead to adverse events (i.e. improperly taking medications, starting and stopping erratically, missed lab monitoring and follow-ups, etc.);
-Limited resident PrEP providers at PHC.

**Aim:**
Ensure that PrEP template* is used for >90% patients on my panel started on PrEP in the next 6 months.
**PrEP template includes documentation of how to take medications, when to take medications, return precautions, etc.*

**Key Measures for Improvement:**
Number of visits during which a PrEP template was used.

**Process of Gathering Information:**
Communication with Community Health Specialist and PrEP Navigator, Andy Hardison.; Chart review of personal PrEP patient panel using panel roster.

**Analysis and Interpretation:**
*Raw Data*

**Table 1. Number of *PrEP visits* and *templates used* 6-months before and after intervention (intervention date: November 4, 2019).**

| Patient | Pre-Intervention | | Post-Intervention | | Notes |
|---|---|---|---|---|---|
| | Used | Not Used | Used | Not Used | |
| LS | 1 | 0 | 0 | 0 | Discontinued PrEP |
| JS | 1 | 1 | 0 | 2 | |
| LV | 0 | 2* | 0 | 2# | * Seen by other providers for both appointments<br># No formal documentation of one follow-up due to COVID-19 |
| SA | 1 | 0 | N/A | N/A | Loss to follow-up |
| HB | 1 | 0 | 0 | 1* | * Seen by other provider for appointment |
| JH | 1 | 1 | N/A | N/A | Loss to follow-up (moved to Washington, D.C.) |
| BW | 1 | 1 | 0 | 1 | |

*Interpretation* **:** It is clear that these data are not statistically significant; Template was understandably *not* used by other providers. PrEP templates are not standardized by PHC, only by individual providers.; Non-use of template before intervention was often subsequently followed by non-use of template. Since templates are not routinely loaded by PHC staff, individual providers may rely on copying-forward a previous note that may not have contained the template. Templates were inconsistently loaded by provider (i.e. self).

**Strategies for Change:**
Develop database of PrEP patients and algorithm for follow-up.; Standardize PrEP templates as an organization.
**Effects of Change:**
Inconclusive (i.e. none)

**Lessons Learned:**
Without a usable database of PrEP patients, follow-up and therapeutic drug monitoring can be difficult. Clinic efficiency often competes with consistent and accurate documentation without standardized templates. Luckily, documentation practices in this limited sample size does not correlate with patient clinical outcomes. Provider education and buy-in may be a continued barrier.

## Amy Richmond MD. Scholarly Activity Work

**Project Title**: St. Patrick Hospital Journal Club Revamp

**Details of the project:** General feedback from the residency was that Thursday morning journal clubs were not often relevant and conversations did not focus on applicability to clinical practice. I worked with Dr. Caramore and Dr. Paddock to make modifications to the existing journal club structure to address these issues.

**Outcome**: New journal club template was created to help individuals tailor their presentation to clinically relevant information while maintaining discussion of scientific rigor and validity (see template in Box). Journal club schedule was decreased from once weekly to once every other week.

**Reflections:** This seems to have made a big difference in how applicable and enjoyable journal club is, verbal feedback has been positive. We do get fewer St. Pats docs attending. Now that it's been over a year, would be interesting to do surveys of residents, faculty, and St. Pats staff to see what their thoughts are now, and if further refinements should be made.

**Project Title**: Silver Team Mortality Review

**Details of the project:** In an effort to integrate reflective practices into regular rotations, I created a template for discussions about patient mortality that (ideally) would be used after every death experienced by the Silver Team. Template is brief, 1 page, and included in the resident handbook.

**Outcome**: Seem to be successful when the discussions take place, but I am unsure how often the template is being utilized. Depends on Silver team seniors and attendings, as well as the patients the team happens to experience each month.

**Reflections:** I think this is a useful tool, but there are constraints on its use including time, team willingness, etc. This will require ongoing interest and support from the wellness committee and seniors on Silver to continue to be used. There may be utility in educating Silver team attendings on the existence of this tool as well so they could prompt its use if seniors do not.

**Project Title**: Presentation to National Youth Science Foundation

**Details of the project:** Traveled to Bartow, WV, to give a presentation about radiology to a group of 100+ just-graduated high school seniors. I also participated in discussions about being in medicine and the process of pursuing medical education with the students.

**Outcome**: This project was very successful! I got 74 feedback surveys from the students and reviews were really positive. I may present again this year (albeit virtually).

**Reflections:** It takes relatively little effort on our part to connect with younger learners in a meaningful way and have a significant impact. I would love to explore similar opportunities (especially those closer to home) more frequently.

**Project Title**: Medical Videos for Greenburg High School

**Details of the project:** Created educational videos for my sister's high school biomedical science class while they were home on quarantine. Videos are 10-20min in length each, covering various topics in medicine. Aiming for 4 total (one per week for the rest of the school year), with more if time allows.

**Outcome**: This project is ongoing and I do not yet have feedback from students.

**Reflections:** project still in process

## Amy Richmond MD. QI Project

**Increasing Frequency of AUD Screening with Primary Care Patients**

**Problems:**
Diagnosis of alcohol liver disease (ALD) is often not made until end-organ damage is imminent or already present, such as is seen in alcoholic hepatitis and cirrhosis. There are existing recommendations for screening all patients for alcohol use disorder (AUD) and subsequent screening for ALD, but this screening is not routinely completed in this clinical setting.

**Aim Statement:**
To increase the percentage of primary care patients over the age of 18 who have a documented AUDIT-c score in their chart within the past year, from 0% to 20% within the study period.

**Key Measures for Improvement:**
Percentage of patients over 18 who have documented AUDIT-c score in social history, subsequent appropriate screening ordered (CMP and GGT, with subsequent ultrasound/fibrosure as indicated), clear documentation of the above in EMR.

**Process of Gathering Information:**
Out of 243 individuals on my panel, I chose 15% to randomly review before and after the study period. AUDIT-c scores were documented in the sticky note portion of the chart, as well as need for follow-up.

**Analysis and Interpretation:**

| | **% of Patients with recorded AUDIT-c within the last year** |
|---|---|
| **Prior to Study Initiation** | 0% |
| **End of Study Period** | 11% |

**Strategies for Change:**
- Asked permission to complete screening tool on alcohol use and their risk for liver disease prior to starting AUDIT-c. Once screened, discussed possibility of lab screening if appropriate.
- Also went into the charts of some patients who I didn't get the chance to talk with, and put a note in their sticky that states "Audit-C due" to remind myself and/or future providers.

**Effects of Change:**
- Increase in total number of patients on my panel who have been screened with AUDIT-c.
- Screening led to discussions about EtOH use and benefits of cessation/reduction of use.
- Hope this work can be passed on to the providers who are taking over my panel (Cobb, Merbler, Scott, Zakovich, Ordemann, O'Connor), and that reminders in sticky notes will be helpful even for patients who weren't able to be screened.

**Lessons Learned:**
- Pulling data by hand (rather than a measure that eCW/Azara can pull out) is much more work and requires relatively small sample sizes.
- Some people who required screening already had CMPs in the past year, which limited extra testing; often I did not order a GGT if CMP was normal.

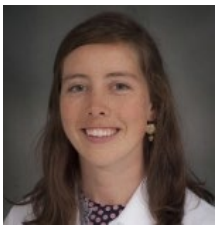
- Global pandemics make QI projects hard – I saw fewer patients during this study than expected; also screening ultrasounds are non-urgent in times of COVID.
- Even if AUDIT-c is currently negative, some patients likely still need screening (i.e. clinical judgement is still crucial).

**Class of 2021 QI PROJECTS**

MISSOULA

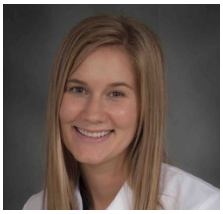

Emily Anderson DO


James Jennings DO


Carey Downey MD


Kelsey Morgosh MD

KALISPELL


Ariel Fillmore MD


Margie Albers MD


Geoff Holman MD


Chelsie Russig MD


Sarah Horne MD


Eric Weber MD

## Marjorie Albers MD. QI Project

### Effect of educational program on Provider's Confidence in prescribing PrEP in an FQHC

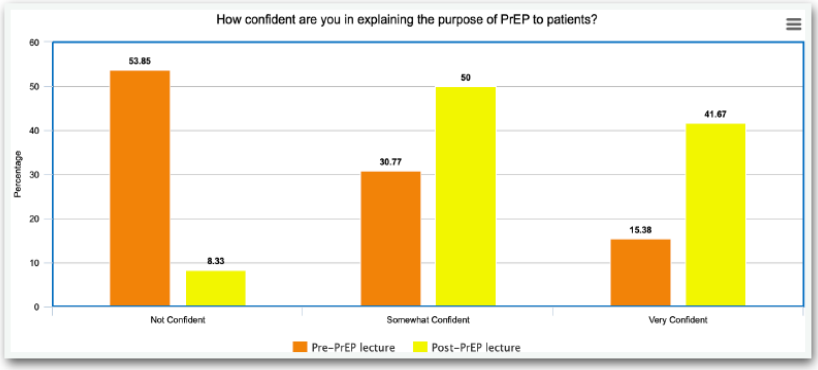
**PROBLEM:** Although data supporting efficacy of PrEP (pre-exposure prophylaxis) to prevent HIV transmission are robust, nationwide only 4% of those eligible for PrEP are prescribed the medication. Reasons often cited for low prescribing practices are lack of provider knowledge and/or confidence in how to prescribe PrEP.

**AIM:** To increase provider confidence in prescribing PrEP in a FQHC setting by providing PrEP education and point of care resource.

**KEY MEASURES FOR IMPROVEMENT:** To increase provider confidence in discussing PrEP with patients and managing patients on PrEP by 20%

**INTERVENTION AND DATA COLLECTION:** - Prior to the intervention, baseline data regarding confidence of PrEP prescribing were collected by a survey of FQHC providers. - Information on PreP utility, eligibility, prescribing, insurance coverage and point of care resources was presented in an hour long clinic-wide meeting - Data on confidence of PrEP prescribing were collected in post-intervention survey of providers (n=14)

**ANALYSIS AND INTERPRETATION:** Data were collected before and after providing an educational intervention on PrEP to clinic-wide audience. Percentage of providers stating that they were "very confident" in explaining the purpose of PrEP to patients increased from 15 to 41%. Percentage of providers stating that they were "very confident" in managing patients with PrEP increased from 15 to 58%.




**STRATEGIES FOR CHANGE:** Provider confidence in discussing PrEP with patients and confidence in prescribing PrEP may be improved with educational programing directed to clinical staff.

**EFFECTS OF CHANGE:** Future research should be aimed at assessing rates of PrEP prescribing in the clinic prior to and after the educational intervention to assess if education and increased confidence translates to higher rates of PrEP prescribing.

**LESSONS LEARNED:** Provider confidence with PrEP is likely associated with familiarity on the subject.

## Eric Weber MD and Chelsie Russig DO. QI Project

**Project Title: Residency Didactics: Satisfaction and Relevance**

**Problem:**

Residents in all disciplines of medicine undergo didactic training across the country in a variety of ways. In an effort to make that time as meaningful, purposeful, and enjoyable as possible for both faculty and residents, a committee of residents and faculty members was formed to implement changes in the didactic curriculum for FMRWM.

Consensus opinion in education endorses that individual learners, especially adults, have a variety of ways in which they learn and retain information best. Many are active learners, which means they retain information best when doing hands-on workshops, while others seem to learn best by reading and writing about specific topics. Some do well with PowerPoint lectures, but certainly not all. One way that may measure the effectiveness of didactics is through the satisfaction of both the primary participant and primary beneficiary of didactic activities.

Throughout committee discussions, several strategies for improving didactic time were discussed including self-study time, increased administrative time, increased small group activities—especially for "reflection rounds," themed days grouping relevant information, and limiting end time to 5 PM. Due to the constraints of data collection and timelines for implementing some of these changes, this project looks specifically at the 5 PM end time of didactics and how it would affect the satisfaction residents have with their didactic experience.

**Aims**

To improve resident satisfaction with didactics by encouraging a 5 PM end time – As much as possible moving forward from Jan 2020, didactics will now be ending at 5 PM regularly, whereas previously they would often extend beyond 6 pm. Presumptively, this not only limits time to a manageable block for intellectual digestion, but also allows residents more time to use their evening for personal wellness, taking care of clinical admin tasks, studying/reading, etc.

**Key measures for improvement**

Improving resident satisfaction will be demonstrated by an anticipated 20% increase in resident satisfaction survey scores after 3 months of time-limited organized didactic activities.

**Process of gathering information**

A survey was sent out about the time of the schedule change asking residents what their satisfaction level, rated on a 10-point scale, was with didactics prior to this change, and what their anticipated satisfaction levels *will* be once the time change is put in place. Then, a follow up survey 3 months later was sent out asking residents what their current satisfaction level was after the implementation of the changes. We also invited commentary on these changes. In the three-month period February through

April 2020, 2/3rds of didactic activities ended by 5 pm with exceptions being OMT and Res/Fac meetings.

**Data Analysis**

Of all respondents, no survey indicated a negative improvement of satisfaction with time-limited activities (i.e. all improvement scores with a change of zero or positive).

Of the 10 R3s, 8 responded to the initial email and 6 completed the full survey. The average anticipated improvement to satisfaction was 3.1 on 10-point scale, while the actual improvement was 2.2. (some respondents used decimal answers)

Of the 10 R2s, 7 responded to the initial email and 6 completed the full survey. The average anticipated improvement to satisfaction was 2 on 10-point scale, while the actual improvement was 2.

Of the 10 R1s, 10 responded to the initial email and 9 completed the full survey. The average anticipated improvement to satisfaction was 1.8 on 10-point scale, while the actual improvement was 2.1. (some respondents used decimal answers)

In aggregate of the survey respondents, anticipated improvement was 2.2 and actual improvement was 2.0.

Across the board, actual improvement did meet our anticipated 20% increase in resident satisfaction, however, anticipated improvement also tended to be higher than actual improvement.

**Discussion**

The difference in anticipated and actual satisfaction scores may be related to a variety of things, for example rolling/slow implementation of changes over time, differences in the expectations that those changes would bring, etc. It is reasonable to expect that with each new group of residents, different needs for learning will arise. Changes and improvements should continue to be adjusted with the didactics committee, and many of these changes have been well received. In the future, a follow-up may look at whether or not this and other planned changes have an impact on ITE scores.

**Emily Anderson DO. QI Work.**
**Title: Increasing Medicare Wellness Visits**

**Problems:** Large population of Medicare patients in my personal panel and no Medicare wellness visits scheduled.

**Background:** The Medicare Wellness visit is a recommended yearly visit is not a physical. It is a visit designed specifically to make time to review past medical history, medication, immunizations, preventive screenings and to discuss advanced directives. For patients this visit generally has no-copay.

**Aim Statement**: I will use Azara to identify Medicare patients that are in need of medicare wellness visits and schedule them to reach a goal of providing 2 new wellness visits a month for the next 4 months

**Process:** I worked with the Geriatrics care team to help identify Medicare patients and develop an intake packet to be mailed to patient prior to their appointment.
We were able to identify over 30 patients in my panel who were due for Medicare Wellness Visits and reached out to a selection of 10 patients. We were able to get three scheduled into hour long visit slots in March and April to test out the new intake packet and flow of Medicare Wellness visit.
These were unfortunately cancelled due to the non-urgent nature of these visits during corona virus pandemic.
Plan is to re-schedule these as allowed when restrictions are lifted.

**Conclusion**: We were able to target individuals that needed Medicare Wellness visits and get them scheduled as planned. I will continue to work with the Geriatrics Care Team to optimize intake and information that patient can complete prior to visit. We will continue to work on Wellness visit process to make it an easier process and something that is standard for our clinic to perform.

**Carey Downey MD, Ariel Fillmore MD and Sarah Horne MD. QI Work.**

**Project Title: Early Pregnancy Loss Management in the Clinic, QI abstract**

**Problem:**
Early pregnancy loss (EPL) occurs in anywhere from 25-33% of all pregnancies, most of which can be managed in the outpatient setting. Many general practice providers do not feel comfortable managing EPL, and as a result, these women are often unnecessarily getting care at the emergency department; or are referred out to a physician/APP who is unfamiliar to the patient. This results in unnecessary hospital costs and undue stress to the patients.

**Rationale:**
Partnership Health Clinic does not have a protocol for EPL management, and providers must rely on their own individual experience and knowledge. Providers who are not comfortable with basic treatment principles have no easily searchable reference, and the safest approach often takes the form of ER transfer. Training providers and arranging for easily accessible EPL management material could help to decrease the amount of unnecessary ER referrals.

**Aim:**
To increase the level of comfort of primary care providers at PHC in treating EPL. Our goal is to increase the number of providers that feel comfortable treating uncomplicated EPL in the clinic by 50% over 18 months.

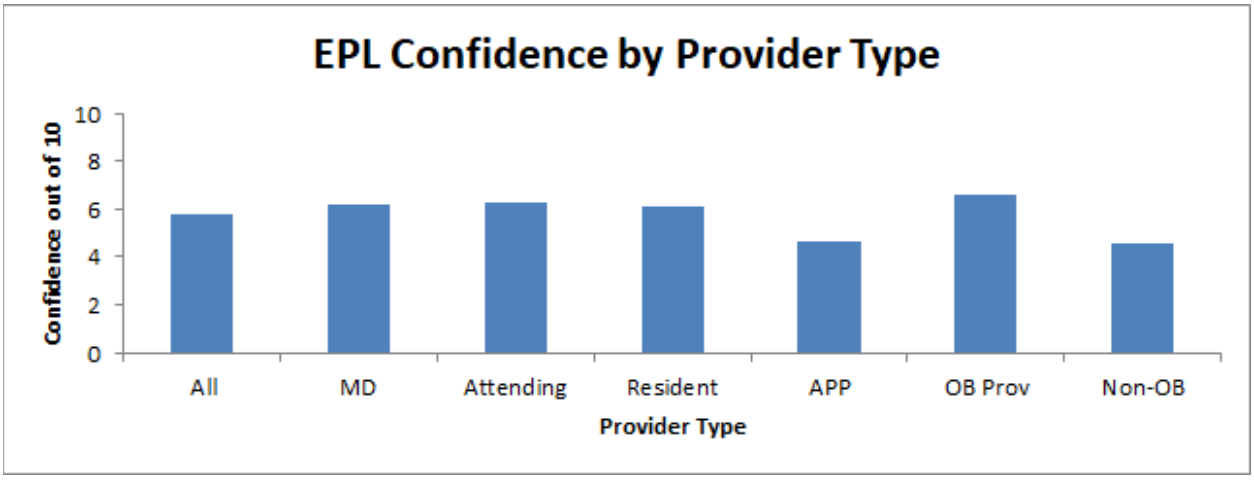
**Key measure:**
Percentage of providers rating their comfort level of treating EPL in clinic as 5 or greater on 10 point scale.

**Process of gathering information:**

1. We collected baseline data about PHC provider comfort with EPL management. We provided a questionnaire asking about their comfort level with EPL management. The questionnaire also included questions of their degree, position, and if they provided OB care. It also asked if they believed there was a clear workflow for EPL management at PHC.
2. We investigated if there was a workflow or standard of care for treating EPL at PHC.

**Analysis and interpretation:**
On average, PHC clinicians see (2) miscarriages per year. Providers average confidence level in managing miscarriages in the clinic is 5.8/10. Attendings have a higher confidence at 6.3/10 compared to residents at 6.1/10 and APPs at 4.7/10. We also see, as expected, that OB providers feel more comfortable with an average rating of 6.6/10, compared to non-OB providers with an average rating of 4.6/10. Only 13% of respondents feel that Partnership has a clear workflow on how to manage miscarriages. When looking at these results, there is a small discrepancy in EPL management confidence between resident (10% under 5/10, 30% less than or equal to 5/10) and attending level (28% under 5/10) physicians which is likely attributed to level of training. It is anticipated that the majority of

residents would achieve the same average level of comfort as attendings by the end of training, with those who have an interest in obstetric care likely having a slightly higher level of confidence. When compared to APPs, it is notable that the average level of confidence remains below 5, with 67% of respondents below 5.




**Strategies for change:**

1. Develop protocols for internal clinical use. This was created with the help of Dr. Paddock and Dr. Krebsbach. Strategies were adapted from Reproductive Health Education in Family Medicine (RHEDI) and Reproductive Health Access Project (RHAP). This workflow was uploaded to the PHC internal website. As an adjunct to this workflow, we created an ECW template to be used for EPL management with medication.
2. Provide easily accessible evidence based algorithms and information for EPL management. These documents include information on diagnosis and treatment options, billing codes, aftercare forms, MVA procedure technique, consent forms, and management for complications. This information was uploaded to the PHC internal website.
3. Provide education on EPL standard of care and above interventions. Presentations were given at Tuesday morning PHC provider meetings on 12/30 and 1/14 prior to the above interventions. We plan to have additional presentations this Summer and Fall both in the settings of Tuesday morning provider meetings and FMRWM didactics in order to help better inform providers on our developed workflow, best practices, and where to find useful information.
4. This Fall, we plan to send out the same questionnaire to evaluate change in provider's comfort with EPL management.

**Effects of change and Analysis:**

Still to be determined as this work is ongoing.

**Lessons learned:**

Prior to our intervention, many providers did not feel comfortable managing EPL in the clinic setting. It was difficult to take multiple protocols and develop them into a single workflow for providers of all comforts levels. Along with provider comfort, there are logistical components of EPL, such as consent forms and billing, that need to be addressed and are affected by which option is chosen. In terms of the

medical complexity of EPL, aftercare and complications are also needed within the workflow. Workflows have now been put together for EPL in the clinic, but these workflows still need to be tested, particularly among providers who are less comfortable with EPL management. We are hopeful that by the end of this project, in the year 2021, providers at PHC will be better informed on standards of practice for EPL management and feel more comfortable in managing this in clinic. We hope this also leads to fewer ER visits for our patients experiencing EPL and with that, a less stressful experience. We would also hope that this leads to lower healthcare costs in general.

We are also considering in-clinic workflows to allow providers who are less comfortable with EPL to easily consult with or transfer management of an EPL to a provider who is more comfortable and facile in EPL management with meds or MVA.

**Kelsey Morgosh MD and Geoff Holman MD. QI Work.**
**Ages and Stages Questionnaire: Improving Compliance**

Effect of a new workflow and template on completion and utilization of ASQ data collection during appropriate clinic visits.

**Problems:**
ASQs are currently underutilized in children aged 0-5 years during clinic visits in which an ASQ should have been completed, resulting in missed opportunities to screen for developmental milestones and possible delays.

**Aim:**
To increase ASQ completion, scoring and review by nurse/MA/provider during appropriate clinic visits for patients aged 0-5 by 10%, through a targeted launch of new pediatric well child templates in eCW and nursing/MA/provider education to familiarize patient facing staff with scoring and recording procedures.

**Key measures for improvement:**
Percentage of ASQs that were completed during appropriate visit types.

**Process of gathering information:**
Data regarding ASQ completion were gathered through pre-intervention data pull of eCW for two months prior to intervention, August 1 through September 30, 2019. An identical two month post-intervention data pull was conducted by the same staff member for direct result comparison.

**Analysis and Interpretation:**

| | Prior to Intervention | Post Intervention | Difference |
|---|---|---|---|
| Percentage of ASQs completed | 46.1% | 66.1% | +20% (P<.0001) |
| Percentage of ASQs not completed | 53.9% | 33.9% | -20% |
| Total | 189 | 174 | |

**Strategies for change:**
Multiple measures, including an updated template with more prominent ASQ placement, a renewed emphasis by nursing/MA staff to deliver ASQs to parents of children age 0-5 when appropriate, and educational presentation to nursing/MA staff for increased fluency in scoring and recording completed ASQ.

**Effects of change:**

Percentage of ASQ completed and documented within the clinic visit note for appropriate visits for children age 0-5 increased significantly from 46.1% to 66.1%. Our intervention was not associated with an overall increase in distribution of ASQ.

**Limitations:**
While it is encouraging that the number of documented completed ASQs increased as a result of our intervention, our study did not collect data regarding utilization and review/patient care modification as a result of increased ASQ completion.

**Lessons learned:**
Large scale organizational workflow change is cumbersome, however even small interventions can have large scale impact. When appropriate, delegating tasks to support staff can leverage the power of a large organization to make large scale improvements in workflow. ASQ data collection is feasible on a large scale despite limited visit times and often unclear indications for ASQ completion at visit onset.

**Next steps:**
While significant progress was made in documented ASQ completion, further interventions regarding the distribution and completion process are necessary to fully capture all relevant screening data. In addition, investigation into effective use of completed ASQs would be highly warranted so as not to miss developmental screening opportunities.

## James Jennings DO. QI Work.

### Effects of simple clinical changes on Point of Care Ultrasound Utilization at Partnership Health Center

**Problems**:
Need to determine the actual utilization of POCUS during clinic visits and what the barriers are to increasing POCUS utilization.

**Aim**:
To increase POCUS utilization by PHC physicians and residents by 10-20% by May of 2020.

**Key Measures for Improvement**:
Baseline comfort level regarding POCUS and average use of POCUS in clinic were collected, along with most common types of scans that were performed in clinic. Most common perceived barriers to POCUS were collected and suggestions to improve utilization.

**Process for Gathering Information**:
Initial data was collected via anonymous surveys prior to implementing interventions. Data was not gathered post intervention as COVID-19 prevented adequate implementation.

**Analysis and Interpretation**:
The results from the pre-intervention survey demonstrate multiple findings. The average comfort level with POCUS was exceedingly low as a whole which is further demonstrated by the lack of utilization. See Table 1. The largest barriers to use include lack of time (86% of respondents) and lack of training (68% of respondents). Even with the above findings, the interest in POCUS is significant, with only 5% of respondents reporting that they are not interested in further POCUS training.

**Strategies for Change**:
Multiple measures were found to potentially increase POCUS utilization based on pre-intervention survey including: providing POCUS resources on PHC intranet (68% of respondents), increasing physician/resident teaching through demonstrations at Tuesday provider meetings (68% of respondents), and by completing POCUS templates on ECW (63% of respondents).

**Effects of Change**:
Interventions and effects were unable to be quantified as clinic visits were primarily transitioned to telemedicine rendering POCUS data unreliable.

**Lessons Learned**:
Relatively simple interventions can potentially increase use of POCUS in clinic. Results also demonstrated that portable U/S machines, such as the Butterfly or Lumify may also be able to increase POCUS utilization, however this intervention would be more costly.

Lack of time continues to be a struggle for many aspects of care in the primary care clinic setting, including POCUS. However, if clinicians were credentialed in POCUS and could perform diagnostic U/S this could potentially change perceptions.

**Table 1**:

| | Pre- Intervention |
|---|---|
| Average Comfort Level with Ultrasound | 4.6 out of 10 |
| Number of Providers Using Ultrasound at Least Once per Week | 36% of respondents |

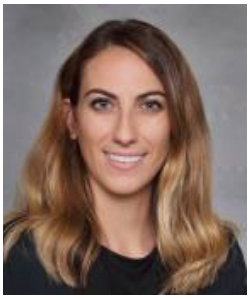
**Class of 2022 QI PROJECTS**

***Wellness themed in the R1 year.***


Genevieve Birang DO


Zach Carlson MD


Grayson Cobb MD


Mallory Koula MD


Michelle Metcalf MD


Shannon Rossio MD


Kathryn Walicki DO


Kayla Whitmore DO


Nick Zakovich DO

## Genevieve Birang DO. QI Project

### THE AFFECT OF REGULAR EXERCISE ON QUALITY OF SLEEP

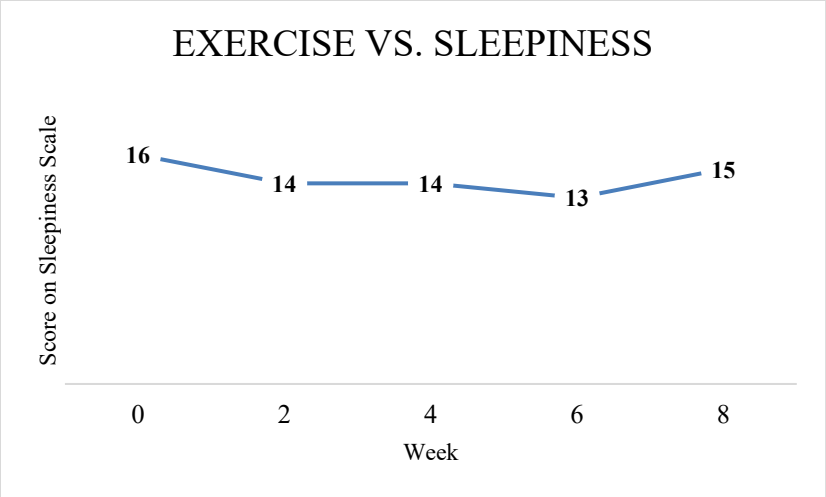
**Problem:**
Sleep is critical to performance and getting a sufficient quantity and quality of sleep is essential to mental and physical well-being. Being well rested is also essential to providing medical care that is safe and effective as it increases attentiveness and decreases the chance of medical errors.

**Aim:**
To increase the overall quality of sleep obtained through the performance of regular exercise. Exercise goal is at least 30 minutes three times a week.

**Measures of Improvement:**
Improvement was measured by the total score on the Epworth Sleepiness scale with the test administered once at the beginning of the eight weeks, and then every two weeks thereafter during the duration of the study.

**Process of gathering information:**
The exercise ring tracking on the Apple Watch 4 was used to measure overall duration of exercise: once the ring had registered 30 minutes this was counted as the goal completed although the exercise did not necessarily stop at this time. Exercise was also not necessarily performed all in one setting, as the watch often tracked many small chunks of exercise, and the total of 30 minutes was used as a goal. The type of exercise also varied between traditional exercise at the gym and other forms, such as walking the dog. Once at the beginning of the eight weeks an Epworth Sleepiness scale chart was filled out, and it was filled out again every two weeks thereafter.

**Analysis and Interpretation:**
The graph and table below demonstrate the values of the Epworth Sleepiness Scale over the course of the experiment. Week zero denotes the beginning of the experiment, when no conscious effort had been made to exercise during the previous two weeks with the following points denoting scores after exercise had begun.




| Week | Epworth Score |
|---|---|
| 0 | 16 |
| 2 | 14 |
| 4 | 14 |
| 6 | 13 |
| 8 | 15 |

Table 1

| Week | Days Exercised |
|---|---|
| 0 | 0 |
| 2 | 5 |
| 4 | 6 |
| 6 | 4 |
| 8 | 4 |

Table 2

**Strategies for Change:**

Using a nearby gym and walking the dog through a nearby neighborhood, then completing the Epworth Sleepiness Scale at the beginning of the project and every two weeks thereafter.

**Effects of Change:**

Throughout the weeks when a conscious effort was made to exercise for more than 30 minutes a day for more than three days a week, the scores on the Epworth Sleepiness Scale did show a decrease when compared to the score from week zero. This decrease was not linear, but it should be noted that the score for each two-week period was consistently lower than it was at the very beginning of the experiment.

**Lessons Learned:**

As sleepiness scores did not decrease linearly, this suggests that any amount of exercise is sufficient to decrease daytime sleepiness scores, although it should be noted that this experiment was performed with N=1. To add to this, this eight-week period was one where rotations allowed for a consistent amount of sleep. Note also that based on Table 2, even if the goal of at least three days of 30 minutes of exercise per week is not met, it suggests that even four days of exercise for every two weeks is sufficient to increase quality of sleep and decrease total daytime sleepiness.

**Zack Carlson MD. QI Work**

**Title:** Impact of Quality Time with Spouse on Relationship Satisfaction

**Problem:** Residency is one of the most demanding times most doctors will experience in their lives, often working eighty plus hours on a weekly basis for significant periods of time. As a result, residents are often forced to choose how they spend their free time since it is so limited. For many in a relationship, this presents quite a challenge since residents may feel forced to choose between spending time with their partner and taking time for themselves. Much research has been done on the effect that spending quality time with one's partner can have on their relationship satisfaction and it should come as no surprise that those who spend more quality time together are happier with their relationships.

**Aim:** To improve satisfaction in my marriage and ensure I am still available to my spouse during this busy chapter of my life.

**Key Measures for Improvement:** Relationship satisfaction was measured twice a month using a validated tool known as the Relationship Satisfaction Scale (RSS), which both my wife (Anna) and I (Zach) completed separately. Quality time was self-reported using an open-format timesheet that was completed in conjunction with the RSS.

Of note, to be considered quality time, the following criteria had to be met:

- Full attention devoted to spouse or shared activity (movie, hike, dinner etc.)
- Not engaged in personal electronics (Phone, laptop, etc.)
- No other people around or involved

**Process of Gathering Information:** We started by establishing a baseline for our relationship satisfaction by each completing the RSS in November. Then, starting in January, my wife and I would sit down every two weeks and complete the RSS and timesheet forms separately, so as not to influence one another's responses. An exception was made for February and early March when I was away in a different city for a rural rotation, as it was felt this time period did not accurately represent our normal relationship.

**Analysis and Interpretation:** Data was collected as described above and entered into a spreadsheet for analysis. Four graphs were created from the data to assist in interpretation. These graphs are included below as Figures 1, 2, 3 and 4 below.

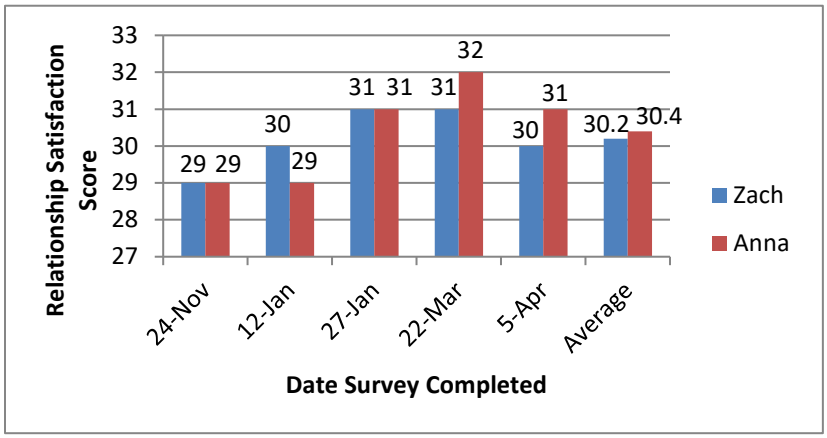



**Figure 1:** Relationship Satisfaction Scale scores from the five dates that the survey was completed.

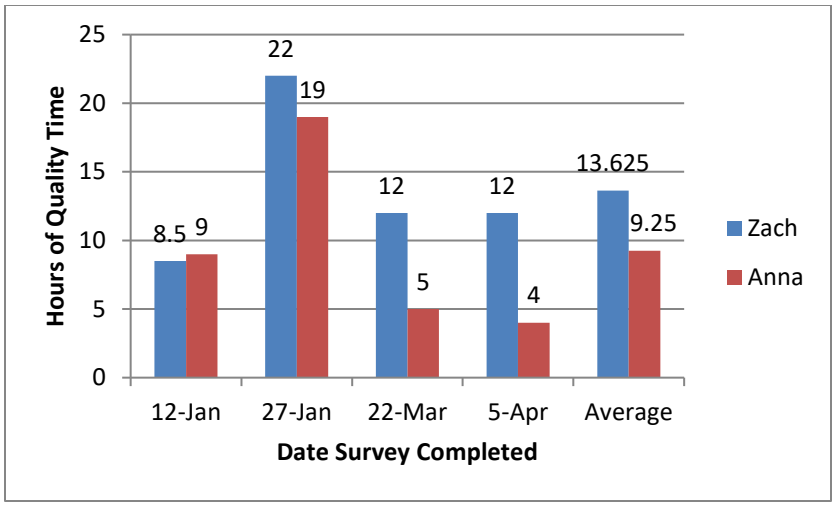



**Figure 2:** Hours of self-reported quality time from the five dates that the survey was completed.

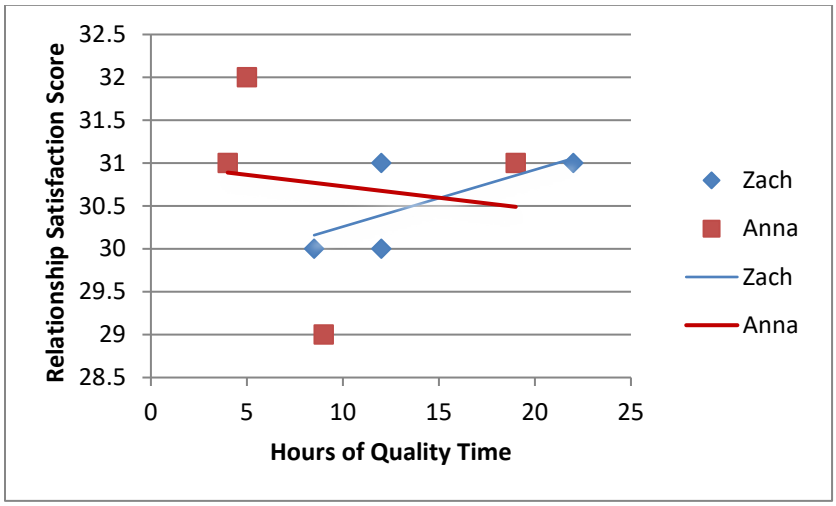



**Figure 3:** Hours of self-reported quality time vs. relationship satisfaction scale scores. Lines of best fit were applied to both data sets.

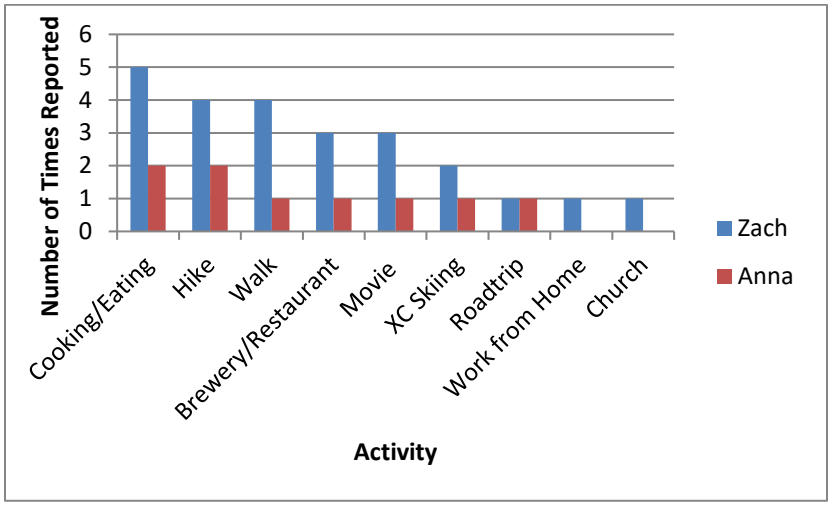



**Figure 4:** Activities reported as quality time and the number of times they were reported.

There were a number of key findings that became clear after analyzing the data:

- Both Zach and Anna were very satisfied with their relationship overall and had nearly identical average scores throughout the study period.
- Despite the busy schedule of residency, Zach and Anna still managed to spend an average of about 10 hours of quality time together each week, though this ranged significantly from as little as 4 hours to as much as 22 hours.
- For Zach, more self-reported quality time did appear to correlate with a greater relationship satisfaction score. For Anna, there was a slightly inverse relationship between the amount of self-reported quality time and relationship satisfaction score. These trends are represented by the lines of best fit for each set of data in Figure 2.
- Zach was more likely than Anna to self-report quality time, both in the number of hours listed and the number of activities reported.
- With the exception of "Church" and "Working from Home", both Zach and Anna reported the same activities as quality time. The most common activities for both were, "Cooking/Eating Together", "Walking", and "Hiking".

**Lessons Learned:**

- In general, Zach and Anna are both quite happy with their relationship.
- Overall, Zach and Anna tend to enjoy the same activities together.
- Despite how busy residency can be, it is still possible to spend quality time with your spouse.
- Though this study was limited, it does suggest that that for Zach, more quality time is better, but this may not be the case for Anna. With this in mind, it appears there is a "Goldilocks Zone" with respect to quality time in their relationship, where the amount of quality time is, "just right" for both of them.

## Grayson Cobb MD. QI Project
### Effect of documenting outdoor adventures on frequency of new adventures

**Problems:** Need for more exploration in Western Montana in lieu of doing the same trails and same activities in the same places.

**Aim:** Engage in one unique adventure (new activity, new place, and/or new setting) and document in a bedside logbook at least once weekly for the next 12 weeks.

**Key measures for improvement:** Process based measure to document adventures weekly.

**Method:** Initially began with retrospectively collecting baseline data from photo documentation and records on the Strava phone app which logs endurance activities. This data showed that prior to the intervention I was engaging in a unique activity 13/18 weeks. I began with the intervention in October and targeted to document this in a bedside logbook which ended up being my phone. Most of the intervention took place on weekends but several adventures were performed during the week after work. The bulk of the intervention involved new places but sometimes involved new activities and sometimes at night instead of day.

**Analysis and Interpretation** Below table shows results of the intervention of time spent outdoors affecting the calmness scale.

| | Prior to intervention | Post intervention | Difference |
|---|---|---|---|
| Unique adventures | 13/18 weeks (0.72) | 28/30 weeks (0.93) | Increase of 21% engaging in unique adventures |

**Strategies for change:** I recruited the support of my friends and partner to engage in this intervention to assist in developing ideas for new adventures and encourage new exploration. With my partner this meant that we would attempt to avoid using the same trails for our runs. Additionally I made a goal that for solo adventures I would attempt different times and locations but largely engaged in the same activities.

**Effects of Change:** A 21% increase in weekly unique adventures was the result of the intervention.

**Lessons Learned:** I learned from this intervention that engaging in unique activities can be done and does not require tremendous effort or motivation. Rather it simply required a concerted effort. I think the mild 21% increase is even an understatement given that baseline data was retrospectively collected from documentation on photos and the Strava phone app right when I moved to Montana. Initially everything was new to me in Montana so engaging in unique adventures was easy. Most of the baseline data that documents not engaging in unique adventures occurred toward the end of baseline data collection and just prior to the start of the intervention. I think the intervention came at an appropriate time and was vital to continue these activities. I would like to continue engaging in this intervention and have likely developed habit given that the intervention was 30 weeks long, a whole 18 weeks longer than the intended intervention.

**Mallory Koula MD. QI Project**
**Mini-Mental Break**

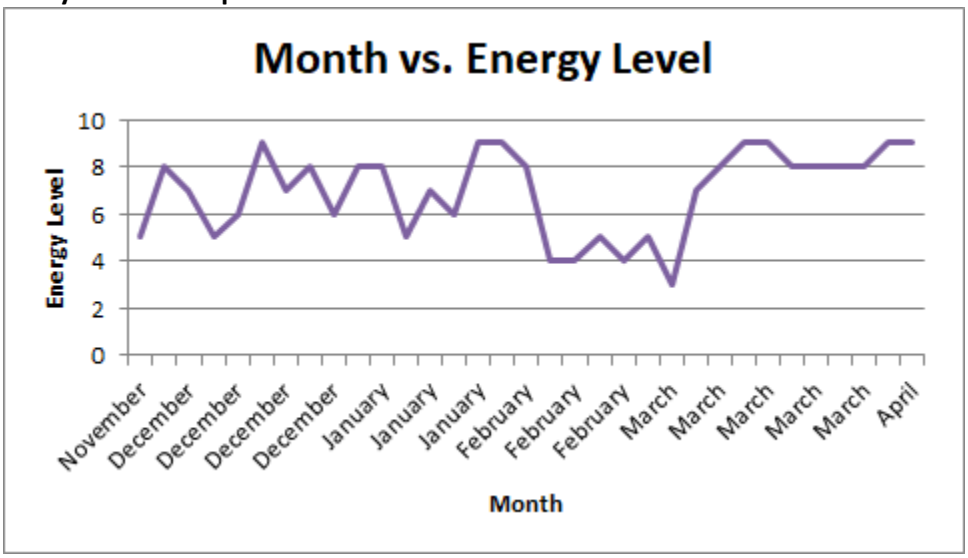
**Problem:**
Working long hours with a varying schedule makes it challenging to be energized and prepared for a full day of demanding work.

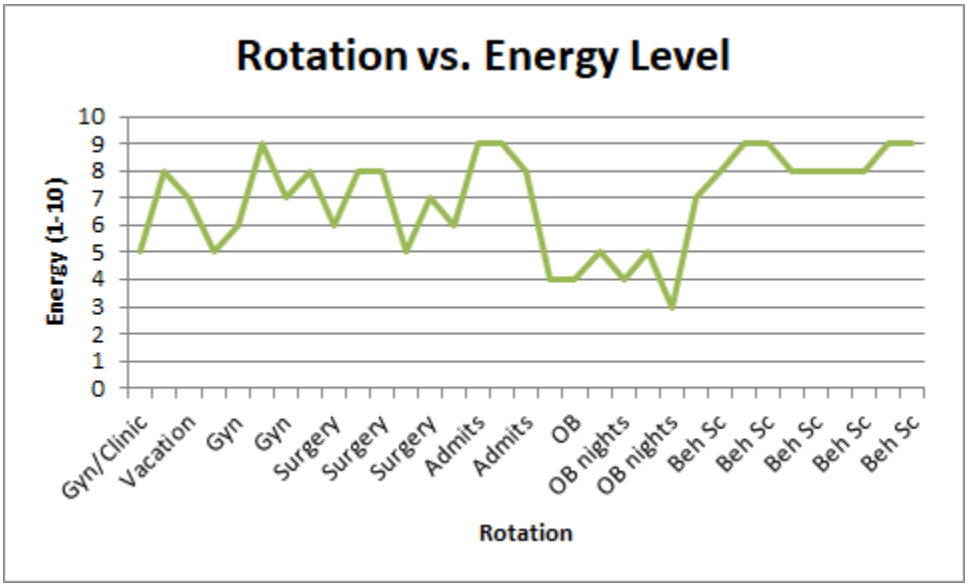
**AIM Statement:** Increase energy by waking up early for mini-mental break (yoga, meditation, journaling) for a minimum of 5 minutes prior to the work day for at least 3 days a week for the winter season (through March).

**Key Measure for Improvement:** Track what means is used for a mini-mental break (yoga, journaling, exercise etc), for how long and correlating energy level following the break on a 1-10 scale (1 = extremely fatigued and 10 = fully energized).

**Process of Gathering Information**: A google doc was created for ease of access where data could be recorded. Whenever a mini-mental break was completed, the session was recorded in this document.

**Analysis and Interpretation:**






Energy level fluctuated from 3-9 with an average energy level of 6.93. The lowest months for energy level were February and March which corresponded to being on the OB rotation and working nights. The most consistently high energy level was from the middle of March to April, which corresponded to being on the behavioral science rotation as well as time on quarantine/self-study.

**Strategies for Change**: Making a plan to take a mini-mental break immediately upon awakening. Then, record energy level and activity performed for the break in a google document.

**Effects of Change**: Being intentional about taking a break at the start of a day and then recording energy level was helpful for checking in. It helped to identify fatigue and energy level.

**Lessons Learned:** A mini-mental break is a great resource to employ to identify level of fatigue. It is unknown whether this helps combat fatigue as baseline was not measured in the data collection. At times, some rotations more than others, it can be difficult to identify the need for and complete the mini-mental break. There may be benefits to mini-mental breaks anytime throughout the day to help check in and evaluate, not just fatigue, but various emotions as work can fluctuate in its demands. A barrier to this is two-fold: remembering to take the break and then actually performing the break. Taking the time to record the break was another barrier to data collection, although using google docs as the platform optimized accessibility.

**Key words**: energy, fatigue, mini-mental break

**Michelle Metcalf MD. QI Project**

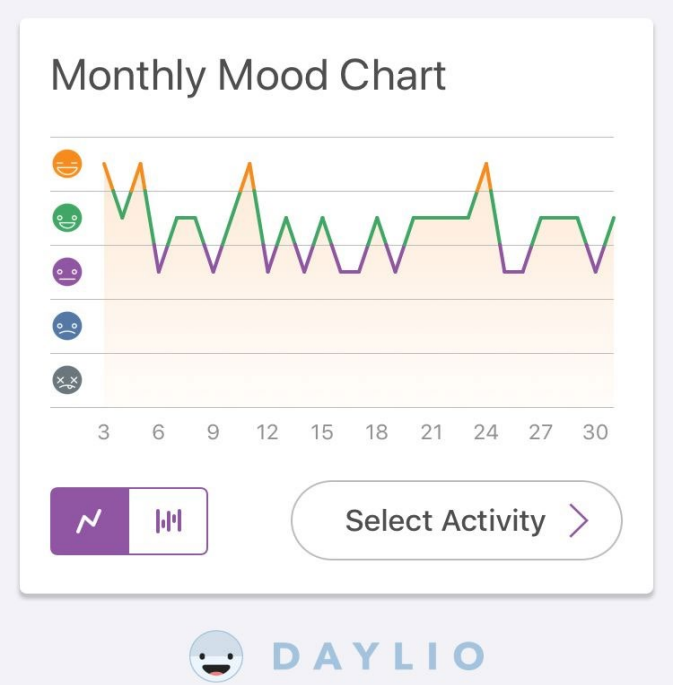
**Family Time to Improve Mood**

**Problems:** Need for increased happiness for myself and my family (partner and animals) during rotations where I am working long hours.

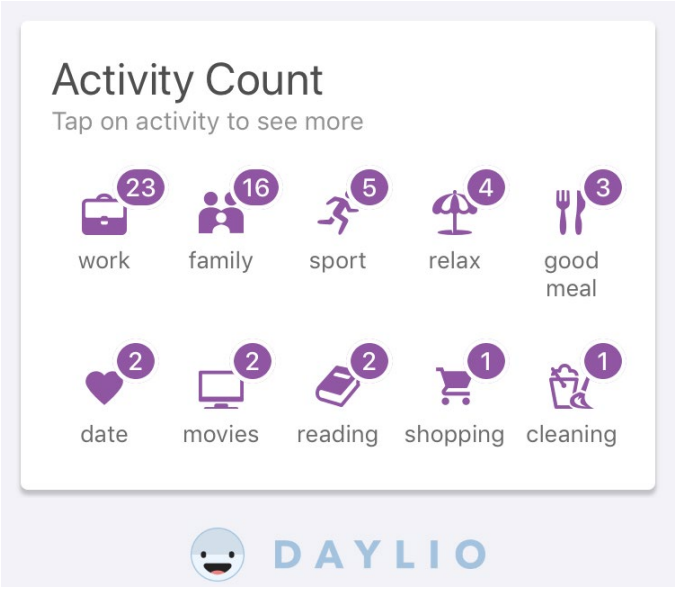
**Aim:** I will spend at least 1 dedicated hour per day engaging with family (animals and significant other) without doing other tasks and not in the presence of electronics to improve my mood by 30% using the Daylio app over the next 2months

**Baseline Measure:** The baseline mood was measured using Daylio app rating (5=great, 4=good, 3=meh, 2=bad, 1=terrible). During those 7 days, I did not track dedicated time spent with family. The mood on average was 3.0.

**Intervention:** Spend at least one dedicated hour per day with family (partner and/or animals) without attending to other tasks or using electronics. This includes charting in EMR, watching television, phone applications. The mood and activities will be tracked using the Daylio app at the end of each night.




**Data Analysis:** The Daylio app was used to rate mood. The mood one could choose was one of five facial expressions (see above, baseline measure) each day and that was converted numerically. Mood ratings were also charted into an excel document using the numerical system and average mood over the month and family time was charted and shown below. I only succeeded in charting mood the first month so only those calculations were included. Activity for each day was also charted on the app in addition to mood. On average, 16days of the 31days in the month were spent with family so I did not succeed in dedicated time with family the other days. Other daily activities were also charted as shown below. The average mood in control week was 3.0 and the average mood in intervention group was 3.8. The percent increase in mood between control and intervention group was 26.67%.



| Column1 | Average Mood | % with Family |
|---|---|---|
| Control | 3 | 0.00% |
| Intervention | 3.8 | 51.60% |

**Discussion:** As can be seen from the above data, mood was improved in the intervention group when tracked. However, I was only successful at spending dedicated time with family about 52% of the time. If I expanded time to include use of electronics or doing work-related tasks in each other's presence, this would have been a higher percentage. I also only tracked my mood consistently for one month. Although the app was easy to use, the time spent opening it and tracking mood got tedious. If I had tracked mood for longer periods of time then the numbers may have been different. There are also so many other variables that can affect mood including exercise, work, and cooking that probably also impacted daily ratings. Based on these numbers, however, my mood was improved by 26.67% when spending dedicated time with family, which is near the goal of 30% increase. It would have been interesting to see if my significant other's mood was also increased with family time, but he was not successful at tracking his mood using the app.

## Shannon Rossio MD. QI Project
### Reducing depression through exercise

**Background:**
Exercise has been shown in multiple studies to have a positive impact on mental health. I think it's important to discuss the importance of exercise in reducing depression and anxiety with patients. I have also relied on exercise to manage my own depression, but have never tried to quantify its impact in improving my mental health. Prior to starting this project, I had been running inconsistently and noticing anecdotally that my mental health seemed to drop when I would not run for a couple of weeks. I decided I should start a structured running program and attempt to measure any change in my level of depression after 2 months of dedicated running.

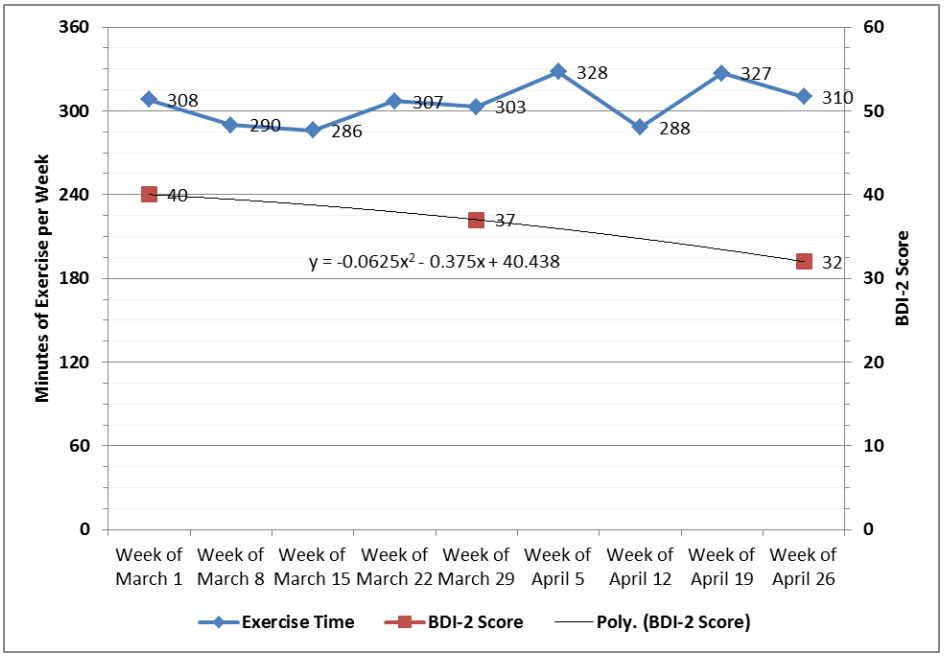
**Aim:**
To reduce depression through running

**Key measure for improvement:**
I used the Beck Depression Inventory II (BDI-II) to measure my level of depression throughout the course of the exercise program. The BDI-II is scored with the following categories: 0-13 (minimal depression), 14-19 (mild depression), 20-28 (moderate depression), and 29-63 (severe depression) with a minimally important clinical difference of 5 points. Hence a 5 point reduction in one's score would be evidence of a clinically significant improvement in their depression.

**Process of gathering information:**
I set a goal of running 4 times per week for a total of 300 minutes of running per week. I used a stopwatch to track the number of minutes I spent running. I completed shorter runs of 4-5 miles on Monday, Wednesday, and Friday and a longer run of 10-12 miles on Sunday. I used the BDI-II to assess my level of depression prior to starting the program, midway through at week 4, and at the end of week 9.

**Data analysis:**

- Total days of running over 9 week period of time: 35 days
- Total minutes of running: 2,747 minutes
- BDI-II score prior to starting running program: 40
- BDI-II score midway through running program: 37
- BDI-II score at the conclusion of running program: 32



**Data interpretation and effects of changes:**
My BDI-II score improved from 40 to 32 over the course of the running program. This is a clinically significant 8 point change, and although it appears that running is correlated with a reduction in depression, it is unclear if it was the cause of the improvement. There are many confounding factors that could have affected the results of this project including the intensity of a current rotation, the amount of sleep obtained each night, diet, impact of Covid-19 on mental health, etc. In addition, this study relied entirely on self-reporting with no blinding, which could significantly alter results and validity. That being said, this was the first time since the start of intern year that I had a consistent exercise schedule, and on a subjective level, I did feel better on the days that I ran.

**Lessons learned from project:**
Exercise and lifestyle are key components to managing health. I was able to maintain a consistent exercise schedule for 9 weeks, and I think I would see a much greater impact in my overall health if I were to keep this consistency for the remainder of residency.

**Kathryn Walicki DO. QI Project**
**EXERCISE TO IMPROVE QUALITY OF SLEEP**

**Problem:** Need for increased quality of sleep, especially on rotations that are mentally and emotionally taxing.

**Aim:** Workout for 30 minutes at least 2/5 work days per week to improve restful sleep measured as an increased average "Sleep Cycle" app score of 10%.

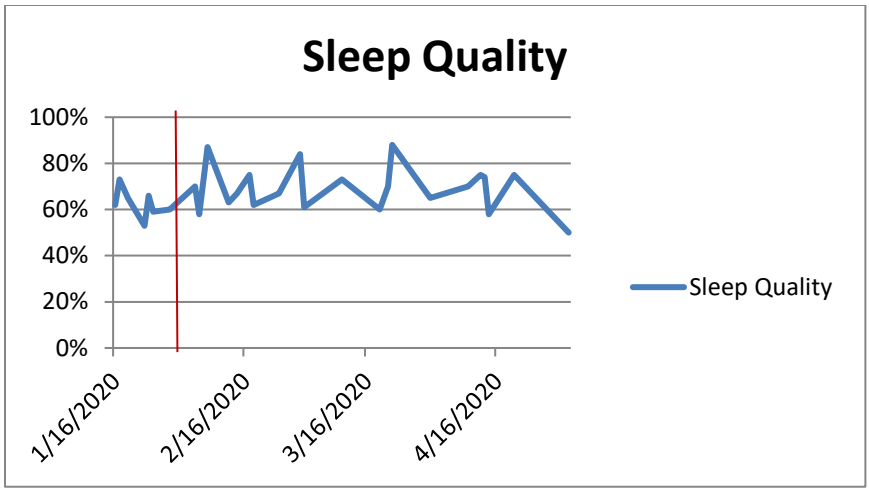
**Methods:** I started my project by collecting baseline data which included 7 days of sleep quality scores when I was not exercising. Then, I collected sleep data for the next several months on days that I exercised. Exercise was defined as at least 30 minutes of an extra activity outside of my daily commute to work (e.g. running, HIIT, yoga, biking, hiking, etc.). Sleep quality was measured in percentages based on the "Sleep Cycle" app monitoring guidelines. The app created these scores by monitoring several factors including movement during sleep, minutes spent in REM, hours spent asleep, snoring, etc. In addition, I collected data over several months in an attempt to correct for the confounding factor of schedule variation.

**Strategies for change:** After collecting my baseline data and observing that my sleep quality averaged 63% per night without exercise, I made an effort to exercise at least 2/5 workdays per week. I was able to succeed in this goal by setting an alarm on my phone as a reminder.

**Analysis and Interpretation** Please see data below for results.

On days where I was able to exercise, I had, on average, higher sleep quality and spent more time asleep. On the days that I exercised, my average length of sleep was 7.1 hours. In comparison, on days that I did not exercise, my average length of sleep was 6.61 hours. Sleep quality, as determined by the app, was also increased on days that I exercised; 69% vs 63%, respectively.

| | Without exercise | With Exercise |
|---|---|---|
| **Average sleep quality** | 63% | 69% |
| **Average hours of sleep** | 6.61 | 7.1 |




**Effects of Change:** Based on my average sleep quality prior to and after intervention, it seems that exercise was indeed related to increased restful sleep. Exercise was correlated with a 6% improvement in sleep quality and increased sleep duration of 29 minutes. Unfortunately this modest improvement did not meet my aim of a 10% improvement in sleep quality. Also, there was not a clear trend of increasing sleep improvement over time, nor was it obvious if these differences were statistically significant.

**Lessons Learned:** Based on my data, regular exercise was correlated with a modest increase in sleep quality. One can envision how the opposite can make for a vicious cycle; lack of sleep leads to lack of exercise which further worsens sleep quality. However, my biggest takeaway from this project was that sleep quality is multifactorial and that mine was poor overall. This project gave me great insight into factors affecting my sleep (stress, anxiety, exercise, time, etc.) and reminded me of the importance of restful sleep, especially during grueling rotations. I plan to make exercise a priority throughout residency as one of many strategies I can utilize to help augment my sleep.

## Kayla Whitmore DO. QI Project

**Can you teach a new dog old tricks?**

**Problem**- I'd wanted a dog for years, and decided that once I matched I would rescue a dog. I knew when I got my dog (Kalispell) that she would require more time/effort in training (High energy, separation anxiety she had been abandoned, returned to the humane society multiple times etc.) but I underestimated my ability. Within days of having her, she had escaped from my yard, gotten into trash, plants, clothes, yarn, whatever you name it. While she is a puppy and it's kinda "cute" the shenanigans she gets into, it is incredibly stressful to wonder what mess will greet me at home and makes me feel like a bad dog mom. Her behavior was causing stressful relationship with myself, my roommates, and other dog friends.

**AIM Statement**: To improve Kalispell's to response to common commands by training her 5min a day 5x week for 6 months.

**Key measures**: creating a spreadsheet to track the number of training sessions. Once a week (Saturday) record the number of times a command is given before she appropriately responds to said command, with max of 10 verbal commands. Use of "Doggo" app (it's free) to learn how to teach some commands and daily reminders to work on her training.

**Process of gathering information** –record on calendar

**Analysis/interpretation** (See tables )

**Effects of change**:
-On average she is <3 times a command needs to be given before she responds, which is much improved from a starting point of >10 times command is given. Learning these commands did not have any secondary effect on her anxious behavior, which was a little disappointing.
-I feel less sense of guilt now when walking with others/hiking off leash as she will more reliably listen to my commands.
-Ended up training 8 commands, for 8 months. There were a few other commands that she learned that I didn't record, mostly because those were extra commands that I ended up not sticking with, or "focus" which I've sporadically tried throughout the month and she STILL doesn't understand it.

-Very quickly I abandoned my original methods for collecting data. When I realized 5 mins at one time was a long time to teach one command, and I was frequently forgetting to set a timer/record the time. I would also work on some commands ("sit", "heel") while we were out on our daily walks, so it was difficult to assess how much actual time I was spending on teaching her commands. I quickly just started checking off on the calendar if I spent any time working with her on commands.

**Reflections/lessons learned**
-Vacation greatly impacted my training, mostly because I had picked Saturdays to be the day to record the number of commands per response, and I was often gone on those days for vacation. While I was

gone, people watching my dog were instructed in both verbal and hand signals for command, but there could be significant variation between people
-Some commands were much easier than others, like heel and place, because those were worked on with a trainer and they are more “high stake” commands, so she quickly picked them up. “Down” and “Roll-over” still are difficult at times, because when giving the command to lay down, she almost automatically goes into a roll, which is technically not the correct command.

-I was surprised how quickly I stopped using Doggo. I thought having an app to remind me to train her and to walk through the tricks would have been more instrumental in helping me to train her so that was surprising to me.

Table 1:

| Week # and command | #of days trained | #commands until appropriate response |
|---|---|---|
| 1-Sit | 6 | 4 |
| 2-Sit | 6 | 2 |
| 3-Sit | 6 | 5 |
| 4-Sit | 6 | 1 |
| 5-Dance | 3 | 4 |
| 6-Dance | 5 | 3 |
| 7-Dance | 4 | 2 |
| 8-Dance | 6 | 2 |
| 9-Down | 4 | Dance:1, Down: 8 |
| 10-Down | 4 | Dance 1, Down 6 |
| 11-Down | 4 | *didn't test |
| 12-Down *On vacation | 0 | 10/10 * didn't test |
| 13-Down | 6 | Dance 3, Down 4 |
| 14-Roll over | 6 | Dance 1, Down, 2, Roll 10 |
| 15-Roll over | 4 | Dance 2, Down 5, Roll 5 |
| 16-Roll over | 2 | Dance 1, Down 5, Roll 7 |
| 17-Roll over | 2 | Dance 1, Down 1, Roll 3 |
| 18-Shake | 3 | Dance 1, down2, roll 3, shake 7 |
| 19-Shake | 3 | Dance 3, Down 5, roll 5, shake 5 |
| 20-Shake | 5 | Dance 2, Down 5, Roll 1, shake 5 |
| 21-Shake | 6 | Dance 1, down 2, Roll 3, Shake 3 |
| 22-Shake | 5? | ? |
| 23-Place | 3 | *Didn't test, on vacation |
| 24-Place *Vacation | 1 | Dance 1, down 2, Roll 2, Shake 5, Place 2 |
| 25-Place | 3 | Dance 2, down 4, roll 1, shake 4, place 1 |
| 26-Place | 2 | Dance 1, down 1, roll 1, shake 1, place 1 |
| 27-Heel | 5 | Dance 1, down 1, roll 1, shake 1, place 1, heel 4 |
| 28-Heel | 5 | Dance 1, down 5, roll 1, shake 2, place 1, heel 4 |
| 29-Heel | 2 | Dance 2, down 7, roll 2, shake 1, place 1, heel 2 |
| 30-Heel | 3 | Dance 1, down 1, roll 1, shake 1, place 1, heel 2 |
| 31-Heel | 1 | ? |
| 32-Sit pretty | 3 | Dance 2, Down 3, Roll 1, Shake 4, Place 1, Heel 2, Pretty 10 |
| 33-Sit Pretty | 5 | Dance 2, Down 1, Roll 1, shake 1, place 1, heel 4, Pretty 8 |
| 34-Sit Pretty | 6 | Dance 1, Down 3, roll 2, shake 3, place 1, heel 2, pretty 4 |
| 35-Sit pretty | 3 | Dance 2, down 3, roll 1, shake 4, place 1, heel 1, pretty 1 |
| 36-Sit Pretty | 4 | Dance 2, down 1, roll 2, shake 1, place 1, heel 1, pretty 2 |

Table 2:

| Command | Avg number of times command given until response (round to nearest whole #) |
|---|---|
| Sit | 3 |
| Dance | 2 |
| Down | 3 |
| Roll over | 3 |

**Nick Zakovich DO. QI Project**
**Nutrition Talk to Improve Work Satisfaction**

**Problem:** I entered the field of family medicine partially due to my passion for nutrition and plant-based diets. Unfortunately, I felt as though I haven't had as many meaningful conversations about nutrition with my patients as anticipated.

**Initial aim statement:** To improve my satisfaction at work, I will ask one preselected clinic patient per day to perform a 24 hour dietary recall. Then ask an open ended question following the recall. The goal of this intervention is to increase my satisfaction at work. This will be measured by a scaling question after the encounter.

**Revised aim statement:** To improve my satisfaction at work, I will attempt to discuss nutrition with one patient per clinic day.

**Key measures for improvement:** I will measure my satisfaction after the patient encounter with a scaling question and record it using an excel spread sheet.

**Scaling Question:** On a scale of 1-10, how enjoyable was your clinic shift?

**Method:** Initially I attempted to follow my aim statement, but within two weeks of starting my project I found it to be very cumbersome. Ironically, I was concerned the extra work I created for myself would further reduce my job satisfaction. My aim statement was revised to be less specific and less rigid. This allowed me to take an individualized approach with each patient and allow the conversation to start naturally. Due to the nature of primary care, you may not have a good opportunity to talk about nutrition every day. I decided to record satisfaction data based on the whole clinic shift; this would allow me to compare days when I did and didn't talk about nutrition. I recorded my satisfaction with clinic on a scale of 1-10 and recorded it in a excel spreadsheet. Following this revision, I had no further issues performing my QI project.

**Gathering data:**
I recorded the following metrics:

- Did I talk about nutrition during this clinic day? Y/N
- On a scale of 1-10, how enjoyable was your clinic shift?
- The date

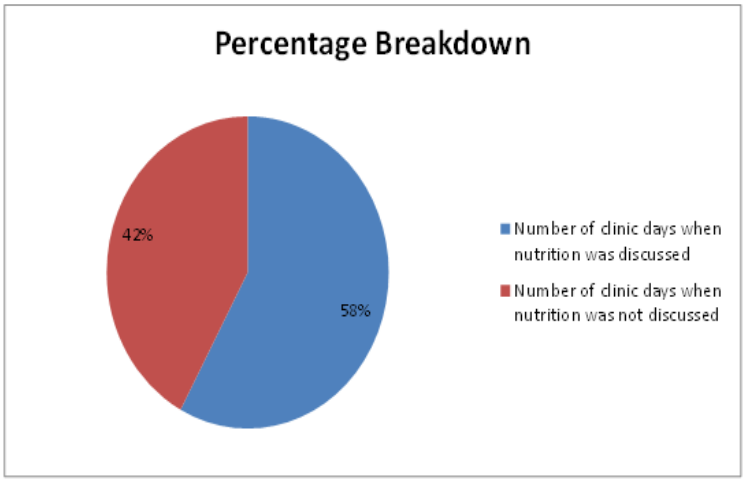
**Analysis and interpretation:** I was surprised that I am already talking about nutrition on a majority of the days I work in clinic, 58% to be specific. Oddly, my average satisfaction was lower on days that I did talk about nutrition, 6.3 vs 7 respectively. I would attribute most of my lower satisfaction days to having challenging clinical encounters. At times, I would feel powerless to help my patients usually due to socioeconomic factors out of my control. I found some nutrition discussions to be incredibly rewarding and others to be frustrating.

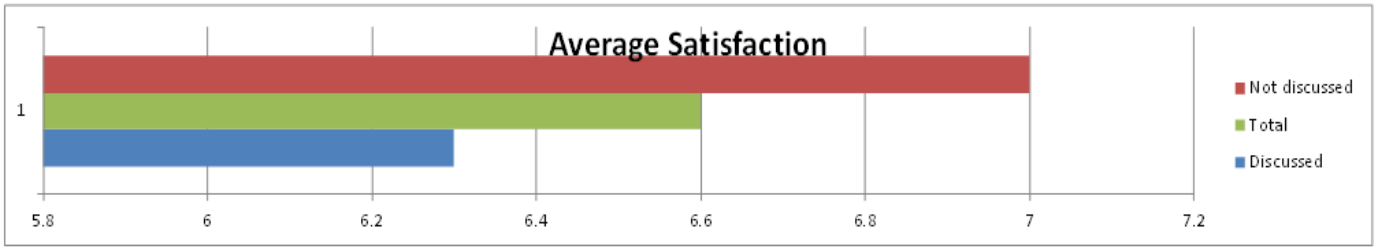
**Strategies for change:** I found having readily available nutrition print-outs to be helpful. Understanding the role nutrition plays in commonly encountered disease processes made transitions into nutritional discussions seamless. Lastly, using patients' desires to avoid medications as leverage for implementing dietary changes was very fruitful.

**Lessons learned:** Moving forward, instead of trying to have more nutrition discussions, I would like to be better prepared for the ones that develop organically. As family doctors, our job entails the prevention of chronic disease, all of which are linked to nutrition and lifestyle in some way. We all will have ample opportunity to have meaningful discussions about nutrition. We will serve our patient's best, and in returned feel empowered, if we are prepared with nutritional knowledge and familiarity with the research. In regards to workplace satisfaction, it cannot be attributed to one specific metric; it is multifactorial in nature and complicated.

| Date: | Was nutrition discussed? | Satisfaction: 1-10 |
|---|---|---|
| 2-Dec | Intial phase prior to revision of aim statement | |
| 4-Dec | | |
| 10-Dec | | |
| 12-Dec | | |
| 16-Dec | No | 7 |
| 24-Dec | Yes | 9 |
| 26-Dec | Yes | 9 |
| 31-Dec | Yes | 6 |
| 3-Jan | No | 8 |
| 6-Jan | No | 7 |
| 10-Jan | Yes | 7 |
| 13-Jan | No | 8 |
| 1/14-2/7 | Rural rotation and vacation | |
| 11-Feb | Yes | 5 |
| 13-Feb | No | 5 |
| 18-Feb | Yes | 3 |
| 20-Feb | No | 7 |
| 25-Feb | Yes | 5 |
| 27-Feb | No | 7 |
| 28-Feb | Yes | 6 |
| 5-Mar | Yes | 8 |
| 10-Mar | No | 7 |
| 12-Mar | Yes | 7 |
| 16-Mar | Yes | 4 |

| Results: | |
|---|---|
| Number of clinic days when nutrition was discussed | 11 |
| Number of clinic days when nutrition was not discussed | 8 |
| Total clinic days analyzed | 18 |
| Averages satisfaction score on days where nutrition was discussed | 6.3 |
| Averages satisfaction score on days where nutrition was not discussed | 7 |
| Average satisfaction for all days | 6.6 |
| Precentage of total days where nutrition was discussed | 58% |



## 2020 Faculty Scholarly Activity Work

Faculty and graduating residents in June 2019.

**Brett Bell MD**

**Title**: Presentation on MAT basics for SPH Hospitalists

**Details of the project:** Presented on basics of Medication Assisted Treatment to the SPH Hospitalist group, outlining how to start MAT in the hospital, how to obtain a waiver to prescribe buprenorphine and how to link patients to outpatient services.
**Outcome**: successful, generated lots of interest in providing MAT in the hospital. Progress was somewhat delayed due to COVID-19 but as things calm down, I expect renewed interest. Some hospitalists have already approached me about staring MAT and I've been happy to provide some coaching on that.
**Reflections:** This was a really neat opportunity and I'm excited for further collaboration and I'm excited about the interest in this. I'm also looking forward to eventually presenting to the ED physician group as well.

**Project Title**: SBIRT Training for Faculty, Staff & Residents

**Details of the project:** In collaboration with Jen Robohm and Ellen Bluett, prepared and delivered trainings on the SBIRT model and motivational interviewing to residents, faculty and PHC staff.
**Outcome**: Success! Some challenges with audience participation as both presentations were shifted to Zoom in light of COVID-19 restrictions.
**Reflections:** would like to do ongoing motivational interviewing refreshers outside of behavioral science rotation.

**Project Title**: Presentation to Montana Pain Conference on Buprenorphine for Chronic Pain

**Details of the project:** Delivered a workshop at the Montana Pain Conference on using buprenorphine to treat chronic pain, also served on a panel discussion of addiction and chronic pain
**Outcome**: Success! Very well received.
**Reflections:** This presentation went well.

**Project Title**: Workshop on A Reproductive Justice Framework for Contraception and Options Counseling for Patients with Substance Use Disorders
**Details of the project:** Collaborated with other younger experts in the field of Addiction Medicine, Addiction in Pregnancy and reproductive health to develop a workshop at the American Society of Addiction Medicine annual conference on the overlaps between addiction medicine and reproductive justice.
**Outcome**: The ASAM conference shifted to an online only format, and our interactive workshop did not fit into this format. We are postponing the workshop until ASAM 2021.

**Reflections:** I really enjoyed the collaboration and enjoyed the opportunity to learn more about reproductive justice. I hope the presentation can be done in the future.

**Ellen Bluett, PhD**

**Title: Patient Centered Outcome Research Scholars Program**

**Details of the project:** This project is part of the Patient Centered Outcome Research (PCORP) Scholar Program through the University of Washington. The PCORP Scholars Program provides an opportunity to gain in depth education, mentorship and training of PCOR/CER principles. I was accepted into this program for the 2019-2020 academic year and completed a week long intensive training with other PCORP scholars from around the country. I was awarded $6,000 in grant funding to complete this project.

The focus of my study is to examine the impact of integrated behavioral health clinic on patient engagement with behavioral health services. The primary aims include:

1. To determine if an IBH clinic improves patient engagement in behavioral health services at Partnership Health Center compared to the traditional warm-hand off model.
2. To examine how social determinants of health including income, employment status, and rurality relate to patient engagement in behavioral health services.
3. To understand patients experiences with integrated behavioral health.

To accomplish these aims, we have developed two smaller studies. The first study is quantitative in nature and simply requires a retrospective chart review to determine whether the implementation of and integrated behavioral health clinic improved patient engagement in behavioral health services compared to treatment as usual. The second study is a focus group, inviting patients who have participated in our integrated behavioral health clinic to share their experience with the service.

**Outcome**: Currently, we are analyzing the data from a retrospective chart review. The findings will be submitted for publication in the Fall of 2020. The focus group is still in development.

**Reflections:** This has been a transformative experience for me as a researcher. The PCORI (patient center outcome research) principles were new to me and have encouraged me to take a different approach to developing my research questions. I've learned the importance of including multiple stakeholders in the research development phase. The inclusion of the patient's perspective and experience should be central when developing a study. I have also learned the complexities of using an EMR for retrospective data. I look forward to using this study as pilot data for future projects.

**Title: Bipolar Disorder: Managing the Peaks and Valleys in Primary Care**

**Details of the project:** Family physicians and behavioral health professionals are constantly updating their skill set to deal with the problems that their patients face. Bipolar Disorder continues to be a challenging topic for clinicians to grasp with a myriad of complexities in terms of diagnosis and treatment. These challenges can be even more difficult in a busy Family Medicine clinic. To address these challenges, myself, another psychologist and a family medicine physician developed and presented a symposium at the 2019 Behavioral Science Forum in Chicago, IL.

**Outcome**: We received exceptional feedback from attendees and as a result we have been invited to submit a publication for the International Journal of Psychiatry. The article will be published in the August, 2020. I also used this project to launch a didactic training on Bipolar disorder for our residents.

**Reflections:** Bipolar disorder is often misdiagnosed and mismanaged in primary care.

**Project: Montana Integrated Behavioral Health Summit and Steering Committee**

**Details of the project:** Ongoing participation in the Montana Integrated Behavioral Health steering committee. As part of this committee, we planned the annual Montana Integrated Behavioral Health Summit. I co-facilitated a 4-hour clinical intensive workshop for behavioral health providers during the first day of the summit. I am currently working with a team to build a sustainable IBH technical assistance program to bring integrated behavioral health to rural communities in Montana.

**Wellness Curriculum Transformation**

**Details of the project:** Teaching wellness principles and practices can be challenging in a residency program. We have worked to transform the Wellness Curriculum at FMRWM with a primary focus on positive psychology theory and principles. We offered two intro to positive psychology didactics this academic year.

**Outcome**: Received positive feedback from the residents following the didactics. Residents reported an improvement in their mood by engaging in experiential exercises during these didactics. In addition, we have also incorporated brief mindfulness practices into faculty and resident/faculty meetings. We plan to offer brief experiential exercises that will teach positive psychology skills/techniques at the beginning of didactics in 2020-2021.

**Reflections:** ACGME requires wellness as part of our curriculum with relatively vague guidelines. Focusing on flourishing rather than burnout seems to be a more effective approach for fostering resident wellness. We will continue to explore new ways to incorporate positive psychology into our curriculum and culture.

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**Other Scholarly Work**

**Publications:**

Ong, C. W., Blakey, S. M., Smith, B. M., Morrison, K. L., **Bluett, E. J.,** Abramowitz, J. S., & Twohig, M. P. (2020). Moderators and processes of change in traditional exposure and response prevention (ERP) versus acceptance and commitment therapy-informed ERP for obsessive-compulsive disorder. *Journal of Obsessive-Compulsive and Related Disorders,* 24. https://doi.org/10.1016/j.jocrd.2019.100499

Smith, B. M., Ong, C. W., Barrett, T. S., **Bluett, E. J**., Slocum, T. A., & Twohig, M. P. (2019). Longitudinal effects of a 2-year meditation and Buddhism program on well-being, quality of life, and valued living. *Mindfulness*, 10(10), 2095-2109. doi: 10.1007/s12671-019-01165

## Bonnie Brown MD

**Project Title**:

1) Presentation, "Integrating learners into clinical practice," (with Sue Ostertag, DPT) 10/25/2019.
2) Prenatal care at PHC, quality improvement and data collection, future project TBD

**Details of the project:**

1) Presentation at the Family Medicine Residency of Western Montana 7th Annual Rural Retreat, discussed best practices for integrating medical students and residents into the outpatient clinical setting.
2) We had started initial retrospective chart review/data collection with the PHC team to gather QI metrics on our prenatal care population, identify areas for quality improvement, and stratify our population's overall risk. Unfortunately this was set aside due to changes and challenges related to Covid-19. Due to Covid-19, we changed our routine prenatal care schedule with the goal of limiting patient (and provider) exposure. This has resulted in a marked increase in OB telemed visits and decline in in-person visits during the time of the outbreak which we have tracked, and will continue to monitor overall health outcomes of patients during this time.

**Outcomes/Reflections:**

1) It has been gratifying to work with Sue Ostertag on interprofessional education and on the collaborative presentation, sharing strategies and challenges of integrating learners from undergraduates to residents/DPT candidates into busy clinical rotations.

2) Rapid changes to clinical care and graduate medical education have presented challenges to our systems, and I have appreciated working within our teams to quickly and flexibly identify ways to maintain clinical care and keep our most at-risk patients safe. As we now approach a "lull" in Covid-19 cases, incorporating telemedicine visits will likely allow us to provide more flexible, "right-size" care for our pregnant patients. We hope to return to the overall QI project and review of antenatal care in the coming months.

## Tim Caramore MD

**Title**: **Top 10 Practice-Changing Research Articles from 2019(-ish)**

**Details of the project:** Presentation at 2020 MAFP Whitefish winter conference, grew out of conversation with Dr. John Miller about what might be helpful evidence-based medicine content for a general family medicine audience and ongoing work coordinating journal club.

**Outcome**: Done deal. Well-received by audience though I need to make my slides easier to read for the audience next year!

**Reflections:** It was a lot of fun whittling my list down from about 25 candidate papers to a top 10. Serving as journal club coordinator made this task a lot easier – I end up reviewing a lot of high-yield papers every year. The presentation was well-received and my plan is to try to make this an annual thing at the conference. People love a top 10 list!

**Title**: **FMRWM / St. Pat's Journal Club**

**Details of the project:** Ongoing coordination of journal club every other Thursday morning.

**Outcome**: It keeps happening every other week.

**Reflections:** I've been so impressed at how the overall quality of the papers and the presentations has improved dramatically these last 2 years with the implementation of some guidelines on paper selection, and presentation content and, more importantly, with consistent modeling of excellence by our residents and faculty. In the coming months I hope to tinker with the model a little bit in an effort to make this even more useful to people. In the medium to longer term I'd love to figure out how to get more physicians from the community engaged as I think it would raise everyone's level of play and potentially improve the quality of care in Missoula.

**Title: Montana Crisis Guidance working group**

**Details**: In March 2020, I had the chance to sit on a rapidly assembled working group to write standards of care for healthcare organizations as the COVID pandemic spread across the U.S. This group involved ethicists, ethics committee representatives, healthcare leaders, state officials, and advocates for disability rights. We spent an intense few days working over email and video conferencing, and ultimately produced a document meant to help healthcare organizations make difficult decisions in the event of a surge in COVID cases.

**Lessons learned**: Sometimes being in the right place at the right time can lead to unexpected opportunities. Though the governor ended up tucking these documents away rather than approve and promulgate them – and interestingly, this happened in other states including NY – this was an incredible chance to work with a group of thoughtful, dedicated people on a real world, high-stakes ethics project.

**Rob Cruikshank MD**

**Title**: **"Diabetes Management" presentation**

**Details of the project:** didactics presentation to FMRWM residents

**Outcome**: I only got through ½ of the material I had prepared, which omitted the second half of the presentation that had the more interactive part of the presentation.

**Reflections:** When I give the lecture again I will take out the review of medication classes and some of the supporting evidence/ clinical studies, as these used presentation time that will be more effectively used by engaging residents in the case based care discussions.

**Title**: **"Common Concerns of Early Childhood" presentation**

**Details of the project:** virtual didactics presentation to FMRWM residents

**Outcome**: I used Google slides to present on Zoom and increased resident interaction by having questions that they answered on Google forms. I felt that the presentation went well, had good participation by residents and early feedback from the presentation has been positive.

**Reflections:** Virtual presentations are more challenging to keep interactive and residents engaged. It is important to be creative with different ways of promoting interactions with the residents in the virtual format.

**Title**: **Precepting Journal**

**Details of the project:** I have piloted the use of a precepting journal as a faculty development tool. The journal is a place to reflect on challenging precepting interactions. What was the tension point? How did I feel? How do I think the resident felt? What could I have done to improve on the interaction?

**Outcome**: Journaling greatly increased my self-awareness of my precepting interactions and my thoughtful reflections on how to improve on them.

**Reflections:** A precepting journal provides an opportunity to reflect and grow from challenging interactions and foster mindfulness during these interactions.

**Title**: **Pediatrics and General Surgery preceptor workforce development**

**Details of the project:** I am responsible for organizing the pediatric and surgery rotation experiences for FMRWM residents. This involves communicating with and developing the cadre of pediatricians and surgeons who are involved with teaching our residents.

**Outcome**: There continues to be some turnover of physicians involved with teaching our residents. We lost a surgeon to retirement and a pediatrician due to work overload. We've also gained a surgeon who is new to practice in Missoula and added pediatric practices in Hamilton and Anaconda.

**Reflections:** It is so helpful to have some excess teaching capacity to avoid overloading preceptors and to have some scheduling flexibility with resident rotations. Relationship connection with community preceptors is so helpful for maintaining their engagement with our teaching mission. It is important to think through how to best overcome the barriers of time and location to strengthen these connections.

**Title**: **Diabetes Taskforce and Refugee Health/Green Card committee**

**Details of the project:** These committees meet several times a year to work on processes that improve the processes of care for our patients with diabetes and our refugee patients through collaborative interprofessional quality improvement processes.

**Outcome**: We have utilized the Azara DRVS clinical database to identify patients at risk for developing diabetes or developing complications of poorly controlled diabetes for targeted interventions. Our processes for the care of diabetics and refugees have been significantly altered by the COVID pandemic.

**Reflections:** My participation in these clinical care committees has highlighted the value of interprofessional communication/ collaboration for improving care processes and the value of leveraging clinical databases to improve patient outcomes.

## Samantha Greenberg MD

**Title: "Gentle Cesarean Section" at Kalispell Regional Medical Center**

**Details of Project:** Gentle cesarean section is a patient centered approach that retains many aspects of the birth experience present in a vaginal delivery, such as immediate skin to skin and early initiation of breastfeeding. Studies show by implementing gentle cesarean technique, rates of maternal satisfaction with the birth experience improve along with improved rates of breastfeeding and neonatal transition. As a resident and fellow, Gentle cesarean was our standard of care for all cesareans. At KRMC many of these steps were being utilized already, there was great provider variation and continued to be a significant delay between time of birth and arrival of the infant to the maternal chest. I introduced the concept of gentle cesarean during an Obstetrics Grand Rounds presentation in the fall. There was immediate enthusiasm from providers, nursing and hospital administration. After discussing with OB providers, anesthesia, nursing staff, and attending several deliveries to model gentle cesarean concepts, I began work on a "Family Centered Cesarean" policy for our hospital.

**Outcome**: A draft of the Family Centered Cesarean Policy has been approved by the OB department. This will be circulated to Anesthesia for feedback before finalizing this policy and implementing as KRMC's standard of care for all cesarean deliveries.

**Reflections:** I had initially been unsure of how gentle cesarean would be received. I was blown away by the positive feedback and enthusiasm for this project. I hope this is a stepping stone for continuing to interrogate our practices and policy change to support patient-centered practices in the future.

**Title: Interim co-facilitator of the Flathead County Maternal Mental Health Coalition**

**Details of the Project:** I have been involved with the Maternal Mental Health Coalition (MMHC) since Fall 2018. The MMHC is a collective of professionals working with pregnant women, children and families with an aim to improve recognition of peripartum mood and anxiety disorders (PMADs) and improve access to mental health care for new parents. In January 2020 the Flathead County Health Department and MMHC was invited to participate in a national learning lab for public health coalition building through Nemour's Children's Hospital. I was invited to participate as a provider representative. Through the learning lab I attended a two day conference with communities from around the country to work on skills for sustainable and effective public health coalition building and continue to attend virtual meetings to work on our coalition's goals of improved structure, governance and sustainability. During this 6 month period I have served in an interim co-facilitator, bringing skills from the learning lab back to the larger coalition.

**Outcome:** We are a continued work in progress but are on our way to a clarity of vision and action. New leadership is transitioning in as the learning lab comes to completion. I will continue to participate in the coalition as a provider representative.

**Reflections:** It has been nice to utilize my public health brain and build a public health skillset, an aspect of my training I have not been able to tap into for a while. Involvement with the learning lab and MMHC has opened up a new direction for professional development including starting the process of a certification in PMADS through Postpartum Support International.

**Kerry Haney PharmD**

**Title**: Creation of an annual FMRN Pharmacists Collaborative Meeting

**Details of the project:** Lead a committee of pharmacists with a WWAMI Family Medicine Residency Network (FMRN) staff representative to create a new meeting for network pharmacists in our region to allow for inter-residency collaboration and support.

**Outcome**: Held May 14th (had to transition to a virtual meeting due to COVID19). Planning an in-person meeting for 2021. Submitted for presentation at STFM, not accepted. Created a manuscript that has been submitted and declined by two journals. Will rework after the meeting and resubmit.

Other activities: SIMS work, Rural Retreat Community, IPE

## Amy Matheny MD

**Projects/Scholarly Work**:

1) 2020 Society of Teachers of Family Medicine (STFM) Annual Meeting Poster and Scholarly Round Table Contributor: "Building Resident Training for Hepatitis C Treatment for Rural and Underserved Populations" (co-authors: C Jose, K Morgosh, S Horne)

2) 2020 STFM Annual Meeting Seminar: "Training Residents for Rural Practice – Strategies for Engaging Rural Preceptors and Communities", (co-presenter with D Bell and R Stenger)

3) Montana Academy of Family Physicians President, 2019/2020

4) MAFP Big Mountain Medical Conference, "Hepatitis C Management in Primary Care", 1/2020

**Details of the project:**

1) Poster presentation outlining a model for a Hepatitis C curriculum in a community-based residency program, with a goal of increasing access to Hepatitis C care in rural and underserved communities in Montana. To be presented August 2020.
2) STFM seminar proposal outlining the structure of the FMRWM rural network, rural preceptor development, and ongoing network coordination to meet a goal of increasing the number of graduates matriculating to rural communities in Montana. To be presented August 2020.
3) As President, I have coordinated the development of the quarterly MAFP magazine, *Montana Family Physician*, highlighting Montana Family Medicine updates and the MAFP's work and value to members. I have also worked on various advocacy issues from the state to national level, including COVID-19 concerns for family physicians in Montana.
4) Presented educational topic at the annual winter CME meeting of the MAFP on Hepatitis C and incorporating treatment into routine primary care practice.

**Outcomes and Reflections**:

1) It has been gratifying to develop some scholarly work around a clinical area of increasing interest for me, especially as we start to see Hepatitis C treatment spread more across our area into the primary care setting.
2) I have been involved with the MAFP Board since 2013, and will serve as Immediate Past President for the 2020/2021 year. I hope to find additional ways to be involved in family medicine advocacy at the national level, perhaps through AAFP commission work or other national venues. I also plan to continue as editor of the MAFP magazine

## Elizabeth Paddock MD

**MAFP 2020 Winter Conference Presentations**

- *Cases in Diabetes Management. Incorporating the New Evidence.* Montana Academy of Family Physicians Annual Winter Conference. Whitefish MT. January 2020.
- *Point of Care Ultrasound. A Hands on Approach to Understanding the Applicability of Bedside Ultrasound.* Montana Academy of Family Physicians Annual Winter Conference. Whitefish MT. January 2020.

**Details of the project/ Reflections:** Outpatient management of diabetes and POCUS are both interests of mine. Presenting at MAFP is always an enjoyable experience. I get to share and learn with Montana's family physicians!

However it takes a significant amount of time to prepare a 50 minute talk and I am always scrambling some at the end to get it all put together on time.

**2019-2020 published articles:**

- **Paddock E.** *Choosing the Best Diabetes Medications for your Patients in 2020. An Evidence Based Review.* Montana Family Physician. Winter 2020.
- Cole AM, Keppel GA, Baldwin LM, Gilles R, Holmes J, Vance C, Kriegsman B, Linares A, Hornecker J, **Paddock E**, Gerrish W, Alto W, Gould D, Neher J. *2019 Room for improvement: Rates of birth cohort hepatitis C screening in primary care practices - A WWAMI region Practice and Research Network Stud*. J Primary Care & Comm Health 10(1).

**Details of the project/Reflections:** I love that the MAFP now has a quarterly magazine. I think including articles written by Montana physicians on relevant medical topics is a great addition. I was glad to summarize my MAFP winter conference presentation for this. I am hopeful this was helpful to physicians and APPs who were not able to attend the conference.

The Hep C paper was one of the first projects I participated in with the WPRN using de-identified data from our EHR. It was a really nice intro to the WPRN, and community based research.

**2019-2020 Presentations:**

- *Tips for Engaging and Exciting Residents (and faculty) in Scholarship and Research, Part 2: Creative QI & Scholarship Activity Curricula.* University of Washington Family Medicine Residency Network webinar. December 2019.

**Details of the project:** This was a presentation during one of the WWAMI FMRN webinars. The FMRN scholarly activity work group presents ~2 of the webinars per year and I was asked to present on the FMRWM QI curriculum.

**Reflections:** I'm really proud of where our QI curriculum is. I love the projects that residents work on and many of them are making a difference in PHC workflows, knowledge etc. It was nice to present our model to the larger FMRN. The Webinar participants seemed really interested in how our model works.

**FPIN Peer Review for HDAs.**

- "Does vitamin K supplementation decrease the risk of bleeding from circumcision in neonates?" . Evidence Based Practice. Accepted for publication.

**Details of the project:** Roughly 2-3 x per year I will do a peer review of a FPIN "Helpdesk Answer". Not all go on to publication. I like reviewing these because it makes me think harder about scientific writing and how to translate and present data into a helpful format.

**Reflections:** Editing for FPIN is something I plan to continue doing. I would like to write an HDA or other FPIN EBM review in the near future.

## Jen Robohm PhD

**Title: SBIRT Training (with Brett Bell, Ellen Bluett)**

**Details of the project:** Sought and received a grant from the Montana Healthcare Foundation to provide training in Screening, Brief Intervention, and Referral for Treatment (SBIRT) for Partnership's behavioral health team and FMRWM residents and faculty. Goal was to bolster this aspect of our substance use curriculum in advance of workflow changes at PHC, knowing that problematic substance use is under-detected in our clinic, and early intervention can lead to better outcomes.

**Outcome**: To date, we've offered a 4-hour training to PHC's behavioral health team and 2, hour-long didactics for residents and FMRWM faculty.

**Reflections:** It's been challenging to provide training re: a workflow that can't be implemented currently, given the COVID-19 pandemic, but we've been pleased to note subsequent times in clinic when residents have utilized elements of the training in their patient care.

**Title: Climate Change and Health**

**Details of the project:** I've been working to build my expertise in the physical and mental health impacts of climate change, to develop related curricula for the residency program and UM's College of Health.

**Outcome**: I enrolled in an on-line "Climate Change and Health" certificate program through the Yale School of Public Health, helped to draft *Climate Change and Human Health in Montana: A Special Report of the Montana Climate Assessment* with colleagues around the state, and provided the following climate-related presentations:

- Robohm, J., Blackburn, H., & McDonough, P. (2020, May 1). *Coronavirus and Climate Change: Lessons Learned.* Friday Morning Medical Conference for St. Patrick Hospital in Missoula, MT.
- Robohm, J. (2020, March 12). *Coping with Climate Change.* Guest lecture provided for undergraduates enrolled in "Climate Change and the Media" (JRNL 292-02) at the University of Montana in Missoula, MT.
- Robohm, J. (2020, January 27). *Anticipating and Addressing Health Impacts for Community Resilience.* "Lightning Talk" presented for the Governor's Climate Solutions Council meeting held on the University of Montana campus in Missoula, MT.
- Robohm, J., Smith, P., & Blackburn, H. (2019, December 6). *Climate Change and Health: Interprofessional Perspectives and Solutions.* Friday Morning Medical Conference for St. Patrick Hospital in Missoula, MT.
- Robohm, J. (2019, February 28). *Climate Change and Mental Health in Montana.* Presentation for "Climate Change and Human Health in Montana" live panel discussion and webinar in Missoula, MT, sponsored by the UM, the American Lung Association, and the Montana Institute on Ecosystems.

**Reflections:** Thinking about additional ways to be more proactive around climate change and health inspired me to apply to the Bloomberg Fellows Program (I'll be getting an MPH from Johns Hopkins) and submit a MHCF proposal with Hayley Blackburn, PharmD, for a planning grant to develop continuing education and an on-line certificate program for the UM College of Health.

## Rob Stenger MD

**Title: Team Training for Transformation - HRSA Grant**

**Details of the project:** I am the PI for this grant, inherited from Frank Reed. The project involves supporting interdisciplinary team training at several of the FMRWM rural partner sites, helping the teams implement transformation projects in their communities and incorporating residents into the work. We are in the final year of the 5 year project.

**Outcome**: Overall, I would say the grant has been a success and a unique way for us to engage with our rural partners and promote the improvement of health care in rural communities. Each team has successfully implemented two transformation projects, some with pretty impressive outcomes. Residents have generally appreciated engaging with the rural teams during trainings and with the projects, though longitudinal involvement has been essentially impossible given residents' schedules and brief rotations in each site. We've had a few presentations at MHA and are considering how to write up and publish some of the results of the grant. Also plan to present results as part of a rural presentation to STFM.

**Reflections:** We are hoping to continue this project after the grant ends in collaboration with our community partners, as well as some support from our new HRSA grant and the Office of Rural Health.

**Title: Missoula City-County Health Board**

**Details of the project:** I am the physician member of the Missoula City-County Health Board. This is a volunteer position appointed by the health board, and my primary role is to bring medical expertise to the board in oversight of the health department. This role has been particularly active this year due to COVID and the public health response. I have played an advisory role in helping the health department develop standing orders and a protocol for its COVID testing site. I have also done some informational interviews with public officials.

**Outcome**: This is an ongoing position. It has been particularly gratifying this year to work with Charlie Jose (R3) on the health department's COVID testing site. Dr. Jose has done an outstanding job of developing and researching testing protocols for COVID testing, helping the health department troubleshoot ongoing issues, notifying patients with positive tests and generally functioning as an on-site medical director for the county testing site.

**Reflections:** I enjoy working with the health department and thinking about the health of our community through a different lens. This position constantly reminds me of the sometimes large disconnect between how we approach individuals and their medical issues vs the more population-oriented approach of public health. Each approach has strengths and weaknesses and both are needed to achieve optimal community health.

## Sarah Watson DO

**Projects/Scholarly Work**: **Clinical Informatics Team**

**Details of the project:**

Our clinic identified a need for more robust training on using the EMR and a team dedicated to the interface of the clinical staff with the EMR. This year, we identified a lot of opportunities, got funding approved, built priority lists, hired full time IT support and we are not getting started on improving quality of life for providers and nurses by finally having the structure in place to improve some of our systems.

**Outcomes and Reflections**:

1) Just getting started making changes, but feeling excited and energized that we have structures in place to start moving projects forward more rapidly!

## Emma Wright MD

### Reach out and Read

**Details of the project:** Implementing the evidence-based ROR program at PHC.

**Outcome**: Successfully rolled out throughout PHC in September 2019. Ongoing work on integrating this program into our WCC. Have worked with some community partners re: funding.

**Reflections:** Always interested in new ideas about how to more robustly incorporate this into the WCC workflow.

### Pediatric Task Force

**Details of the project:** Created to improve the delivery of pediatric care at PHC. Task force is comprised of representatives from nursing staff, PSRs, social work, dental, administration.

**Outcome**: Has thus far served as a great forum to collaborate on initiatives that related to pediatric care. Has resulted in roll out of new WCC templates and order sets. Continue to work on workflow issues.

**Reflections:** Would appreciate resident representation on this task force if possible.

### Ambulatory Case Conference

**Details of the project:** The ambulatory case conference was created to allow a formal venue for discussion about interesting or challenging clinical cases in the outpatient setting and encourage peer education for PHC providers, faculty providers, and residents.

**Outcome**: Have had wonderful turn out from PHC providers and some faculty. Started requiring residents to present one case per year. Each meeting has provided a great opportunity for learning and discussion.

**Reflections:** Would appreciate resident input on how to continue to engage them in these meetings. Currently, on hold temporarily during COVID. May consider doing ongoing zoom/video conferencing for these meetings as we have had good turnout for our zoom provider meetings related to telemed/covid.

### Provider Telehealth Case Conference

**Details of the project:** Organized weekly conferences via zoom to provide an opportunity for providers to share cases, telehealth challenges/pearls, workflow questions/frustrations/suggestions. It is also used as a space for updates regarding changes in workflow/operations given the evolving COVID situation to avoid email overload.

**Outcome**: Has been successful in reducing email burden, giving providers voice in some of the operation/workflow changes, encouraging mutual support.

**Reflections:** My hope is that we can continue this type of a provider meeting going forward, even once the immediate COVID pandemic has eased.

**Operations Committee Member**

**Details of the project:** The operations committee is one branch of the incident command structure that was developed to respond to COVID. I have served as a provider representative on this committee since the middle of March. We met daily initially and now meet twice per week. Have tackled issues including:

-Integrating telemedicine into our existing structure

-Developing the "call center provider" role. This provides clinical triage resource for the PSRs in navigating the challenges of how to schedule people in the context of COVID.

-Working on workflow resources for providers to be housed on the "wiki" page.

-Defining/refining the process for our Focused Screening Area.

-Determining workflows for WCC, immunizations, etc.

-Etc.

**Outcome**: Representation of providers in important conversations that affect our practice. Implementation of many important changes in our clinic operations.

**Reflections:** Has been good exposure to operating in an ICS structure and continues to provide important insight into PHC's operations.

Thanks all for another great year of fantastic QI and Scholarly Activity Work.

Congrats to our graduating R3s and I hope you go on to be leaders in QI and continue Scholarly Activity Work in your future practices.

To everyone else- looking forward to seeing what we accomplish in AY 2020-21.