Background:
- COVID-19 presents an unusual and dangerous clinical situation in that:
  - the clinical diagnosis is often challenging,
  - the laboratory test has a high false negative rate,
  - the clinical course may include rapid decompensation, and
  - the disease is contagious
- Primary care registries have historically been used for chronic, not acute, illness. COVID-19 requires high fidelity, iterative updates of EMR reports to allow for timely, ongoing patient follow-up.

Goals:
- To develop a comprehensive registry to identify at-risk and confirmed COVID-19 patients of the Barre Family Health Center
- To capture the following groups of patients in our registry:
  a. Who tested positive
  b. Who requested a test and had relevant symptoms but did not receive testing
  c. Who had symptoms concerning for COVID-19 but tested negative
  d. Who were asked to self-quarantine and were not tested, and
  e. Who were evaluated outside of the UMass system
- To establish a follow-up protocol for patients at the Barre Family Health Center as there is currently no primary care protocol relating to COVID-19 patients

Limitations:
- While capturing patients falling under bullet a. and c. above was quite feasible, we were unable to capture those from b., d., and e. due to limitations within Epic.
  - Many symptoms were recorded in Telephone encounters instead of in notes in Epic
  - We currently do not have the ability to search through free text in Epic charts
- The team members manually searched through each patient chart in order to identify symptoms and test dates, so this is prone to human error.

Outcomes:
- 377 unique patients were added to the registry (March 1st - August 3rd).
- 54 patients were tagged as “Follow Up Needed:” and categorized into the three color-coded groups.
- There was an average of 6.4 unique patients added to the registry daily.
  - Spike in number of new patients on June 19th, 2020, attributed to free community testing.
- 51 patients tested positive at the Barre Family Health Center from March 1 to present.
- 40 patients had symptoms concerning for COVID-19 but tested negative.
- In addition to untested patients that were included in our color-coded groups, 31 additional patients appeared in the EPIC report but were not tested.

Acknowledgements:
- Francis Wanjau and his team, including Brett Almquist, are thanked for all of their help creating and updating the Epic report used to create the master registry as well as troubleshooting assistance throughout the summer.
- The staff at Barre Family Health Center are acknowledged for their hard work ensuring patients receive timely, quality care in these unprecedented times.
- This elective was funded through AHEC and UMass OUME.

Next Steps:
- Recruit ~3 first year medical students to continue the elective.
- Create manuscript for Quality Improvement or Primary Care Journal.
- Ensure the report can be utilized by other practices.