

COVID-19 Evaluation & Testing Strategies in a Federally Qualified Health Center

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Abstract

The first case of the coronavirus-infectious-disease-19 (COVID-19), a novel version of the pre-existing coronavirus, was detected in Wuhan, China December 2019 and the first case in the United States on January 20, 2020, in Snohomish County, Washington. The World Health Organization declared the outbreak a pandemic on March 11, 2020. Federally Qualified Health Centers (FQHC) have been on the frontlines of responding to this pandemic throughout. FQHCs provide services for primarily low-income, underserved populations who often suffer a disproportionate amount of disease burden and adverse health outcomes, a fact that is highlighted during epidemics, pandemics, and natural disasters. This Doctor of Nursing Practice capstone project paper details how the Department of Family Medicine clinic (FMC), an FQHC in the Pacific Northwest, enhanced access to evaluation and testing for COVID-19 between November 2, 2020 and March 31, 2021 by increasing the number of appointments available to patients. Implementation of this intervention resulted in a significant increase in the number of COVID-19 evaluation and testing appointments available, the number of appointments completed, as well as the number of tests performed ($p < 0.05$). This project provided patients and staff a safe and effective option for in-person clinical care during a pandemic, increased access to this unique type of care when needed, and helped to set the stage for an on-demand increase or decrease in appointment availability to accommodate for fluctuations in COVID-19 case rates. This clinical care model can be adapted to other infectious disease pandemics in the future.

Keywords: COVID-19, COVID-19 testing, federally qualified health center, community health center, COVID-19 response, quality improvement

Introduction

Problem description

A novel human respiratory coronavirus was originally detected December 2019 in the Wuhan, Hubei province of China and labeled the coronavirus-infectious-disease-19 (COVID-19) (Zheng et al., 2020). The first case was detected in the United States on January 20, 2020, in Snohomish County, Washington (Kirksey et al., 2020; Stokes et al., 2020). On January 30, 2020, the World Health Organization (WHO) declared this outbreak a Public Health Emergency of International Concern, which transitioned to a pandemic on March 11, and a national emergency in the United States two days later (Zheng et al., 2020). Since its initial detection, COVID-19 has spread rapidly and, as of May 19, 2021, has killed nearly 600,000 people in the United States and approximately 3.5 million people across the globe (Johns Hopkins University, 2020).

Available knowledge

Since first detected on U.S. soil, the United States health care system has grappled with how to manage this outbreak. Often referred to as the “great equalizer,” COVID-19 is anything but (Mein, 2020). It is widely known that underserved populations and those of lower socioeconomic status often suffer a disproportionate amount of disease burden and adverse health outcomes, a fact that is highlighted during epidemics and natural disasters like COVID-19 (Chowkwanyun & Reed, 2020; Kumar & Quinn, 2012; National Academies of Sciences et al., 2017; Turner-Musa et al., 2020). Circumstances outside of health care have the largest impact on health outcomes (Berwick, 2020). These “circumstances,” also known as social determinants of health, are defined by the WHO (2020) as “conditions in which people are born, grow, live, work and age...shaped by the distribution of money, power and resources at global, national, and local levels.” Examples of these social determinants are conditions of birth and early childhood,

education, work, the social circumstances of elders, community factors (transportation, housing, security, and a sense of self-efficacy), and the imbalance of wealth between socioeconomic groups (Dodds & Fakoya, 2020; Kumar & Quinn, 2012; Marmot, 2015; Turner-Musa et al., 2020).

Our nation's most underserved communities are cared for by Federally Qualified Health Centers (FQHCs), patient-centered organizations that provide comprehensive, cost-effective primary health care services (NACHC, 2020). There are nearly 11,000 FQHC locations in the United States that serve over 29 million patients annually (NACHC, 2020). Of these 29 million patients, 91 percent are low-income (income below 200% of the federal poverty level), 63% are of a racial or ethnic minority, and 82% are uninsured or publicly insured (Medicare or Medicaid) (NACHC, 2020). Patients served by FQHCs have higher rates of chronic medical conditions such as hypertension, diabetes, kidney disease, asthma, obesity, mental health, and substance use disorders than the general population (NACHC, 2020). Chronic conditions like these put an individual at higher risk of hospitalization and all-cause mortality than individuals without chronic conditions (CDC, 2020a). When chronic conditions are combined with illnesses such as COVID-19, an individual's risk of death increases between 1.5 and 5-fold (CDC, 2020b).

To adequately treat any medical condition, one must know of its presence. In addition to individual nonpharmaceutical interventions (NPIs) aimed at reducing COVID-19 transmission, such as handwashing, social distancing, quarantine, and face coverings, access to testing is critical, particularly for higher-risk groups (CDC, 2020a; Greenberger, 2018; Kirksey et al., 2020; Kumar & Quinn, 2012; Phelan & Magnusson, 2018). Widespread testing and early identification are a core public health strategy and one of the most effective ways to curtail disease transmission (Kirksey et al., 2020; Kumar & Quinn, 2012; Magnusson, 2017; Phelan &

Magnusson, 2018). Once an infection is detected, support and treatment can be provided to potentially prevent further transmission and aid in care and treatment services (Phelan & Magnusson, 2018).

Rationale

Public health theory concentrates on three main approaches to health: primary, secondary, and tertiary care (DiClemente et al., 2013). Primary care focuses on prevention, which, in the case of COVID-19, employs the use of NPIs to decrease transmission (DiClemente et al., 2013; Greenberger, 2018). Secondary levels of care focus on early detection and intervention to mitigate consequences with prompt transfer to higher levels of care when indicated (DiClemente et al., 2013; Magnusson, 2017). Tertiary care is when disease is detected and treatment administered with the goal of preventing further damage or death (DiClemente et al., 2013).

This project took place at the Department of Family Medicine Clinic (FMC), an FQHC associated with a large academic health center (AHC) in the Pacific Northwest. FMC aimed to apply public health theory by employing all public health approaches with enhanced evaluation and testing of COVID-19 based on risk and symptom profile. The interventions used in this project were developed based on the secondary level of public health theory and sought to increase early detection to mitigate the consequences of COVID-19.

This project was designed using the Model for Improvement from the Institute for Healthcare Improvement (IHI, n.d.; Langley et al., 2009). This quality improvement model was selected as a framework for this quality improvement project because it is a simple and effective tool that can deliver substantial results in an array of settings (IHI, n.d.; Langley et al., 2009).

The project methods and findings were reported using the Standards for Quality Improvement Reporting Excellence: SQUIRE 2.0 guidelines (Ogrinc et al., 2016).

Specific aims

The aim of this project was to double the number of available patient appointments to COVID-19 evaluation and testing over five months, increase the number of patients being evaluated, and the number of COVID-19 tests being performed. With this increase, FMC would be better able to detect the presence of COVID-19 in the high-risk population it serves so patients could be isolated, treated, monitored, and supported in the community setting (Magnusson, 2017). Additionally, with an increased number of respiratory clinic appointments, FMC sought to manage co-morbidities more effectively, encourage patients to reduce high-risk behaviors, mitigate preventable adverse outcomes in patients diagnosed with COVID-19, and reduce burden on emergency departments and hospitals by maintaining care in the primary care medical home (Bazemore et al., 2018; Magnusson, 2017).

Methods

Context

The Department of Family Medicine Clinic is an FQHC in the Pacific Northwest that serves close to 17,000 individuals (personal communication A, August 28, 2020). Approximately half of these patients are considered low-income, 34% are of a racial or ethnic minority, 71% are uninsured or publicly insured, and over 50% have one or more chronic medical conditions (personal communication A, August 28, 2020). Because of the baseline elevated risk of its patients, impact of social determinants of health, and risk for poor health outcomes, starting in March 2020, FMC quickly mobilized to create a service where a clinician (nurse practitioner, physician, or physician assistant) evaluated and tested patients of all ages for COVID-19. The

specific service developed by FMC was titled a “respiratory clinic.” The respiratory clinic was initially designed to evaluate patients exhibiting respiratory symptoms such as fever, cough, shortness of breath, and other symptoms of COVID-19, or had been previously diagnosed with COVID-19. The respiratory clinic started outdoors to formalize separation of patients with these specific symptoms from those who reported having no symptoms with the intent of maintaining access to care while reducing risk of transmission rates of COVID-19 between patients and staff.

Patients who contacted FMC were triaged by a nurse or a provider by phone or video visit and referred for evaluation in the respiratory clinic if they were exhibiting symptoms of or had already been diagnosed with COVID-19. The goal of each respiratory clinic visit was to determine patient acuity, the appropriate level of care (ambulatory versus hospital setting), and offer the option to test for COVID-19 when indicated. A COVID-19 test was offered if deemed appropriate based on AHC guidelines adapted from the Centers for Disease Control (CDC), which were updated regularly (see Appendix A). Potential outcomes of respiratory clinic visits were a patient being referred to a higher level of care or being discharged to home care with close monitoring and symptomatic treatment as needed. During each visit, a patient either did not meet criteria for a COVID-19 test, did meet criteria and was tested, or declined testing despite meeting criteria.

FMC leadership was supportive in the development of the respiratory clinic. A grant from the federal Coronavirus Aid, Relief, and Economic Security (CARES) act provided FMC with funding that assisted in its development and operation as well as the procurement of supplies and resources needed to run this new service (U.S. Department of the Treasury, n.d.). As the weeks and months pressed on, the clinic’s utility and efficiency became evident and greater

organizational level support and planning was provided to increase capacity at FMC and across the system.

Between March and mid-September 2020, the COVID-19 state case numbers remained relatively low compared to the rest of the country (SHA, 2020). On September 22, 2020, the AHC census forecast showed an increase in COVID-19 positivity rates from approximately 4% to over 7% hospital-wide (Institutional communication, 2020a). Anticipating a sustained and possible further rise in COVID-19 cases over the fall and winter months, FMC sought to increase access to COVID-19 evaluation and testing within the already established respiratory clinic.

Though there was sustained support for evaluation and management of COVID-19 at the local and system level, it was met with a dwindling and exhausted workforce limiting the ability to match staff supply to patient demand (personal communication B, April 8, 2020). By November 2020, clinician and support staff burnout had reached unprecedented heights (Lai et al., 2020; Institutional communication, 2021; Primary Care Collaborative, 2020). A survey conducted by the Primary Care Collaborative (2020) was designed to understand the impact of COVID-19 on primary care practices and providers. It noted that “53% of respondents say their level of mental and/or emotional exhaustion is at ‘an all-time high,’ with 70% describing the need to be on ‘constant high alert’...” Given this stark reality, leaders tried to develop creative ways to redistribute their workforce while seeking to add to their ranks (personal communication B, April 8, 2020). Throughout the course of the pandemic, FMC leadership was supportive of the aims of this project. Resources were provided to maximize efficiency while decreasing demands on clinical staff. Leadership also assisted in offsetting the burden, fatigue, and risk by rotating clinical staff who engaged in this work.

Prior to the beginning of this intervention, between March 2020 and October 2020, FMC held the respiratory clinic in a tent outdoors. The respiratory clinic was run by one clinician (nurse practitioner, physician, or physician assistant) and 3 to 4 medical assistants, five days per week. Ten patient appointments were available each clinic session, fifty per week. Though this had been adequate for COVID-19 evaluation and management at that time, the onset of winter months, increased time spent indoors, an upcoming holiday season, reduced ability to socially distance, and anticipated co-occurring presence of other respiratory conditions such as seasonal influenza, presented greater risk for transmission of and complications from COVID-19 (Fauci, 2020). This led to the development of specific interventions for this DNP project, with the primary one designed to increase the number of available appointments for COVID-19 evaluation and testing in the respiratory clinic setting.

Interventions

The indoor clinic was initially staffed by two medical assistants and one clinician, but due to heightened demand in the first week and to meet the aim of this project, the first Plan-Do-Study-Act (PDSA) cycle focused on increasing to three medical assistants and two clinicians in the second week (Langley et al., 2009). Ten patient appointments were available per clinician, totaling twenty patient appointments per session or one hundred per week, double the number available before the intervention. With this change, the clinic projected a two-fold increase in the number of available appointments when compared to the previous 6 months.

Study of the intervention(s)

The study of this intervention included monitoring the number of available appointments compared to the number of completed visits. Additionally, this study aimed to determine if additional respiratory clinic appointments resulted in increased testing of patients who presented

to FMC with symptoms of or risk for COVID-19 infection; therefore, the number of completed tests was tracked over time. Weekly FMC COVID-19 positive rates were compared to statewide data between November 2, 2020 and March 31, 2021 to monitor similarity and differences in trends.

Measures

The primary outcome measure for this project was the number of completed appointments for COVID-19 evaluation and testing at FMC each week between November 2, 2020 and March 31, 2021. Secondary outcome measures are the number of completed tests and number of tests in which COVID-19 was detected. Process measures include the number of respiratory clinic appointments available each week. As a balancing measure, we were aware that increasing visit capacity could further burden the system and its staff members, specifically schedulers, medical assistants, registered nurses, and clinicians, which could lead to psychological distress and burnout (Primary Care Collaborative, 2020). This was not formally assessed as it was outside of scope of this project.

Analysis

Quantitative data was collected by using both a retrospective chart review and prospective monitoring between June 24, 2020 and March 31, 2021. This data was collected by the author with support from clinic staff. Data was documented in an Excel spreadsheet and displayed in line graphs. Weekly changes in available versus completed appointments, the number of COVID-19 tests completed, and number of tests in which COVID-19 was detected were tracked. The weekly rate of detected COVID-19 tests at FMC was compared with the weekly state rate to look for correlation in these trends. A chi square test of equal proportions

was used to compare the number of available visits, number of completed visits, and number of completed tests before and after the intervention. A p-value of <0.05 was considered significant.

Ethical Considerations

Ethical considerations during this quality improvement project were three-fold. First, as was previously mentioned, this project takes into account that underserved populations and those of lower socioeconomic status suffer a disproportionate amount of disease burden and adverse health outcomes from chronic disease (Chowkwanyun & Reed, 2020; National Academies of Sciences et al., 2017; Turner-Musa et al., 2020). Additionally, individuals of lower socioeconomic status often experience several barriers to accessing health care such as inconsistent access to transportation, historic distrust of the health care system and population-based testing, implicit and explicit clinician bias particularly when health care systems are at capacity, as well as stigma and potential consequences of positive test results such as loss of employment or housing (Kirksey et al., 2020; Kumar & Quinn, 2012; Turner-Musa et al., 2020). In an effort to address some of the downstream effects of social determinants of health, FMC community health workers created a workflow to meet the needs of patients who had detected COVID tests (personal communication C, October 7, 2020). These services included housing and transportation, assistance with funds from community organizations, delivery of food, medication, cleaning supplies, and access to behavioral health, interpersonal violence resources, and assistance with scheduling medical visits (see Appendix B).

Second, by increasing the number of staff exposures to high-risk patients, this intervention had the potential to increase the overall risk of staff contracting COVID-19. To mitigate this risk, prior to and during this project, infection prevention and control (IPC) reviewed the indoor clinic space and all related processes and procedures to ensure they were

being adhered to. Additionally, all staff was provided with the proper amount and type of PPE along with education on how to use it. Furthermore, FMC divided this high-risk work equally amongst all disciplines while offering staff with chronic conditions or other high-risk circumstances the opportunity to opt out.

Third, as of November 2020, clinician burnout was at an unprecedented high (Lai et al., 2020; Primary Care Collaborative, 2020). In implementing this project, the team was aware that it would change the workload and type of work for staff across the system. Close attention was paid to workforce well-being, which ultimately played a large role in capacity improvement measures. Though not formally evaluated, staff was continuously queried about thoughts and emotions around COVID-19 and working in this clinic setting. Adjustments in staffing were made based on personal requests to opt-out and unanticipated absences. In the first week of December 2020, staff outside of the FMC setting was incorporated to decrease overall workload and exposure to FMC clinicians and medical assistants.

The project was deemed not research involving human subjects by the AHC Institutional Review Board due to its nature as quality improvement (IRB #22180).

Results

Between June 24, 2020 and October 31, 2020, prior to the initiation of the first intervention, there were 930 available appointments, 819 of which were completed, 770 tests were completed, and COVID was detected in 48 of these tests at an overall detected rate of 6.2%. PDSA cycle 1 began November 2, 2020 and ended March 31, 2021. This PDSA cycle aimed to increase the number of available respiratory clinic appointments by adding one clinician to each COVID-19 respiratory clinic session per day, equating to 10 additional appointments per day, and 100 total appointments per week (increased from 50). The exception to this increase was

during weeks that included a holiday, unanticipated clinician absences, and/or weather-related closures. This change resulted in 1,760 available appointments, 1,146 completed appointments, 986 completed tests of which COVID was detected in 101 of these tests at an overall detected rate of 10.2% between November 2, 2020 and March 31, 2020 (see Appendix C).

Pre- and post-project implementation data compared the number of available respiratory clinic appointments between June 20, 2020 and October 31, 2020 to the number of available appointments between November 1, 2020 and March 31, 2021. This project resulted in a significant increase in availability of respiratory clinic appointments, the number of completed appointments, and the number of tests completed ($p < 0.05$) (see Figure C1). Overall case rates at FMC were higher than the state average (7.4% and 6%, respectively) when compared to the state weekly COVID detected test rate (see Figure C2).

Discussion

Summary

This DNP project sought to increase availability to COVID-19 respiratory clinic appointments in an outpatient Federally Qualified Health Center between November 2, 2020 and March 31, 2021. It aimed to apply public health theory by employing all public health approaches to evaluate for the presence of COVID-19 based on risk and symptom profile (DiClemente et al., 2013; Magnusson, 2017). The desired outcome of this intervention was to increase the detection rate of COVID-19, decrease disease burden and transmission, emergency department admissions, inpatient hospitalizations, and cost of care, while improving outcomes in the high-risk, underserved population it serves (Bazemore et al., 2018; Magnusson, 2017). Using the Model for Improvement, we were able to plan one PDSA cycle that allowed for continuous modification of our complex system (IHI, n.d.; Langley et al., 2009). Appointment availability,

completion, and number of tests performed all increased significantly over the course of this project ($p < 0.05$), resulting in improved detection rates of COVID-19 when compared to pre-intervention rates and the state average.

Interpretation

There was a direct correlation between the number of respiratory clinic appointments available, appointments completed, and tests performed. No other identifiable causes were related to this change. This was not a “traditional” quality improvement project in that we were trying to meet the needs of a constantly moving target that had several external factors which controlled the demand of the service we were trying to supply. These changes were rapid and challenging, if not impossible, to predict. Factors affecting clinical care but outside the control of this project, such as adherence to NPI use (face coverings, social distancing, and handwashing), policy changes (business and school closures), vaccinations, and viral variants had a direct impact on the demand for evaluation and testing (personal communication D, February 17, 2021). Given the variability of the case counts at any given time, the impact of this project also varied from week to week, but overall goals were met, not only by appointment availability but also the system that was created.

The outcomes of this DNP project were in line with those from other COVID-19 FQHC responses in the United States. In response to a high rate of transmission early in the pandemic, an FQHC in New Orleans, Louisiana, opened a walk-in clinic dedicated to COVID-19 testing (Halperin et al., 2021). They tested 3,366 patients between March 16 and July 2, 2020 with an overall detection rate of 12% (Halperin et al., 2021). Similar to FMC, all patients were evaluated for clinical symptoms, acuity, and transferred to a higher level of care when needed (Halperin et al., 2021). They also incorporated testing of patients who were not exhibiting symptoms, which

dramatically increased their patient volume largely from essential workers concerned about recent exposures and transmission to family members (Halperin et al., 2021).

Brewer et al. (2021) also found an increase in testing demand when testing supply was increased during their intervention in Minnesota, which highlighted the importance of access to this type of care. They also found that integrating the resources of AHCs and FQHCs can “jointly address structural and systemic inequities key to cultivating health equity” (Brewer et al., 2021). In conjunction with national data, each of these examples demonstrates the importance of FQHCs as a frontline response to the nation’s most vulnerable populations (NACHC, 2021).

Three other respiratory clinics were created at the affiliated AHC and aligned with FMCs respiratory clinic. Around November 2, 2020, each of these clinics merged to service a larger area and patient population. Centralized call centers were developed to assist with triage and scheduling. With this change, FMC was able to increase its reach to primarily Medicaid and uninsured patients and broaden its impact on the community.

Based on the study of PDSA cycle 1, it was determined that the addition of a second clinician in the respiratory clinic significantly increased the number of available appointments, the number of completed appointments, and number of tests performed ($p < 0.05$). With this outcome, ways to increase testing opportunities were explored. This finding led to the creation of a similar COVID-19 respiratory clinic model at the FMC high school-based health center site on March 1, 2021. No visits had taken place at the FMC associated high school-based clinic prior to the conclusion of this project. Additionally, to further increase the scope and type of patient who had access to COVID-19 testing within the FMC respiratory clinic, asymptomatic testing (patients who were either exposed and did not have symptoms or did not have symptoms or

known exposure but wanted to be tested for personal reasons – i.e., travel, visiting family, reassurance, etc.) was added, but this project concluded prior to its implementation.

Increasing the number of available appointments increased overall access. Depending on COVID-19 case count and demand, however, some weeks appointments were more heavily utilized than others. During the weeks with low demand, some clinicians did not have busy schedules, decreasing efficiency of this system. In other weeks, demand outstripped supply which placed extra pressure on schedulers, medical assistants, and clinicians to accommodate the needs of a large number of complex patients in a short period of time. Case counts and demand were unpredictable from week to week, making forecasting and staffing difficult.

The implementation of this project also affected the immediate care clinic and staff whose space it occupied. The clinicians and staff who worked in the immediate care setting were displaced during the middle portion of the day and unable to see patients in person as the respiratory clinic was operating in their space. If not working directly in a respiratory clinic session, immediate care providers saw patients virtually via telemedicine. These types of visits were not utilized by patients as frequently as in-person visits which impacted efficiency of the immediate care system.

While we were not able to formally evaluate the level of burnout amongst staff members, a 2021 poll of more than 1,300 frontline healthcare workers found that 62 percent had experienced a direct impact on their mental health and 55 percent felt burned out going to work (Clement et al., 2021). This finding was consistent with anecdotal comments made by staff associated with both primary and respiratory care. Staffing also remained a challenge across the health system upon completion of this project (personal communication E, April 27, 2021).

Limitations

The generalizability of this project may be limited as it is tailored to a specific clinic setting and the needs of a respiratory pandemic; however, the interventions described could potentially be utilized with other types of disease processes or conditions under similar circumstances. Additionally, data analysis was unable to separate return visits or repeat tests, which may affect the number of tests performed, the number of unique patients seen, and account for the weeks when the number of tests exceeded the number of available appointments. While data was reviewed multiple times to ensure accuracy, manual extraction from the electronic health record and human error may have affected analysis. Finally, as was previously mentioned, this project did not formally evaluate the level of burnout staff experienced, how this may have impacted this project during its implementation, or how it may affect clinical care after its completion.

Conclusions

The COVID-19 pandemic has re-shaped how health care is delivered in the United States. It also highlights inequalities, inequities, and disparities that existed long before COVID-19 was first detected (Coughlin et al., 2020). Implementation of this quality improvement project increased access to testing and basic health services that were urgently needed for medically underserved communities during a pandemic (Coughlin et al., 2020). It is another demonstration of the ability of an FQHC partnered with a larger AHC to increase the breadth and scope of health services delivered to medically underserved communities during a crisis (Brewer et al., 2021).

Upon the conclusion of this project, the United States was entering into the fourth wave of the pandemic with a sharp rise in cases (Johns Hopkins University, 2021; LaFraniere & Stolberg,

2021). The AHC and FQHC respiratory clinic system is prepared to meet the need of the patients it serves and has opened the opportunity to disseminate this work to other clinics so they can do the same. As of April 2021, the respiratory clinics were set to lead the way towards safe integration of both respiratory and non-respiratory care in the outpatient setting. This would apply across primary care and outpatient practices, increasing the number and type of staff doing this work and distributing it more evenly across the system. Future analysis may include determining what type of impact these clinics had on hospital demand and ED or inpatient expenditures, how testing and management of COVID-19 is integrated into clinical care in the coming months and years, as well as the impact of community health workers and outreach efforts to those affected by COVID-19.

Other Information

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Appendix A

Guidance for Testing in the Emergency and Ambulatory Settings



Guidance for Testing in the Emergency and Ambulatory Settings

Documentation for COVID-19: Adult and Pediatric

Title: Guidance for COVID-19 Testing in the Emergency and Ambulatory Settings	Creation Date and Time:	04/01/2020 1530
Employee Roles Impacted: Clinicians caring for patients who need COVID-19 testing in emergency department or ambulatory settings	Modified Date:	04/02/21
	Review by Date:	04/01/2022
Sponsoring Department: COVID-19 Lab Testing Taskforce		

Description:

Guidance for COVID-19 Testing in the Ambulatory Setting (includes Mobile Test Sites + ED)

General Principles

The decision to test for COVID-19 depends on several variables, including:

1. Availability of test kits, reagents, and facilities for safe specimen collection
2. Implications for patient medical management
3. Implications for public health/infection control

Testing applies to individuals who fall into the following general clinical areas:

1. Symptomatic Individuals

Clinical signs/symptoms of infection with COVID-19 may include one or more of the following:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

Note that in young children, and both children/adults who are non-verbal, these symptoms may require clarifying questions to discern.



Guidance for Testing in the Emergency and Ambulatory Settings

Documentation for COVID-19: Adult and Pediatric

Description continued:

2. Asymptomatic Individuals – close contacts and qualifying medical reasons*#

No signs/symptoms of infection with COVID-19.

Screening purpose only with one or more of the following:

- An [REDACTED] patient undergoing a planned surgery, birth, or qualifying procedure in the next 2-3 days
- Close contact (defined as closer than 6 feet for at least 15 minutes) with a person with known COVID-19.

Testing for asymptomatic individuals following an exposure is recommended 5-7 days after exposure based on the viral median incubation period. Testing should not occur for at least 48 hours after exposure.

3. Asymptomatic – vulnerable populations*#

No signs/symptoms of infection with COVID-19.

Patient identifying as one or more of the following:

- a) Black, African American, Latino, Latina, Latinx, American Indian/Alaska Native, Asian, Asian American or Pacific Islander
- b) Having a disability
- c) First language is not English
- d) Residents and workers exposed to Covid-19 in congregate settings (group homes, schools, long-term care, corrections, food processing plants, agricultural workplaces)
- e) Others - these may include, but are not limited to, outside contracts.

4. Asymptomatic – on demand screening

No signs/symptoms of infection with COVID-19.

As requested screening, including for travel purposes.

- Asymptomatic persons may need testing for travel within 90 days of their proven or presumed COVID-19 illness, and may be retested for this purpose, though they may receive a “detected” result despite completing their isolation period.

• *Testing asymptomatic individuals more frequently than every 7 days without new symptoms is not recommended*

Re-testing asymptomatic individuals within 90 days of a proven or presumed COVID-19 illness is not recommended

Appendix B

Social needs outreach for COVID+ Patients Workflow

Step 1: Pt identified as testing positive for COVID at FMC or other testing site.

- Notification sent Community Health Workers (CHW)

Step 2: CHW completes chart review to determine if outreach is warranted

- If patient is inpatient or another reason patient does not require outreach, connect with care team to inform of social needs support when necessary.
- Review patient's appointments for next few weeks (prompt for rescheduling if in next 2-3 weeks)
- Determine if patient is signed up for MyChart (if not, make effort during call to set up)

Step 3: Outreach to patient to offer support around social needs.

- Call patient, inform of name role, and objective for call.
- Ask permission to inquire about social needs re: self-isolating for COVID-19
- If allowed, ask below questions:

Members in household:

How many members in your household?

Have they been tested for COVID-19? For flu?

Would they or other friends or family help you receive food, medicine, or other items while you are in quarantine?

Quarantine Related Questions:

Food: If you answered no to the previous question, do you have a plan as to how you will receive food (deliveries, food pantry drop-offs, family member, friend or roommate)?

Safety:

Do you have a place to self-isolate for two weeks?

Do you have a reliable phone? Do you have internet access?

Interpersonal violence (IPV) universal education approach to ensure safety

Suicidal or self-harm in the last 90 days?

Is address up to date? Is that where they are staying? (Cannot deliver meds to Post Office Boxes)

Universal education/motivational interviewing approach to ensure activities for time. What do you enjoy doing when you're bored? How do you plan to occupy your time?

Pets:

If you have pets, do you have enough pet food for two weeks?

Medical questions:

- Do you have enough of all your medications to last two weeks?
- Do you have any upcoming appointments in the next two weeks?
- Do you have an employer that will require a doctor's note for you to return to work?

Hygiene and cleaning:

- Can you do laundry in your home?
- Do you have enough cleaning, hygiene, and toiletry supplies?
Examples: toilet paper, hand sanitizer, soap, mask, cleaning spray, clean towels, shampoo, tampons/pads (if menstruating), gloves/sponges for cleaning

Provide patients a phone number for medically related questions and behavioral health related questions:

- Someone is available to help you any time of day, call FMC

Provide any handouts as to when to call a medical provider related to COVID-19. Examples include shortness of breath, fever, etc.**Positive COVID-19 Questionnaire- Post Quarantine Questionnaire**

- a. Do you feel our discussion and resources allowed you to limit your interactions with others over the last two weeks?
- b. Do you feel like you had everything you needed for the 2 weeks while you were in quarantine?

Step 4: Provide resources for identified needs.

- Food: Connect with food pantries/create plan for family members or friends to deliver.
- Housing: Connect with CHW to utilize hotel voucher program
- IPV: With consent, refer to IPV advocate if disclosure or questions.
- If suicidal/self-harm: Warm hand off to behavioral health consultant for safety planning and support. Provide teaching re: FMC and community options for support.
- Activities/things to do: Utilize motivational interviewing techniques to encourage patient to discover and determine what they would enjoy/are able to do.
- Medication: Connect with care team and pharmacy to request refills as needed and arrange for FedEx same day delivery from FMC Pharmacy.
- Appointments: Assist in cancelling/rescheduling – advocate for reasonable rescheduling if a specialty referral/hard to reschedule appointment.
- Doctor's note: If doctor's note will be required for return to work, inform patient that they will need to schedule a virtual follow up visit with primary care provider or FMC Provider to obtain note.
- Hygiene and cleaning: Create box of necessary items from FMC COVID+ Hygiene products stock and drop on patient's front porch.

Step 5: Provide patient information for future support (via MyChart dotphrase, if possible).

- Medical support:
 - o You can receive advise, help or support any time of day by calling FMC.
 - o Additional social or mental health support can also be offered by FMC too.
- Local mental health support:
 - o You can get free, 24/7 help by calling the below numbers.
 - Multnomah County: XXX-988-4888
 - Clackamas County: XXX-655-8585
 - Washington County: XXX-291-9111
 - Clark County: XXX-696-9560
- Disaster Distress Helpline:
 - o There is a national hotline to support you or someone you care about are feeling overwhelmed with emotions like sadness, depression or anxiety related to COVID. Get support by calling 1-800-985-5990 OR text TalkWithUs, to 66746.
- These are some helpful documents from the CDC:
 - o [10 things you can do to manage COVID-19 symptoms at home](#)
 - o [How to prevent COVID-19 if you are sick](#)
 - o [Washing your hands: a fact sheet](#)
 - o [How to stop the spread of germs](#)
 - o [What you need to know about COVID-19 and pets](#)

Step 6: Document support in Epic using .fmcCOVIDsocialneeds

Appendix C

Figure C1

FMC FQHC COVID-19 Respiratory Clinic: Available appointments, completed appointments & completed tests



Figure C2*COVID-19 Positivity Rate: Family Medicine Clinic vs. State*