SPECTRUM HEALTH DURING COVID PANDEMIC

AUTHORS

JIBAN KHUNTIA, RULON STACEY, AMIT PRADHAN, AND LAUREN DUFF

INTRODUCTION

With the onset of COVID Pandemic in Mar 2020, Spectrum Health, like many health systems in the US, continued to make radical changes in their operations as they faced the COVID crisis. There were many challenges faced by Spectrum, including the shortage of personal protective equipment, shutting down existing facilities, and increased inpatient activities. Spectrum did take measures to mitigate the above issues. It came up with novel ways to tackle this situation by: (1) proactively planning for a surge in patients, (2) creating communication tools such as COVID health dashboard for disseminating COVID information for patients and community members, (3) enhancing capabilities for COVID 19 testing, (4) ensuring that the full range of healthcare services remains uninterrupted, (5) helping businesses with Employer Toolkit and a host of other measures. These steps enabled Spectrum Health to handle challenges during the pandemic.

ABOUT SPECTRUM HEALTH

Spectrum Health is a not-for-profit, integrated, managed health care organization based in Grand Rapids, Michigan. The system operated 14 hospitals, 12 urgent care facilities, 150 ambulatory sites, and 43 laboratory collection sites, along with being the largest employer (see Figure 1).

FIGURE 1: ABOUT SPECTRUM HEALTH

Spectrum Health is well recognized as one of the nation's top health systems by Truven Health Analytics and IBM Watson Health. From a financial perspective, Spectrum Health is a $7 billion organization. It is highly rated by both Moody's Investors Service and Standard and Poor's since 1998. The stable ratings vindicate the value and commitment to the investment community and the local community by offering quality and affordable healthcare. Spectrum Health is also committed to medical research. About 750 open research studies were approved through Spectrum Health's Institutional Review Board, and around 220 cancer clinical trials were approved through the Grand Rapids Clinical Oncology Program[1].

COVID ONSET IN MICHIGAN

COVID-19 pandemic first case was announced in Michigan on March 10, 2020, with a high rate of increasing cases. The state had 72,502 confirmed COVID cases and 6,108 associated deaths as of July 17, 2020. As of July 15, 2020, Michigan was 13th in the number of cases in the country and 7th in the number of deaths[2]. Although the Grand Rapids region is less densely populated, it was still reported to have a high increase in that region, with around 53 new cases per million people per day[3].

The state legislature approved $125 million to aid as part of relief efforts on March 17, 2020. It allocated an additional $150 million for medical supplies and personal protective equipment (PPEs) for hospitals on March 30, 2020. Michigan declared a major disaster on March 28, 2020. Detroit accounted for 20% of the total cases and 25% of the deaths. Subsequently, announcements on school closures, social distancing, restrictions on non-essential travel, business services and operation, and mandatory use of facemasks were made. "Stay-at-home" order was extended till June 12, 2020. As of June 01, 2020, Michigan was in stage four of its six stages of its reopening plan[4]. The Michigan Unemployment Insurance Agency has disbursed $11.4 billion to two million people as of June 19, 2020—that shows the effect of the pandemic in that region.

SPECTRUM HEALTH'S COVID 19 PPE CHALLENGES

Like most organizations, Spectrum recognized that personal protection equipment (PPE) supplies were going to become a problem during the crisis. Spectrum started stockpiling and finding additional sources of PPE resources. They bought as many PPE supplies as they could from their typical vendors. They also started partnering with local manufacturers to produce quantities. For example, Amway created hand sanitizer, especially for them. New protocols and processes put in place for COVID 19 required excessive PPEs. The health system worked on re-processing of masks even though they had enough for ongoing needs. The hospitals wanted to hold onto them by sterilizing N95s while re-building stockpile of the same. Another step they took is to manufacture sanitizer wipes in-house after getting the

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recipe from peer organizations. Spectrum created a mini-manufacturing process to produce these in-house wipes. They also bought additional ventilators and were able to get as many as they wanted and even canceled some orders.

Spectrum spent millions of dollars on PPE to prepare for COVID. They are pursuing reimbursement from FEMA funding for that, and that is progressing. "*Everyone whom we asked for help wanted to help as much as they could. We never paid more than a couple of dollars for an N95."* Quoted Matthew Cox, System CFO at the Spectrum Health.

SURGE CAPACITY PLANNING

Spectrum was confident that the system could handle the surge. The health system had suspended all non-emergency surgeries. It had identified alternative sites such as Grand Valley State University's Cook-DeVos Center for Health Sciences in case the utilization of hospital capacity is fully used up. The health system has reached out to the community for help. Organizations such as Grand Valley State University, Amway, and Steelcase had donated hand sanitizer, shields for medical screeners, and roughly 90,000 medical gloves[5]. Spectrum Health Pennock also planned for Special Tent outside the Emergency Department (ED) for Future Triage Site in case of a surge in Pennock Hospital cases. The tent served as an extension of the ED [6].

Spectrum has a large ambulatory footprint, and they moved employees from shutdown facilities to the hospital. They have historically done much cross-training and did a bit more of that. Although they were prepared for the worst, the worst period did not come, although the number of cases and positivity rates in the communities served by Spectrum Health were still increasing as of July 2020. The total case count was comparatively low. Henry Ford in Detroit had a much higher case count. It took all of its resources to handle the load. They received more federal dollars because of their load of patients. Population density had a big part to play. Grand Rapids also has less international business than Detroit. Grand Rapids took precautions based on their learnings from the city of Detroit before things started spiking. The system acted quickly to help offset significant financial losses due to COVID-19, including temporary reductions in executive compensation, furloughs, working remotely if possible, and reducing expenses, as well as accelerating the pace of operational changes, such as eliminating non-patient-facing positions not needed in the future.

Spectrum Health has a health insurance company, which helped offset the system's losses. When hospital usage goes down, the insurance company's profitability goes up, and that provides an extra financial buffer. FEMA and CARES dollars allowed the system to offset some of the lost revenue.

DASHBOARD TO DISSEMINATE INFORMATION

Spectrum came up with a COVID 19 health dashboard to disseminate information on COVID cases to the employees and the community[7]. The dashboard gets regularly updated on the organization website. Figure 2 below presents the dashboard.

FIGURE 2: COVID-19 SPECTRUM HEALTH DASHBOARD
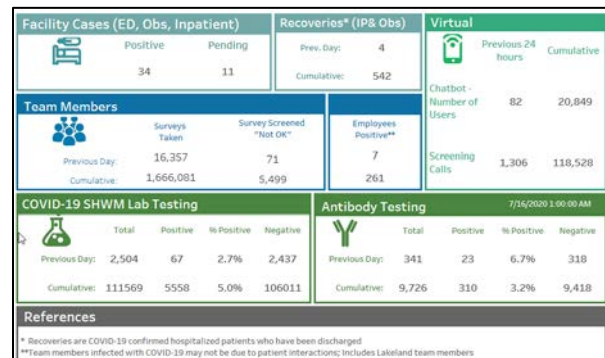
EXTENDED CAPABILITIES FOR TESTING

Spectrum Health started its internal COVID-19 testing from March 23, 2020, and tested more than 8,000 patients in West Michigan as of April 27, 2020. The system has continued to expand testing capability, reaching 4,000 daily in late July. Earlier to that in March beginning, Spectrum Health used to send specimens outside for testing to ViraCor (a reference lab), Quest, and the State of Michigan.

On April 27, 2020, Spectrum announced extended capabilities for testing of COVID cases. The new supplies and testing kits were enabling the testing process. The extension included the "mild to moderate" cases for COVID symptoms for testing along with the "severe" cases. Susan Smith, senior director, laboratory services, Spectrum Health, announced that the goal is always to test as many people as possible with suspected symptoms. Even though there had been limitations to resources in the beginning, however, with additional testing supplies and advanced equipment, Spectrum had been enabled to meet the demand for testing in the community. This was considered a big step in the continued fight against the deadly virus[8]. On May 21, 2020, Spectrum Health was among the first health systems in Michigan to offer COVID-19 antibody testing to the general public. This testing would help meet community needs and also determine the intensity of the spread in West Michigan.

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[5] https://www.mlive.com/news/grand-rapids/2020/03/ spectrum-health-has-capacity-for-surge-in-coronavirus-patients.html

[6] https://newsroom.spectrumhealth.org/spectrum-health-pennock-adds-special-tent-outside-emergency-department-for-future-triage-site-incoming-patients-for-covid-19-symptoms/

[7] https://www.spectrumhealth.org/covid19

[8] https://newsroom.spectrumhealth.org/spectrum-health-announces-expanded-capability-for-more-widespread-covid-19-testing/

Spectrum Health offers two types of COVID-19 testing - COVID-19 (molecular) testing and COVID-19 (serology) antibody testing. The former involves taking a sample via nasal or nasopharyngeal swab and is used to detect if the person is currently infected with the COVID-19 virus. In contrast, the latter uses a blood sample from the person to determine if the person was earlier affected by the illness.[9]

EMPLOYER TOOLKIT FOR CONTINUED OPERATIONS

Adaptation for Businesses amid COVID 19 is essential for keeping the community spread of the virus at bay. Starting from May 13, 2020, Spectrum health started guiding the West and Southwest Michigan businesses on how to adapt to a new environment to control the cases' surge. It oversaw infection prevention and use of resources to help employers and employees to increase their safety and minimize spread.[10] The toolkit consists: (1) an employer guide that provides a primer to help businesses at all stages, such as adapting to a new environment, reopening to the community, welcoming employees back, best practices, tips from experts, ready-to-use signage, and checklists. (2) A one-stop website for various information on frequently asked questions, templates, and industry resources. (3) A free mobile COVID-19 symptom checker to help employees routinely check for symptoms before returning to work. (4) An employee hotline to provide help with all COVID-19 related questions.

WIDE RANGE OF CARE DURING COVID PANDEMIC

To ensure that the full range of Health care is not affected, Spectrum health continued to provide care for other health conditions such as routine care, gastrointestinal issues, chest pain, cancer, labor/delivery, and stroke.[11] To ensure safety and limit exposure to COVID-19, Spectrum Health implemented several protocols at its facilities at hospitals and clinics. First, it ensured extra and frequent cleaning throughout all facilities and high touch areas while sticking to infection prevention guidelines. Second, team members were asked to wear the appropriate PPE to ensure the safety of the patients and employees. Third, it screened all employees and patients at the facilities and limited the number of visitors. Fourth, it made it compulsory for everyone to use hand sanitizer and have a mask upon entry. Floor signages are installed for social distancing following CDC guidelines. Finally, patients treated for COVID-19 were isolated in the hospitals to ensure the safety of all, including physicians and employees.

IN-OFFICE VISITS AND VIRTUAL CARE

As of mid-July 2020, Spectrum health continued to provide in-office visits to those that require face-to-face visits with all the locations having extensive safety measures. They also continued to offer virtual visits by offering healthcare provider service virtually using the Spectrum Health App. The visitor policy gets continuously updated with necessary restrictions on family and visitors. Visitors are encouraged to follow guidelines for their safety and limit potential exposures to COVID-19 while in the hospital. These include wearing a mask, social distancing, and washing hands regularly. All visitors are asked health screening questions, as well as their temperature, are checked upon arrival. Keeping in mind the safety of the staff as well as of the community members, Spectrum Health switched public classes and community events to virtual, when possible, or were canceled or postponed. Exceptions were made for blood drives and other events that address a public health benefit.

CONCLUSION

Spectrum has done a remarkable job in re-orienting itself and ensuring that the community it serves continue to get the necessary healthcare services without any disruption. At the same time, it has taken many steps to ensure that the health system enhances its ability, realign itself in the best possible manner to fight this unprecedented situation. Reflecting on the experience, *"On how the size of their organization affected processes – being bigger allows deep leadership in the supply chain. We have centralized purchasing for our fourteen hospitals. A lot of expertise in our leadership, expert buyers."*- Opined Matthew Cox, System CFO, Spectrum Health.

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[9] https://www.spectrumhealth.org/covid19

[10] https://newsroom.spectrumhealth.org/spectrum-health-announces-employer-toolkit-to-help-businesses-in-the-midst-of-covid-19/

[11] https://newsroom.spectrumhealth.org/spectrum-health-and-pennock-hospital-continue-to-provide-wide-range-of-care-during-covid-19-pandemic/