ENERGY TO CARE
SUCCESS STORY

OhioHealth and Ohio State University Wexner Medical Center

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Greater efficiency supports patient care.

AHA Data & Insights

OhioHealth

Associates: 35,000

Hospitals: 12

Additional Sites: Over 200

Ohio State University Wexner Medical Center

Buildings: 100

Beds: 1,500

Faculty and Staff: Approximately 24,000

The 2020 COVID-19 pandemic has impacted businesses around the world, and hospitals are no different. While doctors and nurses have scrambled to provide the best care during these trying times, there are many other staff members working to ensure buildings are safe for occupancy. The facilities teams at two major central Ohio health systems, OhioHealth and The Ohio State University Wexner Medical Center, have risen to the challenge. While their stories are not unique, they hope their stories may help other businesses facing similar challenges.

As part of the Central Ohio Hospital Council (COHC), OhioHealth and Ohio State Wexner Medical Center openly share best practices to improve patient outcomes and celebrate each other's successes. In recent years, this has expanded into the facilities realm, where facilities managers collaborate to provide the best health care building environment for patients and visitors.

OhioHealth is a nationally recognized, not-for-profit health care system located in Ohio. With 35,000 associates, 12 hospitals and more than 200 additional sites, OhioHealth was presented with a major challenge to keep those associates safe while maintaining their locations to continue to provide world-class care.

The health system had to keep associates safe so that they could continue to perform their roles to the best of their ability. Initially, in March, the concern over PPE availability was widespread. In an effort to funnel as much of the PPE to clinical staff, nonclinical staff were asked to work from home through June 1. This took nonclinical staff away from potential exposure at hospitals, while also preserving PPE for those essential on-site employees. Additionally, OhioHealth created a survey for all employees who worked from home to understand their capabilities moving forward. This was an essential step often overlooked by companies. The survey created a better understanding of what associates would need to continue to work from home, if possible, and which associates would perform better in a more traditional office environment. The survey provided imperative data that allowed OhioHealth to make smart decisions for nonclinical staff in the latter half of 2020 and beyond.

While protecting their associates was important, the fact remained that hospitals still needed to provide services concurrently to those infected with COVID-19 while preventing the spread to noninfected patients. One way to keep the buildings safe was to limit their use when possible. OhioHealth significantly expanded their telehealth and home health care services. These services had been gaining popularity in recent years, but the pandemic created an immediate need to make these services robust.

Within the hospitals, the facilities teams did their best to control airflow to prevent contaminations. OhioHealth immediately created additional isolation room capability so infected patients could be quarantined in a safe environment. Additional contingencies were put in place to make new rooms in case of a surge. OhioHealth installed 246 HEPA filter units across the system that run 24/7 and exhaust to the outside, at a cost of nearly $20,000 a month. It wasn't all an added expense for OhioHealth. While staff members were able to work from home, those buildings and/or parts of buildings were put into conservation mode by unplugging most plug loads and going to minimum energy use to help offset the added filtration requirements. Additionally, the facilities used some of the downtime to perform needed maintenance, create LED surveys, and continue energy efficiency projects sometimes difficult to complete when full of associates.

OhioHealth also enhanced sterile processing of equipment and items in the hospital. They made a switch from disposable to washable isolation gowns and other equipment. While the washable items were always considered a break-even expense as compared to disposable, they actually created a savings during the Pandemic due to the increased use frequency of those items. As an added benefit, it turns out clinical staff preferred the washable gowns. The one downside of the washable gowns and equipment was the need for additional storage space. OhioHealth reevaluated some of their supply carts to create the necessary storage space for the washable items.

Ohio State Wexner Medical Center is a health system in central Ohio with more than 100 buildings, 1,500 beds for patient care, and approximately 24,000 faculty and staff.

During the pandemic, Ohio State Wexner Medical Center opted to provide telework opportunities but required eligible faculty and staff to fill out a telework form and obtain manager approval. This provided an opportunity for faculty and staff to collaborate and create a successful plan for telework.

In addition, Ohio State Wexner Medical Center saw a significant uptick in telehealth offerings and patients during the pandemic. During the eight months prior to the pandemic, there were approximately 800 telehealth appointments; however, during the first eight months of the pandemic, that figure increased to nearly 350,000 telehealth appointments. Interestingly, the medical center found additional benefits to telehealth beyond reducing the risk of virus spread in the hospitals. Ohio State Wexner Medical Center estimates savings of more than 5,000 metric tons of CO_2 emissions avoided as a result of eliminating patients' travel for telehealth visits. This is based on an estimated savings of almost 20 million miles of avoided travel and 650,000 gallons of gas for these patients.

After evaluating some emerging technologies to improve building health, Ohio State Wexner Medical Center turned to tried and true methods for improving air quality by increasing airflow and filtration. The first step was identifying air-handling units (AHUs) serving COVID-19-positive patients and maximizing the outdoor air percentage provided while maintaining indoor environmental quality (IEQ) standards. To avoid indoor air quality (IAQ) issues, outside air started to back off only after the cooling valve exceeded 80% open position. The second step for filtration was to perform a survey of minimum efficiency reporting values (MERV) levels in all buildings. While the majority of filters were rated MERV 14 or higher, any filters rated lower than 14 were evaluated for increased filtration. It's important to evaluate systems when increasing filtration level to ensure they can handle the increased static pressure. Ohio State Wexner Medical Center increased filtration to MERV 14 where possible. Otherwise, the highest possible filter level without compromising design airflow volumes was used.

The medical center also seized the opportunity to conduct preventive and corrective maintenance with less impact to staff because of reduced office occupancy. This is an important component for buildings left unoccupied or with low occupancy. By ramping up maintenance and peforming items like plumbing system flushing, other issues can be avoided when occupancy returns to a more "normal" occupancy in the future.

OhioHealth and Ohio State Wexner Medical Center are two systems in central Ohio that do an extraordinary job collaborating to ensure they are providing the best care possible. Although the process may be different, both systems focused on sending nonclinical associates home to work, while also focusing on air filtration and air management as well as increased robustness of telehealth services. The health systems also used the opportunity of low occupancy in their facilities to double down on maintenance tasks to continue to provide buildings with a clean, safe environment for faculty, staff, patients and visitors.

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Ryan Allsop is a director at Energent Solutions with over 11 years of professional experience. Ryan's background is in mechanical engineering and his experience includes HVAC design, HVAC retrofits, administering utility demand management programs, management consulting and other energy services. Ryan is a technical lead for the nationally recognized OHA Energy & Sustainability Program, which provides support to more than 60% of hospitals in Ohio. Additionally, Ryan helps manage the energy and sustainability program implementation for a Fortune 100 financial services corporation.

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Eric Weber is an engineer at Energent Solutions with over 12 years of professional experience. Eric's background is in mechanical engineering and his experience includes HVAC design, HVAC retrofits, electrical design, plumbing design, and other energy services. Eric has been involved in auditing, constructing, commissioning, and designing over 5 million square feet of buildings in his career. Eric is considered a benchmarking guru, and certifies over 100 facilities annually as ENERGY STAR certified locations.

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