



**24/7**  
**365**



Healthcare student photos courtesy of Thomas Jefferson University.



# Managing Med-Ed Facilities is a 24/7/365 Business

“Med-ed” likely has different meanings for different academic institutions. Med-ed facilities have a medical component, such as a patient-centered hospital or clinical space. Medically related educational facilities include teaching colleges for nursing, pharmacy, medicine, public health, and health sciences, as well as their related laboratory spaces for education and research. In most cases, med-ed facilities provide a continuous 24/7/365 environment that supports patients, families, and medical staff.

The term “med ed” continues to evolve. Initially, it referred to the education and training received at a college or university to become a medical doctor or an osteopath. Today it includes schools that deliver accredited programs for nurses, nurse practitioners, and physician assistants. The med-ed field will continue to evolve, especially as more teaching programs fall into the range of “allied health” that require clinical rotations.

Med-ed facilities typically have many of the same facilities needs that traditional campuses have. However, med-ed requires a greater focus on safety and regulatory compliance, as well as urgency and timeliness in delivery of services. Preventive maintenance is essential for ensuring that life-safety regulations are met. Med-ed facilities also have more complex IT needs, including sophisticated research facilities, vivariums, and other medical spaces, as compared to standard classroom space.

“The portfolio of services for med-ed has different inventory,” says **Thomas Becker**, associate vice president for academic and research facilities at

Thomas Jefferson University (Jefferson) in Philadelphia, Pennsylvania. “University facilities routinely support very large events and sports competitions, with thousands of young adults in attendance. Hospitals don’t necessarily have large crowd events, but they do tend to have urgent response capability, heliports, and more systems with higher levels of sophistication and testing verification.”

Even though med-ed facilities are unique, their facilities managers must still interact with other facilities management (FM) departments on campus, sometimes sharing labor and resources.

“My focus is on our hospital campus, clinics, and business locations,” says **James Harrod**, business and operations manager for UW Health, the health system for the University of Wisconsin Madison. “And although I do not have a focus on campus facilities, I must still work very closely with the campus because physicians, researchers, and students are in both hospital and academic locations.”

Administratively, med-ed is often more complex to manage, with a combination of solid-line and dotted-line reporting structures. Workforces are sometimes even shared between the medical pillar and the academic/research pillars.

For example, at Jefferson, FM has campus, trade-specialty, or building-asset assignments, much like at a typical university campus, and ultimately has line-reporting responsibilities to the senior vice president of corporate facilities. However, many staff are also part of mission administration teams that focus



Thomas Becker



James Harrod



Courtesy of UW Health Marketing & Communications

UW Health—Main Campus (University of Wisconsin-Madison).

on the different pillars of the medical, research, and university enterprise. “These dotted-line responsibilities are critical and typically have a more timely impact on the ultimate customer,” says Becker. “Planning, design, and construction supports the medical, research, and university pillars, also reporting to the senior vice president, but may have staff on full-time assignment within remote Jefferson campuses and medical sites.”

In addition, dual reporting is not exclusive to facilities. Medical faculty work as practicing physicians with reporting relationships aligned with their specialties, and then may report academically to a different administration.

### REGULATORY COMPLIANCE

The biggest difference between med-ed and traditional ed is found in the regulatory oversight. Med-ed facilities undergo regular surveys by The Joint Commission and the Center for Medicare & Medicaid Services (CMS), which can be a shock to any facilities manager moving from an educational university to a med-ed university. “The requirement to comply with these regulations, plus a host of others, exceeds anything I ever encountered during my previous experiences with universities,” says **William Elvey**, APPA Fellow, past APPA President, and senior vice president of facilities and real estate



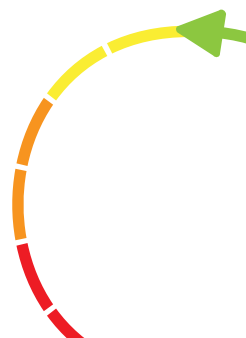
William Elvey

for Children’s Health, the pediatric teaching hospital affiliated with the UTexas Southwestern Medical Center in Dallas.

For example, at Jefferson, regulatory compliance responsibilities include ensuring facilities comply with the requirements, standards, regulations, and laws of the local city/township/borough, the Pennsylvania Department of Health, the Association for Assessment and Accreditation of Laboratory Animal Care, the CMS, and The Joint Commission, as well as federal regulations including the Americans with Disabilities Act (ADA).

When requirements overlap, facilities managers try to comply with the most stringent one. For example, when considering the Life Safety Code, depending on the age of the facility, timing of the project, and the authority having jurisdiction (AHJ), “It is often difficult to determine which requirement we have to comply with,” says Elvey. “For example, the American Society for Healthcare Engineering [ASHE] has even published a 43-page document that provides healthcare facility managers with a side-by-side comparison of the 2015 IBC, 2018 IBC, NFPA 101-2000, NFPA 101-2012, NFPA 101-2015, and NFPA 101-2018. In other areas, The Joint Commission enforces some codes that the CMS folks do not recognize, and so on.”

FM software tools can be beneficial for keeping track of regulatory requirements and testing. “For our inspections, we utilize a product called AkitaBox, a facility management tool that allows us to report on everything from annual fire door inspection to monthly generator test and monthly fire extinguisher tests,” says Harrod. “This includes weekly





tests on drench showers and daily inspections to confirm presurization of spaces for infection-control purposes. In addition, anytime we perform work that may cause dust, we complete an infection-control risk assessment.”

### 24/7/365

Failure of critical equipment can create life-and-death situations in med-ed settings. Therefore, preventative maintenance is essential for life-safety areas. Because many of these areas are patient-centered, facilities departments may choose to do a considerable amount of preventive maintenance work during off hours.

“Patients always come first and may very well drive when facilities work can be completed,” says **Mary Vosevich**, past APPA President and vice president for facilities management and chief facilities officer for the University of Kentucky in Lexington. “Failure in medical facilities where research is being conducted, or patient care is taking place, is unacceptable.”

For example, failure of elevators that are used for transporting patients could have life-threatening consequences. Flooding caused by a pipe failure in the emergency department could result in patients being diverted to other areas, wasting valuable time. “Hence it is important to have a long-term and continuous preventive maintenance plan



Mary Vosevich

in place that includes schedules and resources to make certain these scenarios do not occur,” adds Vosevich.

Medical research facilities are increasingly sophisticated, especially within vivariums or biological research labs. The highly specific environmental conditions they require are generally more stringent than those for most universities, or sometimes even hospital areas. System redundancy is critical. “This is where the Association for Assessment and Accreditation of Laboratory Animal Care [AAALAC] comes into relevance,” says Becker. “The loss of medical research animals resulting from facilities failure can be avoided with great forethought and care. Aside from the lives of the animals, equipment malfunction could affect years of research, waste millions of dollars of research money, and even affect the health of the researchers. To avoid this, 24/7/365 high-precision monitoring equipment is required for these spaces.”

### AN EVOLVING HEALTHCARE LANDSCAPE

The changing environment of healthcare is a constant challenge, especially when it comes to technology. “I have found healthcare to be far more IT-intensive for med-ed administrative and operating systems, and those systems to be far more integrated across our systems, than for the universities I previously worked for,” comments Elvey.

Cybersecurity is also a major concern, especially regarding the strict privacy regulations now in place concerning patient healthcare records. In addition, due to the rapidly changing technology trends in healthcare, med-fed facilities are constantly replacing, upgrading, and installing new equipment across their systems, sometimes even before the current equipment reaches its normal end-of-life.

The only way to keep up with the many changes going on in the healthcare industry, notes Elvey, “is to stay as active as possible in professional associations such as CHA and NFPA, attend workshops and conferences, read industry trade journals, and connect with colleagues at other healthcare institutions.”

Mergers and acquisitions in the field of healthcare often change the mix of med-ed facilities, and therefore change compliance requirements. Trying to develop revised standards, policies, and procedures for use across a new entity can be daunting. For example, Thomas Jefferson University has expanded from being a primarily upper-level medical university and large medical school with extensive research facilities and three hospitals located in Philadelphia, to 14 hospitals spread across two states.

It has also merged with Philadelphia University, a comprehensive undergraduate and graduate university with multiple majors, sports teams, and remote campuses in two states. Such a high level of activity in just a few years has necessitated significant changes to computerized maintenance management systems, space inventory, project management, compliance, parts procurement, and financial systems.



Courtesy of Children's Health

Children's Medical Center, Dallas, Texas.

As part of the massive restructuring of multiple corporate entities, the university decided to centralize services to leverage administrative expenses.

“Facilities management is a portion of that,” says Becker. “Therefore, methodologies for standardization and ongoing improvement of facilities operations and maintenance, planning design and construction, and compliance are rapidly being implemented. Part of the initial planning for this transition was developing a corporate-wide, service-level agreement, which included commitments to APPA service levels for maintenances and custodial services in the academic and research facilities, as well as prioritization levels that align with hospital expectations and service levels according to our healthcare-quality consulting firm’s standards.”

### RUNNING FACILITIES LIKE A BUSINESS

Yet another challenge is the requirement to operate med-ed facilities more like a business rather than a not-for-profit. For example, Children’s Health reviews its financial numbers daily. “As a senior vice president,” says Elvey, “I report directly to the CFO and am a member of the executive leadership team, which meets bimonthly, including three off-site strategic planning sessions a year.”

Children’s Health is highly streamlined from an operating and governance standpoint, which translates into quicker decision-making and execution of projects than most educational institutions could manage. Because it operates as a health system

Courtesy of Thomas Jefferson University



Courtesy of University of Kentucky

Student center, left, and alumni gym, right, at University of Kentucky.

instead of a large public research university, Children’s Health can plan, design, and construct a large-scale, complex healthcare capital project in two to three years.

For traditional-ed universities, the complete life cycle for a similar capital project, from planning and budget development to approval by the university, governing boards, and the state, and through design and construction, could take 10 years or more.

### SAFETY AND SECURITY

Although all colleges and universities emphasize safety and security, med-ed facilities maintain a deeper focus on quality of healthcare delivery (i.e., patient safety).

Thorough, top-notch infection-prevention and control systems are paramount in hospital settings, especially in pediatric healthcare. For example, all planning, design, and construction at Children’s Health, as well as operations and maintenance activities, are carried out with this directive in mind. To reduce the risk of hospital-acquired infections (HAIs), all renovation and construction projects in patient areas are conducted under barricades and in a negative pressure environment to prevent any possible contaminants from escaping the project site.

“On a college campus in an educational setting, this level of attention was usually only reserved for certain activities such as asbestos abatement,” says Elvey. “I have rarely experienced this level of concern on a traditional college campus.”

### PREPARING FOR THE FUTURE

According to Transparency Market Research, the medical education market is expected to reach \$38.4 billion by 2024, driven by an expanding patient base, medical technology innova-

Jefferson facilities leadership team. From left, Ed Sampey, Tom Becker, Doug Pastore, Kevin Donahue, Joe Byham, Frank Daly, Randy Hainas, and Clayton Mitchell.

tions, and the development of new or hybrid medical fields or specialties. This will increase the pressure on med-ed facilities to keep pace, especially as job descriptions merge and management responsibilities overlap.

Harrod believes an APPA/ASHE collaboration has considerable potential to improve med-ed FM in the future.


“There are academic medical centers where the academic senior facilities officer is going to APPA, and the hospital that sits on the campus, and is associated with the campus, is sending its SFO to ASHE,” Harrod says. “At Wisconsin, the hospital is one of the larger customers from a utility standpoint; it is critical to have a great working relationship with the University of Wisconsin. Although the UW leadership team works hard to keep the hospital informed regarding utility services, other universities may not have this relationship in place.”

A collaborative effort between APPA and ASHE could help members in both associations improve the quality of the services they deliver. Credentialing is available through both organizations. As the med-ed landscape continues to evolve, collaboration between APPA and ASHE to develop med-ed-specific programming could be highly beneficial to each organization.

A well-attended med-ed roundtable at the 2018 APPA Annual

Conference in Washington, DC, recommended the following action items:

- Build a listserv or online communication cohort group within APPA membership of med-ed associated campuses to facilitate dialog and networking.
- Reach out to some of the group leadership contacts in ASHE and see if there are collaborative opportunities. This has already started through APPA’s Facilities Performance Indicators survey, which is one way that directors of both organizations can help develop consistent benchmarking.
- Perform a gap analysis between the associations to identify collaboration opportunities for development and training.

A follow-up med-ed roundtable will be part of the APPA 2019 Annual Conference, to be held July 15-17 in Denver, Colorado. Members who are interested in participating in this cohort group may contact Mary Vosevich at [mary.vosevich@uky.edu](mailto:mary.vosevich@uky.edu) or Tom Becker at [tom.becker@jefferson.edu](mailto:tom.becker@jefferson.edu). 

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