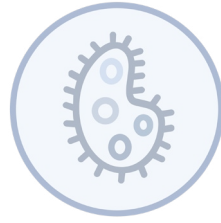


JB&B CELEBRATES NATIONAL HEALTH CARE FACILITIES AND ENGINEERING WEEK



RESILIENCY THROUGH STRATEGIC REDUNDANCY

In the intricate dance of healthcare operations, reliability is paramount. Reliability can mean the ability to react in a resilient manner during an atypical event or having a plan in place to support regularly scheduled maintenance events. One crucial facet of hospital infrastructure for both these aspects of reliability is equipment redundancy.

Investing in Reliability

In the ever-evolving landscape of healthcare, having redundant equipment is often viewed simply as an expense. Often, one of the first items being discussed during a value engineering exercise is reducing or removing equipment redundancy. Requirements for system redundancy in the most essential and sensitive spaces are outlined in FGI and ASHRAE 170. Considering these requirements is a strategic investment that safeguards patient care, operational continuity and, ultimately, the reputation of the institution.

Advantages Beyond Assurance

Redundancy in healthcare equipment ensures uninterrupted functionality, which is critical for life-saving interventions. In the event of unexpected failures, redundant systems seamlessly take over, mitigating downtime and potential harm to patients. Smart implementation can also afford a hospital more flexibility to adjust operations in extreme weather conditions or emergency events such as those experienced at the height of the pandemic.

Moreover, redundancy reduces the strain on maintenance teams, allowing for more efficient and planned servicing. Strategic thinking about redundancy must align with annual as well as ad hoc maintenance planning.

A Paradigm Shift

Redundancy isn't merely about duplication; it's a paradigm shift in how we conceive reliability. Consider it an investment in peace of mind, a guarantee that your healthcare facility is equipped to navigate any unforeseen challenges, from power outages to equipment malfunctions. Some emergency conditions drive a need for a higher-than-typical central plant capacity. With a deeper understanding of facility operations, something as minor as a slightly larger pipe size can allow the redundant equipment to operate in line with the rest of the plant. This extra capacity can support operations during a pandemic-type event where there's a desire for 100% outside air, resulting in increased heating or cooling loads.

Thinking Beyond Replication

Redundancy can also be about optimizing processes and systems for seamless transitions. A deeper understanding of hospital operations and occupancy can highlight which parts of a building may be able to tolerate setbacks in space temperature to offload the critical system, where a fan or pump can be run at a higher speed for a temporary bump in capacity during maintenance, or where portions of the system can be isolated to minimize the impact of a failure.

Finding the appropriate balance of first cost and reliability should include a multidisciplinary team to develop a comprehensive understanding of design, equipment maintenance, and hospital operational needs.



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