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Article of the week

The Main role of Facility Management and Safety to achieve Patient Safety in Healthcare Facilities

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Healthcare facilities are a very complex industry because it contains many professions with different specialties, including medical & non-medical professions such as doctors, nurses and support services such as laboratories, radiology, biomedical maintenance and general maintenance. All of these occupations may positively or negatively affect patient safety in hospitals.

In addition to the risks associated with the failure of utility systems that represent a significant risk to patient safety, therefore, facilities and safety management play a major role in enhancing the safety of patients in healthcare. The International Facility Management Association (IFMA) defines facility management as a profession that encompasses multiple disciplines to ensure functionality, comfort, safety and efficiency of the built environment by integrating people, place, process and technology.

Components of Facility Management and Safety in Healthcare Facilities and how to achieve patient safety ?

Facility management and safety consist of asset management, safety and security, risk management, and maintenance management. All these Component have their roles in achieving patient safety through the Integrated Facility Management in Healthcare.

Asset Management

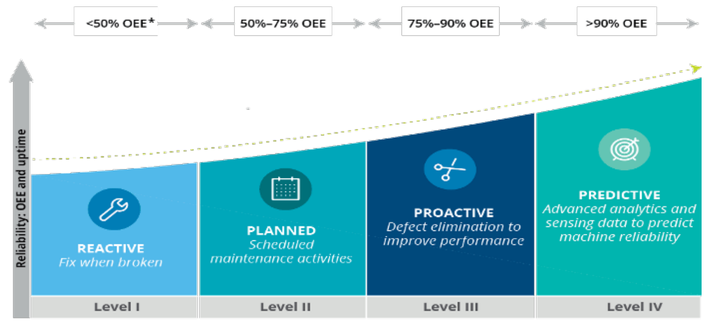
Healthcare asset management systems help the hospitals achieve Patient Safety by maintaining an appropriate inventory of devices and equipment, defining equipment's location quickly and efficiently, maintaining suitable inventory stock, asset life cycle, and improving equipment turnaround time. For example, the risks associated with the lack of maintenance of medical devices as there is no inventory of the equipment's location to ensure patient safety.

Maintenance Management & Sustainability

Maintenance provides sustainability of services and safe use of equipment through regular maintenance for utilities, whether it is corrective maintenance or preventive maintenance. Big data analysis can play an essential role in achieving the sustainability of services. For example, if the cold room temperature regularly recorded in the medication storeroom was increased gradually every day by +1 Celsius until it became out of normal range can be prevented by using big data analysis is called predictive maintenance.

Overall equipment effectiveness (OEE) strategy can enhance the lifetime of equipment or utilities, positively affecting patient safety. OEE = Availability of equipment × Performance of equipment × Quality of outcome the kit), linked to maintenance see figure [1]

Figure 1. Maintenance strategy continuum



Risk Management

Risk management can identify risks associated with facility management. The risk of utility failure is an excellent example of a direct threat to patient safety. Therefore, the national fire protection association has categorized all utilities of possible risks in the hospital, which helps the facility manager define the high-risk utilities and high-risk areas. For instance, if the medical gas failure in dental clinic means improving patient safety, but if this medical gas failure in OR, it would mean high risk and high impact on patient safety. CBAHI, GAHAR and other healthcare accreditation are committed that a proactive plan shall be prepared to avoid utility failures and to find alternatives to avoid the impacts and threats of these risks on patient safety .

3 Core Strategies to Achieve Fire Safety in Healthcare Facilities

Fire safety is one of the significant healthcare facility management components.[3] Core Strategies can help to keep fires under control or prevent fire. In 2007-2011, 1,200 fires in hospitals; (NFPA) found that those fires led to 140 injuries per year and three deaths. Also, in the Jizan hospital fire, about 25 deaths and 123 injuries due to the spread of the fire in the hospital

1st Fire prevention

One of the most critical points for fire prevention is conducting a risk assessment, proper training on the safe handling of hazardous materials and providing fire alarms systems in all hospital facilities

2nd Fire compartment

Fire compartmentation aims to prevent the rapid spread of smoke and fire and avoid the flashover of the fire. By subdividing the building and designing escape routes, high risk or high- use areas can be protected .

3rd Fire protection system maintenance

The National Fire Protection Association acknowledged that the effectiveness of fire alarm and firefighting systems in health care was at 68%. In comparison, 32% was due to ineffective and inadequate maintenance resulting in the fire's significantly spreading in the hospital .

Finally,there will be some obstacles that may face hospitals related to facility management, such as a lack of professional staff to manage facilities and to finding alternative solutions to any obstacles, old age buildings and low budget and leadership support for facilities management .

References:
1. National Fire Protection Association https://www.nfpa.org /
2. International Facility Management Association https://www.ifma.org/about/what-is-facility-management
3. International Sustainable Asset Management https://www.ifma.org/events/fm-events/event-details/2016/06/22/default-calendar/ISAM2016
4. OEE Measures Improvements in Productivity https://www.ifma.org/events/fm-events/event-details/2016/06/22/default-calendar/ISAM2016