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Literature, Russian Literature

Technology 101

Re-locatable Power Taps

Re-locatable power taps are also commonly known as power outlet strips. They consist of an attachment plug on one side that plugs directly to a permanent power receptacle and multiple power receptacles terminated in a single enclosure on the other side. A flexible power cord joins the two sides together. The rule of thumb that needs careful observation is that power taps must always connect to a permanently installed circuit receptacle. For safety reasons, they should never at any one time connect to another power tap, an action commonly referred to as daisy-chaining. Power taps are only suitable for interior usage such as powering laboratory equipment, music instruments, computers, audio and video equipment among other portable electric equipment and appliances. Security also dictates that re-locatable power taps should not take the place of the normal electrical wiring and must pass through ceilings, walls or windows.

The National Electrical Code has the sole purpose of safeguarding people and property from hazards resulting from the use of electricity. As such, it contains the provisions considered necessary in the installation and use of electricity. The NFPA 99 code provided by the National Fire Protection Agency is the specific code that deals with the use of re-locatable power taps. All along, the Joint Commission has allowed the use such devices based on NFPA1999 code 7-5. 1. 2. 5. NFPA 2012 10. 2. 3. 6 also allows the use of re-locatable power taps but under controlled conditions. Agreeably, re-locatable power taps offer undisputable convenience. However, their misuse can pose a great danger to both patients and staff in hospitals and health-

care institutions. Consequently, there exist stringent principles that govern their use in such facilities. Non-adherence to these principles signifies violation of standard code and will often lead to fines and accreditation issues. Failure to comply may also lead to serious injuries to patients, staff and even visitors.

Recently, in June 2014, the director of Engineering at the Joint Commission, George Mills, announced several changes at the Association for the Advancement of Medical Instrumentation. The changes in NFPA regulation are bound to have an impact on healthcare technology management. Apparently, there was the introduction of significant restrictions on the use of re-locatable power taps, as directed by CMS. The federal agency ordered that re-locatable power taps should no longer form part and parcel of medical equipment in patients' upkeep areas. The list of such areas includes ORs, patient rest-rooms, and areas for conducting recovery, tests, and diagnostic measures. NFPA 99 7-5. 1. 2. 5 code dictates that the power cable from the fixed receptacle should not have any switches between any appliance and the attachment plug. It should instead be continuous. The interpretation is that such extension cords are not allowed in sedating locations. A permanently mounted cord on portable equipment is the only exception. Re-locatable power taps are however allowed in patient care areas only if the medical device manufacturers provide them as part and parcel of the equipment e. g. Baxter IV pumps. Such was the decision made by the Joint Commission following the information provided by CMS in a move to strictly implement the NFPA code.

Such a move raises concern amongst people because, until recently,

hospital-grade plugs and receptacles have been in existence with added features and performance necessities for enhanced grounding dependability, strength and resilience. People want to be in a position to access power throughout hospitals and healthcare facilities since accessible power is essential in modern health-care. In most instances, re-locatable power taps afford the most effective form of accessible power.

There exists no single type of health-care re-locatable power tap that supports all applications in one instance for such facilities. Each health-care re-locatable power tap has a unique purpose and does not support anything different for which there was no intention. Most of the governing abuses occur due to inappropriate connection of re-locatable power taps, even when the correct re-locatable power tap is in the right setting for the correct electrical appliance. Common installation-related abuses include; daisy chaining, overloading, damage and neglect, inappropriate grounding, tripping hazards and use of the wrong appliance.

A good understanding is necessary of the expertise, guidelines, connection and purpose of healthcare re-locatable power taps. It is quite evident that when properly used, hospital-grade re-locatable power taps are worthwhile, cost-saving implements that help keep the facility a notch ahead. It is recommendable to work with regulators to ensure that standards meet their consent. Working with proficient partners also helps to revise the policies if need be to identify and deal with liabilities and make endorsements towards realization.

Wet Locations

Wet locations as defined by NEC 517. 2 are areas of patient attention that are, usually, prone to damp conditions while in the presence of patients. Such include areas with standing fluids or soaking of the work area. The normal cleaning procedures and minor spills do not describe a wet location. The new version of the National Fire Protection Association code was controversial when it changed the definitions of wet locations. The association in recent times made a code change that categorizes ORs as wet procedure areas except when a risk assessment proves otherwise. Since it is a requirement that wet locations must have protection against electric shock, ORs proved to be wet locations should have secluded power or ground-fault interrupters. ORs were formerly not considered as wet areas by default but are now the case unless a risk assessment concludes otherwise. The change is difficult for hospitals to deal with because it translates to the hospitals incurring massive costs such as the installation of secluded power systems or ground-fault circuit interrupters so as to afford protection against electric-shock hazards.

The modern day OR makes use of numerous electronic life-support equipment. Such equipment is necessary for the special care of patients during surgery. Additionally, there are recurrent incidences of pools of water and blood on the floor from patients and the irrigating fluids used by surgeons in their surgical procedures. Consequently, the modern day ORs often have conductive liquids on the floor, which poses a hazard to the patients and staff in the OR. Therefore, it is important that the modern day

ORs have the additional safeguard of secluded power or ground-fault circuit interrupters. Such is attainable by identifying ORs as wet areas.

Centers for Medicare and Medicaid Services

CMS is accountable for government of several crucial state healthcare platforms in the United States. In line with Health Information Technology for Economic and Clinical Health Act, CMS has several responsibilities towards the improvement of health IT. They include; Implementation of Electronic Health Records, definition of the meaningful use of EHR technology, drafting standard for EHR certification and updating health information privacy and security regulations. Significant use in a health information technology framework explains the use of electronic health records and associated expertise in a health-care institute.

The main change is in the development of coding from its customary part in deciphering narrative medical manuscripts into analysis and process codes. Coded data nowadays plays a part in rigorousness fine-tuning, valuation of care quality, assessment of patient’s protection, community health investigation, and improvement of decision support models. Therefore, coding must meet an evolving objective of gathering health-care data in a common form comprehendible by many people, and that is applicable both at a personal and community levels.

Such growth brings about extra responsibilities such as feeding of health data into a database for future use and the requirement to appreciate the representation of the quality and precision of data. SMC, therefore, governs the revolutionary alterations in medical vocabulary.

The mandate in the memo dated December 10, 2011 is a summary of the

requirements that hospitals must observe in maintaining their equipment. It clearly stipulates the prohibition of alternative equipment maintenance methods other than that of the manufacturer. Furthermore, it gives hospitals the authority to decide in some instances the testing frequencies, maintenance and inspection schedules of some of the facilities and equipment after risk assessment of staff and patients by qualified personnel. Overall, the memo gives the general guidelines that the hospital should follow when maintaining their facilities and equipment.

After the 2011 mandate, there was a response prepared by AAMI and OSHA. These are bodies that seek to ensure the safety and health of employees and patients by setting and imposing standards, conducting teachings, and boosting perpetual development in the work place care and well-being. They do not represent the hospitals but work to ensure that good environment for the hospitals to thrive while at the same time protecting their patients and staff.

The response document succeeded the CMS decision on the same subject and went slow on some of the CMS necessities. CMS now allows alternative equipment management in certain situations.

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