HOSPITALS NEED COMPETENT ENGINEERS

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THE Institution of Engineers, Malaysia (IEM) is concerned over the recent failures of power supply to two hospitals in the country. On 8th September 2012, 74 patients need to be evacuated from Port Dickson hospital due to a small explosion at the main electrical switch board which led to electrical outages and brought surgery to a standstill. On 14th October 2012, a power failure at the University Malaya Medical Centre disrupted hospital operations for three days. Inadequate maintenance and old equipment were cited as causes for both incidents.

Hospitals have to be designed, constructed, operated and maintained not only to cater for functional clinical requirements but also for patient safety, security and comfort. Hospital facilities are very critical as there are patients who

may not be able to evacuate themselves in the event of a disaster. Failure in any engineering system may jeopardise the lives of the patients especially those who are undergoing surgery or in critical care.

In order that patient safety is not compromised, the design and maintenance of hospital facilities have to comply with local and international standards. There are stringent rules stipulated in the Private Health Care Act 2006 that governs the design and operation of healthcare facilities as well as the Electricity Supply Act, 1990 that governs electrical installations. There is also a local healthcare accreditation body that sets the standards for hospital quality management. Unfortunately, even with all these regulatory structure in place, not all hospitals in the country have complied fully to requirements.

There is a need for hospitals to recognise that engineering equipment and facilities are critical to the safety, recovery and comfort of patients. Whilst hospitals have generally been very strict in enforcing the quality and standards of clinical personnel, the same however, is not the case with engineers. Many hospitals do not even engage registered Professional Engineers to look after their facilities and biomedical equipment. As a result, maintenance practice, renovation and equipment replacement are often not well managed, coordinated and executed according to good engineering practice. Blaming the "ageing" equipment without understanding the underlying issues seems to be missing the source of the problem. IEM recommends that a proper root cause analysis be carried out and a Professional Engineer be engaged to undertake risk management.

Today's modern hospitals use sophisticated equipment and complex engineering systems to deliver a high standard of healthcare. This however, comes with inherently high risks which require the competent services of Professional Engineers who will increasingly be considered essential in the hospital. Contingency plans should also be in place to handle any untoward events and these plans must be rehearsed every year to be effective. The budget allocation for engineering services and personnel in hospitals should commensurate with its growing significance in ensuring patient safety, comfort and wellbeing.

The IEM looks forward to cooperate with the government, relevant agencies and the hospitals in looking at the safety and integrity of healthcare facilities as well as the potential issues that can arise from failures of critical services. ■

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