
THE CHALLENGES OF HEALTHCARE FACILITIES MAINTENANCE IN TERTIARY HOSPITALS IN SOUTH EAST NIGERIA

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ABSTRACT: *The research work critically analyses the inherent challenges of healthcare facilities maintenance in tertiary hospitals in South East Nigeria. The main challenges of managing tertiary healthcare facilities are the highly diverse network and range of functions which are needed to maintain operations as well as the complexity of the support services. Tertiary healthcare hospitals render specialist services with sophisticated healthcare structures, equipment and machinery that can only be maintained by experts.*

KEYWORDS: Challenges, healthcare facilities, maintenance, tertiary hospitals

INTRODUCTION

Maintenance is a combination of both technical and administrative actions which are aimed at keeping the components of a facility in the most appropriate condition for effective use. Al-Zubaidi (1997) observed that the main goal of maintenance is to minimise related operating costs. An all-encompassing maintenance builds in the performance of the buildings, maximises personnel safety, minimises operational costs, environmental threat and the risk of material damage.

Maintenance is one of the main domains of knowledge with which facility management is faced. It involves budgeting and priority setting of different maintenance activities to suit the maintenance policy and service life planning of organizations. Facility maintenance in the hospital is “maturing”, this implies that there has been proper planning and management with all essential requirements and compliances with regularities adhered to, but unfortunately many maintenance organizations in the hospitals still do not realise the importance and benefits of effective facility maintenance.

HEALTHCARE FACILITY MAINTENANCE

Shohet and Lavy, (2001) considered healthcare facility maintenance as one of the key elements for successful delivery of healthcare services. Hospitals and healthcare facilities are among the most complex, costly and challenging facilities to manage (Loosemore and Hsin, 2001).

The goal of the facility maintenance organisation in a hospital environment is to achieve zero defects in the hospitals physical operation, especially in areas where small problems can have huge consequences and be a matter of life and death. One of the main challenges of managing hospital facilities is the highly diverse network and range of functions which are needed to maintain operations as well as the complexity of services which are required to support them. Loosemore and Hsin (2001) enumerated competent areas of coverage of hospital facilities maintenance to include: maintenance of all plant, equipment, building, infrastructure and landscape through a comprehensive maintenance program.

- Maintenance of all medical and laboratory equipment through a comprehensive maintenance programme
- Cleaning of general areas as well as specialised areas including supply of toiletries and consumables.
- Supply of clean new tailored linen, collection, transporting and laundering of soiled linen, repair of torn or damaged linen and provisions of curtains, cushion covers, and screens including consumables and facilities for bagging.
- Supply of consumable items such as waste bins, sharp containers and coloured bags, collect and transport waste from the source of generation within the hospital to the incineration plant for disposal,

In other hospital setting, the situation differ from what Loosemore and Hsin, (2001) presented. Oladejo (2014) in a study conducted on tertiary hospitals in South East Nigeria observed that healthcare facilities maintenance centered mainly on structure, equipment and machinery used by healthcare institutions while the cleaning of wards, offices and general areas as well as the supply of clean linen and disposal of waste bins were carried out by the facility management unit. The maintenance units of tertiary hospitals were responsible for maintaining the structural aspects of healthcare buildings, equipment and plants and machinery. This reduces the responsibility of the maintenance unit but by no means reduces the complexity of their duty.

CHALLENGES OF HEALTHCARE FACILITY MAINTENANCE IN TERTIARY HOSPITALS

Tertiary healthcare facilities are referral centers receiving referrals from secondary and primary healthcare centers. They provide managed care, the most specialised healthcare administered to patients with complex ailments who may require high risk pharmacologic regimens, surgical procedures or high cost technological resources. Tertiary care is provided in tertiary care centres, usually university teaching hospitals, as it requires sophisticated technology, multiple specialists and sub specialists, a diagnostic support group and intensive care facilities. Tertiary hospitals render specialised services with sophisticated healthcare equipment and machinery that can only be maintained by experts. Unlike facility maintenance in the business or corporate world, facility maintenance in the tertiary hospitals calls for expertise from operators, an ability to maintain and manage sophisticated healthcare structures, equipment, plants and machinery to avoid costly failures during emergencies. Tertiary healthcare facilities function round the clock, seven days of the week, all year round. It requires effective support of critical infrastructure of healthcare, such as power supply for operating theatres and medical gas in intensive care units, sophisticated equipment and machinery for diagnosis and treatment etc.,. With public enlightenment on the radio, television and newspapers on the activities of the

National Health Scheme (NHS) more patients are visiting tertiary hospitals where they pay very little or nothing to receive healthcare. This has increased patient admissions and more pressure is exerted on the available facilities leaving them to yearn for urgent maintenance. Unlike maintenance in corporate organisations, tertiary healthcare maintenance involves sophisticated healthcare structures, equipment, plants and machinery that are in constant use all through the year. Oladejo (2014) in a study of tertiary healthcare institutions in South East Nigeria takes a closer look at the maintenance units of University of Nigeria Teaching Hospital Enugu, Enugu State Ebonyi State University Hospital, Federal Medical Centre Owerri, Imo State and Nnamdi Azikiwe University Teaching Hospital Awka, Anambra State and observes that the maintenance units lack competent staff considering the nature of the facility they are to maintain. This is linked to failures and delays in rectifying breakdown of crucial medical equipment. With constant research on healthcare resulting in more sophisticated technologies and therapies, tertiary hospitals will continue to make use of more sophisticated facility. The present calibre of staff in maintenance units of hospitals are obviously incompetent to carry out maintenance on these machinery. With their continued presence, maintenance in tertiary hospitals will continue to be a failure. Some tertiary hospitals outsource the maintenance of sophisticated healthcare equipment to service providers who specialise in them but this has also met with failure in the absence of close monitoring and supervision. Some other tertiary hospitals outsource their facilities maintenance to reduce cost or to cut down on the financial burden of employing qualified maintenance staff.

Effective maintenance is a means to the success of an organization. Constant equipment failure will prevent tertiary hospitals from achieving their aim. In the healthcare sector, constant equipment failure means putting the lives of patients at a very high risk. Although the tertiary hospitals under study admitted having a schedule for maintenance but, that schedule is not being adhered to. Maintenance is carried out when there is crucial equipment breakdown or when emergencies are involved. Maintenance is in the form of “complain and response”, if the cost involved can be borne by the maintenance Department, otherwise the maintenance work holds on until sufficient fund is made available by the management of the hospital. If a regular maintenance schedule is followed, unfortunate patients will not die in medical theatres due to sudden failure of medical equipment and supporting generations.

COMPETENCE OF THE MAINTENANCE UNIT IN TERTIARY HOSPITALS

The competence of the maintenance crew in tertiary hospitals has always been questionable especially during emergencies. In a study of tertiary hospitals in South East Nigeria, Oladejo 2014 observes that the maintenance unit of tertiary hospitals are poorly staffed. Only very few qualified staff are recruited, the host are technicians. See Table 1

Table 1 Competence of the Maintenance Unit in Handling Emergencies

Competence in handling emergencies	Frequency	Percent	Cumulative percent
Yes	8	61.5	61.5
No	5	38.5	100.0
Total	13	100	

Table 1 reveals that 8 respondents representing 61.5% are of the opinion that the maintenance unit is competent to handle emergencies involving equipment failures while 5 respondents

representing 38.5% feel the maintenance unit is not competent in handling emergencies involving equipment failure. The researcher is of the opinion that the responses of the respondents are personal opinions and do not reflect on the actual situations in tertiary hospitals.

The Heads of maintenance units, when interviewed, admitted that insufficient provision of equipment and funds accounted for their poor performance. In view of this, it will be highly inconsistent to claim competence in handling equipment failures.

The professional qualification of the maintenance crew is another very critical aspect that needs to be thoroughly examined because it greatly affects competence of the maintenance unit. See table 2.

Table 2 Professional Qualification and Competence of the maintenance staff

Professional qualification and competence	Frequency	Percent	Cumulative percent
Yes	12	92.3	92.3
No	1	7.7	100.0
Total	13	100.0	

The result in table 2 shows that 12 respondents representing 92.3% feel they are professionally qualified and competent to handle maintenance while 1 respondent representing 7.7% said that maintenance staff are not professional qualified and competent. The economic situation in Nigeria has made employers to recruit staff with less qualification, s who they can pay less and still expect to have the best.

The member of staff in the maintenance Departments of the tertiary hospitals studied are of the opinion that they are professionally competent and qualified to handle all aspects of maintenance but, the big question is, why does their hospital out-source the maintenance of some sophisticated medical equipment. They are obviously not competent. Apart from the Head of the maintenance unit who is an Engineer an one or two other professionals, the other members of staff are technicians,

The available qualified professionals in the maintenance units of tertiary hospitals ought to be engaged in constant staff training and development programmes to be abreast with the current sophistication and complexity of medical technology in Nigerian hospitals. See table 3

Table 3 Existence of staff training and development programme

staff training and development programme	Frequency	Percent	Cumulative percent
Yes	2	15.4	84.6
No	11	84.6	100.0
Total	13	100.0	

Table 3 shows the responses on the presence of staff training and development programmes. The result reveal that 2 respondents representing 15.4% are of the opinion that staff training and development programmes exists while 11 respondents representing 84.6% affirmed that staff training and development programmes are not in existence in their maintenance units.

The responses show that staff in the maintenance unit do not undergo staff training and development even in the face of highly sophisticated medical equipment and technology. In August 2011, the Federal Government of Nigeria imported and distributed sophisticated medical equipment to tertiary healthcare institutions in Nigeria. How will these equipment be put to good use and be maintained without adequate training of the maintenance staff? Lack of maintenance will make these equipment to breakdown and be abandoned without getting to the life cycle estimates of the manufacturers. Medical equipment are in constant use twenty four (24) hours in a day, every seven (7) days of the week all year round because tertiary hospitals do not run out to patients.

FINDINGS

- The maintenance of tertiary hospitals is not effective. Maintenance is reactive instead of proactive. The reactive approach to maintenance is still subject to the availability of funds.
- Although maintenance schedules exist in the tertiary hospitals studied, they are not out to use.
- The inefficiency of the maintenance unit in tertiary hospitals is shown by their very poor response rate to facilities breakdown.
- Resources allocated for facilities maintenance in tertiary hospitals are inadequate. The maintenance unit attributes reasons for their inefficiency to inadequacy of funds.
- Maintenance units of tertiary hospitals have very few professional qualified staff. A greater number of their staff are technicians who do not have the professional training and experience to handle sophisticated medical equipment.

CONCLUSION

Having analysed issues raised and the responses, the researchers conclude that effective and efficient maintenance in tertiary hospitals can only be achieved if specialised professionals who can handle sophisticated medical equipment, fixture and fittings are engaged to render services on full time basis.

RECOMMENDATIONS

- The maintenance unit should be part of the design and construction team in tertiary hospital
- Emphasis must be placed on training and skill development activities to keep up with advancement in technology in tertiary hospitals.
- A proactive approach to maintenance should be adopted, the reactive approach is not suitable especially as human lives are involved.
- Well qualified and experienced maintenance managers and staff should be appointed to achieve effective maintenance.
- A functional maintenance schedule should be put in place and strictly adhered to, to prevent crucial equipment failures
- Adequate resources should be provided for facilities maintenance by critically analysing the cost expended on maintenance over the years and making necessary projections to arrive at a more adequate estimate to cover the cost of maintenance in the future.

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