Editorial – Educational

The Educational Value of Morbidity and Mortality Committee in a Hospital Setting

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The Morbidity and Mortality Committee (MMC) review has a great educational value for physicians and medical students. In addition, it has a great impact on health improvement and healthcare delivery. All hospitals in Bahrain should establish an MMC to update their physicians and improve their services.

The primary goal of reporting and reviewing morbidities and mortalities is to enhance patients' safety, care and prevent possible sentinel and adverse events. It is expected that hospital morbidities and mortalities would increase as the average human lifespan is increasing[1]. Preventable morbidity or mortality could be due to iatrogenesis, human errors, and negligence[2].

Codman, in the early 1900s, lost his staff privileges at Massachusetts General Hospital in Boston because he initiated Morbidity and Mortality Conferences (MMC). His effort was resisted by all surgeons for economic reasons. The first recognized MMC was held in 1935. MMC use is now mandated by the Accreditation Council for Graduate Medical Education in human medicine[3]. MMC educational value could be shared through presentation and error/s analysis, dissemination of information[4]. In a teaching hospital, mandatory attendance of MMCs is an essential requirement of training.

Members of the MMC should be familiar with Root Cause Analysis; the objective of which is to identify factors that contribute to adverse events. The common goal is to gain insight into causes, describe the adverse event, then ask "why" it happened; continue to ask "why" until the root cause is identified (may take more or less than five "whys"). It is essential to maintain focus on the process and not the personalities[5,6]. In many countries and several medical institutions, MMCs have been embedded within the medical curriculum for medical training[7].

Regular hospital morbidity and mortality meetings are educational tools useful for assessing the quality of care and patient safety.

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Vincent et al, in 1998 recommended a framework which considers multiple factors based on systems, resources, internal and external environments to analyze and overcome an adverse event rather than focusing solely on the action of the staff[8]. The framework includes institutional context, organizational and management factors, work environment, team factors, individual factors and patient characteristics, see figure 1 by Ishikawa[8].

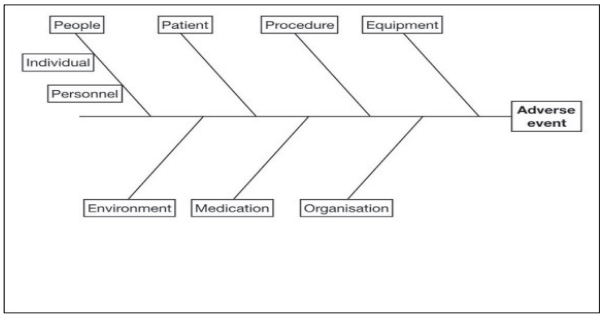

Figure 1: Diagrammatic Representation of Fishbone Analysis

Aboumatar et al found that at Johns Hopkins, only one of twelve departments was reviewing their adverse events using a standard approach and root cause analysis for major cases only[9].

Morbidity and Mortality Root (MMR) cause analysis feedback is of paramount importance for teaching objective and promotion of good practice. The feedback should be linked to the hospital's protocols, policies and managed according to the latest guidelines. Recently, the review process and methods of MMR have been taught to students and integrated into medical school curriculums[10].

Six key elements should be applied to guide the process of effective review and its implementation. The elements included clarification of the purpose, review regularly, select cases systematically, seek system issues, share learning and feedback strategy[10].

The maximum number of disciplinary actions taken by NHRA was against physicians, which resulted in the suspension of more than 50% of involved physicians, followed by a written warning and license suspension[11,12]. Most NHRA disciplinary

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actions were due to morbidity or mortality. In 2015, the majority of complaints were against the private sector, particularly from the department of obstetrics and gynecology and the highest from the emergency department in year 2016[13,14]. Similarly, most lawsuits in many international studies were against obstetrics and gynecology services.

Hospital morbidity and mortality, on many occasions, could lead to medical litigations. A well-structured MMC compared to non-uniformed departmental review grasped more preventable adverse events and morbidities, and resulted in the reduction of lawsuits[15,16,17].

There is no clear system which classifies morbidity into minor or major and not all morbidities discussed in the morbidity and mortality of the department concerned. In addition, some heads of departments believe that the morbidity and mortality committee infringes on their privacy and their "Godlike behavior".

The minor morbidities/incidents are unfortunately still being underreported. Although most MMC evaluate the short-term morbidities, the long-term morbidities are unknown and not recorded in the long-term prospective study.

The Ottawa MMC Model (OM3) has been recently adopted in King Hamad University Hospital. Key components of the module include appropriate case selection, structured case analysis, creating and disseminating summaries, developing an administrative pathway for action item and encourage inter-professional and multidisciplinary involvement[18]. During the meetings, one-third of the time is allocated in describing the case, one-third for analysis and one-third for open discussion and action plan.

Hospital-wide MMC meetings are held monthly and all physicians, nurses, students, and technicians are invited to attend to discuss cases transparently and openly for teaching purposes; no blame culture has been adopted during the discussion.

Similar morbidities rarely occurred after it was discussed in the hospital-wide MMC meeting. Hence, educating healthcare providers regarding evidence-based medicine, hospital guidelines and utilizing the simulation center and the wet lab lead to decreased unexpected morbidities and mortalities.

Many times, morbidity and mortality arise due to a system failure rather than an individual error. The defect could be due to patient factors, lack of technical skills, decreased care level due to work overload and burn out, teamwork failure and improper resident supervision, lack of specialist consultants, administration contributors such as budgeting and absence of pathways and guidelines. Last but not least, external contributors like paramedic services and public health awareness campaigns could well contribute to the prevention of adverse events.

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