

Disease Outbreaks and Its Ramifications on Anaesthesiologists

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Dear Editor-In-Chief,

Today's world is facing multitudes of international health threats. Disease outbreaks in the 21st century had become increasingly frequent and devastating [1]. The 2014 global scare of Ebola virus disease (EVD) outbreak has placed most anaesthesiologists on high alert [2]. Circumstances of these outbreaks has since emphasized the importance of control measures and safe medical practice adherence to minimize transmission of fatal infections.

Associating the anaesthesiologists' work profile with high risk healthcare provider exposure during an outbreak is unavoidable [2]. Invariably, the risk is present whenever there is contact with exposed patients either for medical assessment or health related procedures, usually of the life-saving types. Aerosol generating procedures, surgical and percutaneous procedures involving bodily fluids places them at risk of exposure. This risk exposure is magnified in the event of non-utilization, disruption or failure in personal protection equipment (PPE) during patient contact [3].

The importance of PPE has been stressed in major protocols and guidelines as the only effective means of disease prevention and control [4]. However, the perception of PPE as an indispensable part of efficient medical care is lacking. Its practice and use is sporadic and limited to periods of disease outbreak. As medical frontline providers, anaesthesiologists commonly are required to wear such attire during outbreaks. Based on their experience, they can provide pivotal positive feedback and recommendations for future PPE manufacturing. Its use should factor in simplicity, convenience and comfort. The ideal PPE construction remains an achievable goal in the near future. Nonetheless, its efficiency is still heavily reliant on correct donning, removal, disposal and breach protocol.

Initial infection control arrangements during an outbreak form the foundation of subsequent medical policies. A successful policy depends on healthcare providers (HCP) understanding and acceptance of their roles [5]. Amongst HCP, the anaesthesiologists' health is considerably threatened during periods of disease outbreaks. Their medical duty requires them to be at close proximity with highly contagious patients. The extensive length of patient contact during peak disease progression is another additional health and mental burden.

Further difficulty arises when the obligatory medical duty clashes with the safety of HCP [6]. The anaesthesiologists must be competent in utilization of available medical resources to benefit the community health yet avoiding work hazards involving HCP. This is a drawback as the training process of most anaesthesiologists prioritises on clinical capacity. The lack of emphasis in administrative and psychological wellbeing components in postgraduate anaesthesia education is apparent in inexperienced, junior anaesthesiology trainees' non-clinical judgement and decision.

Reassuring the team of HCP in the anaesthesia department during this challenging period is required. As most frontline doctors are junior anaesthesiology trainees, reassurance can be provided by improving existing knowledge and skills. Organizing workshops, skill laboratories and refresher courses regularly for preparation of impending disease outbreaks is worthwhile to improve their awareness and competence. The critical care background of senior anaesthesiologists renders them suitable for initiating, regulating and maintaining such training.

Anaesthesiologists must realize and contribute their invaluable experience through digital learning. The current era has allowed rapid, repeated and synchronized teachings. Reaching out to non-anaesthetic HCP especially in the under-privileged and rural areas has since become possible and practical. Doctors working in remote area lack direct supervision and learning opportunities. Anaesthesiologists can guide them by real-time monitoring and immediate correction of medical practices through skype or video-conferencing.

Institutional policies can strengthen work environment safety. A relevant yet dynamic disease outbreak control plan is heavily reliant on frontline HCP feedbacks and higher administrative decisions. Dual communication between administrative leaders and frontline HCP is important. Central to this communication is the anaesthesiologist. Their unique position requires them to work with frontline HCP of various medical disciplines, supportive staffs including but not limited to nursing, anaesthetic assistants, medical devices technicians, pharmaceutical and laboratory support. Anaesthesiologists can relay overall feedback to administrators as they could take notice of the strengths and weaknesses of various medical units. Knowing the overall picture can aid in proper outbreak plans according to the capabilities of each medical units.

Infection control, emergency and critical care experts are required for organized coordination and devising appropriate management strategy almost immediately following an outbreak. Unfortunately, each experts lack the knowledge insight of the other units. Anaesthesiologists' central working position amongst HCP requires them to communicate with all medical disciplines involved. They can aid in the avoidance of slow, conflicting and uncertain communication between medical disciplines [7]. Poor communication between teams is detrimental as it leads to a chaotic and stressful work environment.

Teamwork is the key to a united task force on disease outbreak control. Anaesthesiology and intensive care is commonly seen as a support team. Central to delivery of this role is the immense assistance from allied health professionals (AHP). Whenever there is a disease outbreak, medical resources will be reshuffled and shifted in a manner to manage and curb the spread of the disease [6]. This implies increasing critical care beds or opening additional, dedicated outbreak wards. Adequate manpower is an administrative issue. Both

anaesthesiologists and AHP are commonly exposed to physical and mental fatigue from overworking.

The justification and responsibility of all critical care and anaesthetic related procedures has increased over the years. The nature of their work demands them to provide safe and smooth supportive care during disease outbreaks. These expectations can be extremely harmful to their personal health as anaesthesiologists can experience profound anxiety and distress while working. A common expectation is the ability to secure difficult airway. The requirement for rapid clinical decisions and the last in line of expert skill places them in extreme stress. This mental burden is further exacerbated during emergency cases at night when anaesthesiologists commonly attend to critically ill patients alone. They had to learn to adapt and cope with the anticipated stress acutely.

Knowing personal limitations and potential allows realization of anaesthesiologists' capabilities to strategize and modify deleterious behaviors. However, some struggle with additional stress during outbreaks which can spiral into mental breakdowns. A good network of support amongst those in similar situations is helpful to encourage optimism and hope. Unfortunately, mental health in HCP remains a gap to be filled as it will always be second-rated next to major outbreaks.

Anaesthesiologists will continue to be part of future disease outbreak plans. They should possess and cultivate favorable attributes such as leadership qualities, being a team player, dedication and

commitment, effective inter-personal communication skills and unconditional compassion. Such character building is essential for positive work endurance which will improve population health outcomes. The attitude adopted will set the benchmark for future anaesthesiologists' labour intensive yet gratifying role during disease outbreaks.

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