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Review Article

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Excellence in Professional Peak Performance Hope to Believe and a Goal to Achieve "Part 1"

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Abstract

We have crises of professionalism in medical practice which undermines humanism. "The first do no harm" principal stated by Hippocrates more than 2400 years ago is violated. Health care system is a risky domain as the third leading cause of death in America is medical errors, and, half of the mortalities are in the operating room, intensive care unit, as well as in emergency department. Superior knowledge and clinical skills are not sufficient in themselves; as achievement of excellence and professionalism depends on successful interplay of personal qualities and the environment in which they work.

We aim to code and categorize the cognitive and mental skills required for excellence and professionalism associated with exceptional peak performance which are poorly defined and rarely incorporated into clinical and anesthetic curriculum. We hope to facilitate education of this tacit dimension of practice needed for patient safety and serenity.

We may counteract this defect in health care system through a Multi-Dimensional Protective Vision which is composed of knowledge of human factors, catalogue of cognitive errors with overemphasis on correcting those thought-process errors. We will define Non-Technical Skills which are cognitive, behavioral and interpersonal abilities that are not specific to one profession, but crucial to safety. They are expressed as; art of decision making, task management, situation awareness, communication, and team work in addition to stress management. We will explain the science of High Reliability Organizations which are those organizations like commercial aviation flight and nuclear power stations which are running high risk tasks with excellent safety records. We are going to show the behavioral markers of Crises Resource Management and the coordination strategies that are used to improve safety profile in anesthetic and surgical teams. We suggest audio-video record in risky domain to detect peak performance to learn from, and correct poor performance.

Keywords: Excellence, Professionalism, Peak Performance, Medical Errors

Introduction

We have crises of professionalism in the practice of medicine as depersonalization and deprofessionalization undermine humanism. The "first do no harm" principal enunciated by Hippocrates more than 2400 years ago is violated when the professional engages in reprehensible acts such as greed, abuse of authority, discrimination, intimidation, sexual harassment, negligence, waste of health resources of the institutions, fraud, and undeclared conflicts of interests [1].

Current state of medical practice

Health care system is an extremely risky domain as the third leading cause of death in the United States of America is medical errors, and more than 400,000 patients are dying annually, half of the them in the operating room (OR), intensive care unit (ICU), as well as in emergency department (ER) [2]. Our patients are coming to be helped and healed and not to be harmed or even killed by friendly fire due to medical errors (figure1).

Figure 1: Friendly Fire is caused by medical errors and is more dangerous than terrorism

Excellence, professionalism, and peak performance

Superior knowledge and clinical skills are not sufficient in themselves; as achievement of excellence and professionalism depends on successful interplay of individuals' personal qualities and the environment in which they work. Thus trainees, organizers of the training systems, educational supervisors, and head of departments have a part to play in the encouragement of excellence [3].

Excellence, professionalism, and peak performance, are poorly defined and rarely incorporated into clinical and anesthetic curriculum [4]. We will explain concepts of excellence, professionalism and peak performance in high risk domains and in the specialty of anesthesia.

Excellence

Excellence is defined as striving for perfection and to give one's best in the field of play or in life. It is not only about winning, but also about participating, making progress against personal goals, striving to be and to do our best in daily lives [5].

Excellence is about not accepting the status quo i.e. the state of things as it is, the way the things are as opposed to the way they should be. It is characterized by the continuing urge to seek challenges and learn from them. If competence is defined as an observable minimum standard, then excellence is simply an extension of competence to upper extreme [6].

Professionalism

Professionalism; is derived from the verb to profess which means 'to promise'; the community to place the interests of the patients first and foremost. We must promise ourselves by lifelong learning, maintain physical and mental acuity through a perfect lifestyle. We should attend our patients prepared and not impaired by good sleep hygiene and proper stress management [7]. Professionalism is an obligation towards our junior and senior colleagues as well as the whole society. It is defined as a set of values, believes, and behaviors that underpins the trust of people in doctors and is characterized by; responsibility, ethics, altruism and humanism [8].

Expert and peak performance

Medical expert is defined as one whose special scientific knowledge causes him to be an authority in his specialty [9]. An example of this special knowledge is our diagnosis and description of the first worldwide type six bridging bronchus, where there may be only 14 cases of this anomaly in the world which were divided into 5 types [10]. Peak performance is a state known as the zone of maximum function. It refers to the moment when we put it all together so that the ultimate height of human performance can be reached [11]. It is a state of superior function whose characteristics are crystal clearly focused attention, fast reactive, proactive, lack of concern with outcome, and feeling of supreme confidence as well as effectively combat stress to rise above daily challenges in order to strive towards self-mastery.

Challenges and urgent actions

Our hope is developing a peak performance mindset through visualizing the tacit dimension of excellence and professionalism which are interlinked together [12]. We should aim for and accept the challenge to promote excellence not only in few exceptional, but in majorities of trainees and in the consultants in order to combat waste of human potential that is always a cause for regret [13].

Identification of features that are both teachable to trainees and useful for anesthetists to gauge and review their own performance. Ultimately the promotion of excellence must be both an individual and organizational responsibility [12]. Our view offers a conceptual frame work to guide those wishing to address this in their practice.

Modification of medical education

We propose a curriculum to rescue humanistic values and to return to theses raised more than 24 centuries ago by Hippocrates.

Anesthesiologists have to code and categorize the metacognitive and mental skills required for excellence and professionalism associated with exceptional peak performance so that we facilitate education of this tacit dimension of practice needed for patients' safety, patients and community serenity [14].

The roadmap from competent to professional then to excellent peak performance must be outlined, not only in anesthesiology but also in high risk domains as surgery, intensive care unit, and emergency department in order to increase patients' safety and cope with current challenges in surgery and anesthesia.

Multi-Dimensional Protective Vision (MDPV)

An approach that may counteract this great defect in health care system is proposed through a Multi-Dimensional Protective Vision (figure 2) It is composed of a knowledge of the catalogue of most common medical errors in OR, ICU, and ER, errors classification, and types with overemphasis on correcting cognitive errors which are thought-process errors and leads to incorrect diagnoses and/or treatment [15]. Anesthetic and Surgical Non-Technical Skills (ASNTS) are cognitive, behavioral and interpersonal abilities that are not specific to the expertise of one profession, but equally crucial to guarantee maximum safety and reduces the risk of errors. They are expressed as: art of decision making, task management, situation awareness, communication, and team work in addition to stress management [16]. We need to be familiar with the science of High Reliability Organizations (HROs) which are those organizations like commercial aviation flight industry and nuclear power stations which are running high risk tasks with excellent safety records [17]. Introducing the behavioral markers by which HROs teams act will promote patients' safety. Crises Resource Management and the different coordination strategies that are used leading to improve safety profile in anesthetic and surgical team [18].

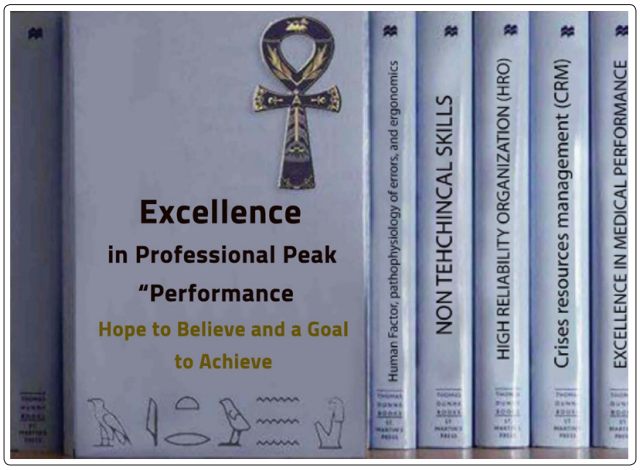

Figure 2: Multi-Dimensional Protective Vision represent our vision and mission in promoting excellence, professionalism, peak performance in patient's safety.

Goal directed approach

A goal directed approach to counteract medical malpractice through an adopting Multi-Dimensional Protective Vision via pre and post graduate program of continuous education on HROs that exhibit closed loop communication, information exchange, shared situation awareness, back up behavior, shared mental models, assertiveness, collective orientation, expertise adaptability, flexibility, planning, error management, feedback, team self correction [19]. Comprehensive studies in human factors as well as understanding the key types of cognitive errors specific to operating room in general and anesthesia in particular can be the first step towards training in metacognition de-biasing strategies which may improve patient safety [20].

Conclusion

We recommend our Multi- Dimensional Protective Vision to be implemented in the same way as advanced cardiac life support and basic life support courses for the unresponsive patients. Let us do resuscitation for the unresponsive health care system for our patients to protect them from friendly fire that are more dangerous than terrorism to people who are coming to be helped and healed. We suggest including school students who already study cardio-vascular system and respiratory system, among other subjects in the science of biology. We should introduce ergonomics, team work, human factors like sleep hygiene, stress management, fatigue awareness, and science of HROs as well as human errors, so that the whole society will speak a common language and attack the core of the problem which is lack of proper education on the major systemic causes of health care catastrophes. We suggest implementing a white box (WB) which is an audio/video record in OR, ER, ICU, and post anesthesia care unit to detect good performance to learn from, and correct poor performance. Gross changes need great leaders to carry out such a holy task.

Authors' contributions

A. EL-Molla proposed the conception, F. Aboul Fetouh shared, reviewed& supervised the proposal, R. AL-Otaiby, S. Bawazir, A. Gad, A. Obied, and M. Al-Mutairy shared their anesthetic and surgical experience in risky domains, A. Kandil shared her vision, experience, critically reviewed the proposed items. S. EL-Molla provided her experience in role of human factors in achieving excellence and professionalism in task performance. All Authors read and approved the final manuscript.

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