

# S4+Game

## TRAINING OF SOFT SKILLS FOR SURGICAL TEAMS USING AN IMMERSIVE SERIOUS GAME

NEWSLETTER

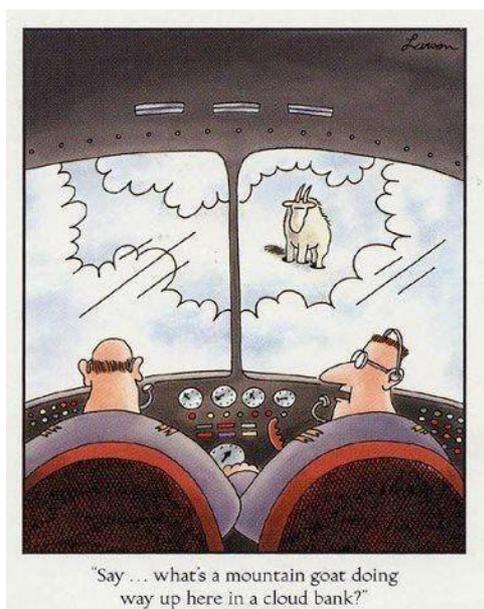
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### #SOFTSKILLS

Non-technical skills are observable behaviours that include both cognitive: situation awareness, decision-making and social skills including communication, teamwork and leadership.

### #SITUATIONAWARENESS



Situation awareness is the perception of environmental elements and events with respect to time or space, the comprehension of their meaning, and the projection of their future status (Endsley, 1995). There are three levels of situation awareness: perception, comprehension and projection. The first level to achieve situation awareness is to perceive the status, attributes, and dynamics of the relevant elements in the environment. Comprehension of the current situation constitutes the second level. Lastly, to reach level three it is necessary to project the future actions that will occur in the environment at least in the near term, based on the information from the two previous levels. In surgery, the first level would imply that each member of the surgical team should perceive all elements present in the operating room, their status, their attributes and their dynamics. For the second level, it

might be necessary to compile information from different sources to establish the patient status. Finally, the last level would request that team members, based on the perceived elements and comprehended situation, must detect future complications that would compromise patient security.

Endsley M. R. (1995) Toward a Theory of Situation Awareness in Dynamic Systems. Human Factors Journal 37(1), 32-64

Figure - @Pinterest

## #LEADERSHIP



Leadership is the ability to influence others, being the capacity to direct assumed as the key element to define the leader, considering that its action associates process management with planning, financing, human and material resources, monitoring implementation and evaluation, as well as problem solving and re-planning if necessary (Kotter, 1996). A distinctive prism of leadership focuses on the ability to lead others in the desired direction, providing and maintaining motivation, while inspiring them to develop their skills. In surgery, leadership contemplates the processes of coordination that may vary depending on the intraoperative phases or events, assuming that all team members are responsible for their tasks and can be considered a leader in their own work area. The Royal College of Surgeons of England (2014), refer that effective leadership of surgical teams, regardless of context, must be able to adapt style to the situation, be assertive, clearly define the roles of each element especially in critical situations, involve all elements in decision making, as well as incessantly promote the search for peer input.

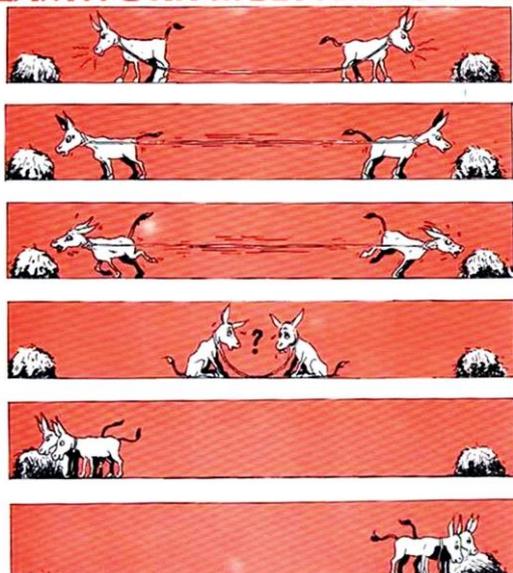
Kotter, J. (1996). *Leading change*. Boston: Harvard Business School Press.

The Royal College of Surgeons of England (2014). *Good surgical practice*. London: The Royal College of Surgeons of England.

Figure - @QuotesGram

## #TEAMWORK

### TEAMWORK ... BETTER FOR ALL



development of the situation.

The decision-making processes might be done by all involved members or by the team leader depending on the situation. Nevertheless, it should be clearly assigned including the rules of

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The key concepts of teamwork comprise the necessity of clearly set meaningful vision and purpose of conducted activities. The team structure as well as clearly set roles and responsibilities matter as well. Moreover, the efficient communication represent the crucial foundation of any team. The team members should be emphatic and able to consider current condition and limits of each other. The overall support is favourable and beneficial. Generally speaking, the ideal team should be flexible and agile in pursuit of being able to change the course of action according to changing conditions and situational context. This matters especially in the operation theatre where it is sometimes hard to estimate the

delegation in critical situations. Important part of a teamwork include also the willingness to consider as well as to appreciate the outputs and achievements of the team. The feedback is a must and the team performance should be continuously monitored. This would stimulate the future motivation to develop the skills of team members and improve the performance of the whole team. On the other hand, if any issue appears, it should be solved and addressed. The lessons learned are ideally identified and best practices derived in order to eliminate or avoid similar situations in the future.

Within the healthcare, the teamwork represents a very important soft skill, because most of the tasks and activities require more people involved. Usually, every process necessitate the participation of various actors. In case of surgery, these include a surgeon, an assistant doctor, an anaesthesiologist, nurses, cleaning staff and other relevant parties. Nevertheless, the stakeholders are much wider. Not only the families of patients, but also entities influencing healthcare institutions such as pharmacies, ministries, governments, etc. are important and impacted by the efficiency of the teamwork performance.

Figure - @QuotesGram

## #COMMUNICATION & INTERACTION



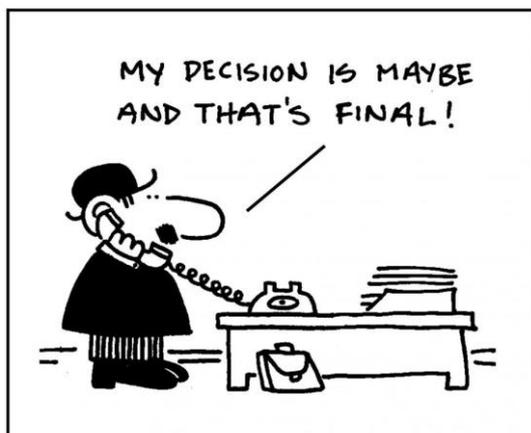
Communication

Communication includes all the mechanisms involved in the transmission of information. Any of these factors can contribute to improving the effectiveness of a work team, and it is enclosed within four basic questions: what, how, why and who. Communication through a virtual space implies a profound change in “how” talking about the usual communication channels. But any innovation in any of these factors has some impact on others. Understanding the communication channel as “the material process through which signals are produced, transmitted, received and interpreted” (Castells, 2008), a virtual communication space becomes a new way of producing, transmitting, receiving and interpreting signals. However, it is based on three already known communication models: the linear model, the interactive model and the transaction model. The latter represents better than the others the meaning of a virtual space when it becomes a communication space. Following the transaction model, in this space all the contexts that are part of the communication process and that determine the interactions that occur are integrated.

Figure - @ReadyToManage

## #DECISION MAKING

Decision-making involves the selection of a course of action from among two or more possible alternatives in order to arrive at a solution for a given problem”. (Trewatha, 1982) Decision making is time consuming and it cannot be taken suddenly. Usually people go through the next steps until they make a decision: firstly assessing situation and defining the problem, than gathering as many information as possible about the case, developing and choosing the best option and finally react to the situation. The last part of decision making is assessing the results



of our decision and draw conclusions. There are 4 main decision making models (intuitive, rule-based, analytical, creative), however surgery is a risky environment, where doctors must make decisions under time pressured- and unexpected conditions. The type of the decision strategy is determined by the available time and risk. Several times, unforeseen situations require new solutions or even changing the normal way of decision making.

Trewatha, R., Newport M.G. (1982). Management. Business Publications.,  
Figure - @Mike Flanagan, Jantoo.com

## MEETINGS

### LEARNING TEACHING AND TRAINING ACTIVITY – 02-05.02.2020. Cáceres, Spain

A 3-days-lasting learning, teaching and training (LTT) activity have been held in the Jesús Usón Minimally Invasive Surgery Centre for the consortium members.

The objective of this short-term joint staff training event has been to share the expert knowledge between the consortium members. Viral Studios (Spain) as a technical partner on one hand has taught how to install and prepare all the necessary equipment to play the Virtual Reality game; and on the other hand, Jesús Usón Minimally Invasive Surgery Centre, Charles University (Czech Republic), Semmelweis University (Hungary) and Polytechnique Institute of Portalegre (Portugal) as clinical partners have taught about soft skills and situations that can happen in the operating room.



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