Chapter 3
G-NO-TECS:
Generic Non-Technical Skills in Healthcare

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ABSTRACT

This chapter examines the concept of non-technical skills and how deficiencies in this arena can result in medical error.

INTRODUCTION

A number of models that originated in the airline industry to improve safety have been adapted to healthcare (Flin, 2003; van Avermaete, 1998.). Whilst there are clear parallels between the two industries, we should not lose sight of the stark contrasts. The team in a cockpit is usually only two individuals. The team in healthcare is incredibly variable: not only will it cross professional boundaries, hierarchies and micro-cultures that exist within the health service but it is often rapidly changing due to shift patterns. The team structure is often dynamic and some staff are environmentally fixed whilst others cover vast areas.

The numbers of tools that are being developed seem to be increasing rapidly (Fletcher et al., 2003; Flin & Patey, 2011; Flin, Patey, Glavin, & Maran, 2010; Mitchell et al., 2012): ANTS (anaesthetic non-technical skills), NOTTS (non-technical skills for surgeons), SPLINTS (scrub practioner's list of intra-operative non-technical skills) for scrub nurses are a few examples. If, however, we are training a team, should we be using a different tool for its different members? How will that make the team feel? I would suggest it will be difficult to unite such a team and give them a sense of a common goal.

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A different approach is presented here. We promote the use of a new generic tool (G-NO-TECS) that crosses the multi-professional silos. This tool builds on those already developed by adopting the aviation model into healthcare (Flin, 2003) but then takes it a step further by incorporating some of the behavioural solutions that potentially contribute to common errors (Rosenorn-Lanng, 2014).

An overview of this generic tool is included in the following section. There are 5 domains; team, decision making, task, situational awareness (including self awareness) and information management. Each will be considered in turn.

TEAM

- Leadership skills (including approachability of leader)
- Followership skills (including assertiveness of followers)
- Team building and maintaining (including hierarchy management)
    - Clear and appropriate role allocation
    - Consideration and support of others
- Conflict solving

If we begin with the team themselves, when looking at outcomes, a lot of focus has been traditionally placed on the role of the leader. However, recently people have become more aware that within a team there are more followers than leaders; a search has begun for what qualities may be beneficial in a great follower. Hierarchy has contributed to a large number of clinical errors("Bromiley Report verdict and corrected timeline,"). Errors occur when the hierarchy is too steep and the followers feel unable to challenge the leader when they are making a mistake (Hofstede, 2010). Another issue with hierarchy occurs when there is a flat hierarchy and so no obvious leader emerges simply through rank difference("Bromiley Report verdict and corrected timeline,"). Unless a conversation takes place about role allocation including who will lead, further problems will arise. These problems include: lack of task allocation which may result in omission or duplication of tasks, lack of direction, lack of decision making, lack of a diagnosis and inadequate situational awareness.

DECISION-MAKING

- Problem definition and diagnosis (commentating, generating shared mental model)
- Option generation (encouraging team input, avoiding fixation error)
- Risk assessment and option selection
- Regular review of decision as new information emerges

Decision-making is the next domain of the tool. Errors occur when a team fails to communicate that there is a problem, fails to declare an emergency or fails to have a shared mental model or diagnosis of what the problem might be. Difficulties also occur if only one diagnosis is considered with the potential for becoming fixated with that one solution. Good option generation is an essential skill, as is the regular review of the diagnosis as new information becomes available. We have not traditionally been taught to ask the questions, "What are we missing here?" "What else could this be?" "Do I agree with the working diagnosis?" Perhaps we should be asking these questions more often.

TASK RELATED

- Providing and maintaining standards
- Workload management (including distraction management and prioritization of tasks)
- Knowledge of and ability to use equipment

When we consider the tasks that are necessary for a patient's treatment, it is important that each