

## Transitioning Crew Resource Management into Healthcare

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## Transitioning Crew Resource Management into Healthcare

Crew Resource Management (CRM) originated in the field of aviation in the early 1980s after a large proportion of transport category airplane crashes were found to have been caused by preventable nontechnical skills, i.e., crew communication and coordination. Today, CRM is applied in training by exemplifying how to effectively work with coworkers while trying to accomplish a centralized goal. CRM transitioned from aviation to healthcare through the subfield of anesthesia in the early 1990s. It then began spreading to other areas of healthcare, such as operating rooms and obstetrics departments, after the release of a report from the Institute of Medicine (2000) which reported that, the estimated national cost of preventable medical errors was \$17 billion and the average number of deaths per year was 98,000.

There are many ways in which CRM training is deployed in healthcare, and thus standardization of aspects of CRM training such as length of the session, people involved, topics discussed, and assessment measures are lacking. For example, healthcare CRM training programs may last as little as an hour to as long as a few days. This is an issue because, without standardization, it is extremely difficult and unlikely to implement a consistent skill set for the medical community or accurately understand if CRM training is transferring into the healthcare setting as well as fitting into the unique scheduling that is present in healthcare. To address this concern, the current proposed paper describes the results of a literature review and analysis of how CRM is applied in healthcare.

For example, Clay-Williams, Greenfield, Stone, and Braithwaite (2014) found that full-day training sessions for CRM did not work well with the typical 12-hour rotating shift schedule in healthcare settings. To work around this, the researchers developed a modular training, based on two sets of two-hour workshops, in which participants could self-schedule and complete the modules they felt were relevant to their personal work environment on their own time. The modules included in this study focused on communication and situational awareness. The participants found the modules to be helpful and educational. This type of modular training seems as though it could potentially benefit the healthcare field. However, more research needs to be done to determine the actual real-world impact as well as if the modular training truly aids in error prevention when skills are transferred to real-world environments.

In summary, healthcare is still in the process of implementing CRM into the different subfields of healthcare (e.g. cardiology, pediatrics, radiology, etc.) and molding the training to be more standardized and validated, however training transfer has not been properly assessed. Future research should focus on creating a more consistent training that can be soundly measured and evaluated. The longitudinal carryover effect of skill persistence involved with modular trainings versus standard 8 hour trainings has yet to be fully researched and could shed light on the most efficient and most effective version of CRM training for the medical community.