Crew resource management: improving team work in high reliability industries

Abstract

The aviation industry recognised the significance of human error in accidents in the 1970s, and has been instrumental in the development of special training, designed to reduce error and increase the effectiveness of flight crews. These crew resource management (CRM) programmes focus on "non-technical skills" critical for enhanced operational performance, such as leadership, situation awareness, decision making, team work and communication. More recently CRM has been adopted by other "high reliability" team environments including anaesthesiology, air traffic control, the Merchant Navy, the nuclear power industry, aviation maintenance, and the offshore oil industry. This review paper describes the basic principles of crew resource management, then outlines recent developments in aviation and other high reliability work environments.

Keywords

Human resource management, Teams, Training, Safety

Citation

https://doi.org/10.1108/13527590210433366

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identified cross-industry and industry-specific lessons learned as well as success factors of these training programmes. The results can be used to improve current CRM programmes, which in turn may increase safety standards in high-risk work domains. Crew resource management or cockpit resource management (CRM)[1][2] is a set of training procedures for use in environments where human error can have devastating effects. Used primarily for improving air safety, CRM focuses on interpersonal communication, leadership, and decision making in the cockpit of an airliner. Its pioneer was David Beaty, a former Royal Air Force pilot and later a BOAC pilot who wrote his seminal book The Human Factor in Aircraft Accidents in the late 1950s.