

SAFETY CULTURE IN AVIATION

EXECUTIVE SUMMARY

This report aims to provide a history and organizational structure of Safety Culture in the Canadian aviation industry, as well as analyse best practices used in the industry to determine its applications to improving safety culture in the healthcare industry.

The Pilot's Flying Certificate for Flying Machines was released in 1919 for moderating public transport. More stringent Canadian standards were adopted in 1920, including requirements of experience and modified distances and testing altitudes. In 1960, the Aircraft Accident Investigation Branch was founded as part of the Department of Transportation. However, the need arose for an independent organization due to recommendations by the Commission of Inquiry on Aviation Safety. For this purpose, the Canadian Aviation Safety Board was created and replaced the Aircraft Accident Investigation Branch in 1984.

In 1990, the Transportation Safety Board of Canada (TSB) was founded to replace the Canadian Aviation Safety Board and currently holds reigning authority on aviation safety culture in Canada. It was created under the Canadian Transportation Accident Investigation and Safety Board Act, in response to a string of eminent accidents. The TSB was also created to further the advancement of safety culture in Canada's aviation system.

Research was focused on the organizational structures of two major organizations in the Canadian aviation industry: Transport Canada, the governing body of commercial aviation in Canada, and Air Canada, the dominating passenger carrier. Transport Canada operates under a Hybrid structure consisting of a Functional structure and a Geographical structure to oversee five different regions across Canada, while Air Canada operates under a Functional structure.

Transport Canada benefits from the addition of a Geographical structure because it enables the organization to cater to the unique characteristics of each of the five regions it oversees and allows for better coordination with provincial offices.

For both Transport Canada and Air Canada, operating under a Functional structure allows for economies of scale and specialization of skills in employees, leading to the reduction of operation costs and increased efficiency, respectively.

Analysis was conducted on three case studies involving separate Canadian aviation accidents involving a Beech King Air 100 aircraft, a Cessna A185E Skywagon, and a Swearingen SA227-AC Metro III. It was determined that between the three cases, modifications to the procedural practices for all flight crew, as well as educating passengers of appropriate safety protocol, would greatly contribute to enhancing safety culture.

Furthermore, the research conducted and case study analyses showed that the safety culture in the Canadian aviation industry can be attributed to six aspects. More specifically, the strong sense of safety culture in the Canadian aviation industry is due to the general awareness of best practices within the industry, acknowledgment and handling of operational setbacks, support of safety culture in upper management, effective use of safety management systems, implementation of non-punitive reporting policies, and enforcing a safety-first approach over profit.

The practices used by the Canadian aviation industry can also be applied to enhancing the safety culture in the health industry. It was found that the healthcare industry would benefit the greatest from borrowing the behaviours and practices found in the aviation industry to develop its collection and analysis of data to determine operational improvements, as well as to strengthen communication and training among medical personnel.