

U.S. Department of
Homeland Security
United States
Coast Guard



**COAST GUARD MEDICAL OFFICER MISHAP
REPORT (MOR)**



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HUMAN FACTOR ANALYSIS OF ACCIDENT INVESTIGATIONS

Introduction:

This CD version of the Medical Officer's Mishap Investigation Report (MOR) was developed by the Safety and Environmental Health Division (G-WKS) at Coast Guard Headquarters to provide medical officers with the necessary tools to successfully conduct a vessel afloat or aircraft mishap investigation. Every medical officer, likely to be assigned to a mishap investigation board, or be primary responders to a mishap should be familiar with the contents of this CD. This MOR reference and operational guide was prepared from the latest policies and most current directives available. If needed, consult Coast Guard Headquarters Safety and Environmental Health Division (# 202-267-1883) for further information.

Human Factors:

Records of mishaps investigations dating back to the early part of the 20th century indicate the important role that human factors have in the majority of accidents and incidents. Human Factor error by itself, or in combination with other factors, account for 60-80% of aviation mishaps and Flight Surgeons are often assigned as "Human Factor" specialists to be part of aviation mishaps. Developing and maintaining the necessary skills to conduct an efficient and thorough investigation is difficult, given the infrequent occurrence of such mishaps. This reference was developed to assist the medical officer in performing a mishap analysis, while minimizing errors resulting from lack of experience and familiarity with the investigation process.

Preparedness is paramount. A thorough mishap investigation begins with a well-organized pre-mishap plan. Coordinating emergency response with local authorities, having a well-organized pre-mishap investigation kit, conducting regular mishap-response training exercises, and close communication with the on-base Safety Officer are critical to the success of the mishap investigation. Much of the information, guides and directives presented here reference aeronautical accidents, which account for the majority of mishaps with the greatest loss of material and/or human life. However, the forms required to gather the data necessary for the MOR follow a generic format allowing the medical officer to adequately complete an aviation as well as surface fleet mishap analysis investigation.



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[Enclosure 3 COMDTINST M5100.47](#). Describes the principles and guidelines for completing the Medical Officer's Mishap Report. It includes the MO's Causality Table and a list of all applicable enclosures and Chapters in other COMNDINTST's required for completion of the MOR. This is a **MUST** read folder.

[Figure A-General Information Questionnaire](#). Collects vital demographics, work habits, social history and training on each member involved in the mishap.

[Figure B-Medical Officer's Injury Questionnaire](#). Collects valuable medical information, including autopsy findings, injury patterns and laboratory and radiological results on each member involved in the mishap.

[Figure C-Human Factors Checklist](#). This checklist provides medical and psychological profiles for member's involved in the mishap. It may also be provided to other unit personnel at the discretion of the medical officer.

[Figure D-72Hour Pre-Mishap History and 72-Hour Chronological Questionnaire](#). Is to be provided to each member involved in the mishap and is intended to collect a detailed history of the member's life during the three days preceding the mishap. This is a **mandatory form** and is not to be used in place of any other form(s). The first page of the pre-mishap history form and the chronological questionnaire **MUST** be included with the MOR.

[Figure E-Escape, Egress Questionnaire](#). Provides data on egress procedures for each member that exited the mishap vessel or was extracted as a result of the mishap.

[Figure F-Rescue and Survival Questionnaire](#). Provides vital information on rescue procedures, as well as the rescue equipment available to the crew before, during and after the mishap.

[Figure G-Survival and Personal Protective Equipment Questionnaire](#). Provides information on survival procedures and personal survival equipment.

[Figure H-Medical Officer's Report \(template\)](#). A printable template is provided for the medical officer to complete the final report. The medical officer **MUST** complete all mandatory information in the pre-printed blocks.

[Aviation Safety Mishap Investigation Guide](#). This extensive document provides the basic information in how to conduct a formal investigation board. Formerly known as the "Senior Member's Guide" this document provides detail information in how to conduct the board proceedings, the role of each assigned member, including the role of the medical officer in conducting autopsies, performing witness investigations, relationship to other board members and completing an aviation medical officer report. This is a **MUST** read document.

NOTE: Except for the 72-hour history and questionnaire all other forms are available to gather factual information and organize the large volumes of data usually obtained during a mishap investigation. These are tools to be utilized by the medical officer/flight surgeon to ensure important issues are addressed and no vital information is lost. These forms do NOT need to be included as part of the final MOR. They may and should be kept as part of the general mishap report as supportive evidence of conclusions surmised from the findings and future reference information.

The following folders listed here are included to provide the medical officer with knowledge on how to evaluate and discuss the findings of the investigation and expand the knowledge base of the human factor investigative process.

[Human Factors Analysis of Post Accident Data.](#) Provides ideas for analyzing and processing information. Allows medical officer to select the method to address the human error component of the mishap.

[Human Error Perspectives in Aviation.](#) Provides an overview of the causal role that human factors have played in aviation accidents.

[Human Error Analysis of Commercial Aviation.](#) Describes a human error framework with new investigative methods looking at the influence of fatigue, illness, attitudes, and work schedules as well as the latent effects of managerial decisions in the mishap process.

[Human Factor Analysis and Classification System \(HFACS\).](#) Describes in detail the HF analysis system and application of the “Swiss Cheese” approach in the identification of active and latent human based errors in accident development.

[Pre-Mishap Investigation Kit.](#) Provides recommendations on personal items, investigational tools and medical supplies to carry to a mishap site in order to properly gather the necessary data required

