

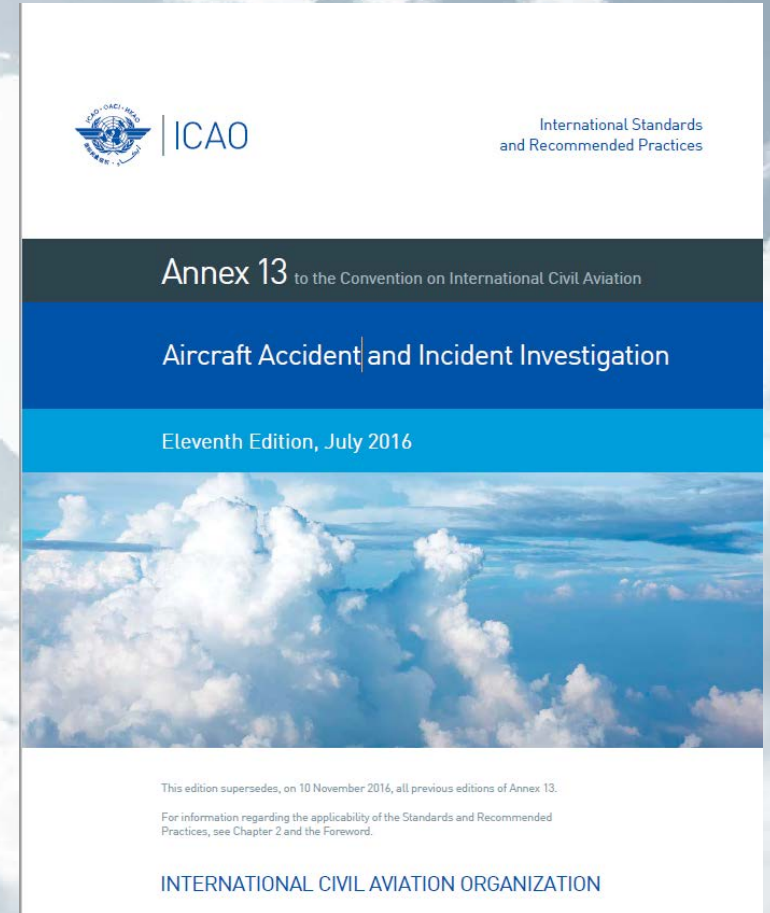
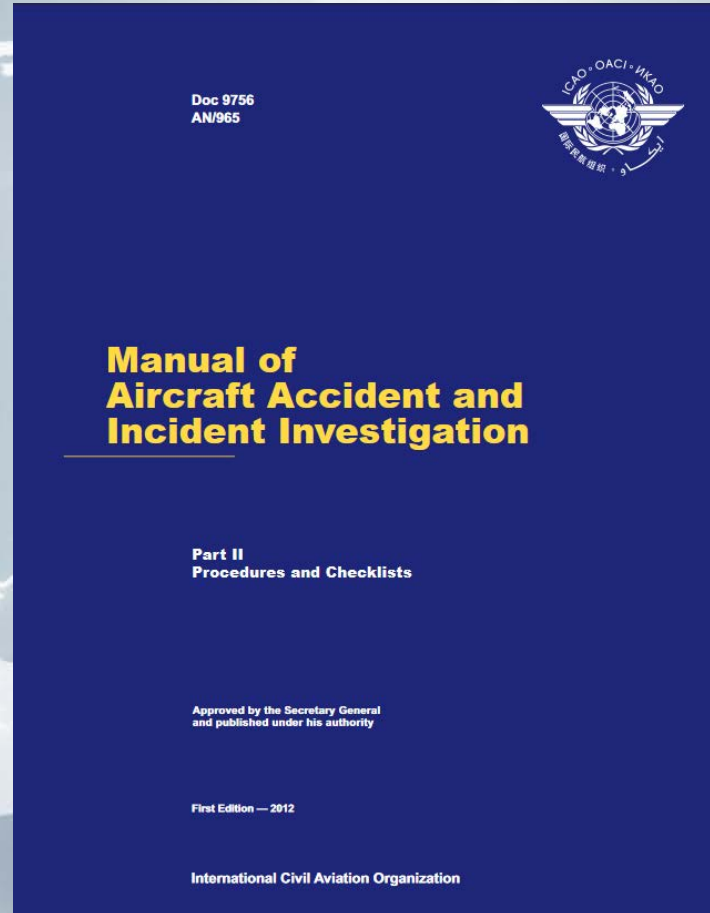
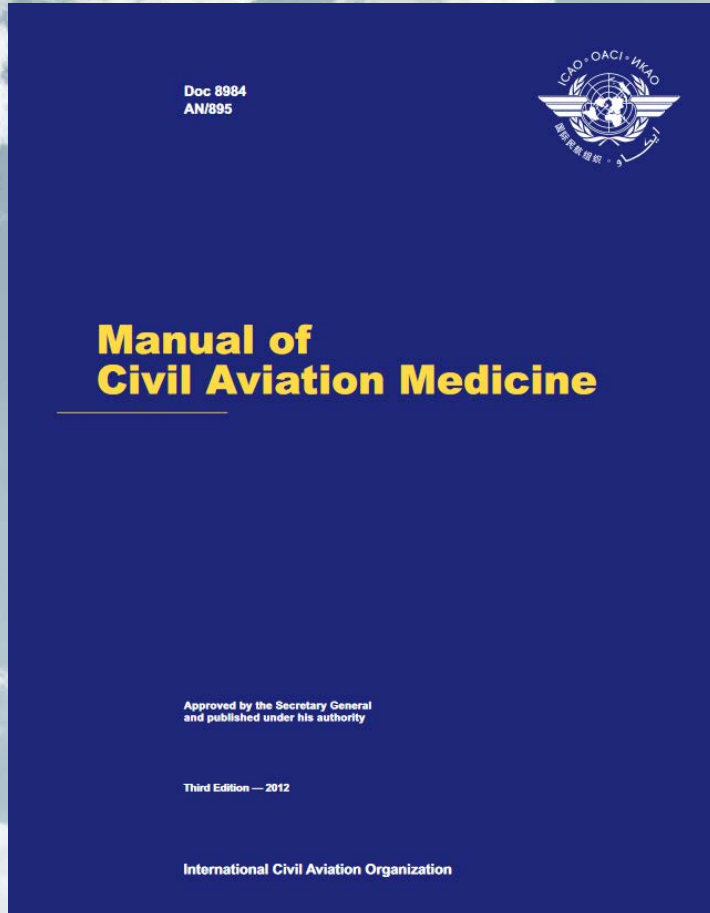


Obtaining and using medical records

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ICAO Documents



DOES MEDICAL RECORDS PROBLEM REALLY EXIST?



MAK experience shows that quite often medical findings are the last piece of investigation puzzle.



Yakovlev 42 on September 7, 2011 in Yaroslavl, Russia



- Brakes were applied during takeoff roll preventing the aircraft from obtaining takeoff pitch timely
- FDR did not monitor brakes application
- Both pilots came from Yak 40 type which has different design of braking pedals and different feet positioning
- Captain was pilot flying
- Autopsy showed that Co-pilot was consuming medicines containing prohibited substances
- Co-pilot addressed a private doctor with neurologic problems
- Final conclusion: most likely the Co-pilot suffered from a disease which may have resulted in reduced feet perceptibility and control



CRJ-200 on January 29, 2013 in Almaty, Kazakhstan



- After decision to go-around no actions were taken by the Captain who was pilot flying to increase pitch. Control column movements were chaotic
- Co-pilot was busy with ATC communication
- Several versions including spatial disorientation and illusions were not sufficiently proved
- At the time of the accident the Captain was not in the working pose and did not control the aircraft
- The Captain had diseases which acute condition could have led to partial or complete incapacitation
- During his vacations the Captain underwent a surgery. Rehabilitation was not provided



Lessons learned – Autopsy is essential!



Standard 5.9 of Annex 13 Autopsy examinations

The State conducting the investigation into a fatal accident **shall arrange** for complete autopsy examination of fatally injured flight crew and, subject to the particular circumstances, of fatally injured passengers and cabin attendants, **by a pathologist**, preferably **experienced in accident investigation**. These examinations shall be **expeditious and complete**.



Lessons learned – obtaining of missing information



Information from medical logbooks could be incomplete and misleading.

Sources for obtaining additional records are:

- Families and personal papers/archives
- Friends
- Criminal authorities

Lessons learned – be up-to-date!



Sometimes diagnostic technic used for medical examinations is obsolete and does not match the current level achieved in dedicated areas.



SAFETY ACTIONS



- Do not accept sick-leave certificate if it is issued by a hospital not approved by CAA. Otherwise, perform a new medical check
- Perform a special medical check after vacations and accidents or incidents
- Amend diagnostic technic continuously
- Modify the legislation allowing doctors to report health problems of crew members to appropriate authorities



Boeing 737-800 on March 19, 2016 in Rostov, Russia



- First Go-Around due to wind shear warning
- Second Go-Around after two hours in holding pattern
- 40 seconds of further unstable flight with high control column forces
- PM made appropriate callouts continuously
- PF responded verbally but did not correct the flight path
- PM did not interfere into control until the aircraft was entered into steep dive and it was too late



Law requirements for psychological examinations



- Before start of initial training
- After break in flights for more than 4 months
- Before transition training on a new aircraft type
- Before commissioning as a Captain or Instructor
- At the age of 50 years and each two years after 55 years
- During inpatient treatment

Example of psychological conclusion



In an emergency situation personal traits of aircraft captain could have caused his disorganization when only simple and extensively trained skills and actions could have been executed. Intellectual activity under such conditions is extremely difficult, behavior disorganized and chaotic, is not mediated by intellect, looks like an inconsistent, disjointed and haphazard set of actions.



Participation of psychologists is mandatory



Attempting to determine and modify the way in which people act and react is much more difficult than simply dealing with the effects of such actions. Often, the people concerned may not know the reason why they responded or acted as they did.



Thank you!

