



Australian Government

Australian Transport Safety Bureau

ATSB TRANSPORT SAFETY INVESTIGATION REPORT

Aviation Occurrence Investigation 200701910

Final

**Crew incapacitation
Enroute Jakarta to Sydney
31 March 2007
VH-OGN
Boeing Company 767-338**



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Analysis of Medical Conditions Affecting Australian Pilots Involved in Accidents and Incidents, 1 January 1975 – 31 March 2006 – ATSB Research and Analysis Report B2006/0170, January 2007.

Abstract

On 31 March 2007, a Boeing Company B767-338, registered VH-OGN, was being operated on a scheduled passenger service between Jakarta, Indonesia, and Sydney, Australia. Approximately 1 hour after departing from Jakarta, the pilot in command (PIC) began to feel unwell. Over the following 4 hours, the medical condition of the PIC continued to deteriorate and the copilot was alerted to this. The PIC vacated the pilot control position and handed over responsibilities for command decisions and flying duties to the copilot. With approximately 2 hours and 40 minutes of flight time remaining, the PIC left his control seat and relocated to an observer's seat at the rear of the cockpit.

As a result of this occurrence, the aircraft operator has advised the Australian Transport Safety Bureau that procedures relating to the monitoring of flight crew, following pilot incapacitation, have been reviewed and additional guidance material will be inserted into the operators' pilot documentation.

THE AUSTRALIAN TRANSPORT SAFETY BUREAU

The Australian Transport Safety Bureau (ATSB) is an operationally independent multi-modal bureau within the Australian Government Department of Infrastructure, Transport, Regional Development and Local Government. ATSB investigations are independent of regulatory, operator or other external bodies.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

Purpose of safety investigations

The object of a safety investigation is to enhance safety. To reduce safety-related risk, ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not the object of an investigation to determine blame or liability. However, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

Developing safety action

Central to the ATSB's investigation of transport safety matters is the early identification of safety issues in the transport environment. The ATSB prefers to encourage the relevant organisation(s) to proactively initiate safety action rather than release formal recommendations. However, depending on the level of risk associated with a safety issue and the extent of corrective action undertaken by the relevant organisation, a recommendation may be issued either during or at the end of an investigation.

The ATSB has decided that when safety recommendations are issued, they will focus on clearly describing the safety issue of concern, rather than providing instructions or opinions on the method of corrective action. As with equivalent overseas organisations, the ATSB has no power to implement its recommendations. It is a matter for the body to which an ATSB recommendation is directed (for example the relevant regulator in consultation with industry) to assess the costs and benefits of any particular means of addressing a safety issue.

About ATSB investigation reports: How investigation reports are organised and definitions of terms used in ATSB reports, such as safety factor, contributing safety factor and safety issue, are provided on the ATSB web site www.atsb.gov.au.

FACTUAL INFORMATION

On 31 March 2007, a Boeing Company B767-338, registered VH-OGN, was being operated on a scheduled passenger service between Jakarta, Indonesia, and Sydney, Australia, with a planned flight duration of 6 hours and 40 minutes. The flight crew consisted of a pilot in command (PIC) and copilot. The PIC was the pilot flying the aircraft.

Approximately 1 hour after departing from Jakarta, the PIC began to feel unwell. The PIC and the copilot discussed contingency arrangements for the event of any further deterioration of the PIC and the aircraft operator's procedures for pilot incapacitation were reviewed. This included the consideration of returning to Jakarta, diverting to another suitable airport or continuing to Sydney. Over the following 4 hours, the medical condition of the PIC continued to deteriorate and the copilot was alerted to this. With approximately 2 hours and 40 minutes of flight time remaining, the PIC handed over responsibilities for command decisions and flying duties to the copilot, and relocated to an observer's seat at the rear of the cockpit.

The copilot flew the aircraft from the right seat and advised air traffic control (ATC), the aircraft operator and the on-board customer services manager of the situation. The operator's procedures required that cabin crew contact the flight crew every 20 to 30 minutes and this was carried out. ATC prioritised the arrival of the aircraft to reduce the complexity and workload for the copilot and the aircraft was landed safely at Sydney. Following the operator's procedures, the copilot taxied the aircraft to the apron area, shut down the engines and the aircraft was towed to the arrival gate.

Following arrival, paramedics provided medical assistance to the PIC and provided ambulance transport to hospital. The diagnosis later confirmed that the medical condition of the PIC resulted from the ingestion of a gastrointestinal parasite. The doctor employed by the aircraft operator advised the PIC that certain gastrointestinal parasites can take up to 2 weeks before symptoms may be experienced.

A review of medical conditions affecting Australian pilots¹ stated:

The majority (22%) of in-flight medical and incapacitation events in Australian civil pilots for the study period were due to acute gastrointestinal illness (usually food poisoning), a finding consistent with other published studies and 29.9 % occurred in airline operations.

The evening before the flight, both flight crew and five cabin crew attended a restaurant for dinner. All of the crew ate from a selection of eight separate meals. The PIC did not experience any symptoms except for an unusual lack of interest in exercising at the gym the next day. None of the remaining crew experienced any symptoms prior to, or during the flight. However, four others of those who attended the dinner at Jakarta experienced similar symptoms to the PIC after arriving at

¹ Analysis of medical conditions affecting Australian pilots involved in accidents and incidents, 1 January 1975 – 31 March 2006 – ATSB Research and Analysis Report B2006/0170, January 2007.

Sydney. The gastrointestinal parasite was possibly ingested by mouth or by touching contaminated material at the restaurant at Jakarta the evening before the flight. A review of the PIC's medical history did not reveal evidence of any similar condition being experienced.

ANALYSIS

The reduction of the threat posed by the effects of this type of gastrointestinal parasite, particularly one that may have a long lead time, is a difficult proposition for aircraft operators and flight crew.

The crew complied with the operational aspects of company policy, especially in relation to crew action upon confirming pilot incapacitation. The crew conducted a risk assessment of the contingency options of returning to Jakarta, diverting to another suitable airport or continuing to Sydney, should the pilot in command's (PIC) condition deteriorate further or if the copilot began to experience similar symptoms. The crew decided that the lowest risk option was to continue and land at Sydney. The post-effect management, including sourcing medical assistance and use of other flight crew on board, was considered by the flight crew.

During the period when the incapacitated PIC was located on the flight deck, the copilot was effectively alone for the remaining 2 hours and 40 minutes of flight. Despite regular checks by cabin crew during this period, there was a risk that the PIC's condition could have deteriorated further or the copilot could also have become incapacitated.

The onset of the symptoms of gastroenteritis may be quick and insidious and, during the final period of the flight, there was no constant monitoring of the incapacitated PIC or the copilot by any other party.

FINDINGS

Contributing Safety Factors

The pilot in command became incapacitated during the flight due to the effects of a gastrointestinal parasite.

Other Safety Factors

The flight crew were not constantly monitored during the latter part of the flight when the pilot in command was not in his control seat and the first officer was the only operating pilot.

SAFETY ACTIONS

Safety issue

The safety issue relevant to this occurrence involves the consideration of situations where the constant monitoring of incapacitated persons and remaining flight crew is warranted.

Aircraft Operator

The aircraft operator has indicated that constant monitoring of incapacitated persons, including flight crew, is an important aspect for consideration. This extends to the constant monitoring of remaining flight crew, especially where the flying pilot may be the only remaining flight crew person on board. The aircraft operator has advised the Australian Transport Safety Bureau that procedures relating to the monitoring of flight crew, following pilot incapacitation, have been reviewed and additional guidance material will be inserted into the operators' pilot documentation.

Australian Transport Safety Bureau

To highlight the safety issues to the broader commercial aviation community, the Australian Transport Safety Bureau is distributing copies of this report to all Australian high capacity regular public transport aircraft operators.