

Good on You, Mates

An ATSB comparative study finds that Australia has a very low fatal accident rate — but so do the United States, Canada, the United Kingdom and New Zealand.

BY RICK DARBY

Australian civil aviation is widely considered to be among the safest in the world. The Australian Transport Safety Bureau (ATSB) recently set out to determine how its fatal accident rates compare with similar data from the United States, Canada, the United Kingdom and New Zealand.¹

The ATSB report found that the Australian fatal accident rate for air carriers in the 1995–2004 period — the most recent 10 years for which data were available — was slightly higher than that of the United States (but with a qualifier); slightly lower in most years for all operations than in Canada; and higher than in the United Kingdom for public transport operations. A comparison of fatal accidents and fatalities in high-capacity regular public transport (RPT) between Australia and New Zealand showed that Australia, with no fatalities, had the lower rate.

“Only those countries that define a fatal accident in accordance with the [International Civil Aviation Organization, Annex 13] definition were used in the analyses,” said the report.

The researchers, using accident databases from ATSB and accident investigation agencies and civil aviation authorities of the other countries, adjusted source data for differences in countries’ operational definitions.² Because of the nature of the source data, however, the same categories could not be compared among all the countries.

Figure 1 shows fatal accident rates for Australian and U.S. air carriers. “The highest rate for Australia occurred in 1996, when Australia recorded 0.4 fatal accidents per 100,000 hours flown,” the report said. “The highest rate for the U.S. was in 1995 and 1996, when 0.2 fatal accidents per 100,000 hours flown occurred. The U.S. recorded a consistently low rate of around 0.1 fatal accidents per 100,000 hours flown from 1997 to 2004.”³

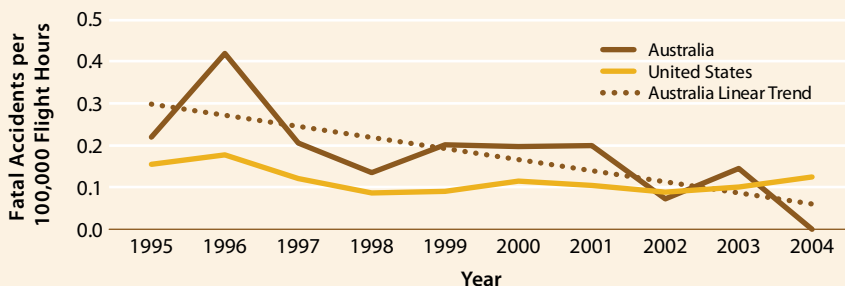
The report said that Australia’s higher fatal accident rate for air carriers was skewed because the rates for both countries are strongly influenced by the commercial charter (Australia) and on-demand (United States) categories, which tend to have higher accident rates.

“Australia’s commercial charter operations represented 32 percent of the total air carrier activity, while scheduled airline services comprised the remainder,” the report said. “For the U.S., on-demand services represented 15 percent of the total air carrier activity and the remainder comprised scheduled airline services. ... If Australia’s activity profile mirrored that of the U.S., Australia’s overall fatal accident rate would fall below that of the U.S.”

The fatal accident rate for all operations⁴ in Canada was higher than that for Australia, as shown by the respective linear trend⁵ lines in Figure 2. “The highest rate for Australia was

Fatal Accident Rates, Australia and United States

Air Carriers, 1995–2004

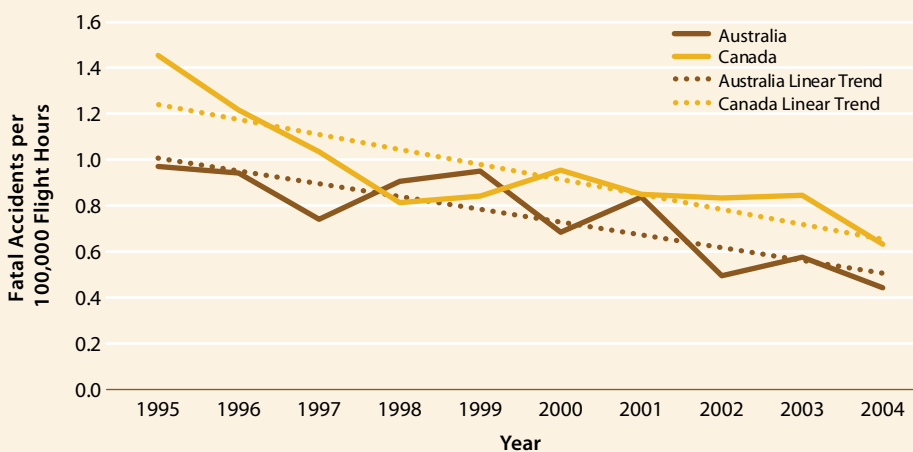


Source: Australian Transport Safety Bureau

Figure 1

Fatal Accident Rates, Australia and Canada

All Operations, 1995–2004



Source: Australian Transport Safety Bureau

Figure 2

in 1995 and 1999, when 1.0 fatal accidents per 100,000 hours were recorded,” the report said. “Canada also recorded its highest rate in 1995, with 1.5 fatal accidents per 100,000 hours flown. The lowest rate for Australia was in 2004, with 0.4 fatal accidents per 100,000 hours flown. The lowest rate for Canada was in 2004, when 0.6 fatal accidents per 100,000 hours flown occurred. Both countries experienced a significant decline in the rate of fatal accidents during this period.”

For helicopters, Australia had a higher fatal accident rate than Canada, 1.9 per 100,000 flight hours versus 1.2 for Canada. For airplanes, Australia had a lower fatal accident

rate, 0.5 per 100,000 flight hours versus 0.9 for Canada (Figure 3, page 52).

The report compared fatal accident rates for Australian and U.K. public transport⁶ aircraft (Figure 4, page 52). “The highest rate for Australia was recorded in 1996, when Australia recorded 0.4 fatal accidents per 100,000 hours flown,” the report said. “The highest rate for the U.K. was 0.1, which occurred in 1995, 1996, 1998, 1999 and 2000. The lowest rate for Australia was in 2004, when no fatal accidents occurred. The lowest rate for the U.K. was in 2003 and 2004, when no fatal accidents were recorded.” The linear trend line shows a

significant decline in the fatal accident rate for Australia during the period.

The report compared fatal accidents for high capacity RPT⁷ in Australia and New Zealand. Australia had no fatal accidents. New Zealand had two fatal accidents and seven fatalities during the period, in which annual flight hours for the category averaged 744,404 for Australia and 208,790 for New Zealand, which had a rate of 0.96 fatal accidents per 100,000 flight hours.

“Overall, the findings showed that Australia’s fatal accident and fatality rates were mostly similar to the corresponding rates of the other countries examined,” the report said. “Using North America and the United Kingdom to represent world’s best practice and as a benchmark of aviation safety, the findings demonstrate that Australia has a good safety record.” ●

Notes

1. *International Fatality Rates: A Comparison of Australian Civil Aviation Fatality Rates with International Data.* Australian Transport Safety Bureau (ATSB), Transport Safety Discussion Paper B2006/0002. Aug. 11, 2006. Available on the Internet at <www.atsb.gov.au/publications/2006/B20060002.aspx>.
2. For example, data for U.S. air carriers, defined as those operating under U.S. Federal Aviation Regulations Part 121 and Part 135, were considered to be equivalent to combined Australian regular public transport (RPT) and commercial charter (passenger and cargo) operations.

The report acknowledged that data sets could not be matched precisely. For example, the report said, “The U.K. data for the public transport category included ambulance, police and search-and-rescue operations, which were not included in the ATSB data.”

3. Rates given in the text of the report were rounded; therefore, there are some slight discrepancies between data points in the figures and the numbers in this article.

4. “All operations” included, for Canada, operations involving Canadian-registered civil aircraft and some sport operations. For Australia, it included RPT, general aviation and some sport operations of Australian-registered civil aircraft.
5. A linear trend is a straight line showing the overall tendency of a time series of data points.
6. “Public transport” included, for the United Kingdom, transport of passengers and/or cargo on scheduled or nonscheduled services, or other revenue services including air taxi and pleasure flights. It also included ambulance, police and search-and-rescue operations. For Australia, the category included all RPT and commercial charter (passenger and cargo) operations involving Australian-registered civil aircraft. Ambulance, police and search-and-rescue operations were not included.
7. “High capacity RPT” represented, for New Zealand, all operations involving aircraft with 39 or more seats, including scheduled, unscheduled, passenger and cargo flights. For Australia, the category included operations involving Australian-registered civil aircraft with a maximum seating capacity of 39 or more seats or a maximum payload exceeding 4,200 kg (9,259 lb).

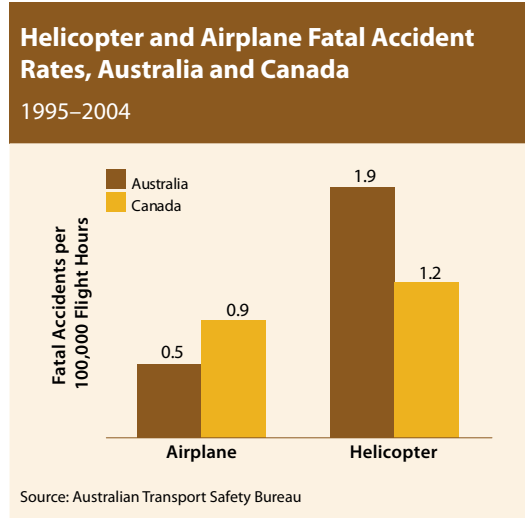


Figure 3

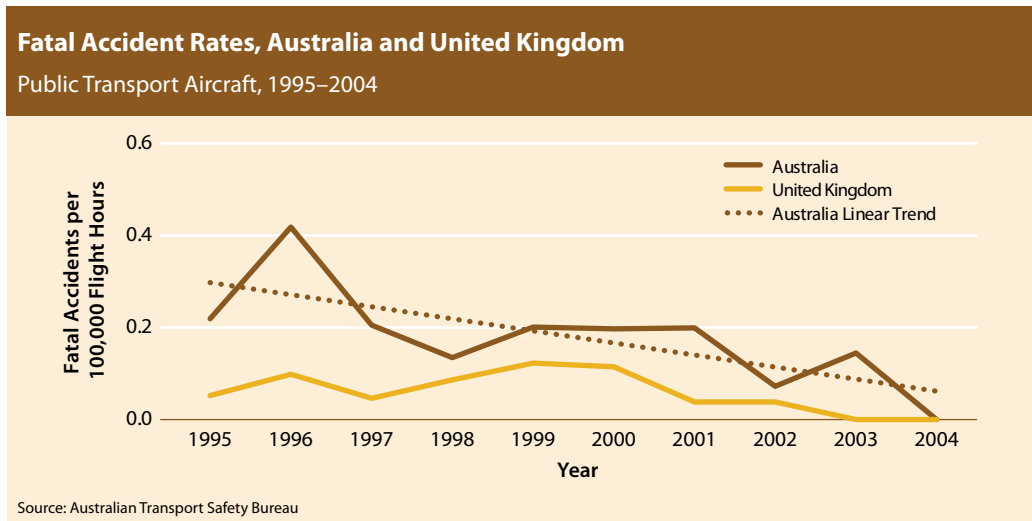


Figure 4