



FEDERAL AVIATION ADMINISTRATION
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From: Dr. William K. Krebs, (AAR-100), General Aviation Human Factors Program
Manager

To: Mr. Michael Henry (AFS-801)

Subj: Human Error And General Aviation Accidents: A Comprehensive, Fine-Grained
Analysis Using HFACS

Ref: (a) General Aviation TCRG February 21, 2002 meeting minutes
General Aviation requirement entitled "Human Error And General Aviation
Accidents: A Comprehensive, Fine-Grained Analysis Using HFACS"
(b) Aeronautical Decision Making (ADM) JSAT and General Aviation Data
Improvement Team (GADIT) recommendations

1) Per references (a) and (b), the "Human Error And General Aviation Accidents: A
Comprehensive, Fine-Grained Analysis Using HFACS" was considered an important
requirement for Flight Standards. The requirement's objective is to "conduct a more
fine-grained HFACS analysis of the individual human causal factors associated with
fatal general aviation accidents and to assist in the generation of possible intervention
programs"

2) The project will be executed as follows:

Phase I tasks:

- i. Perform a comprehensive and systematic analysis of the individual human
causal factors associated with fatal GA accidents.
- ii. GA TCRG will rank questions to be addressed in each FY:
 1. What are the exact types of errors committed within each error
category? In other words, how often do skill-based errors involve
stick-and-rudder errors, verses attention failures (slips) or memory
failures (lapses)?
 2. How important is each error type, or how often is each error type the
"primary" cause of an accident? For example, 80% of accidents might

be associated with skill-based errors, but how often are skill-based errors the “initiating” error or simply the “consequence” of another type of error, such as decision errors?

3. How do the different error types relate to one another, or with other HFACS variables? Are there connections between the categories that, if known, could improve intervention development?
4. Do accidents that occur in different geographical regions or training facilities within the U.S. have different error patterns or trends?
5. What can be done to intervene given the information that is now available, and what more might be done with the additional refined data?

iii. Quarterly (December, March, July, and September) research progress status reports

- Informal e-mail reports from the AAR-100 general aviation human factors program manager to Michael Henry (AFS-801)

iii. FY03 annual report summarizing year’s activities by grantee. This annual report including other human factors general aviation projects sponsored by general aviation TCRG will be electronically submitted to the committee.

- Grantee will submit an annual report using AAR-100’s Productivity Report website (<http://www.hf.faa.gov/report/>) to the AAR-100 general aviation human factors program manager.

Deliverables:

i. Final report containing

- Identifying intervention strategies that can be mapped onto different error categories to determine plausible prevention programs for reducing GA accidents

ii. Final Report formatted to permit development of appropriate guidance material by AFS-800

- AFS-800 is responsible in submitting defined format to the program manager for aviation maintenance human factors.

Schedule:

Phase I Tasks: FY03

Each FY, the GA TCRG will determine which questions to be addressed.