

Human Factors Risk Management Checklist



By **Anthony Ciavarelli, Ed.D. &
Thomas E. Sather, M.S.,M.S.S.**

**School of Aviation Safety
Naval Postgraduate School
Monterey, California
Revised: September 11, 2002**

HUMAN FACTORS RISK MANAGEMENT CHECKLIST

1. SENSORY- PERCEPTUAL FACTORS

- Ensure Currency in Physiological Qualifications.
- Provide Continued Education for ASO and AMSO.
- Promote Flight Surgeon and AMSO Involvement at unit/squadron level.
- Establish Weather (IMC) Go/No Go Decision Criteria.
- Establish Standard Procedures for Night Low Altitude, and Other Known High-Risk Missions.

2. MEDICAL AND PHYSIOLOGICAL FACTORS

- Document Medical/Physiological Qualifications.
- Provide Procedure to Remove, Disqualify, or Creatively Schedule Aviator Under High Stress.
- Publish Human Factors' Hazard Reports of Physiological and Behavioral Incidents.
- Use Aeromedical Team Resources.
- Provide Written Instructions on Use of Flight Gear, Oxygen Equipment, Exposures Suits, etc.
- Include Flight Surgeon and AMSO on Human Factors Boards and Committees.
- Use Human Resource and Social Services for Family Crisis and Drug or Alcohol Abuse.

3. KNOWLEDGE OR SKILL FACTORS

- Establish Proficiency and Currency Standards.
- Enforce Standards in Equitable Manner.
- Assess Training Progress Against Standards.
- Document Training Results (Performance).
- Have Remedial Training Program in Place.
- Remove the Persistent Marginal Performer.

4. PERSONALITY AND SAFETY ATTITUDE

- Identify and Remove Chronic High-Risk Taker.
- Use Judicious Crew Assignment/Scheduling.
- Conduct Periodic Human Factors Reviews.
- Use Human Factors Board to Help Manage High-risk taker. Go to FNAEB/FFPB if needed.

5. JUDGEMENT- RISK DECISION FACTORS

- Enforce Use of Squadron Go/No Go Criteria.
- Commanders Illustrate Judgment By Example.
- Provide Crew Judgment Training and Evaluation. (Teach Headwork Too.)
- Monitor and Correct High-Risk Behaviors.
- Encourage Development of Personal SOP (Go/No Go Flight Readiness Decision).

6. COMMUNICATIONS/CREW COORDINATION FACTORS

- Establish Communications Protocol/Standards.
- Provide Aircrew Coordination (team) Training.
- Construct Mission Task SOP's (Crew Tasking).
- Brief and Debrief Crew Coordination Events.
- Use Specific Simulator or Flight Scenarios to Teach Crew Concept/Coordination Tasks.

7. DESIGN/SYSTEM FACTORS

- Train and Test Aircraft Systems Knowledge.
- Ensure Pilots Know and Fly "By the Book".
- Identify Potential Aircraft Performance Limits and Tolerances.
- Identify Faulty Cockpit Layout, Control, and Display Designs.
- Communicate to Aircrews High-Risk Areas Due to Aircraft Performance Limits, and any Cockpit Design Deficiencies.
- Conduct Periodic "Blind Cockpit Tests".
- Publish Human Engineering Hazreps and Recommend Design Changes as Needed.
- Monitor/ Improve Maintenance and Quality Control Procedures.

8. SUPERVISORY FACTORS

- Establish Positive Command Climate.
- Include Safety Advocacy as Organizational Goal.
- Set Clear Performance Standards.
- Monitor Compliance to Standards and Procedures.
- Know Your People.
- Keep Open Door Policy, Walk Around and Listen.
- Swiftly Correct Poor Performance and Non-Compliance to Standards.
- Acknowledge and Reward Safe Behavior.
- Conduct Top-down, and Contingency, Risk Management
- Leadership Should Set Example For Safe Operation