



DEPARTMENT OF THE NAVY
COMMANDER NAVAL AIR FORCES
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COMNAVAIRFORINST 5420.2D
N45
16 Nov 21

COMNAVAIRFOR INSTRUCTION 5420.2D

From: Commander, Naval Air Forces

Subj: HUMAN FACTORS COUNCIL AND HUMAN FACTORS BOARD POLICY AND PROCEDURES

Ref: (a) OPNAVINST 3750.6S

Encl: (1) Human Factors Council Worksheet
(2) Human Factors Matrix (Example)
(3) Common Human Factors Focus Areas
(4) Human Factors Board Worksheet
(5) Aircrew Categories and Intervention Strategies
(6) Sample Human Factors Board Assignment Letter

1. Purpose. To establish policy and procedures to standardize the conduct of Human Factors Councils (HFC) and Human Factors Boards (HFB) within Naval Aviation. This instruction provides a formal mechanism for unit commanding officers to assess human factors in conducting risk assessments and subsequent decisions regarding safety of flight issues. It is highly recommended that some form of human factors review be conducted for all squadron personnel.

2. Cancellation. COMNAVAIRFORINST 5420.2C.

3. Scope. This instruction applies to the conduct of HFCs and HFBs for all active duty and reserve aircrew, as well as applicable aviation support personnel. All personnel who routinely operate, fly in, or maintain squadron aircraft, group III or above unmanned aerial systems, or operate support equipment near aircraft shall be included. This includes squadron personnel as well as CVN Air Department, Supply, or other personnel at risk for contributing to an aviation mishap including aviation ground mishaps (AGMs). Commanding officers may require HFBs and HFCs for all personnel.

4. Definitions

a. Human Factors. For purposes of this instruction, human factors are the set of personal and professional circumstances that may interfere with an individual's ability to perform effectively.

b. HFC. An administrative review of applicable personal and professional characteristics of all aircrew who regularly fly in squadron aircraft including aircrew external to the command (e.g. wing staff, flight surgeons, aeromedical safety officers (AMSO)) to identify and address potential safety risks.

c. HFB. An administrative board convened by the CO to review all known human factors for individuals whenever their ability to safely perform required duties is in question.

5. Background. Human factors continue to be the leading causal factor of aviation mishaps. All too frequently, at least some portion of the mishap crew's human factors issues were known by supervisors or peers, but only as isolated pieces of a larger picture. Unfortunately, these pieces are typically not assembled until after a mishap. The two basic attributes that often contribute to a mishap are underqualified and overstressed. Underqualified personnel fail to demonstrate the knowledge, skill, or discipline necessary for the tasks assigned. Overstressed personnel are often under serious stress from personal or professional factors which may not be apparent to command leadership. This stress may lead to fatigue, distraction, and degraded performance, including instances of poor judgment, excessive risk-taking, or poor crew resource management (CRM).

6. Discussion. HFCs and HFBs are intended as tools for commanders to identify and address human factors deficiencies and inadequate skill development, enabling informed decisions concerning the safety performance of aircrew and aviation support personnel and possible mission impacts. Assessments made during the course of an HFC or HFB should be accomplished within the framework of a risk management process and follow the principles of operational risk management (ORM). Prudent and timely use of these tools should not only prevent potential mishaps, but may help to prevent personnel from failing in other areas as well.

7. Assessment Guidelines

a. HFC. A non-punitive forum that is informal in nature. Enclosures (1), (2), and (3) are recommended guidelines used to evaluate the current level of training, qualification progress, flight discipline, and job performance for all personnel. HFCs should be composed of the squadron CO (chairman), flight surgeon (FS) or aerospace physician assistant (APA), operations or training officer, aviation safety officer (ASO) course graduate (ASO or AMSO), CRM facilitator or CRM instructor (CRMI), weapons and tactics instructor (WTI), and a junior officer. A senior enlisted aircrewman and a senior maintenance person may also be a member as appropriate. Additional council members may be appointed by the CO as required.

b. HFB. A non-punitive forum, but may be more formal than an HFC. The objective is to focus on specific aviation deficiencies and recommend an appropriate course of corrective action. Enclosures (2), (3), (4), and (5) should be used to provide an individual plan of action tailored to mitigate identified problems and successfully reintegrate aircrew back to full performance of assigned duties. HFBs should be composed of the squadron executive officer (chairman), FS or APA, and an ASO. A CRM unit level manager, CRMI, or a WTI should also be included in the board membership at the discretion of the chairman. HFBs for enlisted personnel should also include at least one senior enlisted leader. For CVN personnel, the Executive Officer may chair an HFB or delegate to the appropriate Head of Department (HOD). Other board members should include the Safety Officer, a medical officer, and senior enlisted leader as appropriate. Members from outside the command may be used as required. HFBs shall be convened in the following situations or as directed by the commanding officer:

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(1) Major life events or stressors including marriage, birth of a child, separation from active service, pending divorce, or death of a family member or close friend.

(2) Involvement in an AGM. HFBs shall not replace or interfere with mishap investigations but are intended to prevent future mishaps from occurring.

(3) A one-time or sustained deficiency in performance, not serious enough to warrant a Field Naval Aviator Evaluation Board (FNAEB) or Field Naval Flight Officer Evaluation Board.

(4) Failure to achieve established milestones, required qualifications, or skills (e.g., aircraft commander, plane captain, section leader).

(5) Aeromedical problems (e.g., vulnerability to spatial disorientation, poor physical fitness, recurring airsickness).

8. Assessment Guidelines. Information included in enclosures (2), (3), and (5) provides documentation for conducting assessments of personnel during HFCs or HFBs. Information presented here is intended to be flexible and adaptive to meet the unique requirements of a particular command, individual, or situation. Guidelines discussed herein are intended to compliment a commander's preferred practices and best judgment in handling individual assessments. Any notes generated by an HFB or HFC that are personal in nature are for the commanding officer's use only and shall be secured appropriately. This does not preclude use of professional documentation following an HFB/HFC such as an individual training plan.

9. Responsibilities

a. CO.

(1) Convene HFCs quarterly, at a minimum, and HFBs as appropriate per this instruction.

(2) Retain completed assessments until the transfer of either the subject aircrew or the CO, or upon determination that the assessment is no longer useful. Recent assessments may be passed between outgoing and incoming COs to help ensure continuity.

b. HFC Members. Thoroughly review all human factors risks for appropriate personnel.

c. HFB Members.

(1) Notify the individual that an HFB will be convened and identify specific problem areas to be considered.

(2) Connect those individuals with personal stressors to DoN programs and resources.

(3) Conduct a thorough review of individual performance and forward the individual's performance summary of deficiencies to the HFB chairman upon convening an HFB.

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(4) Communicate performance deficiencies and recommend an appropriate course of action to the CO.

d. Reviewed Individuals. Individuals will not normally appear before an HFC, but may do so at the request of the council or the individual if circumstances warrant. If desired, the individual may make written comments to be retained with any assessments. Presence of the individual under review is mandatory for an HFB.

10. Records Management

a. Records created as a result of this instruction, regardless of format or media, must be maintained and dispositioned for the standard subject identification codes (SSIC) 1000, 2000, and 4000 through 13000 series per the records disposition schedules located on the Department of the Navy/Assistant for Administration (DON/AA), Directives and Records Management Division (DRMD) portal page at [https://portal.secnav.navy.mil/orgs/DUSNM/DONAA/DRM/Records-and-Information-Management/Approved%20Record%20Schedules/Forms/ AllItems.aspx](https://portal.secnav.navy.mil/orgs/DUSNM/DONAA/DRM/Records-and-Information-Management/Approved%20Record%20Schedules/Forms/AllItems.aspx). For SSIC 3000 series dispositions, please refer to part III, chapter 3, of Secretary of the Navy Manual 5210.1 of September 2019.

b. For questions concerning the management of records related to this notice or the records disposition schedules, please contact your local records manager or the DON/AA DRMD program office.

11. Review and Effective Date. Per OPNAVINST 5215.17A, COMNAVAIRPAC N45 will review this instruction annually around the anniversary of its effective date to ensure applicability, currency, and consistency with Federal, DoD, SECNAV, and Navy Policy and statutory authority using OPNAV 5215/40 Review of Instruction. This instruction will automatically expire 10 years after effective date unless reissued or canceled prior to 10-year anniversary date, or an extension has been granted.



M. C. PARADISE
Chief of Staff

Releasibility and distribution:

This instruction is cleared for public release and is available electronically via:

COMNAVAIRFOR HIP:

<https://cpf.navy.deps.mil/sites/cnap/n004/Pages/directives.aspx>

HUMAN FACTORS COUNCIL WORKSHEET

The HFC must review personal and professional circumstances, and direct particular attention toward uncovering underlying medical, physiological, social, behavioral and psychological factors which could adversely affect aircrew performance. Assessments are made only in the interest of aviation safety and must make no recommendations which are disciplinary in nature.

During HFC deliberations, consideration must be given to current squadron operations tempo (OPTEMPO), workload, command dynamics, and other factors which may influence aircrew performance and safety.

DATE: _____

MEMBERS PRESENT

_____	_____
_____	_____
_____	_____
_____	_____

1. Operations. Provide flight data or documentation as needed.

a. OPTEMPO. Is the squadron flying too much or too little?

b. Individual flight time summaries. Are aircrew flying enough to maintain proficiency?

2. Training. Provide data to assess the aircrew qualifications and professional progress.

3. NATOPS/instrument/physiology/survival qualifications/upgrades. Are qualification expiration dates adequately anticipated?

4. All members should discuss the following as related to each individual.

- a. Naval aviation skills and qualifications progress.

- b. Systems and procedures knowledge.

- c. CRM performance.

- d. Professional discipline, maturity, and work habits.

- e. Risk-taking behavior.

- f. Career development and other job performance factors.

5. Critical Indicators

- a. Declining performance, failure to meet required standards, or qualification progress.

- b. Known violations or instances of poor flight discipline.

c. Presence of major life or job stressors.

d. Classified as high-risk aircrew.

6. Recommended action

HUMAN FACTORS MATRIX (EXAMPLE)

1. Example Human Factors Matrix. This School of Aviation Safety matrix is included to aid leaders in reviewing aircrew factors in preparation for an HFC or HFB. It can be modified to meet the needs of a specific unit.

Human Factors Matrix		NAME											
>> Key Factors<<													
Is SNM under 21?													
Did SNM join the command in the last three months?													
Is SNM currently on light/limited duty or less than 30 days past light/limited duty expiration?													
Does SNM participate in extreme sports?													
Is SNM involved in Intramural or other organized team sports?													
Is SNM a frequent hunter/ target shooter?													
Is SNM involved in off-duty education?													
Is SNM involved in off-duty employment?													
Does SNM own a recreational vehicle? (motorcycle, ATV, jet-ski, boat, etc.)													
Has SNM been operating recreational vehicles for six months or less?													
Does SNM drive over 150 miles (one way) more than three times a month?													
Is SNM in receipt of permanent change of station orders?													
Is SNM slated for deployment in the next six months?													
Is SNM scheduled to retire/separate in the next six months?													
Has SNM been reduced in grade in the last six months?													
Has SNM been promoted in the last two months?													
Does SNM hold more than one collateral duty?													
Does SNM supervise more than ten immediate subordinates?													
Has SNM experienced a death of an immediate family member in the last six months?													
Does SNM have immediate family member with terminal/long-term debilitating illness?													
Is SNM a geographical bachelor?													
Is SNM/spouse pregnant or postpartum? (within six months of birth)													
Is SNM a single parent?													
Is SNM pending divorce or experienced divorce in the last six months?													
Has SNM made a major purchase in the last six months? (home, car, RV, etc.)													
Was SNM subject to fines due to NJP/court martial/civilian conviction in the last six months?													
Does SNM pay alimony/child support?													
Has SNM been subject of NJP/court martial or civilian prosecution in the last six months?													
Is SNM pending mil/civ prosecution?													
Has SNM received an adverse service record entry in the last three months?													
Has SNM lost one or more workdays due to mil/civ incarceration in the last six months?													
Has SNM attended "directed" counseling (anger management, etc) in the last six months?													

COMMON HUMAN FACTORS FOCUS AREAS

<p><u>Performance History</u></p> <ul style="list-style-type: none">- Naval Training Command grades (if available)- FRS grades- Current syllabus grades <p><u>Experience</u></p> <ul style="list-style-type: none">- Total flight hours- Hours in model- Previous commands <p><u>Proficiency</u> (last 30/60/90 days)</p> <ul style="list-style-type: none">- Day, night/night vision goggles- Instrument time- Specific mission <p><u>Physical Condition</u></p> <ul style="list-style-type: none">- Illness history- Medication history- Exercise history- Weight/dietary problems <p><u>Fatigue Sources</u></p> <p>Physical</p> <ul style="list-style-type: none">- Noise- Temperature extremes <p>Psychological</p> <ul style="list-style-type: none">- Promotion, change in work responsibilities- New working hours- New supervisor- Learning new job or collateral duty- Passed over, failure to promote- Separation from service <p>Off-Duty</p> <ul style="list-style-type: none">- Illness or death in family- New baby or pregnancy- Marital difficulties, separation, divorce <p>Crew Rest</p> <ul style="list-style-type: none">- Sleep loss- Disruption in diurnal cycle- Circadian rhythm- OPTEMPO/extended crew day- Missed meals	<p><u>Mental Attitude</u></p> <p>Motivation</p> <ul style="list-style-type: none">- Toward military, aviation, squadron, mission <p>Hazardous Attitudes</p> <ul style="list-style-type: none">- Denial, impulsivity, macho, anti-authority, resignation <p><u>Symptoms to Look for</u></p> <p>Failure at stress coping</p> <ul style="list-style-type: none">- Increased alcohol intake- Recent change in personality- Difficulty in interpersonal relationships- Traffic violations- Mishaps- Tobacco use <p>Fatigue (symptoms may be subtle)</p> <ul style="list-style-type: none">- Increased irritability- Lapses in judgment- Failure to meet deadlines- Behind in paperwork- Behind in the aircraft- Distracted or preoccupied
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HUMAN FACTORS BOARD WORKSHEET

INDIVIDUAL _____ DATE REVIEWED _____

SPECIFIC REASON FOR HFB _____

PERFORMANCE AND QUALIFICATIONS PROGRESS

Factors Considered in Assessment:

- General Aviation Skills
- Level of Knowledge and Procedures
- Aircrew Coordination Performance
- Professional Discipline (Adherence to standards, maturity, and work habits)
- Career Development and Other Job Performance Factors

HAZARD Assessment

1	2	3	4	5
Negligible	Minor	Moderate	Serious	Critical

MISHAP Probability

1	2	3	4	5
Negligible	Minor	Moderate	Serious	Critical

Comments:

AEROMEDICAL CONCERNS

Factors Considered in Assessment:

- Health and Fitness (Flight Surgeon Input)
- Job-Related Stressors
- Personal-life Stressors

HAZARD Assessment

1	2	3	4	5
Negligible	Minor	Moderate	Serious	Critical

MISHAP Probability

1	2	3	4	5
Negligible	Minor	Moderate	Serious	Critical

Comments:

Other considerations or concerns.

Recommendations to the CO.

AIRCREW CATEGORIES AND INTERVENTION STRATEGIES

AIRCREW CATEGORY	KEY CHARACTERISTICS	POSSIBLE INTERVENTIONS
A. BELOW-AVERAGE NUGGET OR TRANSITION AIRCREW	<ul style="list-style-type: none"> - Lacks working knowledge of CRM skills. - Behind peers in progression. - Fails NATOPS exams or check rides. - Poor knowledge of procedures. - Lacks flying skills or mission proficiency. - Shows poor headwork or judgment. - Lacks confidence in ability. 	<ul style="list-style-type: none"> - Give remedial training in weak areas. - Move back in training syllabus. - Selectively schedule. - Crew with best teacher not best aircrew. - Minimize collateral duties. - Counsel and document performance trends. - Provide candid, but constructive briefs. - Recommend HFB, FNAEB, or Field Flight Performance Board (FFPB). - Return to Fleet Readiness Squadron.
B. OVERCONFIDENT SENIOR AIRCREW	<ul style="list-style-type: none"> - Exhibits disregard for CRM skills, intimidates other aircrew. - Has been out of cockpit, or is not flying enough. - Has “been there – done that” attitude. - Relies on experience instead of proficiency. - Does not adhere to NATOPS or standards. - Uses rank inappropriately to “bend the rules.” - Fails to recognize own limits. 	<ul style="list-style-type: none"> - CO confront and counsel. - Closely monitor progression. - Crew with senior aircrew. - Clarify adherence to standard procedures. - Provide additional flight time. - Document progress. - Refer to higher authority. - Provide CRM training review.
C. “BEST PILOT/ AIRCREWMAN”	<ul style="list-style-type: none"> - Low regard for CRM, takes minimal input from other aircrew. - Typically “good stick” but overestimates ability. - May be highly regarded by command and peers. - Consistently pushes the aircraft envelope. - Completes mission at “any” cost. - Lacks judgment and accurate perception of mission risks. - Violates NATOPS/SOP. Thinks rules apply only to the “average” aviator. - Talks down to other pilots. - Prefers high-risk missions and conditions to preserve “best pilot/aircrewman” image. 	<ul style="list-style-type: none"> - CO confront and counsel. - Clarify and enforce standards. - Promote peer accountability. - Restrict flights, or ground for temporary period. - Suspend qualifications. - Closely supervise and monitor. - Document progress. - Recommend HFB, FNAEB or FFPB. - Provide CRM training review.

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AIRCREW CATEGORY	KEY CHARACTERISTICS	POSSIBLE INTERVENTIONS
D. CONSISTENTLY POOR PERFORMER	<ul style="list-style-type: none"> - Weak CRM skills. - History of below average performance. - May be well-liked and excel at ground duties. - Barely meets, or is slow in qualification progress. - High incidence of flight snivels. - Easily distracted and task overloaded. - Frequently suffers loss of situational awareness. - Does not seem to improve or come up to peer level. - Usually behind peers in progression. - Lacks self-confidence. - Excess dependence on other aircrew. 	<ul style="list-style-type: none"> - Provide candid critique and requirements to improve. - Close supervision and performance monitoring. - Set achievable standards and performance goals. - Provide remedial training and defined time to improve. - Crew with experienced and best instructors. - Selective scheduling. - Recommend HFB, FNAEB, or FFPB. - Provide CRM training review.
E. OVERSTRESSED AIRCREW	<ul style="list-style-type: none"> - No longer exhibits the ability to recognize the appropriate use of CRM skills. - Presence of major stressors, such as death of close family member or friend, recent divorce, failed relationship, serious financial setback, job performance problems. - Noticeable change in mood or personality. - Frequent, out of proportion anger, resentment, hostility. - Distracted, mentally pre-occupied, loss of focus. - Uncharacteristic breakdown of flight discipline or intentional violations. - High incidence of flight snivels. - Excessive alcohol use. 	<ul style="list-style-type: none"> - Identify and address source of stress. - Command counseling. - FS review. - Selective scheduling. - Close supervision and monitoring. - Temporary grounding or flight restrictions, put in leave status. - Reduce job workload and stress. - Send to family services or stress management clinic. - Recommend HFB

SAMPLE HUMAN FACTORS BOARD ASSIGNMENT LETTER

5420
Ser XX/
Date

From: Commanding Officer, (Squadron)
To: CDR First M. Last, USN

Subj: HUMAN FACTORS BOARD IN CASE OF LT FIRST M LAST USN

Ref: (a) COMNAVAIRFORINST 5420.2C

1. Per reference (a), you are hereby directed to conduct a Human Factors Board in care of LT First M. Last. Composition of the board will be as follows:

Senior Member: LCDR First M. Last
Flight Surgeon: LT First M. Last
Board Member: LT First M. Last

2. Conduct a thorough investigation into any human factors which may be affecting this aircrew's performance. Use of enclosures (2), (3), (4), and (5) of reference (a) is recommended.

3. The board must submit recommendations for corrective action and forward a report to me no later than (enter date). Use of enclosure (4) of reference (a) is recommended.

F. M. LAST