Naval Aviation Safety: 2012 Year in Review

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I have no financial relationships to disclose.

I will not discuss off-label use or investigational use in my presentation.
Code 14 Core Functions

• **Mishap Prevention**
  - Safety surveys
  - Aeromedical analysis
  - Human Factors analysis and trends
  - Physiology analysis

• **Teaching and Education**
  - Student aeromedical officer course
  - Safety presentations (conferences, squadrons)

• **Resource Facilitation**
  - Website
  - Flight Surgeons Manual
  - Data
Code 14 “Other” Activities

- Physiologic episodes in the F/A-18, T-45
- Fatigue (FAST program)
- Human Factors consults to surface, sub
- “Every time the phone rings…”
Naval Safety Center Website
http://www.safetycenter.navy.mil/
Naval Safety Center Website

http://www.public.navy.mil/navsafecen/Pages/aviation/aeromedical/Aeromedical.aspx
The Naval Flight Surgeon's

Pocket Reference to Aircraft Mishap Investigation

The Naval Safety Center, Aeromedical Division
In conjunction with
Dedicated Aerospace Medicine Professionals

Sixth Edition
2006
Pocket Guides

Available from
www.quickseries.com; (800) 361-4653
Mishap Classification

• **Class A**
  - Total cost of damage greater than $2,000,000
  - Aircraft destroyed or missing
  - Fatality or permanent total disability

• **Class B**
  - Damage greater than $500,000 but less than $2,000,000
  - Permanent partial disability
  - Hospitalization of three or more personnel

• **Class C**
  - Damage greater than $50,000 but less than $500,000
  - Injury requiring 5 or more lost workdays
Aviation Safety Historical Perspective

- Acquisition System Changes
- Organizational Structure
- Policy & Programs
- Maintenance & Standardization
- Technical Solutions
- Training
- Risk Management – Ops & Maint

Focus: Human Factors and Safety Information / Program Management

Navy Data

- Fatalities: 131
- Aircraft: 139
- Cost: $4.5B

Angled decks

Aviation Safety Center

Squadron Safety program

Naval Aviation Maintenance Program, 1959

FRS, 1961

NATOPS, 1961

Ground Proximity Warning System (GPWS), 1978

ACT, CRM

ORM

HFACS

MFOQA

ORM

ASAP

HF FOCUS
Historical Flight-Hours Between Mishaps

(Mean Time Between Class “A” Naval Aviation Flight Mishaps)

Through 08 May 12

92971

(51,373)

(42,500)

(26,929)

(11,727)

(6500)

(2405)

(1147)

(774)

(465)

0

100000

50000

Hours

1922-29
1930-39
1940-49
1950-59
1960-69
1970-79
1980-89
1990-99
2000-09
2010-12

WW II
Korea
Vietnam
Gulf War
Bosnia
OIF/OEF

92971

(51,373)
FY12 CLASS A FLIGHT MISHAPS

FY12 CLASS A FLIGHT MISHAPS

2 NOV 11
T-45C VT-21
CRASHED ON DAY SECTION TAKEOFF
KINGSVILLE, TX
IP & SNA EJECTED OK

21 DEC 11
MH-60S NSAWC
CRASHED ON DAY MOUNTAIN TRAINING FLIGHT
BRIDGEPORT, CA
ALL 5 CREW OK

10 JAN 12
CH-53D HMH-363
CRASHED DURING OEF NIGHT MISSION
AFGHANISTAN
ALL 8 CREW FATAL

22 AUG 12
MH-53E HM-15
EXPERIENCED HARD LANDING
AFGHANISTAN
ALL 4 CREW OK

30 AUG 12
UH-1Y HMLA-469
CRASHED DURING NIGHT LANDING
AFGHANISTAN
2 PAX FATAL, 1 CREW INJURED, 3 CREW & 4 PAX OK

1 SEP 12
FA-18C VMFA-323
CRASHED DURING DAY TRAINING FLIGHT
FALLON, NV
PILOT EJECTED OK

22 FEB 12
UH-1Y & AH-1W HMLA-469
COLLIDED DURING NIGHT TRAINING FLIGHT
EL CENTRO, CA
ALL 7 CREW FATAL

24 FEB 12
FA-18F VFA-213
CRASHED ON DAY TRAINING FLIGHT
FALLON, NV
PILOT & WSO EJECTED OK

6 APR 12
FA-18D VFA-106
CRASHED INTO APARTMENTS
AFTER DAY TAKE-OFF
AFGHANISTAN
ALL 4 CREW OK

4 SEP 12
C-2A VAW-120
STRUCK E-2C ON FLIGHT DECK ON DAY BOLTER
CVN 75 / ATLANTIC
2 FATAL, 2 INJURED

FY12 FINAL SUMMARY

15 CLASS A FLIGHT MISHAPS
9 USN (5 JET, 4 ROTARY WING)
6 USMC (2 JET, 4 ROTARY WING)
19 FATALTIES
FY-13 TO DATE

11 OCT 12
CH-46E HMM-262
ROLLED OVER AND BURNED
AFTER DAY HARD LANDING
PHILIPPINES
4 CREW & 11 PAX OK

12 DEC 12
MH-60R HSM-75
EXPERIENCED HARD LANDING
ON NIGHT TRAINING FLIGHT
NORTH ISLAND, CA
4 CREW INJURED

9 JAN 13
CH-46E HMM-268
DAMAGED DURING DAY
CONFINED AREA LANDING
29 PALMS, CA
ALL 5 CREW OK

23 JAN 13
FA-18E VFA-86
EXPERIENCED ENGINE FIRE
DURING DAY TRAINING FLIGHT
LEMOORE, CA
PILOT RECOVERED SAFELY

20 FEB 13
CH-46E HMM-262
BURNED AFTER HARD LANDING
DURING DAY EXERCISE
LHD 6 / THAILAND
4 INJURED, 3 OK

11 MAR 13
EA-6B VAQ-129
CRASHED ON DAY
LOW LEVEL HARRINGTON, WA
ALL 3 FATAL

8 APR 13
FA-18F VFA-103
CRASHED AT SEA ON
DAY DIVERT
CVN 69 / N. ARABIAN SEA
PILOT AND WSO EJECTED OK

16 APR 13
CH-53E HMM-262
LANDED HARD AND
BURNED ON DAY MISSION
SOUTH KOREA
15 OK, 6 INJURED
CLASS A FLIGHT MISHAPS

Manned Aircraft Only

CLASS A MISHAPS/MISHAP RATE FY COMPARISON:

<table>
<thead>
<tr>
<th>Year</th>
<th>Mishap Numbers</th>
<th>Mishap Rate</th>
<th>Rate UCI</th>
<th>Rate LCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>21</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2003</td>
<td>26</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2004</td>
<td>12</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2005</td>
<td>13</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2006</td>
<td>14</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2007</td>
<td>9</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2008</td>
<td>14</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2009</td>
<td>11</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2010</td>
<td>7</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2011</td>
<td>9</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2012</td>
<td>9</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
<td>13.60</td>
<td>9/0.99</td>
<td>9/0.96</td>
</tr>
</tbody>
</table>

30-Sep-12: 9/0.99  30-Sep-11: 9/0.96

10-YEAR AVERAGE (FY02-11) MISHAPS/MISHAP RATE:

13.60/1.36

*see last slide for definition of UCI/LCI and FY12 Max explanation
CLASS A FLIGHT MISHAPS
Manned Aircraft Only

CLASS A FM/FM RATE FY COMPARISON:

<table>
<thead>
<tr>
<th>Year</th>
<th>Mishap Numbers</th>
<th>Mishap Rate</th>
<th>Rate UCI*</th>
<th>Rate LCI*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>15</td>
<td>3.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>11</td>
<td>2.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>18</td>
<td>5.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>9</td>
<td>2.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>6</td>
<td>1.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>7</td>
<td>2.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>7</td>
<td>2.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>1.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
<td>1.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>7</td>
<td>2.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>6</td>
<td>2.18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

30-Sep-12: 6/2.18  30-Sep-11: 7/2.44
FY11 MISHAPS/MISHAP RATE: 7/2.44
10-YEAR AVERAGE (FY02-11) MISHAPS/MISHAP RATE: 8.80/2.60
## Aircrew Human Factors

<table>
<thead>
<tr>
<th>Class</th>
<th>FY-11</th>
<th>FY-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM</td>
<td>USN</td>
<td>USMC</td>
</tr>
<tr>
<td>Maintenance</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Aircrew-HF</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>M/Mat –</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Aircrew HF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undetermined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total mishaps with an ultimate characterization of Aircrew-Human Factors:

**FY11:** 10 of 16 (63%)  **FY12:** 10 of 15 (66%)
Back to Basics
The HFACS View

FY10-11 HFACS Causal Factors

HFACS analysis tells the same story for Aircrew and Maintenance
Decreasing Mishap Rate and Cost

Navy Aviation Class A Mishap Cost

Costs in then year $

Decreasing Rate Controlling Mishap Costs
Cost

AVIATION
$516M

Total Cost: $692M

Fatalities

PMV
42

Total Fatalities: 59

Current as of 20 Dec 2012
**USN-FY 2011**

**Cost**
- **AVIATION** $492M
- **Shore/ Ground/Op MV** $28M
- **PMV** $21M
- **Afloat** $35M
- **Recreation** $9M

**Total Cost: $585M**

**Fatalities**
- **PMV** 67
- **PMV-2** 32
- **PMV-4** 32
- **Ped/Bike** 3
- **Recreation** 18
- **Aviation** 9
- **Afloat** 0
- **Shore/ Ground/Op MV** 16

**Total Fatalities: 110**

Current as of 14 Nov 2011
Where We Are Going

• Vision
  – **ZERO** “preventable” mishaps
    • Aviation A, B, C
    • Ground, flight related, flight
    • Operational, recreational, POV, etc.

• Method
  – More focus on HF cause factor prevention
  – Technology / Systems Safety
  – Programs
  – Leadership
Where We Are Going
Programs / Tools

• Traditional
  • HFACS / Human Factors
  • CRM / (O) RM
    • Time Critical Risk Management (TCRM)
  • Safety Management System (3750.7R/S)
  • Culture Workshop
  • Safety Survey
    • Improved Survey – not as much programmatic as Climate/Culture/Maintenance Risk Management focused
  • CSA / MCAS
  • Safety Education
Where We Are Going

Programs / Tools

• New / Emerging
  • Aviation Safety Awareness Program (ASAP)
  • USMC Force Preservation Board
  • Military Flight Operations Quality Assurance (MFOQA)
  • Risk Management Information
  • Fatigue Avoidance Scheduling Tool (FAST)
Naval Safety Center Aeromedical Contact List

• **CDR Christopher Lucas—Flight Surgeon**
  - christopher.c.lucas@navy.mil  757-444-3520x7268

• **LCDR Lisa Finlayson—Aerospace Physiologist**
  - lisa.finlayson@navy.mil    757-444-3520 x7229

• **LT Antonio Anglero—Aerospace Experimental Psychologist**
  - antonio.anglero@navy.mil    757-444-3520x7231
Additional Slides
FY11/FY12 Class A Characterizations*

• Factors leading up to mishaps fall into in 4 bins
  – Material Failure only
  – Maintenance Factors only
  – Aircrew-related Human Factors (Aircrew Error)
  – Maintenance or material factors followed by Aircrew-related Human Factors**

• FY11 and FY12 – majority of Class A mishaps characterized as Aircrew-related Human Factor related.

** Events where aircrew-related human factors errors follow maintenance or material failure are ultimately characterized as Aircrew-related HF events.

*Characterization not to be confused with accepted cause factors.
FY11/12 Class A FM Totals

- **Class A Mishaps**
  - FY11: 16
  - FY12: 15 (to date)

- **Aircrew Human Factors Involved**
  - FY11: 10 of 16
  - FY12: 10 of 15 (to date)
  - 65% of all class A losses in FY11 & 12.

- **In Field Takeoff, Hover & Landing Environment**
  - FY11: 5 of 10
  - FY12: 7 of 10 (to date)
  - 60% of all class A losses due to Aircrew Human Error.

Aircrew humans factors mishaps parsed to T/O, hovering and landing.
Back to Basics

Airfield Environment

Mishaps

• Bottom Line: 65% of all Class As in FY11 & 12 can be characterized as Aircrew Human Factors mishaps
  ** 60% of those occurred in the landing environment ashore **

• We average almost 10 times as many flight hours ashore vs hours afloat.
  ➢ Mishaps over the past 2 years indicate zero Class A mishaps involving aircrew human factors while landing afloat.

• We need to take a hard look at our training for the ashore airfield environment.
  ➢ Do we focus enough on our training in the landing environment?

We must balance tactics training with basic airmanship skills.
• **Maintenance causal factors**
  - Comprise a small portion of Class A mishaps
  - Therefore, look at Class B and C mishaps
  - FY-11 & 12 = 98 events

What results in most maintenance mishaps?
## Maintenance Mishaps

<table>
<thead>
<tr>
<th>Rank</th>
<th>FY-11</th>
<th>FY-12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Severity</td>
<td>Severity</td>
</tr>
<tr>
<td>1</td>
<td>Failure to follow maintenance instructions</td>
<td>1 Failure to follow maintenance instructions</td>
</tr>
<tr>
<td>2</td>
<td>Aircraft maintenance turns</td>
<td>2 Aircraft maintenance turns</td>
</tr>
<tr>
<td>3</td>
<td>Aircraft towing</td>
<td>3 Aircraft towing</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>4 Personnel injury (falls)</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>5 Tool control</td>
</tr>
</tbody>
</table>

Note the repeat of mishap characterizations in FY-11 and FY-12

- ✔️
Back to Basics

Maintenance Environment

Mishaps

• FAILURE TO FOLLOW PUBS, NO SUPERVISION

- FY-11 & 12 = 60 mishaps
- Common factors:
  • Performing maintenance on loaded weapons
  • Improper completion of special/conditional inspections
  • Lack of QA/CDI/SUP involvement/supervision
  • Not heeding NOTES / CAUTIONS / WARNINGS
  • Lack of knowledge & experience
  • Improper daily/pre-flight inspections
  • Poor communication/pass down, complacency

Back to basics needed in maintenance as well.
Back to Basics
The HFACS View

• BLUF:
  • Act-level skill based & judgment errors are increasing
  • Supervisory-level operations planning issues are still high
  • Organizational-level process (optempo, guidance, training) is increasing

• Statistical trends are not possible to determine due to the low number of mishaps
• Listed are the probabilities that the change seen from one year to the next was by chance. (P=.05 was used as cut off)
• CRM remains the most frequently cited causal factor, although incidences decreased.
• Green indicates decreases that are likely not due to chance and the red are increase that are not likely due to chance.

HFACS analysis tells the same story for Aircrew and Maintenance
Aviation Mishap Summary

Areas for Improvement

• Aircrew:
  - Compliance with NATOPS & SOPs
  - Basic airmanship
  - Balance tactical qualifications with flying skills

• Maintenance
  - Compliance with maintenance publications
  - Basic sound maintenance practices
  - Balance work accomplishment with quality assurance

• Every one: **Supervise, Supervise, Supervise!**

Aircrew and Maintenance personnel have similar problems
Navy Fatalities and Aircraft Losses
1982 vs 2012 Comparison

<table>
<thead>
<tr>
<th>Category</th>
<th>1982</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy Personal Motor Vehicles</td>
<td>222</td>
<td>42</td>
</tr>
<tr>
<td>Navy Recreation</td>
<td>75</td>
<td>7</td>
</tr>
<tr>
<td>Navy Aviation</td>
<td>64</td>
<td>2</td>
</tr>
<tr>
<td>Navy Shore</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Navy Afloat</td>
<td>21</td>
<td>3</td>
</tr>
</tbody>
</table>

| Aircraft Mishap/Losses        | 70/64| 10/6 |

| Cost in then Year $          | $319M| $516M |

Focus on Greatest Fatality and Cost Drivers
<table>
<thead>
<tr>
<th>Rank</th>
<th>FY-11</th>
<th>Severity</th>
<th>FY-12</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aircraft logbook inspection and TD’s do not match OOMA/NALCOMIS</td>
<td></td>
<td>1</td>
<td>Personnel lack ORM knowledge and proper application</td>
</tr>
<tr>
<td>2</td>
<td>Personnel lack ORM knowledge and proper application</td>
<td></td>
<td>2</td>
<td>Improper/Lack of proper use of personal protective equipment</td>
</tr>
<tr>
<td>3</td>
<td>Outdated publications utilized by maintenance personnel</td>
<td>1</td>
<td>3</td>
<td>Failure to use publication/checklist during task</td>
</tr>
<tr>
<td>4</td>
<td>Tool inventories not updated to reflect changes</td>
<td>1</td>
<td>4</td>
<td>Poor communication between work center and maintenance control/unrealistic expectation</td>
</tr>
<tr>
<td>5</td>
<td>Pre-expendable and spare parts bin lack proper accountability</td>
<td></td>
<td>5</td>
<td>Lack of senior leadership guidance during towing evolution</td>
</tr>
<tr>
<td>6</td>
<td>Hydraulic fluid log not fully documented and class 6 results not entered in logbook</td>
<td></td>
<td>6</td>
<td>Tool Control: Shift change ATAF, lack of knowledge for lost/missing tool reporting</td>
</tr>
<tr>
<td>7</td>
<td>Personnel introducing spark producing items within ALSS hazard area</td>
<td></td>
<td>7</td>
<td>Improper storage of Hazardous material</td>
</tr>
<tr>
<td>8</td>
<td>Missing safety devices on shop equipment, (i.e. sewing machine, grinders, drill press)</td>
<td>3</td>
<td>8</td>
<td>Missing safety devices on shop equipment, (i.e. sewing machine, grinders, drill press)</td>
</tr>
<tr>
<td>9</td>
<td>Material Safety Data sheets not updated and lack unique identifier</td>
<td></td>
<td>9</td>
<td>Personnel introducing spark producing items within ALSS hazard area</td>
</tr>
<tr>
<td>10</td>
<td>Pre-operational checks not performed prior to use of equipment</td>
<td>2</td>
<td>10</td>
<td>Aircraft logbook inspection and TD’s do not match OOMA/NALCOMIS</td>
</tr>
<tr>
<td>Rank</td>
<td>FY-11</td>
<td>Severity</td>
<td>Rank</td>
<td>FY-12</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------</td>
<td>----------------------</td>
<td>------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Runway/Taxiway markings faded, worn or peeling</td>
<td>✓</td>
<td>1</td>
<td>Runway/Taxiway markings faded, worn or peeling</td>
</tr>
<tr>
<td>2</td>
<td>Grass obstructing view of airfield signage &amp; lighting</td>
<td>✓</td>
<td>2</td>
<td>Grass obstructing view of airfield signage &amp; lighting</td>
</tr>
<tr>
<td>3</td>
<td>No vehicle traffic signs or hold short lines to airfield</td>
<td>✓</td>
<td>3</td>
<td>No vehicle traffic signs or hold short lines to airfield</td>
</tr>
<tr>
<td>4</td>
<td>Surface corrosion on AG</td>
<td>✓</td>
<td>4</td>
<td>Surface corrosion on AG</td>
</tr>
<tr>
<td>5</td>
<td>Arresting gear lubrication</td>
<td></td>
<td>5</td>
<td>Arresting gear lubrication</td>
</tr>
<tr>
<td>6</td>
<td>FOD underneath AG system</td>
<td>✓</td>
<td>6</td>
<td>FOD underneath AG system</td>
</tr>
<tr>
<td>7</td>
<td>No explosion proof lighting</td>
<td></td>
<td>7</td>
<td>Expired gauges on fuel equipment and trucks</td>
</tr>
<tr>
<td>8</td>
<td>Fuel sample documentation</td>
<td></td>
<td>8</td>
<td>QA fuel lab not IAW the NATOPS &amp; UFC</td>
</tr>
<tr>
<td>9</td>
<td>Missing fuel farm pump placards</td>
<td></td>
<td>9</td>
<td>Explosion proof lighting (fuel lab)</td>
</tr>
<tr>
<td>10</td>
<td>Point of sale meter not calibrated</td>
<td></td>
<td>10</td>
<td>BASH</td>
</tr>
</tbody>
</table>

Repeat discrepancies
Culture Workshop Results

Aviation

• CW areas of Concern:
  - MATCHING MANNING WITH SKILL-SETS
  - MANDATORY TRAINING VS OPS TEMPO
  - PTS/ERB
  - LACK OF SKIPPER’S AUTHORITY
  - AIRCREW CURRENCY
  - CONTRACT HOUSING
  - HIGH OPTEMPO
  - FATIGUE
  - LACK OF RESOURCES/AGING AIRCRAFT/AIRCRAFT TRANSITIONING
  - FORCE SHAPING PROGRAMS
  - EXPERIENCE/ENLISTED LEADERSHIP CAPABILITIES
  - MILLENNIAL GENERATION CHALLENGES
  - SAFETY PRIORITIZATION

Non-prioritized information through August CY 12
Culture Workshop Results

Surface

• CW areas of Concern:
  - LACK OF COMPETENT PERSONNEL
  - COMMUNICATION BETWEEN OFFICERS AND ENLISTED PERSONNEL
  - OPERATIONAL DEMAND FROM EXTERNAL SOURCES
  - POOR COMMAND INDOC/PQS
  - PQS/TRAINING EFFECTIVENESS
  - AT/FP REQUIREMENTS
  - MANNING AND CANNIBALIZATION (BORROWED) EQUIPMENT TO SUPPORT INSURV
  - HOSTILE WORK ENVIRONMENT/ SEXUAL ASSAULTS

Non-prioritized information through August CY 12
Areas of Concern

- Squadron ORM Implementation. Many commands lacked a formal ORM instruction per OPNAVINST 3500.39.

- Naval Aviation Survival Training Program (NASTP appendix E, OPNAVINST 3710.7T) required annual training in:
  - Aeromedical aspects of ejection and emergency ground egress
  - Emergency ground egress — impact, acceleration, survivability and egress
  - Sensory problems — spatial disorientation, visual illusions, visual scanning, situational awareness and disorientation countermeasures

3710 required aeromedical briefs rarely done
Areas of Concern

• Most squadrons have not recently (or ever) briefed their personnel on the Concept of Privilege.
• Many mishap investigation kits contained expired and out of date items.
• AMB training is not happening on a quarterly basis for all squadrons. Documentation is also lacking.
Areas of Concern

• Aviation Safety Council, Enlisted Safety Committee, and even HFB/HFC sometimes lack medical representation (or a ‘rent a doc’ fills in who really doesn’t know what's going on).
• Medical data entry is behind/inaccurate (inoculations, hearing conservation, etc.).
• Medical Clearance Notices/waivers are often inaccurate/not followed up on.
• Often there is no medical training for the mishap boards
• Ground OSH/PPE programs often lack medical assistance. These programs were taken over by clinics which can leave the squadron Flight Surgeon out of the loop.
Areas of Concern

• Safety / NATOPS
  • Lacked a squadron instruction for safety, and many did not define their squadron’s safety program and all the safety department’s personnel, roles, and responsibilities. Such as HFCs, ASCs, ESCs, ground safety programs, etc. This safety instruction should include the flight surgeon, corpsman, and the enlisted NATOPS clerk.
  • Few squadrons did not conduct their aviation safety councils on a quarterly basis as required by OPNAVINST and MCO.
Areas of Concern

• Navy AMSOs not getting out much at all
• Access to care a problem, especially Reserves
• Flight Surgeons not putting AA in WESS!
• Go to your squadrons and FLY!!
  – Need familiarity with mission and people
  – Primary job – Aviation Safety, NOT clinic
Positives

- Squadrons like their “Docs”
- Excellent quality of medical care
- Good understanding of human errors in mishaps
- Improving Aeromedical Analysis write ups
• UCI = Upper Confidence Interval   LCI = Lower Confidence Interval

• Rate values above the UCI or below the LCI infer a statistically significant change is probable. This is only an indicator. Significance cannot be determined until end-of-year.

• Values between the UCI and LCI infer that nothing significant has occurred to increase or decrease mishap rate.

(Confidence Interval is based on: Poisson Rate related to a Chi Squared Distribution and calculated using FY07-11 data except for the Lost Work Days and Lost Time Case slides which were based on a normal distribution).

FY12 Goal Explanation

FY12 Goals were calculated to reflect the whole number of events that could occur in a given category and still achieve the 75% reduction from 2002. This calculation takes into account the changing exposure level (i.e. population, flight hours and fleet size) as well as the OSD requirement to only count the property damage events from 2002 that would be Class A events under the new property damage thresholds.