

# **2008 State of the Flight Surgeon Preliminary Report**

**Society of USAF Flight Surgeons**

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# 2008 State of the Flight Surgeon Survey of Line Commanders

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## Introduction

In May 2003, the Surgeon General of the Air Force requested that the president of the Society of USAF Flight Surgeons (SoUSAFFS) provide an annual report capturing the “state of the flight surgeon.” This assessment, conducted outside commander channels, would provide an independent assessment of priority areas to guide senior leaders in continued improvements. Analysis of this data constitutes the fourth “State of the Flight Surgeon” report.

Over the past seven years, the Aerospace Medicine Primary Course underwent restructuring and a major course rewrite implementing a distance learning course prerequisite. The Residency in Aerospace Medicine added a Preventive Medicine emphasis area in 1999, relocated the occupational medicine training site from Kelly AFB to Tinker AFB in 2002, and added the required completion of Master’s in Public Health and Aerospace Medicine programs. Air Staff has defined the roles of the installation Chief of Aeromedical Services (SGP) with AFPD 48-1 and AFI 48-101. All changes have occurred during the seven-plus years of continuous sustained combat operations and the nearly two decades of continuous worldwide deployment for peacekeeping and combat, while being overshadowed by BRAC and planning for the relocation of the School of Aerospace Medicine to Wright Patterson AFB.

This year’s evaluation is a two-year progress report, comparing its results with the benchmark 2006 Line Commanders Survey and assessing the success of training and education programs of flight surgeons and chiefs of aerospace medicine.

## Methods

This component of the SoUSAFFS “State of the Flight Surgeon” survey series utilized a number of resources to accomplish, then analyze, a survey of operational line leadership regarding its perceptions of the flight surgeons assigned to, or supporting, operational units. The purpose of the survey was to provide feedback to flight surgeons in the field regarding line perceptions of their performance, and to utilize it as a tool to further enhance current and future education and training emphasis areas. It was designed by a USAF Resident in Aerospace Medicine (RAM) conducted online by using [www.surveymonkey.com](http://www.surveymonkey.com), and sponsored by the USAF School of Aerospace Medicine. Analysis of the data was accomplished via a cooperative effort between the resident and Eagle Applied Sciences.

This survey targeted commanders of operations groups and squadrons involved in active flying or missile/launch operations. A previous survey in 2006 relied upon reference materials, such as unit level Personnel Accounting System (PAS) files and the Air Force Association Almanac, to construct a comprehensive list of Air Force (AF) units directly supporting major weapons systems. Due to political and logistical obstacles this year, a novel approach using MAJCOM SGPs was employed. MAJCOM SGPs were approached at a meeting of the 2008 Aerospace Medicine Corporate Board at Brooks City-Base, and briefed the purpose and objectives of the survey. MAJCOM SGP support was requested, utilizing them as a communication conduit to their MAJCOM bases. One week later, a survey email invitation was sent to the MAJCOM SGPs, who forwarded it to the base-level SGPs with instructions to disseminate it to base group and squadron commanders.

Due to the compressed time table, the initial survey collection period was set for four weeks. Toward the end of the collection period, a reminder email was sent out to MAJCOM SGPs, extending the survey collection period for one week and requesting that they encourage base commanders to participate in the survey.

The online survey questioned operational line commanders regarding their perceptions of the abilities, capabilities, and mission support of their FSs. The survey questions are contained in Appendix A.

All commanders (CCs) were queried Question Set 1 (QS1) regarding the performance of all their installation flight surgeons (IFS) as a group. The remainder of the questions targeted specific CC types. Commanders were divided into five groups; each assigned specific questions to answer.

The five commander groups are defined:

Operations group commanders (OGCC),  
 squadron commanders (SQCC)  
 assigned a squadron medical element  
 flight surgeon (SMEFSCC), SQCC with  
 one attached flight surgeon (1AtFSCC),  
 SQCC with multiple attached flight  
 surgeons (MultFSCC), and SQCC not  
 assigned either an SME or attached flight surgeon (NoFSCC).

| Survey Question Sets |           |                                |
|----------------------|-----------|--------------------------------|
| Question Set         | Questions | Targeted Commander Demographic |
| QS1                  | Q1-Q17    | All commanders                 |
| QS2                  | Q18-Q30   | OGCC                           |
| QS3                  | Q31-Q33   | All squadron commanders        |
| QS4                  | Q34-Q48   | SMEFSCC                        |
| QS5                  | Q49-Q58   | 1AtFSCC, MultFSCC              |

1. OGCC – Operations group commanders.  
 OGCCs directed to answer QS1 and QS2 regarding installation SGP.

SqCC made up the other four groups:

2. SMEFSCC – SqCCs with an assigned squadron medical element (SME).  
 SMEFSCCs directed to answer QS1, QS3 and QS4 regarding the assigned SME FS.

3. 1AtFSCC – SqCCs with a solitary squadron attached FS.  
1AtFSCCs directed to answer QS1, QS3, QS5 regarding the attached flight surgeon (AtFS).
4. MultFSCC – SqCCs with more than one squadron attached FS.  
1AtFSCCs directed to answer QS1, QS3, QS5 regarding the multiple attached flight surgeon (MultAtFS).
5. NoFSCC – SqCCs with no assigned or attached FSs.  
NoFSCCs directed to answer QS1 and QS3 only.

The descriptive statistics of commander's responses to questions, QS1-5, are shown graphically in Appendix E.

Each question set is concluded by a "Comments" open response text box, encouraging "further comments, positive, negative or otherwise." Comments are located in Appendix B - OPERATIONS GROUP COMMANDERS – COMMENTS and C - SQUADRON COMMANDERS – COMMENTS.

In addition to the above described commander group routing, several questions required skip logic or filtering. Skip logic is as follows:

- Skip Q21 if answered No or Unsure to Q20.
- Skip Q13 if answered No or Unsure to Q12.
- Skip Q35 if answered No to Q34.
- Skip Q46 if answered No or N/A to Q45.
- Skip Q50 if answered No to Q49.

The survey collection window spanned March 3 through April 6, 2008. SGPs from nine of the 10 MAJCOMS were contacted. These include: ACC, AETC, AFMC, AFSOC, AFRC, AFSPC, AMC, PACAF, and USAFE. Air Force Cyber Command (AFCYBER), due to its provisional status, was not contacted for survey participation.

Statistical analysis was performed using STATA MP 10.0. Complete results and STATA run files are attached in Appendix D.

Three null hypotheses were established:

1.  $H_0$  - Each of the five commander group's responses would not statistically differ from one another.
2.  $H_0$  - Overall commander group responses would not statistically differ from 2006 and 2008 survey data.
3.  $H_0$  - Commander responses regarding IFS were not influenced by regular and frequent flights by their IFS.

Survey responses used Likert ordinal scales, assigning each response a numerical value. Most-favorable responses were coded a value of 1 and each less-favorable ordered response

|  |
|--|
| The format of a typical five-level Likert item is: |
|--|

- |  |
|--|
| <ol style="list-style-type: none"> <li>1. Superior</li> <li>2. Excellent</li> <li>3. Good</li> <li>4. Fair</li> <li>5. Poor</li> </ol> |
|--|

was given a whole number value sequentially greater than one. In statistical comparisons, the higher a question's mean score by a commander group, the less favorable impression of the flight surgeon's performance. This is reflected in the group-mean distribution plots. Groups with the higher deflections have least-favorable opinions.

Surveys where individuals did not identify themselves in Q17 as either a Group CC or Squadron CC, or who failed to identify what kind of squadron they commanded in Q33, were dropped from analysis.

Most of the qualitative questions had a "no opinion" response option. These responses were reflected in the descriptive and graphical statistics; however, they were excluded during statistical analysis.

QS1 graded the installation flight surgeons as a group, regarding their knowledge, skills, delivery of aeromedical services, and support of the operational mission. Variation among each of the five commander groups' responses was examined using Kruskal Wallis test (KWALLIS).

KWALLIS was also used to compare the OGCC, SMEFSCC, and 1AtFSCC responses; assessing the CCs' impressions of SGP, SME and solo ATFSs funds of knowledge respectively, regarding: operational issues, flight safety, occupational health and medical knowledge/practice (Q28\_1-4, Q44\_1-4, Q57\_1-4, respectively). This analysis assessed for differences in CC's perception of their own FS in these specific knowledge areas.

Scheffe's test was used for pairwise analysis to determine significant differences between each pair combination of the five groups (for QS1) and of the three groups (for the "knowledge questions" in QS2, 4 and 5) on those questions where kwallis showed group differences exceeding the 95% confidence level.

Data from the 2006 State of the Flight Surgeon – Survey of Line Commanders was compared to this survey. Questions were paired and kwallis was used to examine total CC responses from each survey.

Logistical regression was used to calculate odds ratios for QS1. Commander responses were dichotomized into Superior/Excellent vs. Good, Fair, Poor, or into Very Satisfied/Satisfied vs Neutral, Dissatisfied, Very Dissatisfied.

Discrepancies between the 2008 and 2006 surveys included a change in the five-level Likert scale in Q11.1-4, and Q15.1-2. The 2008 survey used: Very satisfied, Satisfied, Neutral, Dissatisfied, Very Dissatisfied; while the 2006 survey use: Superior, Excellent, Good, Fair, Poor. After careful consideration and discussion with the statistics expert from Eagle Applied Sciences, it was determined that each of the five-level Likert scales could be directly compared.

Other discrepancies identified include a change in the three-level Likert scale in Q37, Q38, and Q39. The 2006 report stated the scale was Yes, No, Unsure; however, the actual 2006 survey used Frequently, Occasionally, Never. This error in the 2006 report was propagated to the 2008 survey, thereby rendering analysis between survey years problematic for these questions. Future surveys should use a Frequently, Occasionally, Never Likert scale for Q37, Q38, and Q39.

## **Results**

Of 58 OGCCs identified last year, 39 (67%) returned surveys. Of 188 flying or missile operations SqCCs, 105 (56%) returned completed surveys. Of those, 25 (24% of those with completed responses) reported having an SMEFS assigned, 36 (34%) had one AtFS, 17 (16%) had multiple attached flight surgeons, and 27 (26%) had no SMEFS or AtFS.

### **PART I. Installation Flight Surgeons (IFS)**

Questions 3-15 (Appendix A)

All CCs evaluated, via QS1, performance of all flight surgeons, as a group, assigned to their installations.

#### *IFS – Credibility:*

All CCs were queried regarding perceptions of credibility, as physicians and clinicians, of their IFS as a group (Q7). 76% rated them as excellent or better and 27% rated them as a group of superior clinicians. 16% rated them as good, 5% as fair, and 1% as poor. 2% had no opinion.

KWALLIS for Q7 showed no significant difference in responses among CC groups (Table 1). The 2008-2006 survey response KWALLIS analysis shows no significant differences between years (Table 2).

CCs rated their IFS as aircrew. In Q8, 62% of CCs felt their rated personnel respected the IFS as aircrew, at a level of excellent or better, with 21% rating this as superior; 26% responded with a rating of good, 6% fair, and 3% poor; 3% had no opinion.

KWALLIS for Q8 was statistically insignificant (Table 1).

2008-2006 survey response Q8 KWALLIS analysis shows no significant differences between years (Table 2).

IFS were rated very highly in their management of flying status (Q9). 91% of all CCs felt IFS flying status determinations—including the ability of the FSs to balance concerns for flying safety, the manpower needs of mission completion, and good medical care in the process of making those determinations—were “about right”

(neither overly restrictive nor overly permissive). Only one of the 144 CCs felt the IFS were overly permissive; 6% of all CCs felt the flying status determinations were overly-restrictive, and 3% had no opinion. KWALLIS of responses for Q9 showed no significant variance among the CC groups (Table 1) or between 2008-2006 surveys (Table 2).

Only 54% of all CC respondents felt the IFS were the primary care-givers for families of their flyers (Q12); 38% felt the families did not receive their basic medical care primarily at Flight Medicine; 8% were unsure. KWALLIS for Q12 showed a significant variance among the groups ( $p < 0.03$ , Table 1). A one-way Scheffe did not identify any significant intergroup variance.

Comparison between 2008 and 2006 surveys identified a statistically significant ( $p < 0.0001$ , Table 2) decrease in families of flyers receiving basic medical care at Flight Medicine. In 2006, 75% of families of flyers received basic medical care at flight medicine, decreasing to 54% in 2008.

CCs answering “yes” to Q12 were presented with Q13, asking as to the quality of care the flyers’ families receive from the IFS. CCs answering “no” or “unsure” to Q12 were routed past Q13 to Q14.

In Q13, 77% felt the quality of care the IFS provided to the flyers’ families was excellent or better (up from 67% in 2006), with 22% overall rating this as superior; 23% felt the effort was good, 5% fair, 0% poor, and 0% had no opinion. KWALLIS of responses for Q13 showed no significant variance among the CC groups (Table 1) or between 2008-2006 surveys (Table 2).

#### *IFS – Flying:*

In Q6, 68% of all CCs reported that their IFS were flying regularly and frequently; 20% felt they were not and 12% were unsure.

Only 41% of the NoFSCCs reported installation flight surgeons, as a group, were flying regularly and frequently (with any flying unit). Other CC groups estimated IFS flying frequency ranging between 64% to 84%. KWALLIS for Q6 no significant variance among the CC groups (Table 1) or between 2008-2006 surveys (Table 2).

#### *IFS - Flight Surgeon Knowledge:*

All CCs were presented with QS1, which regarded their opinions on IFS as a group. Respondents were asked their opinions of their IFS mastery of four areas of depth and breadth of knowledge: operational issues, flight safety issues, occupational health, and medicine and medical practice. They rated their impressions on a scale of Very Satisfied, Satisfied, Neutral, Dissatisfied, Very Dissatisfied, or No Opinion.

IFS knowledge of operational medicine (Q11\_1) had 88% of all CCs rating them as satisfied and better, 6% neutral, 5% as dissatisfied or worse, and 1% with no opinion.

IFS knowledge of flight safety (Q11\_2) had 91% of all CCs rating them as satisfied or better, 5% neutral, 1% very dissatisfied, and 3% with no opinion.

IFS knowledge of occupational health (Q11\_3) had 90% of all CCs rating them as satisfied or better, 6% neutral, 2% dissatisfied or worse, and 2% with no opinion.

IFS knowledge of medicine and medical practice (Q11\_4) had 95% of all CCs rating them as satisfied or better, 3% neutral, and 2% dissatisfied or worse.

KWALLIS of responses for Q11\_1, Q11\_2, Q11\_3, and Q11\_4 showed no significant variance among the CC groups (Table 1).

KWALLIS of the same question above between 2008 and 2006 surveys showed a significant ( $p = 0.0001$ , Table 2) improvement of commander satisfaction regarding IFS mastery of the four areas of depth and breadth of knowledge: operational issues, flight safety issues, occupational health, and medicine and medical practice.

#### *IFS – Readiness:*

All CCs were asked to rate their satisfaction with level of preparedness demonstrated by their IFS for mishap response and investigation (Q14\_1), and response to other types of casualties (Q14\_2).

In Q14\_1, 69% (58% in 2006) were satisfied or very satisfied with IFS mishap response and investigation preparedness, of which 38% were very satisfied. Approximately 10% were neutral and 2% were either dissatisfied or very dissatisfied with IFS preparedness. No opinion was reported in 18% of respondents.

In Q14\_2, 68% (48% in 2006) were satisfied or very satisfied with IFS other casualty response preparedness, of which 37% were very satisfied. Approximately 10% were neutral and 2% were either dissatisfied or very dissatisfied with IFS preparedness. No opinion was reported in 20% of respondents.

KWALLIS of responses for Q14\_1 and Q14\_2 showed no significant variance among CC groups (Table 1); however, statistically significant ( $p < 0.000$ , Table 2) differences between 2008-2006 surveys exist in both Q14\_1 and Q14\_2, showing an increased CC satisfaction of IFS mishap response and investigation and other casualty response preparedness.



*IFS – Communication Skills and Efforts:*

In Q10, 79% (74% in 2006) of responding CCs rated the communication skills and efforts of their IFS as excellent or better. This broke down to: 32% superior, 47% excellent, 15% good, 4% fair, 1% poor; 1% had no opinion.

KWALLIS of responses for Q10 showed no significant variance among the CC groups (Table 1) or between 2008-2006 surveys (Table 2).

*IFS – Briefings:*

Responding CCs were asked how often their IFS speak to their personnel at safety briefings, Commanders Calls, and other appropriate venues (Q3); 95% of all CCs responded with “frequently” or “occasionally.” OGCC, SMEFSCCs, and MultiFSCC all reported 100%, while 1AtFSCC reported 94% as “frequent” or “occasionally”. Overall, 46% brief frequently, 49% brief occasionally, and only 5% brief never.

Q3 KWALLIS showed no significant variance among the CC groups (Table 1) or between 2008-2006 surveys (Table 2).

Those CCs who said their IFS never briefed were routed to Q6.

In Q5, 77% (77% in 2006) of all CCs felt these briefings to be exceptional and high quality, while 20% felt them to be adequate, and 2% felt them to be marginal or poor quality. Q5 KWALLIS showed no significant variance among the CC groups (Table 1) or between 2008-2006 surveys (Table 2).

In Q4, 90% (93% in 2006) of the CCs who said their IFS briefed at least occasionally felt the briefings had a “positive” or “strongly positive” impact on their operational missions. Q4 KWALLIS showed no significant variance among the CC groups (Table 1) or between 2008-2006 surveys (Table 2).

*IFS – Other Impact on Mission:*

All CCs rated overall impact of their IFS on flying safety (Q15\_1). The response was positive, with 89% rating this as excellent or better; 6% said the impact was “good,” 1% fair and 1% poor. The OGCCs and SMEFSCCs put in a strongly positive rating, 94% and 100% rating respectively for the overall impact of their IFS on flying safety as excellent or superior.

Q15\_1 KWALLIS showed no significant variance among the CC groups (Table 1). Q15\_1 KWALLIS between 2008-2006 surveys was statistically significantly ( $p < 0.000$ , Table 2), with 2008 IFS impact on flying safety considered more favorable than 2006.

CCs rated the overall impact of IFS on mission completion. The response was positive, with 89% rating this as excellent or better; 6% said the impact was “good,” 1% fair, and 2% poor. The SMEFSCCs and 1AtFSCC put in a strongly positive rating: 96% and 94% rating, respectively for the overall impact of their IFS on mission completion as excellent or superior.

Q15\_2 KWALLIS showed no significant variance among the CC groups (Table 1). Q15\_2 KWALLIS between 2008-2006 surveys was statistically significant ( $p < 0.000$ , Table 2), with 2008 IFS impact on mission completion considered more favorable than 2006.

### *IFS - Flying influencing Commanders Ratings*

Statistical evaluation was performed to see if IFS who fly regularly and frequently were rated more favorably by their commanders than those who do not in QS1. Odds ratio results for 2006 and 2008 datasets (Table 3) demonstrated more favorable commander ratings of IFS who fly in: Q7 - Credibility as a physician/clinician, Q8 - Level of respect as aircrew, Q10 - Communication skills and efforts, Q11 Depth and Breadth of knowledge in: Operational Issues, Flight Safety, Occupational Health, Medicine and Medical Practice; Q14 - Demonstrated preparedness in: Mishap response/investigation, Other casualty response; Q15 - IFS impact on: Flying safety, and Mission Completion.

IFS who flew regularly and frequently were 2.65 - 8.05 ( $p < 0.05$ ) times more likely to be rated by their commander as Superior or Excellent or Very Satisfied or Satisfied, than those IFS who did not.

## **PART II. Chief of Aerospace Medicine (SGP)**

Questions Q20-Q27, Q29-Q30. (Appendix A)

Ratings of the base-level SGPs were obtained from the responding OGCCs.

### *SGP – Advisory Support to the OGCC:*

OGCCs were asked, “Do you consider your SGP to be your primary aeromedical advisor regarding flight or missile crew medical issues, flying safety, human factors, and human performance enhancement?” 76% said they did; 24% indicated they did not. Of those who did (the others were routed past this item), 93% rated their SGP’s performance in this capacity as excellent to superior, with just 17% rating it as good.

KWALLIS showed no significant variance between 2008-2006 surveys.

### *SGP – Meeting Attendance:*

Only 13% of OGCCs reported that their SGPs frequently attend “any” operations group meetings and 51% reported occasional SGP attendance. 31% reported

frequent SGP attendance at Wing Standup and 49% reported occasional attendance. They indicated their impression that 21% of SGPs never attend Wing Standup and fully 36% never see the SGP at their OG meetings.

KWALLIS showed no significant variance between 2008-2006 surveys.

*SGP – As Aeromedical Consultant and Advisor to Wing Leadership:*

The OGCCs were asked to assess the services the SGP provides to the line as an advisor or consultant on aeromedical issues. They rated the SGP in three components of this role. The responses showed little variance across the items. The first of these represented a first, line-side look at how the SGPs are doing with gap analysis. The OGCCs' ratings are in percentages and are in this order: Superior, Excellent, Good, Fair, Poor, and No Opinion. KWALLIS performed on A-D showed no significant variance between 2008-2006 surveys

- A. Please rate your Chief of Aeromedical Services on how well he/she advises wing leadership regarding medical and operational factors that enhances war fighter effectiveness.

23, 44, 15, 8, 8, 2

- B. Please rate the performance of your Chief of Aeromedical Services in identifying gaps in the capabilities of the human weapons system in your wing, and making recommendations or implementing plans to close those gaps.

18, 36, 23, 2, 8, 13

- C. Please rate the performance of your Chief of Aeromedical Services as a consultant to commanders and supervisors regarding aeromedical problems related to aircraft or life support equipment, mission plans, and human performance enhancement.

15, 51, 18, 0, 10, 5

- D. Please rate your Chief of Aeromedical Services' advice to you and your wing leadership regarding medical, environmental, and operational factors that influence war fighter effectiveness and mission completion.

21, 36, 28, 0, 13, 3

*SGP – As a Leader:*

67% of responding OGCCs felt their SGPs were very well-prepared, at the excellent to superior level, to lead the other flight surgeons at their installations; 18% rated this at good to fair and 5% had no opinion.

**PART III. Squadron Medical Element Flight Surgeon (SMEFS)**

Questions Q34-Q43, Q45-Q46. (Appendix A)

*SME – Advisory Support to the SqCC and Squadron:*

SMEFSCCs were asked, “Do you consider your SME flight surgeon to be your primary aeromedical advisor regarding flight crew medical issues, flying safety, human factors, and human performance enhancement?” Fully 92% said they did; only 8% (one SMEFSCC) indicated they did not. Of those who did, 82% rated their SMEFSs’ performance in this capacity as excellent to superior, with 18% rating it as good.

In addition, this question was asked, “Please rate your SME flight surgeon's advice to you and your squadron leadership regarding medical, environmental, and operational factors that influence war fighter effectiveness and mission completion.” 73% rated this advice as excellent or superior, 14% good, 0% fair, and 13% had no opinion.

88% advise the squadron personnel at Commanders Calls and flight safety meetings with briefings on aeromedical, flight safety, or general safety topics; 12% do not.

*SME – Meeting Attendance:*

83% of SMEFSCCs reported that their SMEFSs attended their squadron Commander’s Calls, 17% do not; 88% of SMEFSs attend squadron safety briefings frequently; 12% do not.

*SME – Leadership and Supervision*

73% of SMEFSCCs rated their SMEFSs’ performance in providing and arranging medical training for the SME medical personnel as superior or excellent, 9% rated this as good, and 18% had no opinion.

71% felt their SMEFSs’ overall supervision of their SME personnel was excellent or better, with 42% rating this as superior; 13% felt it was good, 8% fair or poor, and 4% had no opinion.

*SME – Flying:*

75% of SMEFSCCs reported their SME to be flying regularly and frequently with their squadrons; 25% indicating this was not the case. However, other response options that might have explained some of the 25% were not offered (e.g., flying N/A to this squadron or SMEFS flying regularly but not with own squadron).

*SME – Social Activity Involvement:*

In Q43, 67% of SMEFSCCs reported their SMEFSs were frequently involved in squadron social activities, 25% indicated occasional involvement, and 8% (2 of the 24 reporting) said their SMEFS never attended such functions. KWALLIS analysis of Q34 – SME as personal aeromedical advisor, and Q43 – SME attendance in social functions was statistically significant ( $p=0.043$ , Table 4). SME who attended social functions were rated more favorably regarding their role as a personal aeromedical advisor.

*SME – Deployment Support:*

63% of SMEFSCCs indicated their SMEFS had deployed with the squadron, while 13% reported the SMEFS had not. The question was not applicable in 25%. Performance in deployed locations was assessed by having the SMEFSCCs rate the performance of their SMEFSs in four areas. 100% of these ratings were good or better.

The SMEFSCCs were asked how well-prepared the SMEFS were to lead the squadron medical element in-garrison versus in the deployed environment. Preparedness for leadership in deployed location was better than in garrison and was highly statistically significant ( $p<0.000$ ) favoring deployed over in garrison. There were no significant differences in Q47\_1 and Q\_472 between 2006 and 2008 surveys.

Finally, KWALLIS was performed on Q34 – “Do you consider your SME flight surgeon to be your personal advisor?” and Q37, Q38, Q39, Q42, Q43, and Q45. Statistical significance was found in each of these comparisons (Table 4). SME FS who performed the tasks in Q37, Q38, Q39, Q42, Q43, and Q45 were statistically considered as an aeromedical advisor more often than those who did not perform these tasks.

**PART IV. Attached Flight Surgeon (AtFS)**

Questions Q49-Q56, Q58. (Appendix A)

*AtFS – Advisory Support to the SqCC and Squadron:*

Nearly all—92%—of the 1AtFSCCs consider their AtFS to be their personal aeromedical advisor (the same question that was put to the SMEFSCCs and the OGCCs); 8% did not. Of those who did, 93% rated their AtFSs’ performance in this capacity as excellent to superior, with 3% rating it as good.

Aeromedical advice to the squadron leadership (the same question that was asked of the SMEFSCCs) was felt to be excellent or superior by 75%, good by 14%, fair by 3%, and 8% had no opinion. Again, this was nearly the same as (just slightly higher than) the ratings of the advice given by the SMEFSs.

37% frequently advise squadron personnel at Commanders Calls and flight safety meetings with briefings on aeromedical, flight safety, or general safety topics; 54% do so occasionally and 8% have yet to do so.

*AtFS – Meeting Attendance:*

Only 42% of 1AtFSCCs reported that their AtFSs attended their squadron Commanders Calls frequently; 42% reported occasional attendance and 16% never see their AtFS at their Commanders Calls; 50% of AtFSs attend squadron safety briefings frequently, 36% occasionally, and 14% never. Again, the AtFSs appear to be somewhat less involved with these functions than the assigned SMEFSs.

*AtFS – Flying:*

69% of 1AtFSCCs reported their AtFS to be flying regularly and frequently with their squadrons and 19% said “no.” However, this question was slightly different than the corresponding one for the SMEFSs and IFS, as other choices were given to account for those who do not fly regularly with the squadron to which they are attached. Still, an option for “flying regularly but not with this squadron” would have improved the design of the question. 3% said “no, the FS is not on flying status” and 8% felt the question was not applicable to the situation.

*AtFS – Social Activity Involvement:*

As expected, involvement of the AtFSs in squadron social activities was slightly less than for the SMEFSs. The percentage of 1AtFSCCs reporting that their AtFS never participates was 17% (8 of the 49 reporting), similar to the SMEFSs (8%); 56% reported frequent participation; 28% occasional.

KWALLIS was performed on Q49 – “Do you consider your attached flight surgeon to be your personal advisor?” and Q53, Q55, and Q56. Statistical significance was found in each of these comparisons (Table 4).

**PART V. Flight Surgeon Knowledge**  
**Questions Q28, Q44, Q57. (Appendix A)**

A second group of questions to evaluate SGP, SMEFS, and AtFS knowledge was administered to the appropriate commanders. The purpose was to see if commanders differed from one another in assessing their own flight surgeon regarding the four “knowledge questions.” OGCC evaluated the SGP, SMEFSCC evaluated their SME, and 1AtFSCC evaluated their AtFS.

Asking these same questions in QS2, QS4, and QS5 allowed for this analysis. KWALLIS showed no statistically significant differences between commander types with their respective flight surgeon in the knowledge areas of operations, flight safety, occupational health, and medicine/medical practice questions.

KWALLIS analysis of commander responses comparing 2008 to 2006 surveys showed no statistically significant difference between the two years, with the exception in 1AtFS, Flt Safety, which improved slightly in 2008 (Table 6).

KWALLIS analysis of commander's responses to knowledge questions, comparing IFS and their own FS, was statistically significant in all cases in all cases except for one (1AtFSCC occupational health,  $p < 0.079$ ). Each commander group overwhelmingly perceived IFS knowledge to be superior to their own respective flight surgeon's, with the exception of SMEFSCC Occupational Health, which ranked SMEFS significantly better than IFS (Table 5).

## PART VI. Commander Comments

Questions Q16, Q30, Q48, Q8. (Appendix B and C)

Comments were solicited as described in methods section. Tabulation revealed 78 out of the 144 (54%) respondents left at least one comment, 87% of which were overwhelmingly positive. Manning deficiencies were a recurrent theme in 23 of the commanders' comments.

**TABLE 1. 2008 KWALLIS by CC group  
P-Values for Institution Flight Surgeons**

| Question  | N          | Mean         | sd           | p            |
|-----------|------------|--------------|--------------|--------------|
| 3         | 144        | 1.583        | 0.585        | 0.281        |
| 4         | 136        | 1.860        | 0.052        | 0.802        |
| 5         | 137        | 2.043        | 0.063        | 0.097        |
| 6         | 142        | 1.444        | 0.670        | 0.095        |
| 7         | 139        | 2.000        | 0.843        | 0.495        |
| 8         | 139        | 2.273        | 0.984        | 0.872        |
| 9         | 137        | 1.950        | 0.252        | 0.871        |
| 10        | 143        | 1.937        | 0.841        | 0.707        |
| 11.1      | 141        | 1.801        | 0.839        | 0.648        |
| 11.2      | 140        | 1.557        | 0.671        | 0.769        |
| 11.3      | 140        | 1.579        | 0.787        | 0.768        |
| 11.4      | 144        | 1.438        | 0.655        | 0.400        |
| <b>12</b> | <b>132</b> | <b>0.409</b> | <b>0.494</b> | <b>0.031</b> |
| 13        | 78         | 2.115        | 0.806        | 0.210        |
| 14.1      | 117        | 1.754        | 0.845        | 0.798        |
| 14.2      | 115        | 1.730        | 0.841        | 0.445        |
| 15.1      | 140        | 1.679        | 0.752        | 0.226        |
| 15.2      | 142        | 1.676        | 0.830        | 0.402        |

**TABLE 2. 2008-2006 KWALLIS  
P-Values for Institution Flight Surgeons**

| Question | Year | N   | Mean  | sd    | p      | Question | Year | N     | Mean  | sd    | p      |
|----------|------|-----|-------|-------|--------|----------|------|-------|-------|-------|--------|
| 3        | 2008 | 145 | 1.048 | 0.215 | 0.324  | 11.2     | 2008 | 141   | 1.560 | 0.669 | <0.001 |
|          | 2006 | 158 | 1.114 | 0.319 | 2006   |          | 146  | 2.089 | 0.813 |       |        |
| 4        | 2008 | 137 | 1.861 | 0.608 | 0.824  | 11.3     | 2008 | 141   | 1.582 | 0.785 | <0.001 |
|          | 2006 | 140 | 1.829 | 0.508 | 2006   |          | 146  | 1.945 | 0.803 |       |        |
| 5        | 2008 | 137 | 2.044 | 0.736 | 0.104  | 11.4     | 2008 | 145   | 1.441 | 0.655 | <0.001 |
|          | 2006 | 140 | 2.050 | 0.638 | 2006   |          | 154  | 1.864 | 0.825 |       |        |
| 6        | 2008 | 143 | 1.441 | 0.698 | 0.902  | 12       | 2008 | 133   | 0.406 | 0.493 | 0.003  |
|          | 2006 | 158 | 1.570 | 0.817 | 2006   |          | 146  | 0.199 | 0.400 |       |        |
| 7        | 2008 | 140 | 2.000 | 0.840 | 0.207  | 13       | 2008 | 79    | 2.114 | 0.800 | 0.928  |
|          | 2006 | 153 | 2.140 | 0.896 | 2006   |          | 114  | 2.123 | 0.811 |       |        |
| 8        | 2008 | 140 | 2.279 | 0.982 | 0.708  | 14.1     | 2008 | 118   | 1.737 | 0.842 | 0.005  |
|          | 2006 | 141 | 2.333 | 1.019 | 2006   |          | 124  | 2.444 | 1.532 |       |        |
| 9        | 2008 | 138 | 1.949 | 0.251 | 0.978  | 14.2     | 2008 | 116   | 1.733 | 0.838 | 0.003  |
|          | 2006 | 152 | 1.947 | 0.252 | 2006   |          | 117  | 2.453 | 1.506 |       |        |
| 10       | 2008 | 144 | 1.944 | 0.843 | 0.849  | 15.1     | 2008 | 141   | 1.681 | 0.749 | <0.001 |
|          | 2006 | 155 | 1.955 | 0.824 | 2006   |          | 144  | 2.111 | 0.785 |       |        |
| 11.1     | 2008 | 142 | 1.803 | 0.836 | <0.001 | 15.2     | 2008 | 143   | 1.678 | 0.827 | <0.001 |
|          | 2006 | 154 | 2.448 | 0.915 | 2006   |          | 150  | 2.045 | 0.900 |       |        |

**TABLE 3. Odds Ratio for more favorable commander rating in IFS who fly regularly and frequently vs IFS who do not**

| Question  | Year | OR    | p      |
|---|------|-------|--------|
| Q7 - Credibility as physician/clinician†                                  | 2008 | 4.85  | <0.001 |
|   | 2006 | 7.81  | <0.001 |
| Q8 - Level of respect as aircrew†   | 2008 | 4.40  | <0.001 |
|   | 2006 | 3.29  | 0.002  |
| Q10 - Communications skills and efforts†                                  | 2008 | 4.39  | 0.001  |
|   | 2006 | 6.75  | <0.001 |
| Q11.1 - Depth and Breadth of knowledge in Operational Issues††            | 2008 | 3.09  | 0.037  |
|   | 2006 | 2.65  | 0.005  |
| Q11.2 - Depth and Breadth of knowledge in Flight Safety Issues††          | 2008 | 2.88  | 0.130  |
|   | 2006 | 3.87  | <0.001 |
| Q11.3 - Depth and Breadth of knowledge in Occupational Health††           | 2008 | 2.39  | 0.151  |
|   | 2006 | 4.11  | 0.001  |
| Q11.4 - Depth and Breadth of knowledge in Medicine and Medical Practice†† | 2008 | 4.32  | 0.098  |
|   | 2006 | 3.98  | 0.001  |
| Q14.1 - Demonstrated preparedness for Mishap response/investigation††     | 2008 | 3.17  | 0.029  |
|   | 2006 | 0.88  | 0.771  |
| Q14.2 - Demonstrated preparedness for Other casualty response††           | 2008 | 5.72  | 0.002  |
|   | 2006 | 0.976 | 0.944  |
| Q15.1 - Flight surgeons' impact on Flying safety††                        | 2008 | 8.05  | 0.003  |
|   | 2006 | 5.25  | <0.001 |
| Q15.2 - Flight surgeons' impact on Mission Completion††                   | 2008 | 4.48  | 0.011  |
|   | 2006 | 7.69  | <0.001 |

† Odds of being rating (Superior or Excellent) vs (Good, Fair or Poor) in those who fly regularly and frequently vs those who do not.

†† Odds of being rating (Very Satisfied or Satisfied) vs (Neutral, Dissatisfied, Very Dissatisfied) in those who fly regularly and frequently vs those who do not.

**TABLE 4. KWALLIS Aeromedical Advisor Q34 & Q49 P-Values for FS**

| Question      | Advisor | N  | Mean  | sd    | p     |
|---------------|---------|----|-------|-------|-------|
| SMEFS         |         |    |       |       |       |
| 37 CC Call    | Y       | 22 | 1.090 | 0.294 | 0.001 |
|               | N       | 2  | 2.000 | 0.000 |       |
| 38 Flt Safety | Y       | 22 | 1.045 | 0.213 | 0.000 |
|               | N       | 2  | 2.000 | 0.000 |       |
| 39 Brief      | Y       | 22 | 1.045 | 0.213 | 0.000 |
|               | N       | 2  | 2.000 | 0.000 |       |
| 42 Fly        | Y       | 22 | 1.182 | 0.395 | 0.012 |
|               | N       | 2  | 2.000 | 0.000 |       |
| 43 Social     | Y       | 22 | 1.312 | 0.568 | 0.043 |
|               | N       | 2  | 2.500 | 0.707 |       |
| 45 Deploy     | Y       | 22 | 1.545 | 0.858 | 0.025 |
|               | N       | 2  | 2.500 | 0.707 |       |
| 1AtFS         |         |    |       |       |       |
| 53 Brief      | Y       | 30 | 1.633 | 0.556 | 0.027 |
|               | N       | 5  | 2.200 | 0.837 |       |
| 55 Fly        | Y       | 28 | 1.143 | 0.356 | 0.007 |
|               | N       | 4  | 1.750 | 0.500 |       |
| 56 Social     | Y       | 31 | 1.452 | 0.624 | 0.000 |
|               | N       | 5  | 2.600 | 0.894 |       |

**TABLE 5. 2008 KWALLIS IFS-FS and Commander FS P-Values and Means for IFS**

| Commander Type | Question    | IFS Mean | FS Mean | IFS-FS p |
|----------------|-------------|----------|---------|----------|
| OGCC           | Operational | 1.923    | 2.394   | <0.000   |
|                | Flt Safety  | 1.641    | 2.026   | <0.000   |
|                | Occupation  | 1.692    | 1.888   | <0.000   |
|                | Medicine    | 1.589    | 1.684   | <0.000   |
| SMEFSCC        | Operational | 1.640    | 1.909   | 0.003    |
|                | Flt Safety  | 1.480    | 1.590   | 0.004    |
|                | Occupation  | 1.560    | 1.545   | 0.015    |
|                | Medicine    | 1.360    | 1.428   | 0.010    |
| 1AtFS          | Operational | 1.685    | 1.843   | 0.006    |
|                | Flt Safety  | 1.485    | 1.580   | 0.011    |
|                | Occupation  | 1.441    | 1.617   | 0.079    |
|                | Medicine    | 1.277    | 1.588   | 0.004    |

**TABLE 6. KWALLIS 2008 v 2006 Knowledge Questions P-Values for Institution Flight Surgeons**

| Grp/Question | Year | N  | Mean  | sd    | p    |
|--------------|------|----|-------|-------|------|
| SGP          |      |    |       |       |      |
| Operational  | 2008 | 38 | 2.394 | 1.283 | NS   |
|              | 2006 | 27 | 1.963 | 0.759 |      |
| Flt Safety   | 2008 | 38 | 2.026 | 1.102 | NS   |
|              | 2006 | 27 | 1.852 | 0.817 |      |
| Occ Health   | 2008 | 36 | 1.889 | 0.979 | NS   |
|              | 2006 | 26 | 1.769 | 0.710 |      |
| Medicine     | 2008 | 38 | 1.684 | 1.016 | NS   |
|              | 2006 | 26 | 1.769 | 0.652 |      |
| SMEFS        |      |    |       |       |      |
| Operational  | 2008 | 22 | 1.909 | 0.750 | NS   |
|              | 2006 | 31 | 2.065 | 0.892 |      |
| Flt Safety   | 2008 | 22 | 1.591 | 0.734 | NS   |
|              | 2006 | 31 | 1.710 | 0.739 |      |
| Occ Health   | 2008 | 22 | 1.545 | 0.739 | NS   |
|              | 2006 | 31 | 1.387 | 0.615 |      |
| Medicine     | 2008 | 21 | 1.429 | 0.676 | NS   |
|              | 2006 | 33 | 1.455 | 0.711 |      |
| 1AtFS        |      |    |       |       |      |
| Operational  | 2008 | 32 | 1.844 | 0.723 | NS   |
|              | 2006 | 49 | 2.142 | 0.890 |      |
| Flt Safety   | 2008 | 31 | 1.581 | 0.620 | 0.02 |
|              | 2006 | 49 | 1.959 | 0.762 |      |
| Occ Health   | 2008 | 34 | 1.618 | 0.695 | NS   |
|              | 2006 | 47 | 1.830 | 0.732 |      |
| Medicine     | 2008 | 34 | 1.588 | 0.657 | NS   |
|              | 2006 | 49 | 1.694 | 0.683 |      |



## **Discussion**

### **PART I. Installation Flight Surgeons (IFS)**

An overall trend was observed in the descriptive analysis of QS1, which included Q3 through Q15. This set of questions examined the five groups of commander evaluations regarding the installation flight surgeons (IFS) as a group. The null hypothesis was that each of the five groups would rate the IFS the same on each question. Commander's responses did not statistically differ from each other (except for Q12), thereby not rejecting the null hypothesis.

All CC groups reported IFS performance favorably. The presence of flight surgeons associated with a squadron had a positive association with SqCCs' impressions of all the IFS; however, these findings were statistically insignificant.

IFS performance responses were favorable; however, there was a significant portion of CCs who rated the performance as "less than excellent". Ten questions used the five-level Likert scale: Superior-Excellent-Good-Fair-Poor-No opinion. Responses to those questions were dichotomized into "excellent or better" and "less than excellent".

A general trend of poorer ratings by NoFSCCs was seen in questions Q7, Q8, Q10, Q11, Q13, and Q15. In each question, NoFSCCs had a higher mean score (poorer rating) than other commanders. This phenomenon was observed in the 2006 survey; however, it is not statistically significant. Future studies may want to examine what type of squadrons these are, to see if there are factors not being controlled for.

CCs evaluated how their flyers regarded the IFS as aircrew in Q8. 1AtFSCC and MultFSCCs both reported 70% rating of "Excellent or Better" compared to 60% for SMEFSCCs and 56% for NoFSCCs. This finding was consistent with the 2006 survey which found MultFSCCs rated the IFS the highest of the groups, while SMEFSCCs had one of the lowest "superior" totals. This might be due to SME squadron bias, viewing their own FS as superior to IFS as a whole.

Poor or fair ratings as aircrew were found in 13 (9%) of 144 CCs. This is a decrease from the 2006 survey where 17 (11%) of 153 were reported as poor or fair. This is not a statistically significant decrease ( $p=0.45$ ).

Flight surgeons who graduate from the Aerospace Medicine Primary (AMP) program receive no formal flight training. Often, AMP students receive only a single familiarization ride in a two-seat trainer before graduating and functioning as an FS. Learning how to become an aircrew member occurs as "on the job training." Effective communication and crew resource management, as well as familiarity with aircraft control, requires many months or years to accomplish. Aircrew credibility

could be improved by including Medical Officer Flight Familiarization Training (MOFFT) for all FSs attending AMP.

The third null hypothesis -  $H_0$  - Commander responses regarding IFS were not influenced by regular and frequent flights by their IFS was evaluated in questions, Q7, Q8, Q10, Q11, Q14, Q15. Overwhelming statistical significance was observed in both 2008 and 2006 datasets, thereby rejecting this null hypothesis. IFS who flew regularly and frequently were rated more favorably than those IFS who did not, with odds ratios ranged from 2.65 - 8.05 time. **This substantiates the argument that Flight Surgeons should “*participate in regular and frequent flying*”** as our credibility in the flying community is directly linked with our frequency of flying. The next survey might include a question of how many flights per month are performed by FS, to better assess the perception of “regular and frequent flying.”

Caring for the flyer, both physically and emotionally, has been a cornerstone of flight medicine. To accomplish this, not only do we need to be competent physicians but we must also tend to the psyche of flyers. Flyers will repress or minimize their own ailments; however, they are greatly concerned about the wellbeing of their family members. Providing excellent medical care for the families is paramount for the flyer to maintain focus on the mission.

It is disturbing to see a decrease in CCs who report their families receive their basic medical care primarily from flight medicine (Q12). In 2006, 75% of CCs reported that flight medicine took care of their families. In 2008, it has significantly dropped to 54% ( $p < 0.001$ ). Although operations tempo resulting in FS manning shortages might shoulder some of the blame, it is a trend that must be carefully examined and reversed.

Despite the decrease in flyer's families receiving their primary care at flight medicine, the care that is being provided remains high quality. Over 73% rate the care their families receive as Superior or Excellent, 23% Good, 5% Fair, and 0% Poor. These outstanding ratings speak to the high quality of individuals who are selected to become flight surgeons.

Frequency of IFS safety briefings has not significantly changed since the 2006 survey. IFS are reported to brief frequently 46% of the time, while occasionally briefing 49%, and never briefing 5%. Although there was no significant difference between commander groups, the worst impressions came from the NoFSCCs (44% know of only occasional IFS briefings and 19% report “never”). To correct this, examination of NoFSCCs mission should be conducted, evaluating their operational needs, and customizing safety briefings to meet them. Alternatively, NoFSCCs examination may reveal safety briefing needs are already being met by aerospace physiologists.

## **PART II. Chief of Aerospace Medicine (SGP)**

This was a follow-up survey evaluating the effectiveness of Chief of Aerospace Medicine in their leadership role. Ratings were done by the OGCCs. Overall responses were favorable toward their installations' SGPs.

OGCCs overwhelmingly responded (76%) that they consider the SGP to be their primary aeromedical advisor. Furthermore, 93% rate the SGPs' performance in this advisory role as superior or excellent. This is substantiated in the 2006 survey, which had similar results. Clearly, SGPs are highly regarded in the flying community.

SGPs performance ratings on gap analysis and closure (Q25), and to wing leadership in general (Q27), remained favorable and did not statistically change from 2006 survey results. Of respondents with opinions, both questions had less than 12% as fair or poor ratings.

SGP performance as specialist aeromedical consultants to other commanders and supervisors (Q26) has declined since the 2006 survey. Four OGCCs rated their SGP performance as poor. This significantly right-shifted the question results.

64% and 80% of OGCCs see the SGP at Wing Standup and OG meetings either occasionally or frequently. These numbers compare with 2006 survey results and probably represent reasonable values, as rank and local policy considerations may keep these from ever approaching 100%.

Finally, 71% of OGCCs felt their SGPs showed leadership qualities at excellent or better. Only 16% (6 of 37) rated this as fair or poor. This is a significant right-shift when compared to the 2006 survey, where 93% rated SGP leadership qualities as excellent or better. This decline of perceived leadership should be examined more closely.

## **PART III. Squadron Medical Element Flight Surgeon (SMEFS) and Solo Attached Flight Surgeon (1AtFS)**

SMEFSs were rated by their squadron commanders on a range of topics relevant to the SME function. Having 1AtFSs rated by the squadron commanders of the units to which they were attached was included as a FS group with some similarities to compare the performance of the SMEFSs, as well as to directly evaluate how involved 1AtFSs are in the squadrons to which they are attached. The question sets for these two groups were very similar except for the deployment and SME leadership questions asked of SMEFSCCs that were not relevant to the 1AtFSs.

SMEFSs and 1AtFSs were almost universally perceived as the CCs' primary personal aeromedical advisors (92%). The quality of this advice was rated very

high: 86% and 79%, respectively. This high regard by their CC makes one wonder if an attached FS is merely an SME with a different rater. Are they performing the exact same functions for the squadron?

The similarity between SMEFSs and 1AtFSs continues. Both have a high attendance rate to squadron's Commanders Calls and safety briefings. SMEFSs were reported to attend 83% and 88%, respectively; while 1AtFSs were reported to attend 84% and 86%, respectively.

Nearly 25% of SMEFSs are perceived as not flying regularly and frequently with their squadrons. This may be partly explained by operational flying units where there is no opportunity for the SMEFS to do so, such as A-10 and F-22 squadrons. Present survey limitations prevent further investigation of these results.

Similarly, 21% of 1AtFSs were perceived as not flying regularly and frequently with their attached squadron. This may be due to the type of FS attached to the squadron (e.g., SGP may fly only minimal hours each month due to administrative requirements elsewhere on base).

Aeromedical briefings were reported at 88% for SMEFSs and 92% 1AtFSs, while reported social event participation has been reported at 91% and 84%, respectively.

KWALLIS analysis has identified attending Commander's Calls (Q37), Attending Flight Safety Briefings (Q38), presenting at Aeromedical Briefings (Q39,Q53), Regular and Frequent Flying (Q42, Q55), Attending Social Functions (Q43,Q56), and Deploying with the Squadron (Q45) all positively influence commanders' perceptions regarding their FS being their personal aeromedical advisor (Q34, Q49). What has been preached as common sense—being an active participant in the community you work for will increase your likelihood of success—is now statistically supported through this analysis.

#### **PART IV. Flight Surgeon Knowledge**

SGPs, SMEFSs, and 1AtFSs all rated well in the four knowledge areas examined across commander groups: line operations, flight safety, occupational health, and medicine and medical practice. There were no significant differences between FS groups regarding these "knowledge questions." Additionally, with the exception of 1AtFSC in Flt Safety, comparison between survey years was the same. The high markings in knowledge areas are uniformly seen across all three FS types as well as between survey periods. This reflects positively on the quality training we received at AMP, as well as on the quality personnel who become FS.

It is interesting to see that when controlling for commander type, each commander group rated the IFS better than their own FS. This might represent a perceived synergistic effect, where strengths of other FS complement other FS weaknesses.

On the whole, the IFS would collectively have higher competencies than any one individual, but this is pure speculation on the author's part.

## **PART V. Commanders' Comments**

Comments were left by 75 (54%) of the CCs. These were mostly favorable, some very highly so. Many included "best ever" type comments. Seven commanders left negative comments, but these mostly focused on individual "problem" flight surgeons and did not reflect on FSs as a whole. There were 23 (29%) comments expressing concern about FS manning at their installations and its negative impact on the mission.

## **PART VI. Weaknesses**

Weaknesses of this study included an imprecise technique to invite commanders to participate in the survey. Although our response numbers were similar to the 2006 survey, we were unable to accurately calculate a denominator of each commander type. This prevented us from calculating a true survey return rate.

Recommendations for future surveys, if using this MAJCOM SGP approach, would be to start communicating with the MAJCOMs earlier and to request actual OG and squadron commander names. This would track commanders who have participated, allowing for reminders to be sent to those commanders who have not yet responded. Additionally, this would select only Operations Group and Squadron Commanders, the targets of this survey, thereby reducing the number of "Neither OG nor Squadron Commander" responses. Finally, by having a specific commander list, the ability for individuals to submit multiple survey responses would be addressed.

Improved design characteristic for future studies would determine whether the SGP rated by the OGCC is a fully trained Resident of Aerospace Medicine (RAM) or an experienced FS. This would give us another data point to see if there is a statistical difference between the two strata of SGPs, possibly identifying discrepancies between the two as well as lending credibility to the RAM program.

Another design consideration would be to add AFSOC-specific categories to Q32 – Squadron Weapon Systems. Expansion of these would provide better resolution of what types of squadron weapon systems we are serving and would reduce the number of "Other" responses, which is currently capturing these commanders.

## **Acknowledgements**

Lt Col Dana Windhorst for providing the 2006 data and documentation.

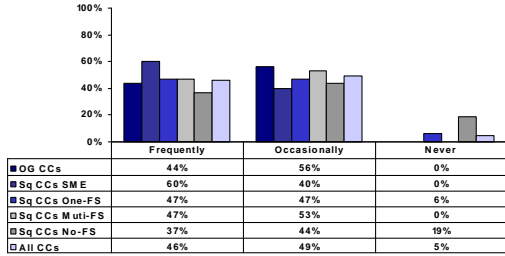
Major David Duval; who grabbed the RAM by the horns during the author's SERE sabbatical. Duval devised the "SGP Solution" for survey distribution, after encountering countless political obstacles and dead ends. Without his assistance, this survey would still be sitting on a desk.

Special thank you to William Thompson from Eagle Applied Sciences, who reviewed the statistics and encouraged in-depth examination of the data.



**Line Support from Installation Flight Surgeons (IFS): Briefings - Q3**

- Do your flight surgeons speak to your personnel at safety briefings, Commanders Calls and other appropriate venues?

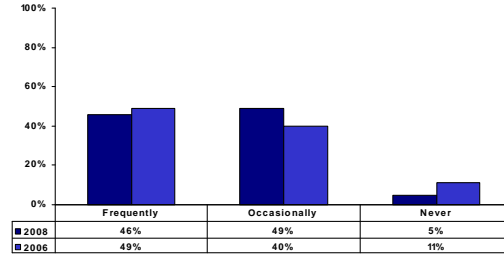


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**Line Support from Installation Flight Surgeons (IFS): Briefings - Q3 2008 vs 2006**

- Do your flight surgeons speak to your personnel at safety briefings, Commanders Calls and other appropriate venues?

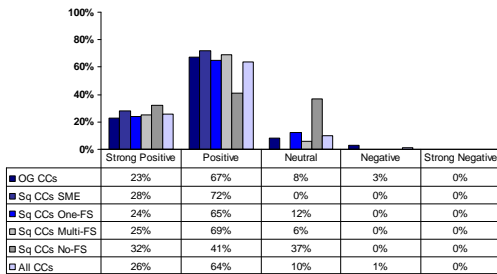


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**Impact of IFS Briefings on Mission - Q4**

- Please rate the impact of these briefings on your mission.

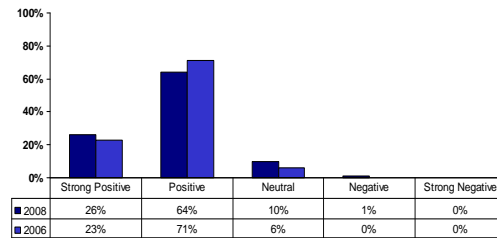


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**Impact of IFS Briefings on Mission - Q4 2008 vs 2006**

- Please rate the impact of these briefings on your mission.

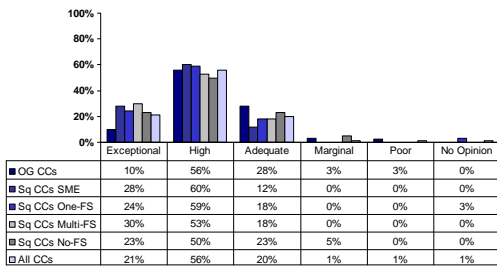


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**Quality of IFS Briefings - Q5**

- Please rate the overall quality of these briefings

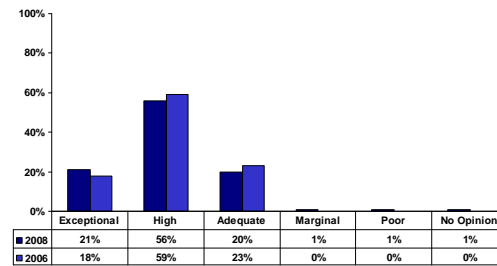


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**Quality of IFS Briefings - Q5 2008 vs 2006**

- Please rate the overall quality of these briefings



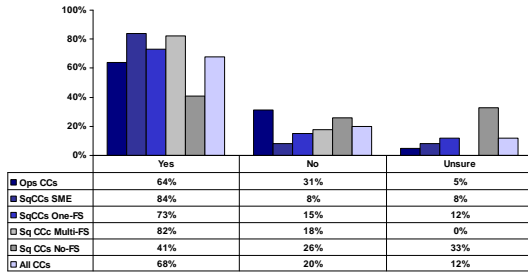
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**IFS Flying - Q6**

U.S. AIR FORCE

■ Do your FSs fly regularly and frequently?



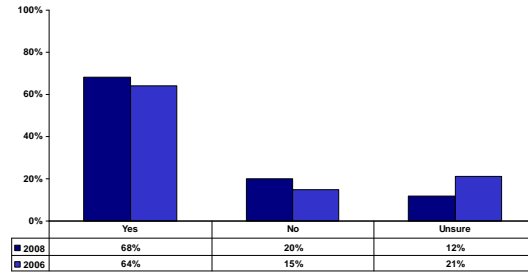
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**IFS Flying - Q6  
2008 vs 2006**

U.S. AIR FORCE

■ Do your FSs fly regularly and frequently?



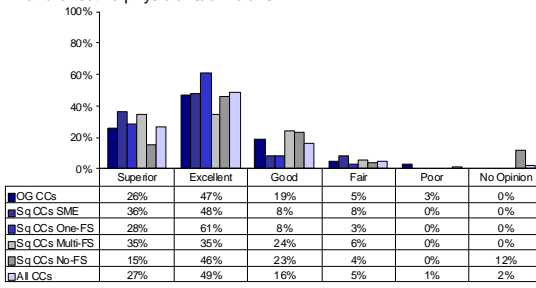
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**Flyers' Impressions of IFS Clinical  
Credibility - Q7**

U.S. AIR FORCE

■ How credible do your flyers consider your flight surgeons as good and effective physicians/clinicians?



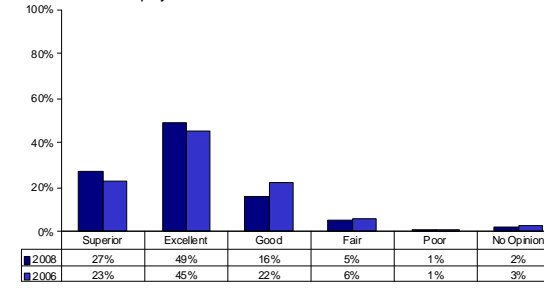
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**Flyers' Impressions of IFS Clinical  
Credibility - Q7  
2008 vs 2006**

U.S. AIR FORCE

■ How credible do your flyers consider your flight surgeons as good and effective physicians/clinicians?



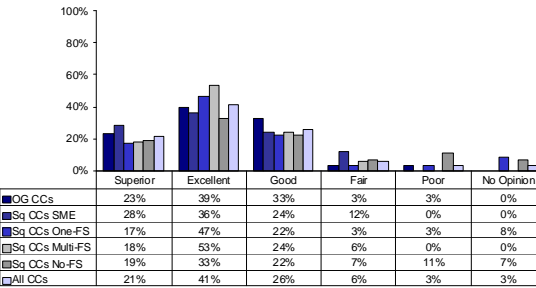
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**IFS Credibility as Aircrew - Q8**

U.S. AIR FORCE

■ Please rate your FSs in terms of level of respect accorded them as aircrew



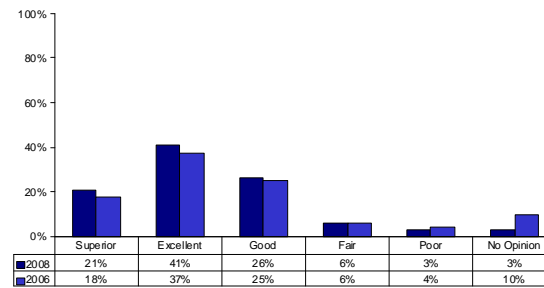
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**IFS Credibility as Aircrew - Q8  
2008 vs 2006**

U.S. AIR FORCE

■ Please rate your FSs in terms of level of respect accorded them as aircrew



*Integrity - Service - Excellence*

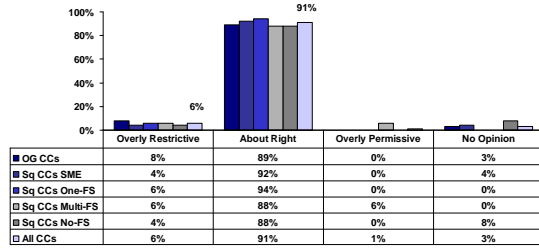




**IFS Determination of Flying Status - Q9**

U.S. AIR FORCE

■ How 'easy' or 'tough' are your flight surgeons when determining flying status, DNIF or RTFS, when you balance flying safety, the manpower needs of mission completion, and good medical care?



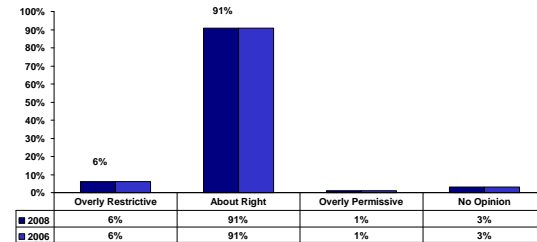
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**IFS Determination of Flying Status - Q9  
2008 vs 2006**

U.S. AIR FORCE

■ How 'easy' or 'tough' are your flight surgeons when determining flying status, DNIF or RTFS, when you balance flying safety, the manpower needs of mission completion, and good medical care?



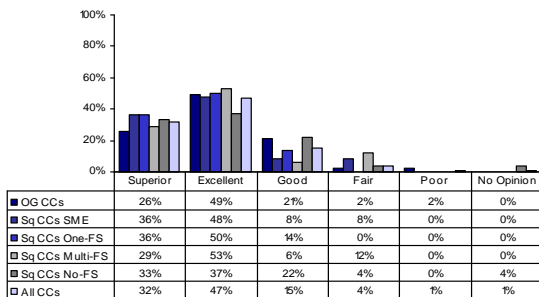
*Integrity - Service - Excellence*



**IFS Communication - Q10**

U.S. AIR FORCE

■ Please rate your flight surgeons' communication skills and efforts



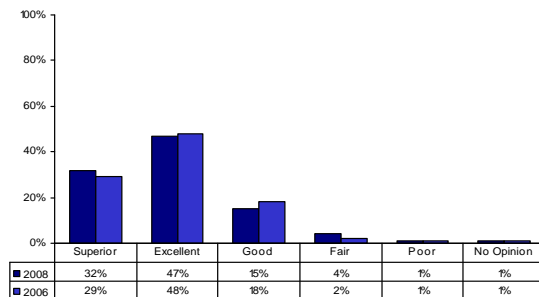
*Integrity - Service - Excellence*



**IFS Communication - Q10  
2008 vs 2006**

U.S. AIR FORCE

■ Please rate your flight surgeons' communication skills and efforts



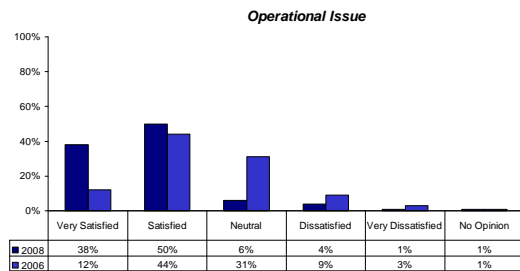
*Integrity - Service - Excellence*



**IFS Knowledge  
Operational Issues - Q11\_1  
2008 vs 2006**

U.S. AIR FORCE

■ Rate your installation flight surgeons' depth and breadth of knowledge in the following areas:



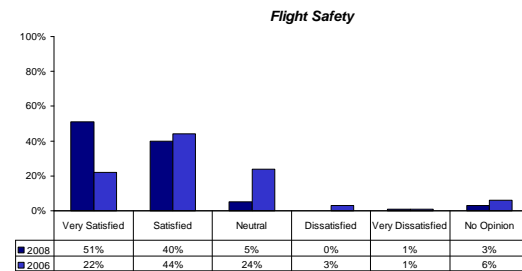
*Integrity - Service - Excellence* p<0.000



**IFS Knowledge  
Flight Safety - Q11\_2  
2008 vs 2006**

U.S. AIR FORCE

■ Rate your installation flight surgeons' depth and breadth of knowledge in the following areas:



*Integrity - Service - Excellence* p<0.000

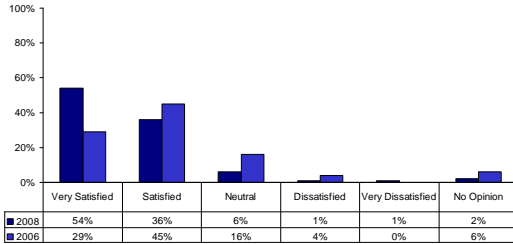


**IFS Knowledge**  
**Occupational Health - Q11\_3**  
2008 vs 2006

U.S. AIR FORCE

- Rate your installation flight surgeons' depth and breadth of knowledge in the following areas:

**Occupational Health**



*Integrity - Service - Excellence* p<0.0001

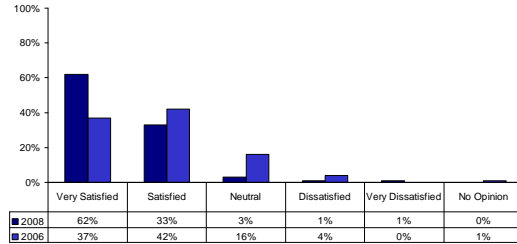


**IFS Knowledge**  
**Medicine and Medical Practice - Q11\_4**  
2008 vs 2006

U.S. AIR FORCE

- Rate your installation flight surgeons' depth and breadth of knowledge in the following areas:

**Medicine & Medical Practice**



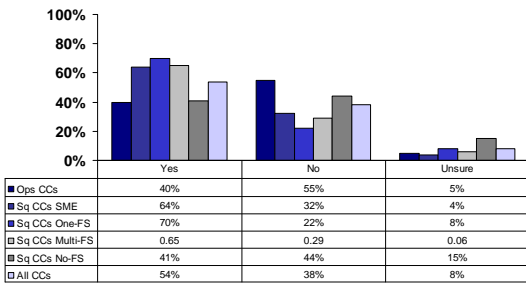
*Integrity - Service - Excellence* p<0.000



**IFS Medical Care of Flyers' Families - Q12**

U.S. AIR FORCE

- Do the families of flyers receive their basic medical care primarily at Flight Medicine?



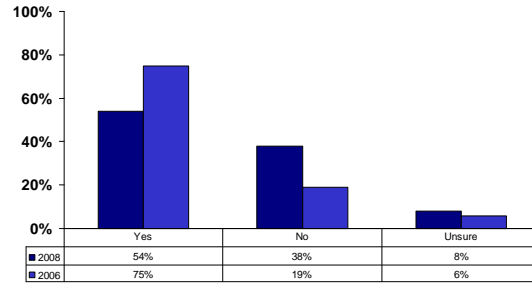
*Integrity - Service - Excellence*



**IFS Medical Care of Flyers' Families - Q12**  
2008 vs 2006

U.S. AIR FORCE

- Do the families of flyers receive their basic medical care primarily at Flight Medicine?



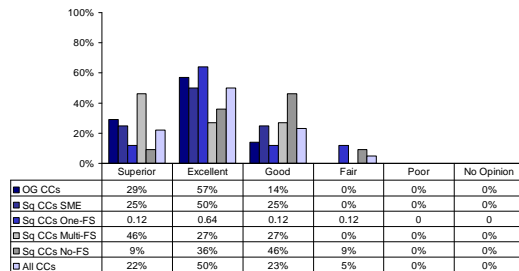
*Integrity - Service - Excellence* p<0.000



**IFS Medical Care of Flyers' Families - Q13**

U.S. AIR FORCE

- How well do your flight surgeons meet the families' health care needs?



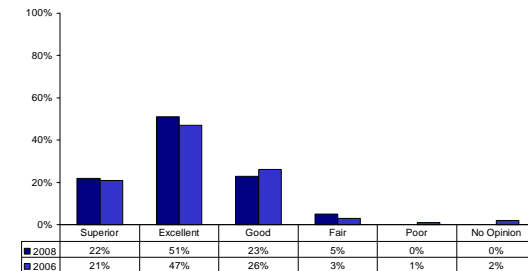
*Integrity - Service - Excellence*



**IFS Medical Care of Flyers' Families - Q13**  
2008 vs 2006

U.S. AIR FORCE

- How well do your flight surgeons meet the families' health care needs?



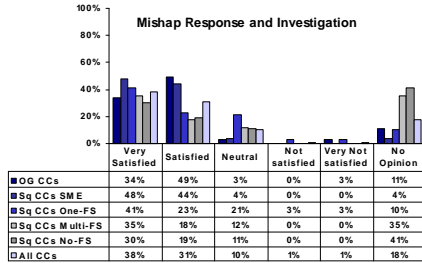
*Integrity - Service - Excellence*



**IFS Readiness – Mishap Response and Investigation - Q14\_1**

U.S. AIR FORCE

- Rate your level of satisfaction with the level of demonstrated preparedness of your flight surgeons for:



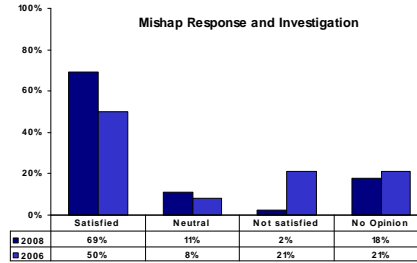
Integrity - Service - Excellence



**IFS Readiness – Mishap Response and Investigation - Q14\_1 2008 vs 2006**

U.S. AIR FORCE

- Rate your level of satisfaction with the level of demonstrated preparedness of your flight surgeons for:



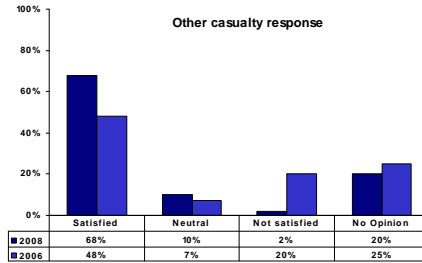
Integrity - Service - Excellence p<0.000



**IFS Readiness – Other casualty response - Q14\_2 2008 vs 2006**

U.S. AIR FORCE

- Rate your level of satisfaction with the level of demonstrated preparedness of your flight surgeons for:



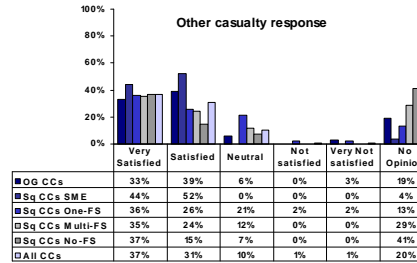
Integrity - Service - Excellence p<0.003



**IFS Readiness – Other casualty response - Q14\_2**

U.S. AIR FORCE

- Rate your level of satisfaction with the level of demonstrated preparedness of your flight surgeons for:



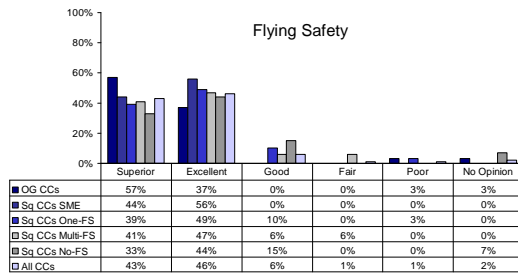
Integrity - Service - Excellence



**IFS Impact on Flying Safety - Q15\_1**

U.S. AIR FORCE

- Provide your overall rating of your flight surgeons' impact on :



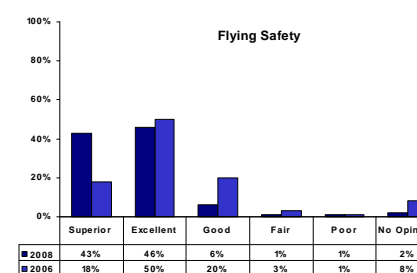
Integrity - Service - Excellence



**IFS Impact on Flying Safety - Q15\_1 2008 vs 2006**

U.S. AIR FORCE

- Provide your overall rating of your flight surgeons' impact on :



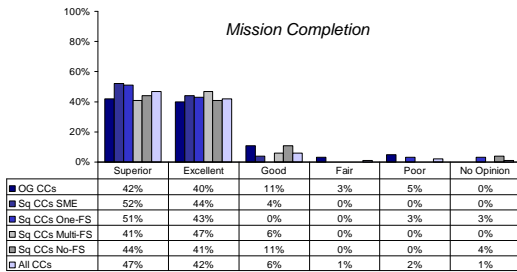
Integrity - Service - Excellence p<0.000



**IFS Impact on Mission Completion - Q15\_2**

U.S. AIR FORCE

Provide your overall rating of your flight surgeons' impact on :



Integrity - Service - Excellence

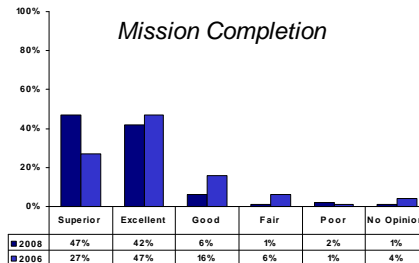


**IFS Impact on Mission Completion - Q15\_2**

U.S. AIR FORCE

**2008 vs 2006**

Provide your overall rating of your flight surgeons' impact on :



Integrity - Service - Excellence

p<0.003



**SME FS Support to Sq CC – Q34,35**

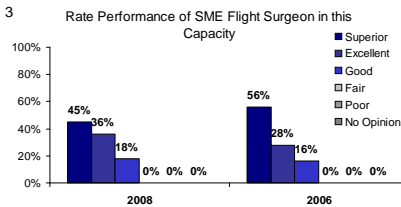
U.S. AIR FORCE

Do you consider your SME flight surgeon to be your personal aeromedical advisor regarding flight or missile crew medical issues, flying safety, human factors and human performance enhancement?

2008 2006

Yes 92% 97%

No 8% 3%



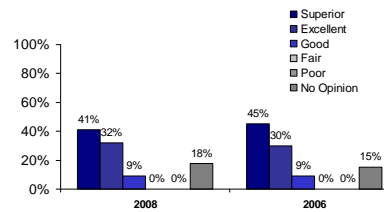
Integrity - Service - Excellence



**SME FS Unit Training – Q36**

U.S. AIR FORCE

Rate the performance of your SME flight surgeon in providing and arranging medical training for the SME medical personnel

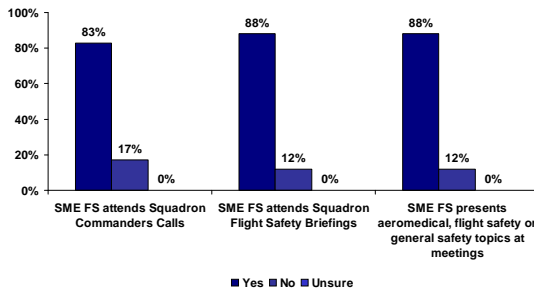


Integrity - Service - Excellence



**SME FS Safety Briefings / Meeting Attendance – Q37,38,39**

U.S. AIR FORCE



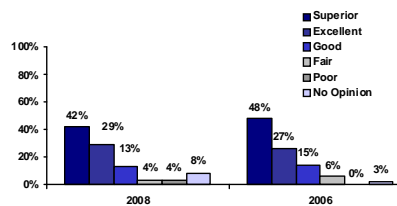
Integrity - Service - Excellence



**SME FS Unit Supervision – Q41**

U.S. AIR FORCE

Rate the performance of your SME flight surgeon in supervising the SME personnel



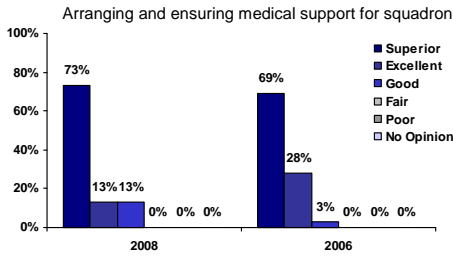
Integrity - Service - Excellence



**SME FS Deployment Support – Q46\_1**

U.S. AIR FORCE

Rate your SME flight surgeon's performance during deployments in the following areas :



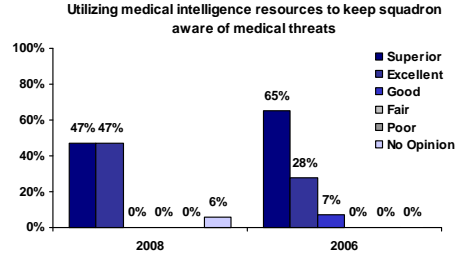
*Integrity - Service - Excellence*



**SME FS Deployment Support – Q46\_2**

U.S. AIR FORCE

Rate your SME flight surgeon's performance during deployments in the following areas :



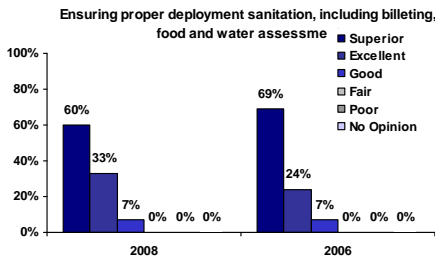
*Integrity - Service - Excellence*



**SME FS Deployment Support – Q46\_3**

U.S. AIR FORCE

Rate your SME flight surgeon's performance during deployments in the following areas :



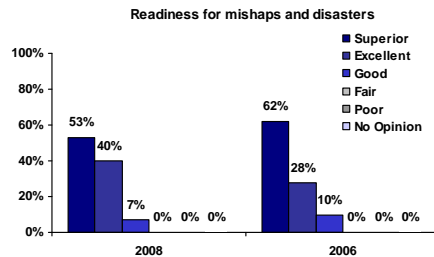
*Integrity - Service - Excellence*



**SME FS Deployment Support – Q46\_4**

U.S. AIR FORCE

Rate your SME flight surgeon's performance during deployments in the following areas :



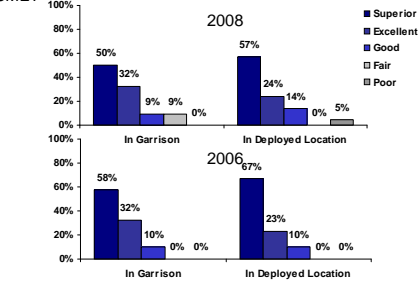
*Integrity - Service - Excellence*



**SME FS Leadership In Garrison vs. Deployment – Q47\_1, \_2**

U.S. AIR FORCE

How well prepared, overall, is your SME Flight Surgeon to lead your SME?



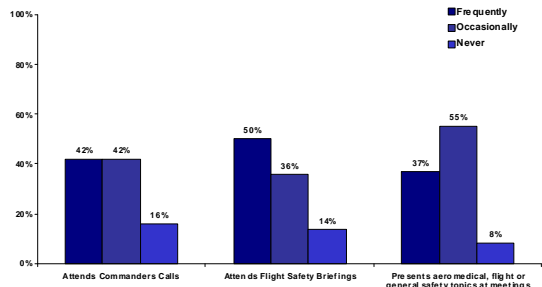
*Integrity - Service - Excellence*



**AtFS Safety Briefings / Meeting Attendance – Q51, 52, 53**

U.S. AIR FORCE

How frequently do you attend safety briefings and meetings?



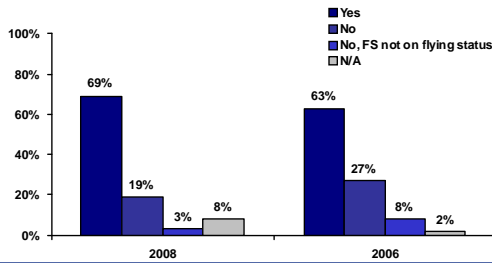
*Integrity - Service - Excellence*



**AtFS Flying – Q55**

U.S. AIR FORCE

- Does your attached FS fly regularly and frequently with your squadron?



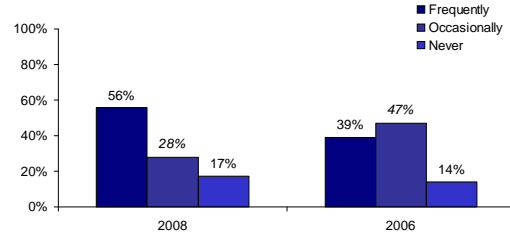
*Integrity - Service - Excellence*



**AtFS Squadron Social Activities – Q56**

U.S. AIR FORCE

- Is your attached FS involved in squadron social functions?



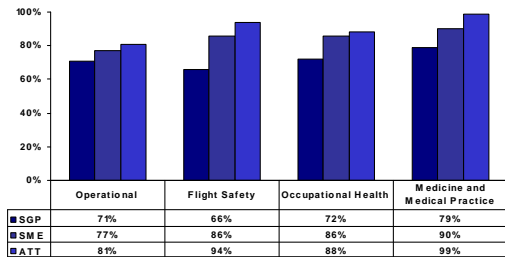
*Integrity - Service - Excellence*



**FS Knowledge Composite Q28, Q44, Q57**

U.S. AIR FORCE

- FS's depth and breadth of knowledge in the following areas reported as percent superior and excellent

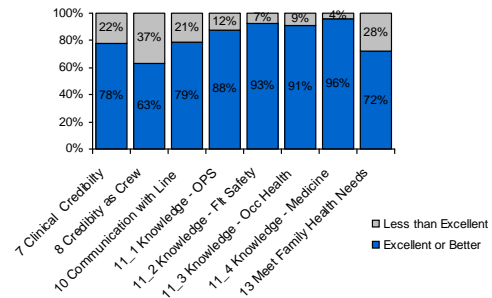


*Integrity - Service - Excellence*



**Question Set 1 Summary**

U.S. AIR FORCE



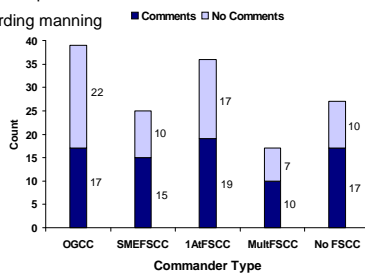
*Integrity - Service - Excellence*



**Commander Comments**

U.S. AIR FORCE

- 54% (78/144) CC commented
- 87% (69/78) comments positive
- 23 comments regarding manning



*Integrity - Service - Excellence*

To Lt Col Edgar Rodriguez; who seamlessly converted oxygen into carbon dioxide thereby demonstrating the principles of entropy.  
 ho seamlessly converted oxygen into carbon dioxide thereby demonstrating the principles of entropy.

# List of Appendices

Appendix A –Line Survey Questions

Appendix B – OGCC Comments from Line Survey

Appendix C – SqCC Comments

Appendix D – KWALLIS of Line Survey Data

Appendix E – Slides depicting Line Survey Data

**APPENDIX A****Assessment of Flight Surgeon Support of the Line****1. Welcome**

The U.S. Air Force is committed to maintaining the readiness of the professional Airmen who serve this nation. The Air Force's ability to consistently answer the call of duty includes a focus on the health of our airmen. Ultimately, it is the health of our force that will maximize readiness and mission success.

The U.S. Air Force School of Aerospace Medicine is partnering with the Air Force Survey Office to gather information from selected line leadership regarding the professional performance of our flight surgeons in the field. We need your help in this partnership.

The survey is completely anonymous and will take 7 to 10 minutes to complete. Your replies will enable the Air Force to better serve its Airmen and maximize force readiness to meet unique mission requirements of the 21st century.

Thank you in advance for your time.

\*\*This survey has been approved by United States Air Force Survey Center. Survey Control Number 08-016

**\* 1. Please Enter your survey ID number:****\* 2. My Operations Group or Squadron operates flying or missile assets and receives Flight Medicine support from an on-installation medical treatment facility.**

- Yes  
 No

**2. Default Section**

The first groups of questions apply to all assigned flight surgeons, assessed as a group or average, at your installation.

**3. Do your flight surgeons speak to your personnel at safety briefings, Commanders Calls and other appropriate venues?**

- Frequently  
 Occasionally  
 Never

**4. Please rate the impact of these briefings on your mission.**

- Strong Positive Impact  
 Positive Impact  
 Neutral  
 Negative Impact  
 Strong Negative Impact



**Assessment of Flight Surgeon Support of the Line****5. Please rate the overall quality of these briefings.**

- Exceptional Quality
- High Quality
- Adequate Quality
- Marginal Quality
- Poor Quality
- No Opinion

**6. Do your flight surgeons fly regularly and frequently?**

- Yes
- No
- Unsure

**7. How credible do your flyers consider your flight surgeons as good and effective physicians/clinicians?**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**8. Please rate your flight surgeons in terms of level of respect accorded them as aircrew.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**9. How 'easy' or 'tough' are your flight surgeons when determining flying status, DNIF or RTFS, when you balance flying safety, the manpower needs of mission completion, and good medical care.**

- Overly Restrictive
- About right
- Overly Permissive
- No Opinion

## Assessment of Flight Surgeon Support of the Line

**10. Please rate your flight surgeons' communication skills and efforts.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**11. Please rate your installation flight surgeons' depth and breadth of knowledge in the following areas**

|                               | Very Satisfied        | Satisfied             | Neutral               | Dissatisfied          | Very Dissatisfied     | No Opinion            |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Operational Issues            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Flight Safety Issues          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Occupational Health           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Medicine and medical practice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**12. Do the families of your flyers obtain their basic medical care primarily at the Flight Medicine Clinic?**

- Yes
- No
- Unsure

**13. How well do your flight surgeons meet the families' health care needs?**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**14. Please rate your level of satisfaction with level of demonstrated preparedness of your flight surgeons for:**

|                                   | Very Satisfied        | Satisfied             | Neutral               | Dissatisfied          | Very Dissatisfied     | No Opinion            |
|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Mishap response and investigation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other casualty response           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## Assessment of Flight Surgeon Support of the Line

**15. Please provide your overall rating of your flight surgeons' impact on ...**

|                    | Very Satisfied        | Satisfied             | Neutral               | Dissatisfied          | Very Dissatisfied     | No Opinion            |
|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Flying safety      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mission completion | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**16. Are there any comments you wish to make about your flight surgeons, positive, negative or otherwise?**

**\* 17. Are you...**

- I am currently, or have been within the last 6 months, an Operations Group Commander
- I am currently, or have been within the last 6 months, a Squadron Commander
- I am neither

### 3. Operations Group Commanders

This group of questions concerns specifically the flight surgeon who is the Chief of Aeromedical Services (SGP) at your installation. This is frequently a different individual than the Aeromedical Squadron Commander, particularly when the latter is not a flight surgeon.

**18. How long have you been, or were you, an operations group commander?**

- Less than 6 months
- 6-12 Months
- 13-18 Months
- 19-24 Months
- Greater than 24 Months

**Assessment of Flight Surgeon Support of the Line****19. For which weapon systems are your operations group responsible?**

- Airborne Command and Control
- Attack/Fighter
- Bomber
- Cargo
- High Performance Trainer
- Heavy Trainer
- Reconnaissance
- Tanker
- Helicopter
- Missile and/or Launch Ops
- UAV
- Other

**20. Do you consider your Chief of Aeromedical Services to be your primary aeromedical advisor regarding flight or missile crew medical issues, flying safety, human factors and human performance enhancement?**

- Yes
- No
- Unsure

**21. Please rate the performance of your Chief of Aeromedical Services in this capacity.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**22. Does your Chief of Aeromedical Services attend any of your OG meetings?**

- Frequently
- Occasionally
- Never

## Assessment of Flight Surgeon Support of the Line

**23. Does your Chief of Aeromedical Services attend Wing Standup?**

- Frequently
- Occasionally
- Never

**24. Please rate your Chief of Aeromedical Services on how well he/she advises wing leadership regarding medical and operational factors that enhance war fighter effectiveness.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**25. Please rate the performance of your Chief of Aeromedical Services in identifying gaps in the capabilities of the human weapons system in your wing, and making recommendations, or implementing plans, to close those gaps.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**26. Please rate the performance of your Chief of Aeromedical Services as a consultant to commanders and supervisors regarding aeromedical problems related to aircraft or life support equipment, mission plans, and human performance enhancement.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion



**Assessment of Flight Surgeon Support of the Line**

**27. Please rate your Chief of Aeromedical Services' advice to you and your wing leadership regarding medical, environmental and operational factors that influence war fighter effectiveness and mission completion.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**28. Please rate your Chief of Aeromedical Services' depth and breadth of knowledge in the following areas:**

|                               | Superior              | Excellent             | Good                  | Fair                  | Poor                  | No Opinion            |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Operational Issues            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Flight Safety Issues          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Occupational Health           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Medicine and medical practice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**29. How well prepared is your Chief of Aeromedical Services to lead the other flight surgeons at your installation?**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**30. Do you have any further comments, positive, negative or otherwise?**

**4. Squadron Commander**

**Assessment of Flight Surgeon Support of the Line****31. How long have (had) you been a squadron commander?**

- Less than 6 months
- 6-12 Months
- 13-18 Months
- 19-24 Months
- Greater than 24 Months

**32. For which weapon system is (was) your squadron responsible?**

- Airborne Command and Control
- Attack/Fighter
- Bomber
- Cargo
- High Performance Trainer
- Heavy Trainer
- Reconnaissance
- Tanker
- Helicopter
- Missile and/or Launch Ops
- UAV
- Other

**33. My squadron has:**

- A squadron medical element (SME)
- One (1) attached flight surgeon
- Multiple attached flight surgeons
- No SME or attached flight surgeon

**5. SME Flight Surgeons**

This group of questions concerns specifically your own SME flight surgeon.

**34. Do you consider your SME flight surgeon to be your personal aeromedical advisor regarding flying safety, human factors and human performance enhancement?**

- Yes
- No

## Assessment of Flight Surgeon Support of the Line

**35. Please rate the performance of your SME flight surgeon in this capacity.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**36. Please rate the performance of your SME flight surgeon in providing and arranging medical training for the SME medical personnel.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**37. Does your SME flight surgeon attend your Commander's Calls?**

- Yes
- No
- Unsure

**38. Does your SME flight surgeon attend your Flight Safety meetings/briefings?**

- Yes
- No
- Unsure

**39. Does your SME flight surgeon present aeromedical, flight safety or general safety topics at Commander's Calls and/or Flight Safety meetings/briefings?**

- Yes
- No



## Assessment of Flight Surgeon Support of the Line

**40. Please rate your SME flight surgeon's advice to you and your squadron leadership regarding medical, environmental and operational factors that influence war fighter effectiveness and mission completion.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**41. Please rate the performance of your SME flight surgeon in supervising the other members of your SME.**

- Superior
- Excellent
- Good
- Fair
- Poor
- No Opinion

**42. Does your SME flight surgeon fly regularly and frequently with your squadron?**

- Yes
- No

**43. Is your SME flight surgeon involved in squadron social functions?**

- Frequently
- Occasionally
- Never

**44. Please rate your SME's flight surgeon's depth and breadth of knowledge in the following areas.**

|                               | Superior              | Excellent             | Good                  | Fair                  | Poor                  | No Opinion            |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Operational Issues            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Flight Safety Issues          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Occupational Health           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Medicine and medical practice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## Assessment of Flight Surgeon Support of the Line

**45. While you have been, or were, a squadron commander, did your SME flight surgeon deploy with your unit?**

- Yes
- No
- N/A, my unit did not deploy

### 6. SME Flight Surgeon Deployment

**46. Please rate your SME flight surgeon's performance during deployments in the following areas:**

|  | Superior              | Excellent             | Good                  | Fair                  | Poor                  | No Opinion            |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Arranging and ensuring adequate medical support of the squadron                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Utilizing medical intelligence resources to keep squadron personnel aware of medical threats | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ensuring proper deployment sanitation, including billeting, food and water assessment        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Readiness for mishaps and disasters (response plans, checklists and equipment)               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

### 7. SME Flight Surgeon #2

**47. How well prepared, overall, is your SME flight surgeon to lead your Squadron Medical Element?**

|                      | Superior              | Excellent             | Good                  | Fair                  | Poor                  | No Opinion            |
|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| In garrison          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In deployed location | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**48. Do you have any further comments, positive, negative or otherwise?**

### 8. Attached Flight Surgeons

This group of questions concerns specifically the flight surgeon attached to your squadron.

**Assessment of Flight Surgeon Support of the Line**

**49. Do you consider your attached flight surgeon to be your personal aeromedical advisor regarding flying safety, human factors and human performance enhancement?**

- Yes  
 No

**50. Please rate the performance of your attached flight surgeon in this capacity.**

- Superior  
 Excellent  
 Good  
 Fair  
 Poor  
 No Opinion

**51. Does your attached flight surgeon attend your Commander's Calls?**

- Frequently  
 Occasionally  
 Never

**52. Does your attached flight surgeon attend your Flight Safety meetings/briefings?**

- Frequently  
 Occasionally  
 Never

**53. Does your attached flight surgeon present aeromedical, flight safety or general safety topics at Commander's Calls and/or Flight Safety meetings/briefings?**

- Frequently  
 Occasionally  
 Never

**54. Please rate your attached flight surgeon advice to you and your squadron leadership regarding medical, environmental and operational factors that influence war fighter effectiveness and mission completion.**

- Superior  
 Excellent  
 Good  
 Fair  
 Poor  
 No Opinion

## Assessment of Flight Surgeon Support of the Line

**55. Does your attached flight surgeon fly regularly and frequently with your squadron?**

- Yes
- No
- No, the attached flight surgeon is not on flying status, or is not qualified
- N/A

**56. Is your attached flight surgeon involved in squadron social functions?**

- Frequently
- Occasionally
- Never

**57. Please rate your attached flight surgeon's depth and breadth of knowledge in the following areas.**

|                               | Superior              | Excellent             | Good                  | Fair                  | Poor                  | No Opinion            |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Operational Issues            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Flight Safety Issues          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Occupational Health           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Medicine and medical practice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**58. Do you have any further comments, positive, negative or otherwise?**

### 9. End of Survey

Thank you for your participation. Please press 'Done' to complete the survey and upload your answers.

## **APPENDIX B**

### **OPERATIONS GROUP COMMANDERS – COMMENTS**

#### **Comment 1**

##### **OPERATIONAL PLATFORM – Airborne Command and Control, Attack/Fighter**

###### **Comments:**

Very professional group that has the welfare of the pilots and their families as their top priority. Great job.

Invaluable resource to our group.

#### **Comment 2**

##### **OPERATIONAL PLATFORM – Attack/Fighter**

###### **Comments:**

I am continually impressed by the quality of flight surgeons across the AF.

#### **Comment 3**

##### **OPERATIONAL PLATFORM – Attack/Fighter**

###### **Comments:**

I am the OG/CC at the X FW at X AFB. For the past 15 yrs the unit has 1 flight surgeon that was adequate. He deployed with our unit overseas and did a good job. He earned O-6 and is retiring. The other 4 Flight surgeons that have worked at the X were not deployable because they don't have a clue about medicine or the Air Force. I personally fired the last flight surgeon assigned to the fighter squadron. In two months the FS is deploying to OEF and we are taking a flight surgeon from another unit.

#### **Comment 4**

##### **OPERATIONAL PLATFORM – Attack/Fighter**

###### **Comments:**

Reserve Unit-No Full time medical support of any kind. Must use off-base facilities except for physicals or deployed operation

#### **Comment 5**

##### **OPERATIONAL PLATFORM – Attack/Fighter**

###### **Comments:**

There just aren't enough of them. We lost Doc X to the X Wing 4 months ago. Col X is helping out in the interim.

XX WG does not own Flight Medicine (XX ABW). We are a training unit, not a combat unit. Chief is doing the best he can given the circumstances.

#### **Comment 6**

##### **OPERATIONAL PLATFORM – Attack/Fighter**

###### **Comments:**

Our flight surgeons are limited by civilian practice in the time available to participate with the wing other than UTAs and AT deployments. They are, however, very capable physicians whose knowledge and expertise is invaluable to our reservists.

**Comment 7**

**OPERATIONAL PLATFORM – Bomber**

**Comments:**

The only conflict we have had recently is differentiating priorities within the operations group when the SMEs are pulled for additional duties by the medical group.

The Chief of Aeromedical Services is concerned with administration and function of the flight medical clinic. The squadron level flight surgeons are absolutely critical to operational effectiveness and safety when the medical group doctors are pulled in other directions.

**Comment 8**

**OPERATIONAL PLATFORM – Cargo, Other**

**Comments:**

Great Docs...very professional...extremely knowledgeable.

**Comment 9**

**OPERATIONAL PLATFORM – Cargo, Tanker**

**Comments:**

The reserve flight surgeons have more restrictions when it comes to waiver authority or returning crewmembers to fly status.

**Comment 10**

**OPERATIONAL PLATFORM – Cargo**

**Comments:**

Availability is poor. We have trouble keeping crews flying. Delays are often weeks long to get flyers back on flight status. This command should fund full time FS for each flight wing. TR FSs don't work in the operational reserves.

**Comment 11**

**OPERATIONAL PLATFORM – Cargo**

**Comments:**

Our flight surgeons "get it". They know the rules, they are acutely aware of the current guidance and can discuss the pros and cons on many issues, (anthrax, Lasik, etc.) They have great credibility with the crews and have worked hard to insure they handle things appropriately.

We don't have a med group here, but an AMDS, and ASTS. The flt surgeon I consider the Chief of Aeromedical services is a senior flt surgeon and former AMDS commander who more than likely would have been the med group cc.

**Comment 12**

**OPERATIONAL PLATFORM – Cargo**

**Comments:**

We are a Reserve unit--our flight medicine section has neither the facilities nor the authorization to care for our families. They are also not allowed to diagnose/prescribe medicine for illnesses. That's ridiculous.

**Comment 13**

**OPERATIONAL PLATFORM – Cargo**

**Comments:**

We need a stronger recruiting effort for Flight Surgeons in AFRC. I appreciate the willingness to keep aircrew flying BUT if the aircrew is DNIF...make the call and let's get the proper treatment to get that member RTFS.

Manning has to be addressed. Commands should consider assigning an AGR as the Chief of Aeromedical Services at reserve bases.

**Comment 14**

**OPERATIONAL PLATFORM – Cargo**

**Comments:**

We only have the one flight surgeon.

**Comment 15**

**OPERATIONAL PLATFORM – High Performance Trainer**

**Comments:**

2 is not enough for 1000 pilots with a huge turnover of students each year

**Comment 16**

**OPERATIONAL PLATFORM – High Performance Trainer**

**Comments:**

Lt Col X is the finest Flight Surgeon I have seen in my career. Doc Y and Z have also picked up AETC awards for flight surgeon excellence. I am completely satisfied to have them as part of the OG team.

As stated before. Lt Col X is a top-notch Flight Surgeon.

**Comment 17**

**OPERATIONAL PLATFORM – Other**

**Comments:**

Those Flight Surgeons assigned to the XXX SOG are an operational necessity for our mission. We frequently conduct operations in Africa where medical issues are an integral part of risk management. Additionally, our doctors do MEDCAP missions that are crucial to advancing US goals in OEF-TRANS SAHARA. Additionally, our Army Special Forces partners could not accomplish their mission in Africa without USAF Flight Surgeons.

Lt Col X is a great doctor and leader. When OSS leadership is TDY, they have put him in charge of monitoring the diverse OSS mission, a testament to our trust/confidence in his abilities.

## **APPENDIX C**

### **SQUADRON COMMANDERS – COMMENTS**

#### **Comment 1**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)**  
**OPERATIONAL PLATFORM – Airborne Command and Control**

#### **Comments:**

We could not ask for a better flight surgeon for the ### AACS at X AFB. Lt Col X is outstanding.

#### **Comment 2**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)**  
**OPERATIONAL PLATFORM – Attack/Fighter**

#### **Comments:**

I wish the flight doc's attended more of our social functions (holiday party's and all other social events).

#### **Comment 3**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)**  
**OPERATIONAL PLATFORM – Attack/Fighter**

#### **Comments:**

As with any opinion on a group of people, it varies depending on which person you are referring to. On balance, with have very strong Flight Surgeon support both organic and host base.

My comments refer to the previous SME Flight surgeon in terms of leadership in garrison. The SME is not commanded by a Flight Surgeon currently. The senior Flight Surgeon is excellent to superior, especially deployed. I have not asked him to lead in garrison, due to a shortage in assigned Flight Surgeons.

#### **Comment 4**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)**  
**OPERATIONAL PLATFORM – Attack/Fighter**

#### **Comments:**

Some issues getting family members appointments in a timely manner. Mission impact to the service member continues to be a problem when dealing with a sick/hurt dependent. The appointment service is the worst I've seen in my AF career. Calling the Flt doctors directly is the only way to get prompt service--they perform flawlessly when aware but is this what it's really supposed to be happening? Suffice to say in my opinion the appointment system is severely flawed. Keeping service members and dependents' healthy is crucial to readiness---problem is with the constrictive appointment scheduling Sq/CC's are spending a much larger portion of their time on these issues; usually after events have become confrontational and personal. Additionally, if the Flt doc's are expected to cover the entire base populace---what direction/priority is given to other support functions within the medical groups--I doubt it's being directed in support/prioritization of accomplishing the Wing mission. Lastly, every 6 months or so the Medical group tries again to take the Flt doctors away from the flying squadrons--if you take away from squadron identification you'll take away from mission readiness--it's really that simple!

When deploying the issue as to whether or not the Flt doctor deploys always becomes a factor (cost vs value) of service in garrison if the doctor deploys forward. Is this not why we have them attached to the squadron? Again, I don't think having the Flt doctor's serving to organizations, two bosses, and 2 missions is constructive. It leads to inefficiencies at all levels and hurts overall readiness.



**Comment 5**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)**  
**OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

Our current team of Flight Surgeons is definitely amongst the best I've seen in 19+ years. Same goes for their squadron and group leadership.

**Comment 6**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)**  
**OPERATIONAL PLATFORM – Bomber**

**Comments:**

Flight surgeons are doing great. There seemingly is a move to prevent flight surgeons from practicing outside of the clinic X AFB, prohibits flight surgeons from practicing on the flight line. In an expeditionary Air Force, this trend must stop!

This is the first USAF assignment for my flight surgeon and he is eager to learn supervisory skills. I do not think his initial training did a good job providing practice on military discipline techniques (LOC, LOR) or rewards (recognition programs, quarterly awards, etc...).

**Comment 7**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)**  
**OPERATIONAL PLATFORM – Cargo**

**Comments:**

Continuity of care among the flyers seems to be a problem. Have had several long term DNIF issues and often times conflicting guidance is given as well as multiple delays when one caregiver jumps in to "take over" the case.

To be respected as flight docs, it's important to fly/interact with the crews as opposed to just sitting on the bunk and logging time.

**Comment 8**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)**  
**OPERATIONAL PLATFORM – Cargo**

**Comments:**

At this point in time, my squadron does not have a flight surgeon attached with the SME. We only have medical technicians at the moment.

**Comment 9**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)**  
**OPERATIONAL PLATFORM – Cargo**

**Comments:**

Continue SME program at all costs. This program dramatically improved medical attention for flyers. It is the equivalent of having a daily housecall from our flight surgeon.

**Comment 10**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)**  
**OPERATIONAL PLATFORM – Other**

**Comments:**

OSM flight CC is only flight surgeon I have and he has only been in the military for two years and has never deployed. He needs to deploy to gain OSM experience.

**Comment 11**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)  
OPERATIONAL PLATFORM – Reconnaissance**

**Comments:**

My flight surgeon is very good, but there are areas where he could be better if he were not being pulled in too many directions. These are a fact of reduced/insufficient manning.

**Comment 12**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)  
OPERATIONAL PLATFORM – Reconnaissance**

**Comments:**

Question 6: Some of the flight docs fly regularly and frequently.

Due to the nature of LD/HD deployments and the organization of the X RW, X MDG and X OG, my SME is tasked via the X MDG and not by the XX RS. Therefore, this section of questions is difficult to answer as any flight surgeon, regardless of assigned squadron, will be tasked with attending CC Calls, deployments, sees patients, etc. This is not the "traditional" setup, but the XX RS does not deploy and operation in the traditional sense.

**Comment 13**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)  
OPERATIONAL PLATFORM – Reconnaissance**

**Comments:**

My experience has been that the flight doc is too busy with routine medical care (flight physicals, etc.) to have time to be part of the squadron. The med group tasks the flight docs, not me. There are not enough flight docs base-wide for the amount of work, so squadron interaction with the flight doc suffers

**Comment 14**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)  
OPERATIONAL PLATFORM – Reconnaissance**

**Comments:**

I am the sq CC at X AFB for a Predator Sq. My flt surgeon is qualified as a sensor operator in my aircraft and routinely flies combat sorties with us. He has been so good that we are upgrading him to instructor. While doing this he attends mass briefs/debriefs on a routine basis and such has a great understanding our unique issues flying combat from home station on a 24/7 basis. Regardless of all these facts he is still required to go fly in other aircraft at a separate base in order to fulfill his flying requirement -- though no other crew member in predator is required to do this to maintain currency or flight pay. This hinders his ability to focus on our weapons systems unique issues; I wish this could be resolved as soon as possible.

**Comment 15**

**My Squadron Has – A SQUADRON MEDICAL ELEMENT (SME)  
OPERATIONAL PLATFORM – Tanker**

**Comments:**

Capt X is an exceptional flight surgeon. He does an outstanding job taking care of our people.

**Comment 16**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Airborne Command and Control**

**Comments:**

Prior to arrival of Dr. X, the GK program was in trouble. It has done a complete turn around and is 100% on track. Awesome effort and results are phenomenal. Thank you.

We only have one Flight Surgeon and the competing effects of a shortage in Family Care providers will often cause US Clinic to move FS to see families. I understand this, but it can NOT be to the detriment of flight medicine. Current Dr. will work 18 hours of day if needed but it's going to wear him out. Thank you.

**Comment 17**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

Capt X is our assigned Flt Surg, and he is truly outstanding. His care and commitment are second to none.

**Comment 18**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

The ones we have are awesome. Have been issues with manning and retention. Probably not different than the pilot side, but need to find a way to keep the ones we have.

New to the USAF, but learning his role quickly.

**Comment 19**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

Flt Doc manning is getting better, hopefully we can return to the normal ops of having a Flt Doc assigned to each fighter squadron; and be IN the squadron - not just attached. This will enhance relationship with Flt Medicine by having a Flt Surgeon living in the squadron daily with a med tech assigned as well. Better for deployments, squadron mission health and most importantly medical trust.

Due to manning, we finally have a flight doc assigned to the squadron - AMDS/CC has worked very hard to instill a sense of mission in the Flight Surgeons here on base. New flight docs take time to gather experience - living in the squadron and getting to know the pilots, people, and families better will move marks from excellent to superior.

**Comment 20**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

Not having a designated squadron flight surgeon has had a negative impact on the flyers and their families as compared to previous assignments.

Brand new and yet to get established...see previous comments

**Comment 21**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

Question 13 was rated as fair, but it is a clinic access problem, not a flight surgeon's ability as a physician, that requires this poor rating.

**Comment 22**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

Single seat fighter with no 2 seat models. Flt doc must fly with other units

**Comment 23**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Bomber**

**Comments:**

This is the best group of flight surgeons at X AFB I've seen in my 20 years in the USAF

**Comment 24**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Bomber**

**Comments:**

We have one flight surgeon attached for the entire operations group. I don't have one who flies with us in bombers.

**Comment 25**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Cargo**

**Comments:**

All great flt docs here. Desire: flt docs to have direct control of immunizations for aircrew.

**Comment 26**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Cargo**

**Comments:**

I am very grateful to the support of all the Flight Surgeons, especially Doc X at X AFB.

Doc X is great. He is always there when we need him.

**Comment 27**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Cargo**

**Comments:**

MEB process is very slow wrt to the Flight Surgeon office.

**Comment 28**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – High Performance Trainer**

**Comments:**

Fit surgeons have been very helpful and comm lines are very good with the ops ccs on the base.

**Comment 29**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – High Performance Trainer**

**Comments:**

Our assigned flight surgeon is young, but doing great things for and with the squadron. I could not ask for a more motivated young professional to be part of this operation

**Comment 30**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – High Performance Trainer**

**Comments:**

They are not as cooperative as we need in DNIF/Off DNIF notification.

**Comment 31**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Missile and/or Launch Ops**

**Comments:**

Our flight surgeons are first rate. They are responsive and have an outstanding sense of the ICBM mission.

**Comment 32**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Other**

**Comments:**

They seem to work very hard. Their office seems to be undermanned. I think they put in a ton of extra hours. The air force needs to address this!

**Comment 33**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Other**

**Comments:**

Very responsive to my squadron's needs and flexible on their support of dependent care.

**Comment 34**

**My Squadron Has – ONE (1) ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Tanker**

**Comments:**

Flight surgeons understand our mission better than any other specialty in the Med Group and arguably better than anyone in the Msn Support Group.

**Comment 35**

**My Squadron Has – MULTIPLE ATTACHED FLIGHT SURGEONS  
OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

My Assigned (Attached) Flight Surgeons are among the best I have ever worked with. The screening process appears to be very healthy and intact. No Bozos here.

Best Flight Surgeons I've ever been associated with.

**Comment 36**

**My Squadron Has – MULTIPLE ATTACHED FLIGHT SURGEONS  
OPERATIONAL PLATFORM – Cargo**

**Comments:**

I feel that overall the Flt Surgeons office does a good job in meeting mission needs. However, I have gotten several complaints with regards to waivers and waiver processing. My members feel they either get the wrong information or incomplete information in these matters.

**Comment 37**

**My Squadron Has – MULTIPLE ATTACHED FLIGHT SURGEONS  
OPERATIONAL PLATFORM – Cargo**

**Comments:**

The biggest problem we have is with waiver processing. The majority of waiver requests are denied yet the FAA has no problem with flying commercially. It is very frustrating.

The squadron likes and respects all of our flight surgeons

**Comment 38**

**My Squadron Has – MULTIPLE ATTACHED FLIGHT SURGEONS  
OPERATIONAL PLATFORM – Helicopter**

**Comments:**

I am extremely pleased with the service provided by our flight docs. I am always amazed at how quickly I am informed of medical issues impacting my unit.

**Comment 39**

**My Squadron Has – MULTIPLE ATTACHED FLIGHT SURGEONS  
OPERATIONAL PLATFORM – Helicopter**

**Comments:**

The flight medicine staff at X AFB is OUTSTANDING! The flight surgeons and flight nurse/medical technicians/support staff are true professionals and second to none. I'm proud to serve with all of them. LtC X, X HS/CC

Outstanding A+++ professionals. I'd serve with all of them any time, any place.

**Comment 40**

**My Squadron Has – MULTIPLE ATTACHED FLIGHT SURGEONS  
OPERATIONAL PLATFORM – Helicopter**

**Comments:**

We could not be more pleased with the level of health care provided by our flight medicine office. All flight surgeons and medical technicians are well respected and play a vital role in our flight operations. They are truly a part of the crew and add immeasurably to our flight safety and operational capability.

**Comment 41**

**My Squadron Has – MULTIPLE ATTACHED FLIGHT SURGEONS  
OPERATIONAL PLATFORM – Missile and/or Launch Ops**

**Comments:**

My squadron had two problematic flight surgeons. One who refused to work and the other unable to due to mental health issues. This has negatively impacted the FSO.

My remaining flight surgeon came from the AF Reserves and uses that excuse for his inadequacies. Despite removal of additional duties and sending the member for more training, no improvement has been noted. It is best to separate this member. In my opinion, this flight surgeon is not beneficial for the AD or ARC.

**Comment 42**

**My Squadron Has – MULTIPLE ATTACHED FLIGHT SURGEONS  
OPERATIONAL PLATFORM – Other**

**Comments:**

Flight surgeons are basically good docs -- AMP course, as ever, provides only superficial capabilities, based on current ops tempo and lack of FSs there is not enough time/people to fill gaps

**Comment 43**

**My Squadron Has – MULTIPLE ATTACHED FLIGHT SURGEONS  
OPERATIONAL PLATFORM – Other**

**Comments:**

We have more than 1 flt surgeon flying with us; while they run the gamut, most are excellent.

**Comment 44**

**My Squadron Has – MULTIPLE ATTACHED FLIGHT SURGEONS  
OPERATIONAL PLATFORM – Other**

**Comments:**

Sometimes longer waits due to low manning in the clinic.

**Comment 45**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON  
OPERATIONAL PLATFORM – Airborne Command and Control**

**Comments:**

Decline in FS ability, dedication, and commitment is a pure function of availability. We do not have enough Flight Surgeons and Med Techs available to support the needs and requirements of the unit and associated mission. As a result, care is delayed, and there are impediments to the mission.

**Comment 46**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON  
OPERATIONAL PLATFORM – Airborne Command and Control**

**Comments:**

Undermanned at times, but fully engaged in the success of our squadron and mission. Great working relationship.

**Comment 47**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON  
OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

The WS was just allocated a FS a few months ago...I have had little interaction since then.

**Comment 48**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

A lot of the negative comments are from the 6 months prior to now when the USAFWS did not have an assigned Flt Surgeon. Recently one has been assigned to the USAFWS and he is reversing all of the negative trends except for the lack of accommodation afforded by the Flt Surgeon Office as a whole when it come to taking care of the pilots and families in my squadron.

**Comment 49**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

As an OSS/CC at a remote location, families are not an issue for our flight surgeons. Currently the Fighter Squadrons have a flight surgeon assigned to them and rated by the FS/CC. I would like to have the same for my OSS since I have as many or more rated personnel in my squadron than the Fighter Squadrons (tower, RAPCON and pilots).

**Comment 50**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

I am authorized a Flight Surgeon, but do not have one assigned to me. I share a flight surgeon with the other A-10 Sq on base. I need my own ASAP as the AEF looms near. Our Flight surgeon does not fly with us (Single seat, with no two-seat aircraft). I also do not have Med Techs, though I am authorized two.

**Comment 51**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

Our flight surgeon's here are very proactive about making sure the pilots and students are getting exactly what they need to succeed. Dr. X in particular, although very busy in the clinic, is tuned into what's happening in the wing with respect to G-Awareness and other pilot health issues. He also is very responsive to pilot's families.

**Comment 52**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Attack/Fighter**

**Comments:**

Undermanned.

**Comment 53**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Cargo**

**Comments:**

Had a great Flt Surgeon a while ago. The squadron has been without one for the last 5 months. The others are filling in, but we really need one dedicated to us.



**Comment 54**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Cargo**

**Comments:**

Our flight surgeons are great. However, there is too much extra stuff (profile processing, etc.) piled on them.

**Comment 55**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Cargo**

**Comments:**

We have great flight surgeon support at X AFB, even though we are a tenant unit on the base. We love to have them fly with us.

**Comment 56**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – High Performance Trainer**

**Comments:**

The AF 469 profile system and the AFRC system do not talk to each other. As associations grow with the reserves it is unacceptable that I and Doc X are the one's having to implement a work around system at the unit level. This needs to be done at the Air Force level and completed last October (07) when the 469 was implemented. Bad Bad Bad. We have an outstanding system but we had to do it ourselves and when there is a change in personnel that relationship will go with us.

**Comment 57**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Missile and/or Launch Ops**

**Comments:**

PRP is demanding; flt docs have been very pro-active in working medicine w/the mission.

**Comment 58**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Other**

**Comments:**

I do not have a flight surgeon assigned and the operators in the squadron are paying heavily. The lack of immediate medical oversight and involvement with the EMT-P (PJs) in my squadron has proven critical due to decreasing medical capabilities and preparedness. It is vital that my medical section quickly come back up to speed, and that starts with an assigned Flight Doctor.

**Comment 59**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – Reconnaissance**

**Comments:**

I think they'd all be great if they weren't hamstrung by the paperwork beast. Most patients I know use civilian medicine to the max extent possible because you call, you get an appointment quickly/easily, no wait in the office, and you are on your way. In many cases, I don't get treatment when I should because I feel the military system is set up to discourage me from using it by being too cumbersome/difficult. Overall, flt surgeons have been superior in terms of customer service to other docs, and far superior relative to other health care professionals. I appreciate the ones who cut thru the garbage to get you in, out, and back to the fight - some actually understand that concept. Others seem offended by the fact that I am in their office.

**Comment 60**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – UAV**

**Comments:**

Overly restrictive comment - Our FS follows the regs and the regs are overly restrictive for UAS OPS - X doesn't serve families - really not applicable.

**Comment 61**

**My Squadron Has – NO SME or ATTACHED FLIGHT SURGEON OPERATIONAL PLATFORM – UAV**

**Comments:**

The flight surgeons are not attached to my squadron due to the classification requirement to enter my facility. That said, the flight surgeons have been bending over backwards to make X AFB medical clinic suited to the needs of our disparate and geographically separated unit. I appreciate their efforts.

```
. *****
. ***** IFS Examine if answer results vary by commander type.
. tabstat q3 _3_ _4_ _5_ q6 _7_ _8_, by(cmdtype) statistic(n mean sd), if year==2008
```

Summary statistics: N, mean, sd  
by categories of: cmdtype

| cmdtype     | q3                         | _3_                        | _4_                        | _5_                        | q6                         | _7_                        | _8_                        |
|-------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| OG CC       | 39<br>1.564103<br>.5023561 | 39<br>1<br>0               | 39<br>1.897436<br>.6405126 | 39<br>2.307692<br>.7997975 | 39<br>1.410256<br>.5946228 | 38<br>2.105263<br>.9526485 | 39<br>2.230769<br>.9308044 |
| SQ SME      | 25<br>1.4<br>.5            | 25<br>1<br>0               | 25<br>1.72<br>.4582576     | 25<br>1.84<br>.6244998     | 25<br>1.24<br>.5972158     | 25<br>1.88<br>.8812869     | 25<br>2.2<br>1             |
| SQ 1 ATT    | 36<br>1.583333<br>.6035609 | 36<br>1.055556<br>.2323107 | 34<br>1.882353<br>.5910805 | 33<br>1.909091<br>.6306562 | 34<br>1.382353<br>.6969503 | 36<br>1.861111<br>.6825489 | 33<br>2.212121<br>.8929437 |
| SQ Mult ATT | 17<br>1.529412<br>.5144958 | 17<br>1<br>0               | 16<br>1.8125<br>.5439056   | 17<br>1.882353<br>.6966305 | 17<br>1.176471<br>.3929526 | 17<br>2<br>.9354143        | 17<br>2.176471<br>.8089572 |
| SQ None     | 27<br>1.814815<br>.7357381 | 27<br>1.185185<br>.3958474 | 22<br>1.954545<br>.7854191 | 22<br>2.090909<br>.8111773 | 27<br>1.925926<br>.8738036 | 23<br>2.173913<br>.7776523 | 25<br>2.56<br>1.260952     |

```
. tabstat _9_ _10_ _11_ _112_ _113_ _114_ _12_, by(cmdtype) statistic(n mean sd), if year==2008
```

Summary statistics: N, mean, sd  
by categories of: cmdtype

| cmdtype     | _9_                        | _10_                       | _111_                      | _112_                      | _113_                      | _114_                      | _12_                       |
|-------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| OG CC       | 37<br>1.918919<br>.2767247 | 39<br>2.076923<br>.8998425 | 39<br>1.923077<br>1.035797 | 39<br>1.641026<br>.8425269 | 39<br>1.692308<br>.8630986 | 39<br>1.589744<br>.9380256 | 36<br>.5833333<br>.5       |
| SQ SME      | 24<br>1.958333<br>.2041241 | 25<br>1.88<br>.8812869     | 25<br>1.64<br>.6377042     | 25<br>1.48<br>.5859465     | 25<br>1.56<br>.7681146     | 25<br>1.36<br>.5686241     | 24<br>.3333333<br>.4815434 |
| SQ 1 ATT    | 35<br>1.942857<br>.2355041 | 36<br>1.777778<br>.6808025 | 35<br>1.685714<br>.6311254 | 35<br>1.485714<br>.5621089 | 34<br>1.441176<br>.6125543 | 36<br>1.277778<br>.4542568 | 33<br>.2424242<br>.4351941 |
| SQ Mult ATT | 17<br>2<br>.3535534        | 17<br>2<br>.9354143        | 17<br>1.764706<br>.9701425 | 17<br>1.470588<br>.6242643 | 17<br>1.470588<br>.6242643 | 17<br>1.411765<br>.5072997 | 16<br>.3125<br>.4787136    |
| SQ None     | 24<br>1.958333<br>.2041241 | 26<br>1.961538<br>.870897  | 25<br>1.96<br>.8406347     | 24<br>1.666667<br>.6370221 | 25<br>1.68<br>.9882645     | 27<br>1.518519<br>.5091751 | 23<br>.5217391<br>.5107539 |

```
. tabstat _13_ _141_ _142_ _151_ _152_, by(cmdtype) statistic(n mean sd), if year==2008
```

Summary statistics: N, mean, sd  
by categories of: cmdtype

| cmdtype     | _13_     | _141_    | _142_    | _151_    | _152_    |
|-------------|----------|----------|----------|----------|----------|
| OG CC       | 15       | 35       | 34       | 39       | 39       |
|             | 1.933333 | 1.914286 | 1.970588 | 1.794872 | 1.897436 |
|             | .7037316 | 1.039554 | 1.029424 | .8328609 | 1.046168 |
| SQ SME      | 16       | 24       | 24       | 25       | 25       |
|             | 2        | 1.541667 | 1.541667 | 1.56     | 1.48     |
|             | .7302967 | .58823   | .5089774 | .5066228 | .5859465 |
| SQ 1 ATT    | 25       | 31       | 29       | 34       | 35       |
|             | 2.24     | 1.741935 | 1.758621 | 1.5      | 1.542857 |
|             | .8306624 | .8151786 | .8724011 | .7881701 | .7800022 |
| SQ Mult ATT | 11       | 11       | 12       | 17       | 17       |
|             | 1.818182 | 1.636364 | 1.666667 | 1.764706 | 1.764706 |
|             | .8738629 | .8090398 | .7784989 | .8313702 | .8313702 |
| SQ None     | 11       | 16       | 16       | 25       | 26       |
|             | 2.545455 | 1.6875   | 1.5      | 1.8      | 1.653846 |
|             | .8201995 | .7932003 | .7302967 | .7071068 | .6894814 |

```
. kwallis q3 if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 2833.00  |
| SQ SME      | 25  | 1535.00  |
| SQ 1 ATT    | 36  | 2602.50  |
| SQ Mult ATT | 17  | 1194.50  |
| SQ None     | 27  | 2275.00  |

```
chi-squared = 3.966 with 4 d.f.
probability = 0.4106
```

```
chi-squared with ties = 5.057 with 4 d.f.
probability = 0.2815
```

```
. kwallis _4_ if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 2724.50  |
| SQ SME      | 25  | 1539.00  |
| SQ 1 ATT    | 34  | 2385.00  |
| SQ Mult ATT | 16  | 1064.00  |
| SQ None     | 22  | 1603.50  |

```
chi-squared = 1.195 with 4 d.f.
probability = 0.8789
```

```
chi-squared with ties = 1.639 with 4 d.f.
probability = 0.8017
```

```
. kwallis _5_ if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 3146.50  |
| SQ SME      | 25  | 1485.00  |
| SQ 1 ATT    | 33  | 2080.00  |
| SQ Mult ATT | 17  | 1047.00  |
| SQ None     | 22  | 1557.50  |

```
chi-squared = 6.293 with 4 d.f.
probability = 0.1783
```

```
chi-squared with ties = 7.856 with 4 d.f.
probability = 0.0970
```

```
. kwallis q6 if year==2008 & q6<3, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 37  | 2544.50  |
| SQ SME      | 23  | 1240.50  |
| SQ 1 ATT    | 30  | 1767.50  |
| SQ Mult ATT | 17  | 1012.00  |
| SQ None     | 18  | 1310.50  |

```
chi-squared = 4.234 with 4 d.f.
probability = 0.3752
```

```
chi-squared with ties = 7.921 with 4 d.f.
probability = 0.0945
```

```
. kwallis _7_ if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 38  | 2793.50  |
| SQ SME      | 25  | 1585.00  |
| SQ 1 ATT    | 36  | 2335.50  |
| SQ Mult ATT | 17  | 1184.00  |
| SQ None     | 23  | 1832.00  |

```
chi-squared = 2.866 with 4 d.f.
probability = 0.5804
```

```
chi-squared with ties = 3.388 with 4 d.f.
probability = 0.4952
```

```
. kwallis _8_ if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 2711.00  |
| SQ SME      | 25  | 1688.00  |
| SQ 1 ATT    | 33  | 2244.50  |
| SQ Mult ATT | 17  | 1149.00  |
| SQ None     | 25  | 1937.50  |

```
chi-squared = 1.109 with 4 d.f.
probability = 0.8929
```

```
chi-squared with ties = 1.240 with 4 d.f.
probability = 0.8715
```

```
. kwallis _9_ if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 37  | 2478.50  |
| SQ SME      | 24  | 1672.00  |
| SQ 1 ATT    | 35  | 2401.50  |
| SQ Mult ATT | 17  | 1229.00  |
| SQ None     | 24  | 1672.00  |

```
chi-squared = 0.229 with 4 d.f.
probability = 0.9939
```

```
chi-squared with ties = 1.244 with 4 d.f.
probability = 0.8708
```

```
. kwallis _10_ if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 3051.00  |
| SQ SME      | 25  | 1707.50  |
| SQ 1 ATT    | 36  | 2382.00  |
| SQ Mult ATT | 17  | 1246.50  |
| SQ None     | 26  | 1909.00  |

```
chi-squared = 1.844 with 4 d.f.
probability = 0.7645
```

```
chi-squared with ties = 2.155 with 4 d.f.
probability = 0.7073
```

```
. kwallis _l11_ if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 2868.50  |
| SQ SME      | 25  | 1641.50  |
| SQ 1 ATT    | 35  | 2393.50  |
| SQ Mult ATT | 17  | 1123.00  |
| SQ None     | 25  | 1984.50  |

```
chi-squared =      2.024 with 4 d.f.
probability =      0.7314
```

```
chi-squared with ties =      2.480 with 4 d.f.
probability =      0.6482
```

```
. kwallis _l12_ if year==2008, by(cmdtype)
```

```
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 2824.00  |
| SQ SME      | 25  | 1678.50  |
| SQ 1 ATT    | 35  | 2376.00  |
| SQ Mult ATT | 17  | 1120.50  |
| SQ None     | 24  | 1871.00  |

```
chi-squared =      1.433 with 4 d.f.
probability =      0.8385
```

```
chi-squared with ties =      1.820 with 4 d.f.
probability =      0.7687
```

```
. kwallis _l13_ if year==2008, by(cmdtype)
```

```
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 2955.50  |
| SQ SME      | 25  | 1743.00  |
| SQ 1 ATT    | 34  | 2217.00  |
| SQ Mult ATT | 17  | 1140.50  |
| SQ None     | 25  | 1814.00  |

```
chi-squared =      1.435 with 4 d.f.
probability =      0.8381
```

```
chi-squared with ties =      1.827 with 4 d.f.
probability =      0.7675
```

. kwallis \_114\_ if year==2008, by(cmdtype)

Kruskal-Wallis equality-of-populations rank test

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 2945.50  |
| SQ SME      | 25  | 1715.50  |
| SQ 1 ATT    | 36  | 2328.00  |
| SQ Mult ATT | 17  | 1256.50  |
| SQ None     | 27  | 2194.50  |

chi-squared = 2.906 with 4 d.f.  
 probability = 0.5737

chi-squared with ties = 4.043 with 4 d.f.  
 probability = 0.4002

. kwallis \_12\_ if year==2008, by(cmdtype)

Kruskal-Wallis equality-of-populations rank test

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 36  | 2808.00  |
| SQ SME      | 24  | 1476.00  |
| SQ 1 ATT    | 33  | 1831.50  |
| SQ Mult ATT | 16  | 962.00   |
| SQ None     | 23  | 1700.50  |

chi-squared = 7.707 with 4 d.f.  
 probability = 0.1029

chi-squared with ties = 10.627 with 4 d.f.  
 probability = 0.0311

. kwallis \_13\_ if year==2008, by(cmdtype)

Kruskal-Wallis equality-of-populations rank test

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 15  | 528.50   |
| SQ SME      | 16  | 594.00   |
| SQ 1 ATT    | 25  | 1045.00  |
| SQ Mult ATT | 11  | 352.50   |
| SQ None     | 11  | 561.00   |

chi-squared = 4.988 with 4 d.f.  
 probability = 0.2885

chi-squared with ties = 5.853 with 4 d.f.  
 probability = 0.2104



```
. kwallis _141_ if year==2008, by(cmdtype)
```

Kruskal-Wallis equality-of-populations rank test

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 35  | 2220.50  |
| SQ SME      | 24  | 1284.00  |
| SQ 1 ATT    | 31  | 1862.50  |
| SQ Mult ATT | 11  | 610.00   |
| SQ None     | 16  | 926.00   |

```
chi-squared = 1.401 with 4 d.f.
probability = 0.8441
```

```
chi-squared with ties = 1.662 with 4 d.f.
probability = 0.7976
```

```
. kwallis _142_ if year==2008, by(cmdtype)
```

Kruskal-Wallis equality-of-populations rank test

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 34  | 2209.50  |
| SQ SME      | 24  | 1285.00  |
| SQ 1 ATT    | 29  | 1713.50  |
| SQ Mult ATT | 12  | 677.00   |
| SQ None     | 16  | 785.00   |

```
chi-squared = 3.129 with 4 d.f.
probability = 0.5365
```

```
chi-squared with ties = 3.723 with 4 d.f.
probability = 0.4448
```

```
. kwallis _151_ if year==2008, by(cmdtype)
```

Kruskal-Wallis equality-of-populations rank test

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 2958.50  |
| SQ SME      | 25  | 1683.50  |
| SQ 1 ATT    | 34  | 2011.00  |
| SQ Mult ATT | 17  | 1255.50  |
| SQ None     | 25  | 1961.50  |

```
chi-squared = 4.576 with 4 d.f.
probability = 0.3337
```

```
chi-squared with ties = 5.662 with 4 d.f.
probability = 0.2259
```

```
. kwallis _152_ if year==2008, by(cmdtype)
```

Kruskal-Wallis equality-of-populations rank test

| cmdtype     | Obs | Rank Sum |
|-------------|-----|----------|
| OG CC       | 39  | 3080.50  |
| SQ SME      | 25  | 1601.00  |
| SQ 1 ATT    | 35  | 2274.00  |
| SQ Mult ATT | 17  | 1301.00  |
| SQ None     | 26  | 1896.50  |

```
chi-squared =      3.282 with 4 d.f.  
probability =      0.5118
```

```
chi-squared with ties =      4.029 with 4 d.f.  
probability =      0.4021
```

```
. *****
. ***** IFS 2008 vs 2006 statistical evaluation of difference.
. tabstat _3_ _4_ _5_ q6 _7_ _8_ _9_, statistics (n mean sd) by (yr)
```

Summary statistics: N, mean, sd  
by categories of: yr

| yr   | _3_      | _4_      | _5_      | q6       | _7_      | _8_      | _9_      |
|------|----------|----------|----------|----------|----------|----------|----------|
| 2006 | 158      | 140      | 140      | 158      | 153      | 141      | 152      |
|      | 1.113924 | 1.828571 | 2.05     | 1.56962  | 2.137255 | 2.333333 | 1.947368 |
|      | .3187292 | .5081049 | .6383995 | .8167599 | .8963289 | 1.01887  | .2518665 |
| 2008 | 145      | 137      | 137      | 143      | 140      | 140      | 138      |
|      | 1.048276 | 1.861314 | 2.043796 | 1.440559 | 2        | 2.278571 | 1.949275 |
|      | .2150915 | .608548  | .7363325 | .6983116 | .8396642 | .9823468 | .2512004 |

```
. tabstat _10_ _111_ _112_ _113_ _114_ _12_ _13_, statistics (n mean sd) by (yr)
```

Summary statistics: N, mean, sd  
by categories of: yr

| yr   | _10_     | _111_    | _112_    | _113_    | _114_    | _12_     | _13_     |
|------|----------|----------|----------|----------|----------|----------|----------|
| 2006 | 155      | 154      | 146      | 146      | 154      | 146      | 114      |
|      | 1.954839 | 2.448052 | 2.089041 | 1.945205 | 1.863636 | .1986301 | 2.122807 |
|      | .8244789 | .9149607 | .8130083 | .8032762 | .8250029 | .4003423 | .8107721 |
| 2008 | 144      | 142      | 141      | 141      | 145      | 133      | 79       |
|      | 1.944444 | 1.802817 | 1.560284 | 1.58156  | 1.441379 | .406015  | 2.113924 |
|      | .842721  | .8357223 | .6694219 | .7851845 | .6548522 | .4929441 | .800438  |

```
. tabstat _141_ _142_ _151_ _152_, statistics (n mean sd) by (yr)
```

Summary statistics: N, mean, sd  
by categories of: yr

| yr   | _141_    | _142_    | _151_    | _152_    |
|------|----------|----------|----------|----------|
| 2006 | 124      | 117      | 144      | 150      |
|      | 2.443548 | 2.452991 | 2.111111 | 2.046667 |
|      | 1.53179  | 1.505712 | .7854544 | .8999379 |
| 2008 | 118      | 116      | 141      | 143      |
|      | 1.737288 | 1.732759 | 1.680851 | 1.678322 |
|      | .8415286 | .8377792 | .7494679 | .8273613 |

```
. kwallis _3_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 158 | 24768.00 |
| 2008 | 145 | 21288.00 |

chi-squared = 0.974 with 1 d.f.  
probability = 0.3236

chi-squared with ties = 4.290 with 1 d.f.  
probability = 0.0383

```
. kwallis _4_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 140 | 19312.00 |
| 2008 | 137 | 19191.00 |
+-----+
```

```
chi-squared =      0.049 with 1 d.f.
probability =      0.8242
```

```
chi-squared with ties =      0.073 with 1 d.f.
probability =      0.7873
```

```
. kwallis _5_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 140 | 19675.00 |
| 2008 | 137 | 18828.00 |
+-----+
```

```
chi-squared =      0.104 with 1 d.f.
probability =      0.7471
```

```
chi-squared with ties =      0.132 with 1 d.f.
probability =      0.7167
```

```
. kwallis q6, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 158 | 24574.00 |
| 2008 | 143 | 20877.00 |
+-----+
```

```
chi-squared =      0.902 with 1 d.f.
probability =      0.3424
```

```
chi-squared with ties =      1.278 with 1 d.f.
probability =      0.2582
```

```
. kwallis _7_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 153 | 23404.50 |
| 2008 | 140 | 19666.50 |
+-----+
```

```
chi-squared =      1.590 with 1 d.f.
probability =      0.2073
```

```
chi-squared with ties =      1.846 with 1 d.f.
probability =      0.1743
```

```
. kwallis _8_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 141 | 20136.00 |
| 2008 | 140 | 19485.00 |
+-----+
```

```
chi-squared =    0.140 with 1 d.f.
probability =    0.7081
```

```
chi-squared with ties =    0.156 with 1 d.f.
probability =    0.6929
```

```
. kwallis _9_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 152 | 22096.50 |
| 2008 | 138 | 20098.50 |
+-----+
```

```
chi-squared =    0.001 with 1 d.f.
probability =    0.9777
```

```
chi-squared with ties =    0.004 with 1 d.f.
probability =    0.9480
```

```
. kwallis _10_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 155 | 23392.00 |
| 2008 | 144 | 21458.00 |
+-----+
```

```
chi-squared =    0.036 with 1 d.f.
probability =    0.8493
```

```
chi-squared with ties =    0.042 with 1 d.f.
probability =    0.8372
```

```
. kwallis _111_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 154 | 27380.00 |
| 2008 | 142 | 16576.00 |
+-----+
```

```
chi-squared =    37.598 with 1 d.f.
probability =    0.0001
```

```
chi-squared with ties =    43.224 with 1 d.f.
probability =    0.0001
```

```
. kwallis _112_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 146 | 24813.50 |
| 2008 | 141 | 16514.50 |

```
chi-squared = 29.066 with 1 d.f.
probability = 0.0001
```

```
chi-squared with ties = 34.029 with 1 d.f.
probability = 0.0001
```

```
. kwallis _113_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 146 | 23826.50 |
| 2008 | 141 | 17501.50 |

```
chi-squared = 15.897 with 1 d.f.
probability = 0.0001
```

```
chi-squared with ties = 18.816 with 1 d.f.
probability = 0.0001
```

```
. kwallis _114_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 154 | 26373.50 |
| 2008 | 145 | 18476.50 |

```
chi-squared = 19.195 with 1 d.f.
probability = 0.0001
```

```
chi-squared with ties = 23.341 with 1 d.f.
probability = 0.0001
```

```
. kwallis _12_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 146 | 18426.50 |
| 2008 | 133 | 20633.50 |

```
chi-squared = 8.948 with 1 d.f.
probability = 0.0028
```

```
chi-squared with ties = 14.272 with 1 d.f.
probability = 0.0002
```

```
. kwallis _13_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 114 | 11092.50 |
| 2008 |  79 |  7628.50 |
+-----+
```

```
chi-squared =      0.008 with 1 d.f.
probability =      0.9280
```

```
chi-squared with ties =    0.010 with 1 d.f.
probability =    0.9221
```

```
. kwallis _141_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 124 | 16614.00 |
| 2008 | 118 | 12789.00 |
+-----+
```

```
chi-squared =      8.087 with 1 d.f.
probability =      0.0045
```

```
chi-squared with ties =    9.078 with 1 d.f.
probability =    0.0026
```

```
. kwallis _142_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 117 | 15241.50 |
| 2008 | 116 | 12019.50 |
+-----+
```

```
chi-squared =      9.107 with 1 d.f.
probability =      0.0025
```

```
chi-squared with ties =   10.223 with 1 d.f.
probability =    0.0014
```

```
. kwallis _151_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 | 144 | 23797.00 |
| 2008 | 141 | 16958.00 |
+-----+
```

```
chi-squared =     21.227 with 1 d.f.
probability =      0.0001
```

```
chi-squared with ties =   25.407 with 1 d.f.
probability =      0.0001
```

```
. kwallis _152_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 150 | 24716.50 |
| 2008 | 143 | 18354.50 |

```
chi-squared = 13.530 with 1 d.f.
probability = 0.0002
```

```
chi-squared with ties = 15.881 with 1 d.f.
probability = 0.0001
```



```
. *****
. ***** OG CC 2008 vs 2006 statistical evaluation of differences.
. tabstat _20_ _21_ q22 q23 _24_ _25_ _26_, statistics (n mean sd), if cmdtype==1, by(yr)
```

Summary statistics: N, mean, sd  
by categories of: yr

| yr   | _20_     | _21_     | q22      | q23      | _24_     | _25_     | _26_     |
|------|----------|----------|----------|----------|----------|----------|----------|
| 2006 | 30       | 24       | 30       | 30       | 27       | 25       | 26       |
|      | 1.2      | 1.625    | 2.066667 | 1.533333 | 1.962963 | 2.12     | 1.846154 |
|      | .4068381 | .5757792 | .7849153 | .7302967 | .8077262 | .9273618 | .7316998 |
| 2008 | 38       | 29       | 39       | 39       | 38       | 34       | 37       |
|      | 1.236842 | 1.689655 | 2.230769 | 1.897436 | 2.315789 | 2.382353 | 2.351351 |
|      | .4308515 | .6037649 | .6673411 | .7179969 | 1.164921 | 1.128547 | 1.110961 |

```
. tabstat _27_ _281_ _282_ _283_ _284_ _29_, statistics (n mean sd), if cmdtype==1, by(yr)
```

Summary statistics: N, mean, sd  
by categories of: yr

| yr   | _27_     | _281_    | _282_    | _283_    | _284_    | _29_     |
|------|----------|----------|----------|----------|----------|----------|
| 2006 | 26       | 27       | 27       | 26       | 26       | 26       |
|      | 2.115385 | 1.962963 | 1.851852 | 1.769231 | 1.769231 | 1.730769 |
|      | .9089301 | .7586162 | .7181013 | .7103629 | .6516252 | .7243034 |
| 2008 | 38       | 38       | 38       | 36       | 38       | 37       |
|      | 2.473684 | 2.394737 | 2.026316 | 1.888889 | 1.684211 | 2.27027  |
|      | 1.224454 | 1.284828 | 1.102499 | .9791477 | 1.016227 | 1.261583 |

```
. *Question #20
. kwallis _20_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 30  | 1014.00  |
| 2008 | 38  | 1332.00  |

chi-squared = 0.067 with 1 d.f.  
probability = 0.7953

chi-squared with ties = 0.130 with 1 d.f.  
probability = 0.7180

```
. kwallis _21_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 24  | 630.00   |
| 2008 | 29  | 801.00   |

chi-squared = 0.103 with 1 d.f.  
probability = 0.7477

chi-squared with ties = 0.134 with 1 d.f.  
probability = 0.7147

```
. kwallis q22 if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 30  | 985.00   |
| 2008 | 39  | 1430.00  |

```
chi-squared =      0.619 with 1 d.f.
probability =      0.4314
```

```
chi-squared with ties =      0.727 with 1 d.f.
probability =      0.3939
```

```
. kwallis q23 if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 30  | 885.00   |
| 2008 | 39  | 1530.00  |

```
chi-squared =      3.989 with 1 d.f.
probability =      0.0458
```

```
chi-squared with ties =      4.677 with 1 d.f.
probability =      0.0306
```

```
. kwallis _24_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 27  | 820.00   |
| 2008 | 38  | 1325.00  |

```
chi-squared =      0.893 with 1 d.f.
probability =      0.3446
```

```
chi-squared with ties =      1.016 with 1 d.f.
probability =      0.3134
```

```
. kwallis _25_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 25  | 703.50   |
| 2008 | 34  | 1066.50  |

```
chi-squared =      0.509 with 1 d.f.
probability =      0.4757
```

```
chi-squared with ties =      0.563 with 1 d.f.
probability =      0.4529
```

```
. kwallis _26_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  26 |   717.50 |
| 2008 |  37 |  1298.50 |
+-----+-----+
```

```
chi-squared =      2.555 with 1 d.f.
probability =      0.1099
```

```
chi-squared with ties =      3.012 with 1 d.f.
probability =      0.0827
```

```
. kwallis _27_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  26 |   775.00 |
| 2008 |  38 |  1305.00 |
+-----+-----+
```

```
chi-squared =      0.916 with 1 d.f.
probability =      0.3386
```

```
chi-squared with ties =      1.008 with 1 d.f.
probability =      0.3154
```

```
. kwallis _281_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  27 |   826.00 |
| 2008 |  38 |  1319.00 |
+-----+-----+
```

```
chi-squared =      0.749 with 1 d.f.
probability =      0.3869
```

```
chi-squared with ties =      0.850 with 1 d.f.
probability =      0.3565
```

```
. kwallis _282_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  27 |   873.00 |
| 2008 |  38 |  1272.00 |
+-----+-----+
```

```
chi-squared =      0.057 with 1 d.f.
probability =      0.8106
```

```
chi-squared with ties =      0.064 with 1 d.f.
probability =      0.7996
```

```
. kwallis _283_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  26 |    805.00 |
| 2008 |  36 |   1148.00 |
+-----+-----+
```

```
chi-squared =    0.040 with 1 d.f.
probability =    0.8417
```

```
chi-squared with ties =    0.046 with 1 d.f.
probability =    0.8307
```

```
. kwallis _284_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  26 |    924.50 |
| 2008 |  38 |   1155.50 |
+-----+-----+
```

```
chi-squared =    1.181 with 1 d.f.
probability =    0.2772
```

```
chi-squared with ties =    1.411 with 1 d.f.
probability =    0.2349
```

```
. kwallis _29_ if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  26 |    725.50 |
| 2008 |  37 |   1290.50 |
+-----+-----+
```

```
chi-squared =    2.211 with 1 d.f.
probability =    0.1371
```

```
chi-squared with ties =    2.557 with 1 d.f.
probability =    0.1098
```

```
. ***** SQ CC SME 2008 vs 2006 statistical evaluation of difference.
. tabstat q34 _35_ _36_ _37_ _38_ _39_ _40_, statistics (n mean sd) by (yr)
```

Summary statistics: N, mean, sd  
by categories of: yr

```
-----+-----+-----+-----+-----+-----+-----+
|   yr |   q34   |   _35_   |   _36_   |   _37_   |   _38_   |   _39_   |   _40_   |
+-----+-----+-----+-----+-----+-----+-----+
| 2006 |         |         |         |         |         |         |         |
|       | 34      | 32      | 28      | 32      | 32      | 31      | 32      |
|       | 1.058824 | 1.59375 | 1.571429 | 1.125   | 1.21875 | 1.322581 | 1.625   |
|       | .2388326 | .7560242 | .6900656 | .3360108 | .4200134 | .475191 | .7513429 |
+-----+-----+-----+-----+-----+-----+-----+
| 2008 |         |         |         |         |         |         |         |
|       | 24      | 22      | 20      | 24      | 24      | 24      | 21      |
|       | 1.0833333 | 1.727273 | 1.6     | 1.166667 | 1.125   | 1.125   | 1.666667 |
|       | .2823299 | .7672969 | .680557 | .3806935 | .337832 | .337832 | .7302967 |
+-----+-----+-----+-----+-----+-----+-----+
```

. tabstat \_41\_ \_42\_ \_43\_ \_441\_ \_442\_ \_443\_ \_444\_, statistics (n mean sd) by (yr)

Summary statistics: N, mean, sd  
by categories of: yr

| yr   | _41_     | _42_     | _43_     | _441_    | _442_    | _443_    | _444_    |
|------|----------|----------|----------|----------|----------|----------|----------|
| 2006 | 32       | 33       | 30       | 31       | 31       | 31       | 33       |
|      | 1.78125  | 1.181818 | 1.233333 | 2.064516 | 1.709677 | 1.387097 | 1.454545 |
|      | .9413229 | .3916747 | .4301831 | .8920196 | .7390782 | .6152192 | .7111131 |
| 2008 | 22       | 24       | 22       | 22       | 22       | 22       | 21       |
|      | 1.909091 | 1.25     | 1.272727 | 1.909091 | 1.590909 | 1.545455 | 1.428571 |
|      | 1.1088   | .4423259 | .4558423 | .7501804 | .7341397 | .7385489 | .6761234 |

. tabstat \_45\_ \_461\_ \_462\_ \_463\_ \_464\_ \_471\_ \_472\_, statistics (n mean sd) by (yr)

Summary statistics: N, mean, sd  
by categories of: yr

| yr   | _45_     | _461_    | _462_    | _463_    | _464_    | _471_    | _472_    |
|------|----------|----------|----------|----------|----------|----------|----------|
| 2006 | 32       | 29       | 29       | 29       | 29       | 31       | 30       |
|      | 1.09375  | 1.344828 | 1.413793 | 1.37931  | 1.482759 | 1.516129 | 1.433333 |
|      | .2961446 | .552647  | .6277648 | .6218517 | .6876819 | .6768046 | .6789106 |
| 2008 | 18       | 15       | 14       | 15       | 15       | 22       | 21       |
|      | 1.166667 | 1.4      | 1.5      | 1.466667 | 1.533333 | 1.772727 | 1.714286 |
|      | .3834825 | .7367884 | .5188745 | .6399405 | .6399405 | .9725675 | 1.055597 |

. kwallis q34 if cmdtype==2, by(yr)  
Kruskal-Wallis equality-of-populations rank test

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 33  | 936.00   |
| 2008 | 24  | 717.00   |

chi-squared = 0.115 with 1 d.f.  
probability = 0.7343

chi-squared with ties = 0.770 with 1 d.f.  
probability = 0.3802

. kwallis \_35\_ if cmdtype==2, by(yr)  
Kruskal-Wallis equality-of-populations rank test

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 32  | 844.00   |
| 2008 | 22  | 641.00   |

chi-squared = 0.402 with 1 d.f.  
probability = 0.5262

chi-squared with ties = 0.487 with 1 d.f.  
probability = 0.4853

```
. kwallis _36_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 28  | 678.00   |
| 2008 | 20  | 498.00   |

```
chi-squared = 0.028 with 1 d.f.
probability = 0.8671
```

```
chi-squared with ties = 0.035 with 1 d.f.
probability = 0.8521
```

```
. kwallis _37_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 32  | 896.00   |
| 2008 | 24  | 700.00   |

```
chi-squared = 0.070 with 1 d.f.
probability = 0.7911
```

```
chi-squared with ties = 0.191 with 1 d.f.
probability = 0.6621
```

```
. kwallis _38_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 32  | 948.00   |
| 2008 | 24  | 648.00   |

```
chi-squared = 0.355 with 1 d.f.
probability = 0.5511
```

```
chi-squared with ties = 0.807 with 1 d.f.
probability = 0.3690
```

```
. kwallis _39_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 31  | 941.50   |
| 2008 | 24  | 598.50   |

```
chi-squared = 1.556 with 1 d.f.
probability = 0.2123
```

```
chi-squared with ties = 2.873 with 1 d.f.
probability = 0.0901
```

```
. kwallis _40_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 32  | 850.00   |
| 2008 | 21  | 581.00   |

```
chi-squared = 0.065 with 1 d.f.
probability = 0.7990
```

```
chi-squared with ties = 0.079 with 1 d.f.
probability = 0.7785
```

```
. kwallis _41_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 32  | 863.00   |
| 2008 | 22  | 622.00   |

```
chi-squared = 0.090 with 1 d.f.
probability = 0.7647
```

```
chi-squared with ties = 0.104 with 1 d.f.
probability = 0.7468
```

```
. kwallis _42_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 33  | 930.00   |
| 2008 | 24  | 723.00   |

```
chi-squared = 0.190 with 1 d.f.
probability = 0.6626
```

```
chi-squared with ties = 0.382 with 1 d.f.
probability = 0.5366
```

```
. kwallis _43_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 30  | 782.00   |
| 2008 | 22  | 596.00   |

```
chi-squared = 0.058 with 1 d.f.
probability = 0.8097
```

```
chi-squared with ties = 0.103 with 1 d.f.
probability = 0.7482
```

```
. kwallis _441_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  31 |   868.00 |
| 2008 |  22 |   563.00 |
+-----+-----+
```

```
chi-squared =    0.313 with 1 d.f.
probability =    0.5758
```

```
chi-squared with ties =    0.351 with 1 d.f.
probability =    0.5533
```

```
. kwallis _442_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  31 |   868.50 |
| 2008 |  22 |   562.50 |
+-----+-----+
```

```
chi-squared =    0.323 with 1 d.f.
probability =    0.5696
```

```
chi-squared with ties =    0.388 with 1 d.f.
probability =    0.5332
```

```
. kwallis _443_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  31 |   801.50 |
| 2008 |  22 |   629.50 |
+-----+-----+
```

```
chi-squared =    0.411 with 1 d.f.
probability =    0.5216
```

```
chi-squared with ties =    0.573 with 1 d.f.
probability =    0.4492
```

```
. kwallis _444_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  33 |   910.50 |
| 2008 |  21 |   574.50 |
+-----+-----+
```

```
chi-squared =    0.003 with 1 d.f.
probability =    0.9575
```

```
chi-squared with ties =    0.004 with 1 d.f.
probability =    0.9489
```



```
. kwallis _45_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  32 |   795.00 |
| 2008 |  18 |   480.00 |
+-----+-----+
```

```
chi-squared =    0.180 with 1 d.f.
probability =    0.6712
```

```
chi-squared with ties =    0.568 with 1 d.f.
probability =    0.4509
```

```
. kwallis _461_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  29 |   655.00 |
| 2008 |  15 |   335.00 |
+-----+-----+
```

```
chi-squared =    0.004 with 1 d.f.
probability =    0.9506
```

```
chi-squared with ties =    0.006 with 1 d.f.
probability =    0.9382
```

```
. kwallis _462_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  29 |   613.50 |
| 2008 |  14 |   332.50 |
+-----+-----+
```

```
chi-squared =    0.403 with 1 d.f.
probability =    0.5254
```

```
chi-squared with ties =    0.547 with 1 d.f.
probability =    0.4594
```

```
. kwallis _463_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+-----+
| 2006 |  29 |   634.50 |
| 2008 |  15 |   355.50 |
+-----+-----+
```

```
chi-squared =    0.199 with 1 d.f.
probability =    0.6558
```

```
chi-squared with ties =    0.286 with 1 d.f.
probability =    0.5925
```

```
. kwallis _464_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 29  | 638.50   |
| 2008 | 15  | 351.50   |

```
chi-squared = 0.120 with 1 d.f.
probability = 0.7289
```

```
chi-squared with ties = 0.158 with 1 d.f.
probability = 0.6911
```

```
. kwallis _471_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 31  | 797.00   |
| 2008 | 22  | 634.00   |

```
chi-squared = 0.521 with 1 d.f.
probability = 0.4703
```

```
chi-squared with ties = 0.650 with 1 d.f.
probability = 0.4203
```

```
. kwallis _472_ if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 30  | 742.00   |
| 2008 | 21  | 584.00   |

```
chi-squared = 0.529 with 1 d.f.
probability = 0.4671
```

```
chi-squared with ties = 0.716 with 1 d.f.
probability = 0.3974
```

```
. ***** Q47_1 vs Q47 - Better prepared Deployed or in Garrison for 2008 and 2006
. tabstat _441_ _442_ _443_ _444_ _45_, statistics (n mean sd) by(yr)
```

```
Summary statistics: N, mean, sd
by categories of: yr
```

| yr   | _441_    | _442_    | _443_    | _444_    | _45_     |
|------|----------|----------|----------|----------|----------|
| 2006 | 31       | 31       | 31       | 33       | 32       |
|      | 2.064516 | 1.709677 | 1.387097 | 1.454545 | 1.09375  |
|      | .8920196 | .7390782 | .6152192 | .7111131 | .2961446 |
| 2008 | 22       | 22       | 22       | 21       | 18       |
|      | 1.909091 | 1.590909 | 1.545455 | 1.428571 | 1.166667 |
|      | .7501804 | .7341397 | .7385489 | .6761234 | .3834825 |

```
. tabstat _461_ _462_ _463_ _464_ _471_ _472_, statistics (n mean sd) by (yr)
```

Summary statistics: N, mean, sd  
by categories of: yr

| yr    | _461_    | _462_    | _463_    | _464_    | _471_    | _472_    |
|-------|----------|----------|----------|----------|----------|----------|
| 2006  | 29       | 29       | 29       | 29       | 31       | 30       |
|       | 1.344828 | 1.413793 | 1.37931  | 1.482759 | 1.516129 | 1.433333 |
|       | .552647  | .6277648 | .6218517 | .6876819 | .6768046 | .6789106 |
| 2008  | 15       | 14       | 15       | 15       | 22       | 21       |
|       | 1.4      | 1.5      | 1.466667 | 1.533333 | 1.772727 | 1.714286 |
|       | .7367884 | .5188745 | .6399405 | .6399405 | .9725675 | 1.055597 |
| Total | 44       | 43       | 44       | 44       | 53       | 51       |
|       | 1.363636 | 1.44186  | 1.409091 | 1.5      | 1.622642 | 1.54902  |
|       | .6134504 | .5896862 | .6220066 | .6647259 | .8139745 | .8558908 |

```
. kwallis _471_ if year==2008, by(_472_)
Kruskal-Wallis equality-of-populations rank test
```

| _472_ | Obs | Rank Sum |
|-------|-----|----------|
| 1     | 12  | 80.50    |
| 2     | 5   | 72.50    |
| 3     | 3   | 57.50    |
| 5     | 1   | 20.50    |

```
chi-squared = 14.873 with 3 d.f.
probability = 0.0019
```

```
chi-squared with ties = 17.852 with 3 d.f.
probability = 0.0005
```

```
. kwallis _471_ if year==2006, by(_472_)
Kruskal-Wallis equality-of-populations rank test
```

| _472_ | Obs | Rank Sum |
|-------|-----|----------|
| 1     | 20  | 227.00   |
| 2     | 7   | 157.50   |
| 3     | 3   | 80.50    |

```
chi-squared = 13.842 with 2 d.f.
probability = 0.0010
```

```
chi-squared with ties = 17.727 with 2 d.f.
probability = 0.0001
```

```
. kwallis _471_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 31  | 797.00   |
| 2008 | 22  | 634.00   |

```
chi-squared = 0.521 with 1 d.f.
probability = 0.4703
```

```
chi-squared with ties = 0.650 with 1 d.f.
probability = 0.4203
```

```
. kwallis _472_, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 30  | 742.00   |
| 2008 | 21  | 584.00   |

```
chi-squared = 0.529 with 1 d.f.
probability = 0.4671
```

```
chi-squared with ties = 0.716 with 1 d.f.
probability = 0.3974
```

```
. ***** SQ CC ATT 2008 vs 2006 statistical evaluation of difference.
. tabstat _49_ _50_ q51 q52 q53 _54_ q55, statistics (n mean sd) by (yr)
```

```
Summary statistics: N, mean, sd
by categories of: yr
```

| yr   | _49_     | _50_     | q51      | q52      | q53      | _54_     | q55      |
|------|----------|----------|----------|----------|----------|----------|----------|
| 2006 | 49       | 48       | 49       | 49       | 49       | 49       | 49       |
|      | 1.020408 | 1.791667 | 1.734694 | 1.653061 | 1.755102 | 2        | 1.489796 |
|      | .1428571 | .7706956 | .6382107 | .6630429 | .6624013 | .8416254 | .7394381 |
| 2008 | 36       | 30       | 51       | 51       | 50       | 33       | 51       |
|      | 1.138889 | 1.566667 | 1.686275 | 1.588235 | 1.7      | 1.848485 | 1.411765 |
|      | .3507362 | .5683208 | .6779438 | .6686246 | .6144518 | .7953463 | .8288901 |

```
. tabstat q56 _571_ _572_ _573_ _574_, statistics (n mean sd) by (yr)
```

```
Summary statistics: N, mean, sd
by categories of: yr
```

| yr   | q56      | _571_    | _572_    | _573_    | _574_    |
|------|----------|----------|----------|----------|----------|
| 2006 | 49       | 49       | 49       | 47       | 49       |
|      | 1.755102 | 2.142857 | 1.979592 | 1.829787 | 1.693878 |
|      | .6931394 | .8897565 | .7497165 | .7318573 | .6832545 |
| 2008 | 51       | 32       | 31       | 34       | 34       |
|      | 1.627451 | 1.84375  | 1.580645 | 1.617647 | 1.588235 |
|      | .7472827 | .7233156 | .6204404 | .6969503 | .6567896 |

```
. kwallis _49_ if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 49  | 2002.50  |
| 2008 | 36  | 1652.50  |

```
chi-squared =    0.864 with 1 d.f.
probability =    0.3527
```

```
chi-squared with ties =    4.388 with 1 d.f.
probability =    0.0362
```

```
. kwallis _50_ if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 48  | 1996.00  |
| 2008 | 30  | 1085.00  |

```
chi-squared =    1.055 with 1 d.f.
probability =    0.3044
```

```
chi-squared with ties =    1.309 with 1 d.f.
probability =    0.2526
```

```
. kwallis q51 if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 49  | 2110.00  |
| 2008 | 36  | 1545.00  |

```
chi-squared =    0.001 with 1 d.f.
probability =    0.9786
```

```
chi-squared with ties =    0.001 with 1 d.f.
probability =    0.9765
```

```
. kwallis q52 if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 49  | 2129.50  |
| 2008 | 36  | 1525.50  |

```
chi-squared =    0.040 with 1 d.f.
probability =    0.8414
```

```
chi-squared with ties =    0.049 with 1 d.f.
probability =    0.8256
```

```
. kwallis q53 if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 49  | 2105.50  |
| 2008 | 35  | 1464.50  |

```
chi-squared = 0.044 with 1 d.f.
probability = 0.8347
```

```
chi-squared with ties = 0.054 with 1 d.f.
probability = 0.8161
```

```
. kwallis _54_ if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 49  | 2115.00  |
| 2008 | 33  | 1288.00  |

```
chi-squared = 0.594 with 1 d.f.
probability = 0.4409
```

```
chi-squared with ties = 0.690 with 1 d.f.
probability = 0.4063
```

```
. kwallis q55 if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 49  | 2147.50  |
| 2008 | 36  | 1507.50  |

```
chi-squared = 0.130 with 1 d.f.
probability = 0.7187
```

```
chi-squared with ties = 0.185 with 1 d.f.
probability = 0.6670
```

```
. kwallis q56 if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 49  | 2221.00  |
| 2008 | 36  | 1434.00  |

```
chi-squared = 1.028 with 1 d.f.
probability = 0.3106
```

```
chi-squared with ties = 1.222 with 1 d.f.
probability = 0.2690
```

```
. kwallis _571_ if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 |  49 | 2144.00 |
| 2008 |  32 | 1177.00 |
+-----+
```

```
chi-squared =      1.701 with 1 d.f.
probability =      0.1922
```

```
chi-squared with ties =      2.016 with 1 d.f.
probability =      0.1557
```

```
. kwallis _572_ if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 |  49 | 2208.50 |
| 2008 |  31 | 1031.50 |
+-----+
```

```
chi-squared =      4.894 with 1 d.f.
probability =      0.0270
```

```
chi-squared with ties =      6.132 with 1 d.f.
probability =      0.0133
```

```
. kwallis _573_ if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 |  47 | 2054.00 |
| 2008 |  34 | 1267.00 |
+-----+
```

```
chi-squared =      1.477 with 1 d.f.
probability =      0.2242
```

```
chi-squared with ties =      1.768 with 1 d.f.
probability =      0.1836
```

```
. kwallis _574_ if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
|   yr | Obs | Rank Sum |
+-----+
| 2006 |  49 | 2126.50 |
| 2008 |  34 | 1359.50 |
+-----+
```

```
chi-squared =      0.402 with 1 d.f.
probability =      0.5259
```

```
chi-squared with ties =      0.498 with 1 d.f.
probability =      0.4802
```

```
. *****
. ***** Depth and Breadth of Knowledge IFS, SGP, SME, At1FSCC
. ***** Q28-SGP Q44-SME Q57-At1FSCC combined into _1 _2 _3 _4
. ***** CMP Breadth and Depth of knowledge for CMD TYPE in 2008
. tabstat _1 _2 _3 _4, statistic (n mean sd), if year==2008 & cmdtype <=3, by(cmdtype)
```

Summary statistics: N, mean, sd  
by categories of: cmdtype

| cmdtype  | _1       | _2       | _3       | _4       |
|----------|----------|----------|----------|----------|
| OG CC    | 38       | 38       | 36       | 38       |
|          | 2.394737 | 2.026316 | 1.888889 | 1.684211 |
|          | 1.284828 | 1.102499 | .9791477 | 1.016227 |
| SQ SME   | 22       | 22       | 22       | 21       |
|          | 1.909091 | 1.590909 | 1.545455 | 1.428571 |
|          | .7501804 | .7341397 | .7385489 | .6761234 |
| SQ 1 ATT | 32       | 31       | 34       | 34       |
|          | 1.84375  | 1.580645 | 1.617647 | 1.588235 |
|          | .7233156 | .6204404 | .6969503 | .6567896 |

```
. kwallis _1 if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype  | Obs | Rank Sum |
|----------|-----|----------|
| OG CC    | 38  | 1954.00  |
| SQ SME   | 22  | 973.00   |
| SQ 1 ATT | 32  | 1351.00  |

chi-squared = 2.273 with 2 d.f.  
probability = 0.3210

chi-squared with ties = 2.613 with 2 d.f.  
probability = 0.2707

```
. kwallis _2 if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype  | Obs | Rank Sum |
|----------|-----|----------|
| OG CC    | 38  | 1948.00  |
| SQ SME   | 22  | 920.00   |
| SQ 1 ATT | 31  | 1318.00  |

chi-squared = 2.600 with 2 d.f.  
probability = 0.2726

chi-squared with ties = 3.051 with 2 d.f.  
probability = 0.2175



```
. kwallis _3 if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype  | Obs | Rank Sum |
|----------|-----|----------|
| OG CC    | 36  | 1829.50  |
| SQ SME   | 22  | 922.00   |
| SQ 1 ATT | 34  | 1526.50  |

```
chi-squared = 1.715 with 2 d.f.
probability = 0.4242
```

```
chi-squared with ties = 2.045 with 2 d.f.
probability = 0.3597
```

```
. kwallis _4 if year==2008, by(cmdtype)
Kruskal-Wallis equality-of-populations rank test
```

| cmdtype  | Obs | Rank Sum |
|----------|-----|----------|
| OG CC    | 38  | 1806.00  |
| SQ SME   | 21  | 894.50   |
| SQ 1 ATT | 34  | 1670.50  |

```
chi-squared = 0.786 with 2 d.f.
probability = 0.6750
```

```
chi-squared with ties = 1.007 with 2 d.f.
probability = 0.6045
```

```
. ***** CMP Breadth and Depth of knowledge YR holding cmdtype const
. tabstat _1 _2 _3 _4, statistic (n mean sd), if cmdtype==1, by(yr)
```

```
Summary statistics: N, mean, sd
by categories of: yr
```

| yr   | _1       | _2       | _3       | _4       |
|------|----------|----------|----------|----------|
| 2006 | 27       | 27       | 26       | 26       |
|      | 1.962963 | 1.851852 | 1.769231 | 1.769231 |
|      | .7586162 | .7181013 | .7103629 | .6516252 |
| 2008 | 38       | 38       | 36       | 38       |
|      | 2.394737 | 2.026316 | 1.888889 | 1.684211 |
|      | 1.284828 | 1.102499 | .9791477 | 1.016227 |

```
. tabstat _1 _2 _3 _4, statistic (n mean sd), if cmdtype==2, by(yr)
```

```
Summary statistics: N, mean, sd
by categories of: yr
```

| yr   | _1       | _2       | _3       | _4       |
|------|----------|----------|----------|----------|
| 2006 | 31       | 31       | 31       | 33       |
|      | 2.064516 | 1.709677 | 1.387097 | 1.454545 |
|      | .8920196 | .7390782 | .6152192 | .7111131 |
| 2008 | 22       | 22       | 22       | 21       |
|      | 1.909091 | 1.590909 | 1.545455 | 1.428571 |
|      | .7501804 | .7341397 | .7385489 | .6761234 |

```
. tabstat _1 _2 _3 _4, statistic (n mean sd), if cmdtype==3, by(yr)
```

Summary statistics: N, mean, sd  
by categories of: yr

| yr   | _1       | _2       | _3       | _4       |
|------|----------|----------|----------|----------|
| 2006 | 49       | 49       | 47       | 49       |
|      | 2.142857 | 1.959184 | 1.829787 | 1.693878 |
|      | .8897565 | .7626484 | .7318573 | .6832545 |
| 2008 | 32       | 31       | 34       | 34       |
|      | 1.84375  | 1.580645 | 1.617647 | 1.588235 |
|      | .7233156 | .6204404 | .6969503 | .6567896 |

```
. kwallis _1 if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 27  | 826.00   |
| 2008 | 38  | 1319.00  |

```
chi-squared = 0.749 with 1 d.f.
probability = 0.3869
```

```
chi-squared with ties = 0.850 with 1 d.f.
probability = 0.3565
```

```
. kwallis _1 if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 31  | 868.00   |
| 2008 | 22  | 563.00   |

```
chi-squared = 0.313 with 1 d.f.
probability = 0.5758
```

```
chi-squared with ties = 0.351 with 1 d.f.
probability = 0.5533
```

```
. kwallis _1 if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 49  | 2144.00  |
| 2008 | 32  | 1177.00  |

```
chi-squared = 1.701 with 1 d.f.
probability = 0.1922
```

```
chi-squared with ties = 2.016 with 1 d.f.
probability = 0.1557
```

```
. kwallis _2 if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 27  | 873.00   |
| 2008 | 38  | 1272.00  |

```
chi-squared = 0.057 with 1 d.f.
probability = 0.8106
```

```
chi-squared with ties = 0.064 with 1 d.f.
probability = 0.7996
```

```
. kwallis _2 if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 31  | 868.50   |
| 2008 | 22  | 562.50   |

```
chi-squared = 0.323 with 1 d.f.
probability = 0.5696
```

```
chi-squared with ties = 0.388 with 1 d.f.
probability = 0.5332
```

```
. kwallis _2 if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 49  | 2194.00  |
| 2008 | 31  | 1046.00  |

```
chi-squared = 4.281 with 1 d.f.
probability = 0.0385
```

```
chi-squared with ties = 5.318 with 1 d.f.
probability = 0.0211
```

```
. kwallis _3 if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 26  | 805.00   |
| 2008 | 36  | 1148.00  |

```
chi-squared = 0.040 with 1 d.f.
probability = 0.8417
```

```
chi-squared with ties = 0.046 with 1 d.f.
probability = 0.8307
```

```
. kwallis _3 if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 31  | 801.50   |
| 2008 | 22  | 629.50   |

```
chi-squared =      0.411 with 1 d.f.
probability =      0.5216
```

```
chi-squared with ties =      0.573 with 1 d.f.
probability =      0.4492
```

```
. kwallis _3 if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 47  | 2054.00  |
| 2008 | 34  | 1267.00  |

```
chi-squared =      1.477 with 1 d.f.
probability =      0.2242
```

```
chi-squared with ties =      1.768 with 1 d.f.
probability =      0.1836
```

```
. kwallis _4 if cmdtype==1, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 26  | 924.50   |
| 2008 | 38  | 1155.50  |

```
chi-squared =      1.181 with 1 d.f.
probability =      0.2772
```

```
chi-squared with ties =      1.411 with 1 d.f.
probability =      0.2349
```

```
. kwallis _4 if cmdtype==2, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 33  | 910.50   |
| 2008 | 21  | 574.50   |

```
chi-squared =      0.003 with 1 d.f.
probability =      0.9575
```

```
chi-squared with ties =      0.004 with 1 d.f.
probability =      0.9489
```

```
. kwallis _4 if cmdtype==3, by(yr)
Kruskal-Wallis equality-of-populations rank test
```

| yr   | Obs | Rank Sum |
|------|-----|----------|
| 2006 | 49  | 2126.50  |
| 2008 | 34  | 1359.50  |

```
chi-squared = 0.402 with 1 d.f.
probability = 0.5259
```

```
chi-squared with ties = 0.498 with 1 d.f.
probability = 0.4802
```

```
. ***** CMP Breadth and Depth of Knowledge of IFS and SGP in 2008
. tabstat _111_ _1 _112_ _2 _113_ _3 _114_ _4, statistic (n mean sd), if cmdtype==1 & year==2008
```

| stats | _111_    | _1       | _112_    | _2       | _113_    | _3       | _114_    | _4       |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|
| N     | 39       | 38       | 39       | 38       | 39       | 36       | 39       | 38       |
| mean  | 1.923077 | 2.394737 | 1.641026 | 2.026316 | 1.692308 | 1.888889 | 1.589744 | 1.684211 |
| sd    | 1.035797 | 1.284828 | .8425269 | 1.102499 | .8630986 | .9791477 | .9380256 | 1.016227 |

```
. kwallis _111_ if year==2008 & cmdtype==1, by(_1)
Kruskal-Wallis equality-of-populations rank test
```

| _1 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 9   | 84.00    |
| 2  | 18  | 333.00   |
| 3  | 2   | 48.00    |
| 4  | 5   | 156.50   |
| 5  | 4   | 119.50   |

```
chi-squared = 17.130 with 4 d.f.
probability = 0.0018
```

```
chi-squared with ties = 20.757 with 4 d.f.
probability = 0.0004
```

```
. kwallis _112_ if year==2008 & cmdtype==1, by(_2)
Kruskal-Wallis equality-of-populations rank test
```

| _2 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 16  | 185.00   |
| 2  | 10  | 190.00   |
| 3  | 8   | 245.50   |
| 4  | 3   | 82.50    |
| 5  | 1   | 38.00    |

```
chi-squared = 20.616 with 4 d.f.
probability = 0.0004
```

```
chi-squared with ties = 25.634 with 4 d.f.
probability = 0.0001
```

```
. kwallis _113_ if year==2008 & cmdtype==1, by(_3)
Kruskal-Wallis equality-of-populations rank test
```

| _3 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 16  | 167.50   |
| 2  | 10  | 212.00   |
| 3  | 9   | 250.50   |
| 5  | 1   | 36.00    |

```
chi-squared = 19.776 with 3 d.f.
probability = 0.0002
```

```
chi-squared with ties = 23.909 with 3 d.f.
probability = 0.0001
```

```
. kwallis _114_ if year==2008 & cmdtype==1, by(_4)
Kruskal-Wallis equality-of-populations rank test
```

| _4 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 23  | 309.00   |
| 2  | 7   | 173.00   |
| 3  | 6   | 184.00   |
| 4  | 1   | 37.00    |
| 5  | 1   | 38.00    |

```
chi-squared = 19.701 with 4 d.f.
probability = 0.0006
```

```
chi-squared with ties = 25.921 with 4 d.f.
probability = 0.0001
```

```
. ***** CMP Breadth and Depth of Knowledge of IFS and SME in 2008
. tabstat _111_ _1 _112_ _2 _113_ _3 _114_ _4, statistic (n mean sd), if cmdtype==2 & year==2008
```

| stats | _111_    | _1       | _112_    | _2       | _113_    | _3       | _114_    | _4       |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|
| N     | 25       | 22       | 25       | 22       | 25       | 22       | 25       | 21       |
| mean  | 1.64     | 1.909091 | 1.48     | 1.590909 | 1.56     | 1.545455 | 1.36     | 1.428571 |
| sd    | .6377042 | .7501804 | .5859465 | .7341397 | .7681146 | .7385489 | .5686241 | .6761234 |

```
. kwallis _111_ if year==2008 & cmdtype==2, by(_1)
Kruskal-Wallis equality-of-populations rank test
```

| _1 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 7   | 38.50    |
| 2  | 10  | 149.50   |
| 3  | 5   | 65.00    |

```
chi-squared = 9.066 with 2 d.f.
probability = 0.0107
```

```
chi-squared with ties = 11.584 with 2 d.f.
probability = 0.0031
```

```
. kwallis _112_ if year==2008 & cmdtype==2, by(_2)
Kruskal-Wallis equality-of-populations rank test
```

| _2 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 12  | 94.50    |
| 2  | 7   | 112.00   |
| 3  | 3   | 46.50    |

```
chi-squared = 8.240 with 2 d.f.
probability = 0.0162
```

```
chi-squared with ties = 11.030 with 2 d.f.
probability = 0.0040
```

```
. kwallis _113_ if year==2008 & cmdtype==2, by(_3)
Kruskal-Wallis equality-of-populations rank test
```

| _3 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 13  | 112.00   |
| 2  | 6   | 94.50    |
| 3  | 3   | 46.50    |

```
chi-squared = 6.274 with 2 d.f.
probability = 0.0434
```

```
chi-squared with ties = 8.398 with 2 d.f.
probability = 0.0150
```

```
. kwallis _114_ if year==2008 & cmdtype==2, by(_4)
Kruskal-Wallis equality-of-populations rank test
```

| _4 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 14  | 122.00   |
| 2  | 5   | 80.00    |
| 3  | 2   | 29.00    |

```
chi-squared = 5.783 with 2 d.f.
probability = 0.0555
```

```
chi-squared with ties = 9.277 with 2 d.f.
probability = 0.0097
```

```
. ***** CMP Breadth and Depth of Knowledge of IFS and AtlFSCC in 2008
. tabstat _111_ _1 _112_ _2 _113_ _3 _114_ _4, statistic (n mean sd), if cmdtype==3 & year==2008
```

| stats | _111_    | _1       | _112_    | _2       | _113_    | _3       | _114_    | _4       |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|
| N     | 35       | 32       | 35       | 31       | 34       | 34       | 36       | 34       |
| mean  | 1.685714 | 1.84375  | 1.485714 | 1.580645 | 1.441176 | 1.617647 | 1.277778 | 1.588235 |
| sd    | .6311254 | .7233156 | .5621089 | .6204404 | .6125543 | .6969503 | .4542568 | .6567896 |

```
. kwallis _l11_ if year==2008 & cmdtype==3, by(_1)
Kruskal-Wallis equality-of-populations rank test
```

| _1 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 11  | 111.50   |
| 2  | 14  | 250.00   |
| 3  | 6   | 134.50   |

```
chi-squared = 8.148 with 2 d.f.
probability = 0.0170
```

```
chi-squared with ties = 10.246 with 2 d.f.
probability = 0.0060
```

```
. kwallis _l12_ if year==2008 & cmdtype==3, by(_2)
Kruskal-Wallis equality-of-populations rank test
```

| _2 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 15  | 181.00   |
| 2  | 14  | 264.00   |
| 3  | 2   | 51.00    |

```
chi-squared = 6.373 with 2 d.f.
probability = 0.0413
```

```
chi-squared with ties = 8.945 with 2 d.f.
probability = 0.0114
```

```
. kwallis _l13_ if year==2008 & cmdtype==3, by(_3)
Kruskal-Wallis equality-of-populations rank test
```

| _3 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 16  | 228.50   |
| 2  | 13  | 236.00   |
| 3  | 4   | 96.50    |

```
chi-squared = 3.622 with 2 d.f.
probability = 0.1635
```

```
chi-squared with ties = 5.066 with 2 d.f.
probability = 0.0794
```

```
. kwallis _l14_ if year==2008 & cmdtype==3, by(_4)
Kruskal-Wallis equality-of-populations rank test
```

| _4 | Obs | Rank Sum |
|----|-----|----------|
| 1  | 17  | 229.50   |
| 2  | 14  | 291.00   |
| 3  | 3   | 74.50    |

```
chi-squared = 5.894 with 2 d.f.
probability = 0.0525
```

```
chi-squared with ties = 10.909 with 2 d.f.
probability = 0.0043
```



```
. *****
. ***** Significance of Regular Frequent Flights in IFS.
. table Fly, by(yr) c(n _7_ mean _7_ sd _7_)
```

| yr and Fly | N(_7_) | mean(_7_) | sd(_7_)  |
|------------|--------|-----------|----------|
| 2006       |        |           |          |
| Yes        | 101    | 1.8415842 | .7447506 |
| No         | 52     | 2.7115386 | .8930349 |
| 2008       |        |           |          |
| Yes        | 96     | 1.78125   | .7427279 |
| No         | 44     | 2.4772727 | .8487648 |

```
. kwallis __7_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 96  | 6168.00  |
| No  | 44  | 3702.00  |

```
chi-squared = 7.253 with 1 d.f.
probability = 0.0071
```

```
chi-squared with ties = 14.359 with 1 d.f.
probability = 0.0002
```

```
. logistic __7_ Fly if year==2008
Logistic regression
```

```
Log likelihood = -65.937078
Number of obs = 140
LR chi2(1) = 13.61
Prob > chi2 = 0.0002
Pseudo R2 = 0.0935
```

| __7_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|------|------------|-----------|------|-------|----------------------|
| Fly  | 4.846154   | 2.108242  | 3.63 | 0.000 | 2.065835 11.36839    |

```
. kwallis __7_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 101 | 6652.00  |
| No  | 52  | 5129.00  |

```
chi-squared = 18.778 with 1 d.f.
probability = 0.0001
```

```
chi-squared with ties = 30.147 with 1 d.f.
probability = 0.0001
```

```
. logistic __7_ Fly if year==2006
Logistic regression
```

```
Log likelihood = -77.85837
Number of obs = 153
LR chi2(1) = 29.66
Prob > chi2 = 0.0000
Pseudo R2 = 0.1600
```

| __7_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|------|------------|-----------|------|-------|----------------------|
| Fly  | 7.818182   | 3.098613  | 5.19 | 0.000 | 3.595386 17.00067    |

```
. table Fly, by(yr) c(n _8_ mean _8_ sd _8_)
```

| yr and Fly | N(_8_) | mean(_8_) | sd(_8_)  |
|------------|--------|-----------|----------|
| 2006       |        |           |          |
| Yes        | 100    | 2.1199999 | .9020739 |
| No         | 41     | 2.8536584 | 1.108174 |
| 2008       |        |           |          |
| Yes        | 97     | 2.0412371 | .8529059 |
| No         | 43     | 2.8139534 | 1.05234  |

```
. kwallis _8_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 97  | 5969.00  |
| No  | 43  | 3901.00  |

```
chi-squared = 15.426 with 1 d.f.
probability = 0.0001
```

```
chi-squared with ties = 17.234 with 1 d.f.
probability = 0.0001
```

```
. logistic _8_ Fly if year==2008
Logistic regression
```

```
Number of obs = 140
LR chi2(1) = 15.21
Prob > chi2 = 0.0001
Pseudo R2 = 0.0828
```

Log likelihood = -84.211577

| _8_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|-----|------------|-----------|------|-------|----------------------|
| Fly | 4.404706   | 1.712598  | 3.81 | 0.000 | 2.055703 9.437857    |

```
. kwallis _8_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 100 | 6335.00  |
| No  | 41  | 3676.00  |

```
chi-squared = 12.062 with 1 d.f.
probability = 0.0005
```

```
chi-squared with ties = 13.377 with 1 d.f.
probability = 0.0003
```

```
. logistic _8_ Fly if year==2006
Logistic regression
```

```
Number of obs = 141
LR chi2(1) = 9.86
Prob > chi2 = 0.0017
Pseudo R2 = 0.0525
```

Log likelihood = -88.904966

| _8_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|-----|------------|-----------|------|-------|----------------------|
| Fly | 3.294118   | 1.26774   | 3.10 | 0.002 | 1.549368 7.003638    |

```
. table Fly, by(yr) c(n _10_ mean _10_ sd _10_)
```

| yr and Fly | N(_10_) | mean(_10_) | sd(_10_) |
|------------|---------|------------|----------|
| 2006       |         |            |          |
| Yes        | 101     | 1.7128713  | .637756  |
| No         | 54      | 2.4074075  | .9420676 |
| 2008       |         |            |          |
| Yes        | 97      | 1.7525773  | .7504295 |
| No         | 47      | 2.3404255  | .8914228 |

```
. kwallis __10_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 97  | 6441.50  |
| No  | 47  | 3998.50  |

```
chi-squared = 6.340 with 1 d.f.
probability = 0.0118
```

```
chi-squared with ties = 12.814 with 1 d.f.
probability = 0.0003
```

```
. logistic __10_ Fly if year==2008
```

```
Logistic regression                   Number of obs = 144
                                      LR chi2(1)       = 12.22
                                      Prob > chi2       = 0.0005
Log likelihood = -67.581395           Pseudo R2       = 0.0829
```

| __10_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|-------|------------|-----------|------|-------|----------------------|
| Fly   | 4.396552   | 1.891722  | 3.44 | 0.001 | 1.891743 10.21791    |

```
. kwallis __10_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 101 | 6986.50  |
| No  | 54  | 5103.50  |

```
chi-squared = 11.209 with 1 d.f.
probability = 0.0008
```

```
chi-squared with ties = 22.296 with 1 d.f.
probability = 0.0001
```

```
. logistic __10_ Fly if year==2006
```

```
Logistic regression                   Number of obs = 155
                                      LR chi2(1)       = 21.61
                                      Prob > chi2       = 0.0000
Log likelihood = -69.448274           Pseudo R2       = 0.1347
```

| __10_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|-------|------------|-----------|------|-------|----------------------|
| Fly   | 6.751613   | 2.9174    | 4.42 | 0.000 | 2.894675 15.74763    |

```
. table Fly, by(yr) c(n _111_ mean _111_ sd _111_)
```

```
-----+-----
```

| yr and Fly  | N(_111_) | mean(_111_)      | sd(_111_) |
|-------------|----------|------------------|-----------|
| -----+----- |          |                  |           |
| 2006        |          |                  |           |
| Yes         | 101      | 2.21782183647156 | .7430204  |
| No          | 53       | 2.88679242134094 | 1.049915  |
| -----+----- |          |                  |           |
| 2008        |          |                  |           |
| Yes         | 96       | 1.63541662693024 | .782974   |
| No          | 46       | 2.15217399597168 | .8424143  |
| -----+----- |          |                  |           |

```
. kwallis __111_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
| Fly | Obs | Rank Sum |
+-----+
| Yes | 96 | 6593.00 |
| No  | 46 | 3560.00 |
+-----+
```

```
chi-squared = 1.396 with 1 d.f.
probability = 0.2375
```

```
chi-squared with ties = 4.653 with 1 d.f.
probability = 0.0310
```

```
. logistic __111_ Fly if year==2008
Logistic regression
```

```
Number of obs = 142
LR chi2(1) = 4.38
Prob > chi2 = 0.0364
Pseudo R2 = 0.0438
```

```
Log likelihood = -47.805939
```

```
-----+-----
```

| __111_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 3.092664   | 1.671838  | 2.09 | 0.037 | 1.071985 8.922302    |

```
-----+-----
```

```
. kwallis __111_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
| Fly | Obs | Rank Sum |
+-----+
| Yes | 101 | 7189.50 |
| No  | 53  | 4745.50 |
+-----+
```

```
chi-squared = 5.887 with 1 d.f.
probability = 0.0153
```

```
chi-squared with ties = 8.012 with 1 d.f.
probability = 0.0046
```

```
. logistic __111_ Fly if year==2006
Logistic regression
```

```
Number of obs = 154
LR chi2(1) = 8.05
Prob > chi2 = 0.0045
Pseudo R2 = 0.0383
```

```
Log likelihood = -101.14171
```

```
-----+-----
```

| __111_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 2.657143   | .9259493  | 2.80 | 0.005 | 1.342122 5.260631    |

```
-----+-----
```

```
. table Fly, by(yr) c(n _112_ mean _112_ sd _112_)
```

| yr and Fly | N(_112_) | mean(_112_)      | sd(_112_) |
|------------|----------|------------------|-----------|
| 2006       |          |                  |           |
| Yes        | 101      | 1.90099012851715 | .7000707  |
| No         | 45       | 2.51111102104187 | .8949917  |
| 2008       |          |                  |           |
| Yes        | 96       | 1.38541662693024 | .5688362  |
| No         | 45       | 1.93333327770233 | .7198485  |

```
. kwallis __112_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 96  | 6666.00  |
| No  | 45  | 3345.00  |

chi-squared = 0.440 with 1 d.f.  
 probability = 0.5071

chi-squared with ties = 2.455 with 1 d.f.  
 probability = 0.1171

```
. logistic __112_ Fly if year==2008
Logistic regression
```

Number of obs = 141  
 LR chi2(1) = 2.29  
 Prob > chi2 = 0.1302  
 Pseudo R2 = 0.0342

Log likelihood = -32.325144

| __112_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 2.875      | 2.003977  | 1.52 | 0.130 | .733365 11.27082     |

```
. kwallis __112_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 101 | 6762.50  |
| No  | 45  | 3968.50  |

chi-squared = 7.848 with 1 d.f.  
 probability = 0.0051

chi-squared with ties = 12.765 with 1 d.f.  
 probability = 0.0004

```
. logistic __112_ Fly if year==2006
Logistic regression
```

Number of obs = 146  
 LR chi2(1) = 12.33  
 Prob > chi2 = 0.0004  
 Pseudo R2 = 0.0704

Log likelihood = -81.442656

| __112_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 3.873913   | 1.50674   | 3.48 | 0.000 | 1.807503 8.302727    |

```
. table Fly, by(yr) c(n _111_ mean _113_ sd _113_)
```

| yr and Fly | N(_111_) | mean(_113_)      | sd(_113_) |
|------------|----------|------------------|-----------|
| 2006       |          |                  |           |
| Yes        | 101      | 1.78787875175476 | .6891688  |
| No         | 53       | 2.27659583091736 | .9255345  |
| 2008       |          |                  |           |
| Yes        | 96       | 1.45360827445984 | .7219854  |
| No         | 46       | 1.86363637447357 | .8515624  |

```
. kwallis __113_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 97  | 6728.00  |
| No  | 44  | 3283.00  |

chi-squared = 0.501 with 1 d.f.  
probability = 0.4793

chi-squared with ties = 2.143 with 1 d.f.  
probability = 0.1432

```
. logistic __113_ Fly if year==2008
Logistic regression
Log likelihood = -40.033706
Number of obs = 141
LR chi2(1) = 2.01
Prob > chi2 = 0.1559
Pseudo R2 = 0.0245
```

| __113_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 2.394737   | 1.457914  | 1.43 | 0.151 | .7261846 7.897117    |

```
. kwallis __113_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 99  | 6691.00  |
| No  | 47  | 4040.00  |

chi-squared = 6.014 with 1 d.f.  
probability = 0.0142

chi-squared with ties = 11.986 with 1 d.f.  
probability = 0.0005

```
. logistic __113_ Fly if year==2006
Logistic regression
Log likelihood = -69.777323
Number of obs = 146
LR chi2(1) = 11.42
Prob > chi2 = 0.0007
Pseudo R2 = 0.0756
```

| __113_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 4.106101   | 1.73523   | 3.34 | 0.001 | 1.79355 9.400385     |

```
. table Fly, by(yr) c(n _114_ mean _114_ sd _114_)
```

```
-----
```

| yr and Fly | N(_114_) | mean(_114_)      | sd(_114_) |
|------------|----------|------------------|-----------|
| -----      |          |                  |           |
| 2006       |          |                  |           |
| Yes        | 100      | 1.64999997615814 | .7159792  |
| No         | 54       | 2.25925922393799 | .8727572  |
| -----      |          |                  |           |
| 2008       |          |                  |           |
| Yes        | 97       | 1.2886598110199  | .5392658  |
| No         | 48       | 1.75             | .7579367  |
| -----      |          |                  |           |

```
. kwallis __114_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
| Fly | Obs | Rank Sum |
+-----+-----+
| Yes | 97 | 6935.00 |
| No  | 48 | 3650.00 |
+-----+-----+
```

```
chi-squared = 0.376 with 1 d.f.
probability = 0.5396
```

```
chi-squared with ties = 3.162 with 1 d.f.
probability = 0.0754
```

```
. logistic __114_ Fly if year==2008
Logistic regression
```

```
Number of obs = 145
LR chi2(1) = 2.95
Prob > chi2 = 0.0860
Pseudo R2 = 0.0590
```

```
Log likelihood = -23.510493
```

```
-----
```

| __114_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 4.318182   | 3.821661  | 1.65 | 0.098 | .7620331 24.46966    |

```
-----
```

```
. kwallis __114_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
| Fly | Obs | Rank Sum |
+-----+-----+
| Yes | 100 | 7124.00 |
| No  | 54  | 4811.00 |
+-----+-----+
```

```
chi-squared = 5.618 with 1 d.f.
probability = 0.0178
```

```
chi-squared with ties = 11.648 with 1 d.f.
probability = 0.0006
```

```
. logistic __114_ Fly if year==2006
Logistic regression
```

```
Number of obs = 154
LR chi2(1) = 11.24
Prob > chi2 = 0.0008
Pseudo R2 = 0.0727
```

```
Log likelihood = -71.716115
```

```
-----
```

| __114_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 3.980952   | 1.669626  | 3.29 | 0.001 | 1.749806 9.056993    |

```
-----
```

```
. table Fly, by(yr) c(n _141_ mean _141_ sd _141_)
```

| yr and Fly | N(_141_) | mean(_141_) | sd(_141_) |
|------------|----------|-------------|-----------|
| -----      |          |             |           |
| 2006       |          |             |           |
| Yes        | 89       | 2.52809     | 1.631298  |
| No         | 35       | 2.2285714   | 1.238731  |
| -----      |          |             |           |
| 2008       |          |             |           |
| Yes        | 85       | 1.6         | .7590721  |
| No         | 33       | 2.090909    | .9474847  |
| -----      |          |             |           |

```
. kwallis __141_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 85  | 4823.50  |
| No  | 33  | 2197.50  |

chi-squared = 1.968 with 1 d.f.  
probability = 0.1606

chi-squared with ties = 5.075 with 1 d.f.  
probability = 0.0243

```
. logistic __141_ Fly if year==2008
Logistic regression
```

Log likelihood = -48.051038

|               |   |        |
|---------------|---|--------|
| Number of obs | = | 118    |
| LR chi2(1)    | = | 4.69   |
| Prob > chi2   | = | 0.0303 |
| Pseudo R2     | = | 0.0466 |

| __141_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 3.166667   | 1.666678  | 2.19 | 0.029 | 1.128681 8.884511    |

```
. kwallis __141_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 89  | 5606.00  |
| No  | 35  | 2144.00  |

chi-squared = 0.058 with 1 d.f.  
probability = 0.8092

chi-squared with ties = 0.084 with 1 d.f.  
probability = 0.7719

```
. logistic __141_ Fly if year==2006
Logistic regression
```

Log likelihood = -81.186128

|               |   |        |
|---------------|---|--------|
| Number of obs | = | 124    |
| LR chi2(1)    | = | 0.09   |
| Prob > chi2   | = | 0.7704 |
| Pseudo R2     | = | 0.0005 |

| __141_ | Odds Ratio | Std. Err. | z     | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|-------|-------|----------------------|
| Fly    | .8853755   | .3703493  | -0.29 | 0.771 | .3900076 2.009935    |



```
. table Fly, by(yr) c(n _142_ mean _142_ sd _142_)
```

| yr and Fly | N(_142_) | mean(_142_) | sd(_142_) |
|------------|----------|-------------|-----------|
| 2006       |          |             |           |
| Yes        | 86       | 2.5116279   | 1.592218  |
| No         | 31       | 2.2903225   | 1.243478  |
| 2008       |          |             |           |
| Yes        | 81       | 1.5679013   | .7235031  |
| No         | 35       | 2.1142857   | .963188   |

```
. kwallis __142_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 81  | 4398.00  |
| No  | 35  | 2388.00  |

```
chi-squared = 4.194 with 1 d.f.
probability = 0.0406
```

```
chi-squared with ties = 11.178 with 1 d.f.
probability = 0.0008
```

```
. logistic __142_ Fly if year==2008
Logistic regression
```

```
Log likelihood = -43.175258
Number of obs = 116
LR chi2(1) = 10.32
Prob > chi2 = 0.0013
Pseudo R2 = 0.1067
```

| __142_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 5.729167   | 3.203017  | 3.12 | 0.002 | 1.915175 17.13856    |

```
. kwallis __142_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 86  | 5081.50  |
| No  | 31  | 1821.50  |

```
chi-squared = 0.002 with 1 d.f.
probability = 0.9631
```

```
chi-squared with ties = 0.003 with 1 d.f.
probability = 0.9555
```

```
. logistic __142_ Fly if year==2006
Logistic regression
```

```
Log likelihood = -76.379049
Number of obs = 117
LR chi2(1) = 0.00
Prob > chi2 = 0.9553
Pseudo R2 = 0.0000
```

| __142_ | Odds Ratio | Std. Err. | z     | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|-------|-------|----------------------|
| Fly    | .9758065   | .4268514  | -0.06 | 0.955 | .4140175 2.299898    |

```
. table Fly, by(yr) c(n _151_ mean _151_ sd _151_)
```

```
-----+-----
yr and  |      N(_151_)  mean(_151_)  sd(_151_)
Fly     |-----+-----+-----
2006    |
  Yes   |           100          1.91    .6681045
  No    |            44    2.5681818    .8462703
-----+-----
2008    |
  Yes   |            97    1.5257732    .6469928
  No    |            44    2.0227273    .8487648
-----+-----
```

```
. kwallis __151_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
| Fly | Obs | Rank Sum |
+-----+
| Yes |  97 | 6516.50 |
| No  |  44 | 3494.50 |
+-----+
```

```
chi-squared =      2.718 with 1 d.f.
probability =      0.0992
```

```
chi-squared with ties = 11.635 with 1 d.f.
probability =      0.0006
```

```
. logistic __151_ Fly if year==2008
Logistic regression
```

```
Log likelihood = -35.673559
Number of obs   =      141
LR chi2(1)     =      10.73
Prob > chi2    =      0.0011
Pseudo R2     =      0.1308
```

```
-----+-----
__151_ | Odds Ratio  Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
Fly    |  8.057143   5.603358      3.00  0.003    2.061632    31.48843
-----+-----
```

```
. kwallis __151_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

```
+-----+
| Fly | Obs | Rank Sum |
+-----+
| Yes | 100 | 6502.00 |
| No  |  44 | 3938.00 |
+-----+
```

```
chi-squared =      10.524 with 1 d.f.
probability =      0.0012
```

```
chi-squared with ties = 18.057 with 1 d.f.
probability =      0.0001
```

```
. logistic __151_ Fly if year==2006
Logistic regression
```

```
Log likelihood = -74.465464
Number of obs   =      144
LR chi2(1)     =      17.27
Prob > chi2    =      0.0000
Pseudo R2     =      0.1039
```

```
-----+-----
__151_ | Odds Ratio  Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
Fly    |   5.25     2.134586      4.08  0.000    2.366307    11.6479
-----+-----
```

```
. table Fly, by(yr) c(n _152_ mean _152_ sd _152_)
```

| yr and Fly | N(_152_) | mean(_152_) | sd(_152_) |
|------------|----------|-------------|-----------|
| 2006       |          |             |           |
| Yes        | 99       | 1.7979798   | .7556562  |
| No         | 51       | 2.5294118   | .9664976  |
| 2008       |          |             |           |
| Yes        | 97       | 1.5154639   | .7515734  |
| No         | 46       | 2.0217392   | .8816432  |

```
. kwallis __152_ if year==2008, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 97  | 6662.50  |
| No  | 46  | 3633.50  |

chi-squared = 1.930 with 1 d.f.  
probability = 0.1647

chi-squared with ties = 7.286 with 1 d.f.  
probability = 0.0070

```
. logistic __152_ Fly if year==2008
Logistic regression
```

Log likelihood = -42.433747

|               |   |        |
|---------------|---|--------|
| Number of obs | = | 143    |
| LR chi2(1)    | = | 6.78   |
| Prob > chi2   | = | 0.0092 |
| Pseudo R2     | = | 0.0740 |

| __152_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 4.475676   | 2.643995  | 2.54 | 0.011 | 1.406091 14.24636    |

```
. kwallis __152_ if year==2006, by(Fly)
Kruskal-Wallis equality-of-populations rank test
```

| Fly | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 99  | 6517.50  |
| No  | 51  | 4807.50  |

chi-squared = 14.415 with 1 d.f.  
probability = 0.0001

chi-squared with ties = 26.343 with 1 d.f.  
probability = 0.0001

```
. logistic __152_ Fly if year==2006
Logistic regression
```

Log likelihood = -69.875079

|               |   |        |
|---------------|---|--------|
| Number of obs | = | 150    |
| LR chi2(1)    | = | 25.57  |
| Prob > chi2   | = | 0.0000 |
| Pseudo R2     | = | 0.1547 |

| __152_ | Odds Ratio | Std. Err. | z    | P> z  | [95% Conf. Interval] |
|--------|------------|-----------|------|-------|----------------------|
| Fly    | 7.692308   | 3.270138  | 4.80 | 0.000 | 3.343456 17.69773    |

```
. *****
. ***** Q34 Consider SME to be Aeromedical Advisor affect by... in 2008
. kwallis q34 if year==2008 & q37<3, by(q37)
Kruskal-Wallis equality-of-populations rank test
```

| q37 | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 20  | 230.00   |
| No  | 4   | 70.00    |

chi-squared = 2.400 with 1 d.f.  
 probability = 0.1213

chi-squared with ties = 10.455 with 1 d.f.  
 probability = 0.0012

```
. tabstat q37, statistic (n mean sd), if year==2008, by(q34)
```

Summary for variables: q37  
 by categories of: q34 (Q34)

| q34   | N  | mean     | sd       |
|-------|----|----------|----------|
| Yes   | 22 | 1.090909 | .2942449 |
| No    | 2  | 2        | 0        |
| Total | 24 | 1.166667 | .3806935 |

```
. kwallis q34 if year==2008 & q38<3, by(q38)
Kruskal-Wallis equality-of-populations rank test
```

| q38 | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 21  | 241.50   |
| No  | 3   | 58.50    |

chi-squared = 3.360 with 1 d.f.  
 probability = 0.0668  
 chi-squared with ties = 14.636 with 1 d.f.  
 probability = 0.0001

```
. tabstat q38, statistic (n mean sd), if year==2008, by(q34)
```

Summary for variables: q38  
 by categories of: q34 (Q34)

| q34   | N  | mean     | sd       |
|-------|----|----------|----------|
| Yes   | 22 | 1.045455 | .2132007 |
| No    | 2  | 2        | 0        |
| Total | 24 | 1.125    | .337832  |

```
. kwallis q34 if year==2008 & q39<3, by(q39)
Kruskal-Wallis equality-of-populations rank test
```

| q39 | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 21  | 241.50   |
| No  | 3   | 58.50    |

chi-squared = 3.360 with 1 d.f.  
 probability = 0.0668  
 chi-squared with ties = 14.636 with 1 d.f.  
 probability = 0.0001

```
. tabstat q39, statistic (n mean sd), if year==2008, by(q34)
Summary for variables: q39
  by categories of: q34 (Q34)
```

| q34   | N  | mean     | sd       |
|-------|----|----------|----------|
| Yes   | 22 | 1.045455 | .2132007 |
| No    | 2  | 2        | 0        |
| Total | 24 | 1.125    | .337832  |

```
. kwallis q34 if year==2008, by(q42)
Kruskal-Wallis equality-of-populations rank test
```

| q42 | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 18  | 207.00   |
| No  | 6   | 93.00    |

```
chi-squared = 1.440 with 1 d.f.
probability = 0.2301
```

```
chi-squared with ties = 6.273 with 1 d.f.
probability = 0.0123
```

```
. tabstat q42, statistic (n mean sd), if year==2008, by (q34)
Summary for variables: q42
  by categories of: q34 (Q34)
```

| q34   | N  | mean     | sd       |
|-------|----|----------|----------|
| Yes   | 22 | 1.181818 | .394771  |
| No    | 2  | 2        | 0        |
| Total | 24 | 1.25     | .4423259 |

```
. kwallis q34 if year ==2008, by(q43)
Kruskal-Wallis equality-of-populations rank test
```

| q43          | Obs | Rank Sum |
|--------------|-----|----------|
| Frequently   | 16  | 184.00   |
| Occasionally | 6   | 81.00    |
| Never        | 2   | 35.00    |

```
chi-squared = 1.440 with 2 d.f.
probability = 0.4868
```

```
chi-squared with ties = 6.273 with 2 d.f.
probability = 0.0434
```

```
. tabstat q43, statistic (n mean sd), if year==2008, by (q34)
Summary for variables: q43
  by categories of: q34 (Q34)
```

| q34   | N  | mean     | sd       |
|-------|----|----------|----------|
| Yes   | 22 | 1.318182 | .5679004 |
| No    | 2  | 2.5      | .7071068 |
| Total | 24 | 1.416667 | .6538625 |

```
. kwallis q34 if year==2008 & q45<3, by(q45)
Kruskal-Wallis equality-of-populations rank test
```

| q45 | Obs | Rank Sum |
|-----|-----|----------|
| Yes | 15  | 135.00   |
| No  | 3   | 36.00    |

```
chi-squared = 0.789 with 1 d.f.
probability = 0.3743
```

```
chi-squared with ties = 5.000 with 1 d.f.
probability = 0.0253
```

```
. tabstat q45, statistic (n mean sd), if year==2008, by(q34)
Summary for variables: q45
by categories of: q34 (Q34)
```

| q34   | N  | mean     | sd       |
|-------|----|----------|----------|
| Yes   | 22 | 1.545455 | .8578641 |
| No    | 2  | 2.5      | .7071068 |
| Total | 24 | 1.625    | .8753881 |

```
. ***** Q49 Consider 1AtFSCC to be Aeromedical Advisor affect by ... in 2008
```

```
. kwallis q49 if year==2008 & cmdtype==3, by(q53)
Kruskal-Wallis equality-of-populations rank test
```

| q53          | Obs | Rank Sum |
|--------------|-----|----------|
| Frequently   | 13  | 219.00   |
| Occasionally | 19  | 329.50   |
| Never        | 3   | 81.50    |

```
chi-squared = 2.644 with 2 d.f.
probability = 0.2666
```

```
chi-squared with ties = 7.192 with 2 d.f.
probability = 0.0274
```

```
. tabstat q53, statistic (n mean sd), if year==2008 & cmdtype==3, by(q49)
Summary for variables: q53
by categories of: q49 (Q49)
```

| q49   | N  | mean     | sd       |
|-------|----|----------|----------|
| Yes   | 30 | 1.633333 | .5560534 |
| No    | 5  | 2.2      | .83666   |
| Total | 35 | 1.714286 | .6217352 |

```
. kwallis q49 if year==2008 & q55<3 & cmdtype==3, by(q55)
Kruskal-Wallis equality-of-populations rank test
```

| q55 | Obs | Rank Sum |
|-----|-----|----------|
| 1   | 25  | 378.50   |
| 2   | 7   | 149.50   |

```
chi-squared = 2.402 with 1 d.f.
probability = 0.1212
```

```
chi-squared with ties = 7.313 with 1 d.f.
probability = 0.0068
```

```
. tabstat q55, statistic (n mean sd), if year==2008 & q55<3 & cmdtype==3, by(q49)
Summary for variables: q55
by categories of: q49 (Q49)
```

| q49   | N  | mean     | sd       |
|-------|----|----------|----------|
| Yes   | 28 | 1.142857 | .3563483 |
| No    | 4  | 1.75     | .5       |
| Total | 32 | 1.21875  | .4200134 |

```
. kwallis q49 if year ==2008 & cmdtype==3, by(q56)
Kruskal-Wallis equality-of-populations rank test
```

| q56          | Obs | Rank Sum |
|--------------|-----|----------|
| Frequently   | 20  | 338.00   |
| Occasionally | 10  | 160.00   |
| Never        | 6   | 168.00   |

```
chi-squared = 5.903 with 2 d.f.
probability = 0.0523
```

```
chi-squared with ties = 16.439 with 2 d.f.
probability = 0.0003
```

```
. tabstat q56, statistic (n mean sd), if year==2008 & cmdtype==3, by(q49)
Summary for variables: q56
by categories of: q49 (Q49)
```

| q49   | N  | mean     | sd       |
|-------|----|----------|----------|
| Yes   | 31 | 1.451613 | .6238969 |
| No    | 5  | 2.6      | .8944272 |
| Total | 36 | 1.611111 | .766356  |


**Headquarters U.S. Air Force**  
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**2008 State of the Flight Surgeon:**  
Assessment of Active Duty Flight Surgeon Operational Support to the Line



Prepared by  
Robert R. York Jr., MD, MPH, MS


**U.S. AIR FORCE**

  
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**Survey Purpose**

- This is a repeat of Lt Col Dana Windhorst's 2006 State of the Flight Surgeon Survey: Assessment of Active Duty Flight Surgeon Operational Support to the Line.
- The survey was designed to assess the performance of the Flight Surgeons in their operational mission support and medical care roles.


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**Survey Design**

- Survey subjects were flying or missile launch operations commanders
  - Operations Group Commanders
  - Squadron Commanders
- Three categories of questions:
  - General questions were asked of all respondents, regarding overall flight surgeon support at their installations (IFS)
  - Ops Group Commanders (OGCC) were surveyed regarding the performance of their SGPs
  - Commanders of squadrons (SME-SqCC) with an assigned SME FS were surveyed regarding the performance of those SME FSS
  - Commanders of squadrons (AIF-S-SqCC) with a solitary attached FS (AIFS), were surveyed regarding the performance of those AIFS

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**Return Rates for Survey**


| Command            | Population | Completed Survey† | % Return† | CI  | Error Rate |
|--------------------|------------|-------------------|-----------|-----|------------|
| Ops Group CCs 2006 | 58         | 31                | 53        | 90† | (+/-) 10   |
| Ops Group CCs 2008 |            | 39                | 66††      | 95  | (+/-) 5    |
| Squadron CCs 2006  | 188        | 122               | 65        | 95  | (+/-) 5    |
| Squadron CCs 2008  |            | 105               | 54††      | 95  | (+/-) 5    |

††=322 flyers completed to attain 50% Confidence Interval  
†† 2006 data on hand only

**Flight Surgeon Squadron Level Support**

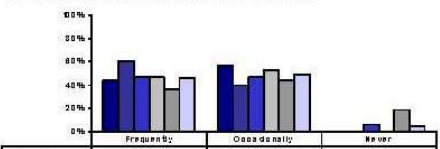
|                       | Squadron Totals 2008 | 2006       |
|-----------------------|----------------------|------------|
| One Assigned FS (SME) | 25                   | 31         |
| One Attached FS       | 36                   | 49         |
| Multiple Attached FS  | 17                   | 16         |
| No SME or Attached FS | 27                   | 26         |
| <b>Total</b>          | <b>105</b>           | <b>122</b> |

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**Line Support from Installation Flight Surgeons (IFS): Briefings - Q3**

■ Do your flight surgeons speak to your personnel at safety briefings, Commanders Calls and other appropriate venues?



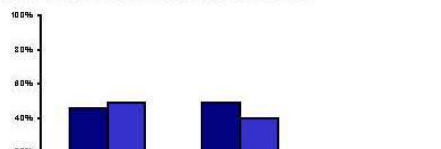
|                 | Frequently | Occasionally | Never |
|-----------------|------------|--------------|-------|
| OG CCs          | 44%        | 56%          | 0%    |
| Sq CCs SME      | 66%        | 34%          | 0%    |
| Sq CCs Ops-FS   | 47%        | 47%          | 6%    |
| Sq CCs Multi-FS | 47%        | 53%          | 0%    |
| Sq CCs No-FS    | 37%        | 44%          | 19%   |
| All CCs         | 48%        | 49%          | 3%    |

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**Line Support from Installation Flight Surgeons (IFS): Briefings - Q3 2008 vs 2006**

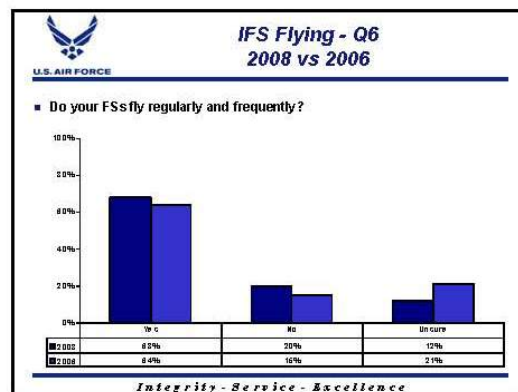
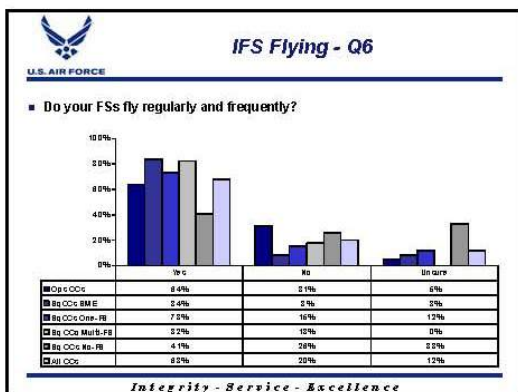
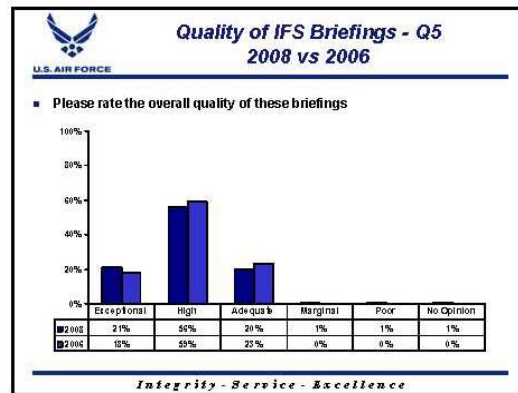
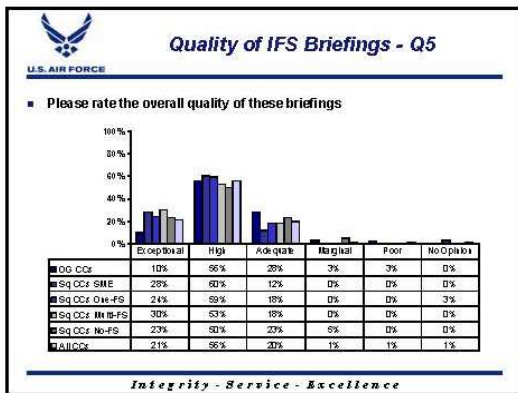
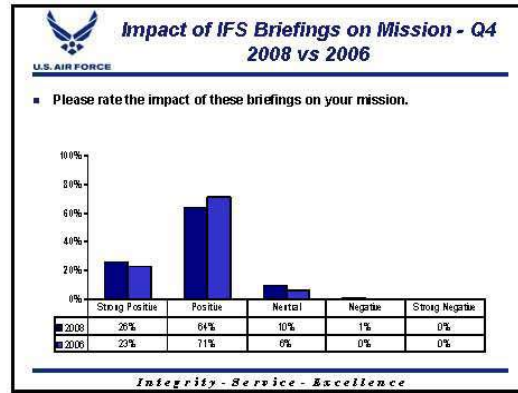
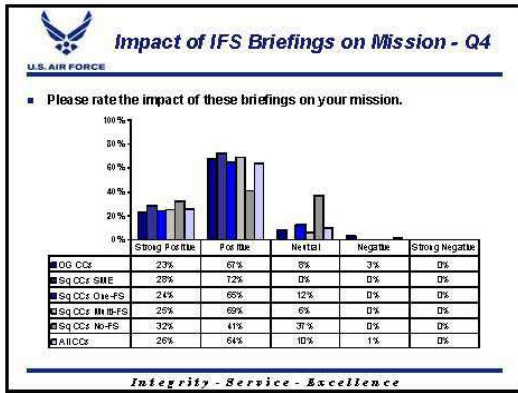
■ Do your flight surgeons speak to your personnel at safety briefings, Commanders Calls and other appropriate venues?

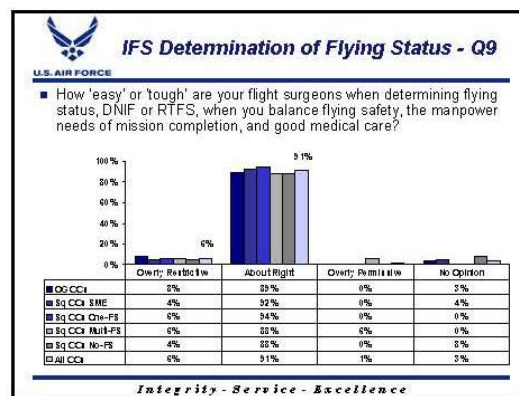
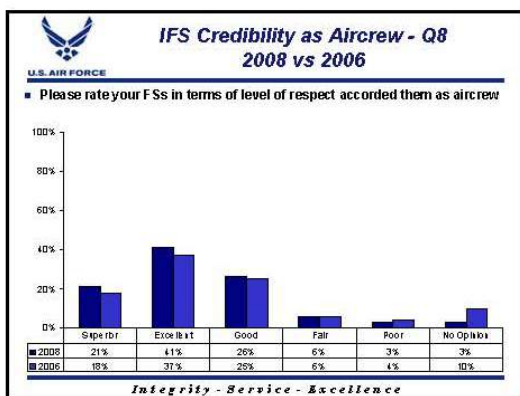
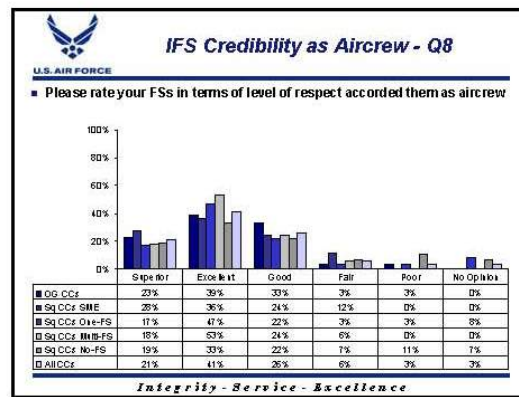
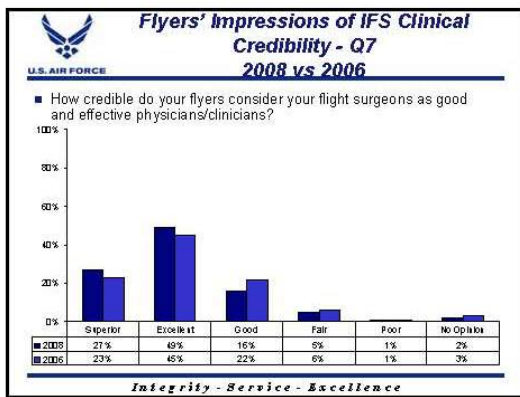
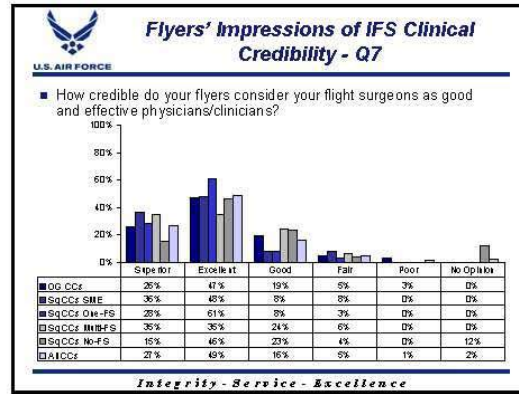
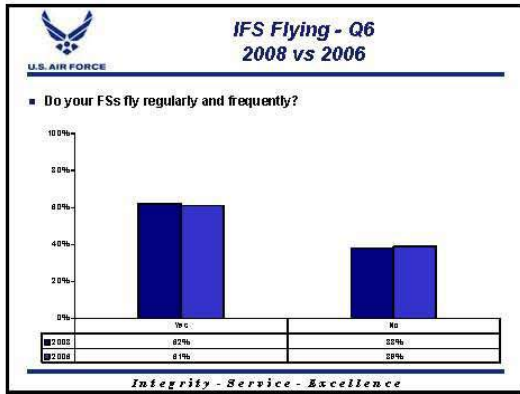


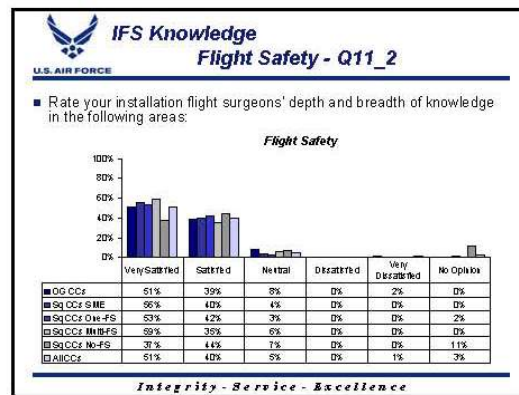
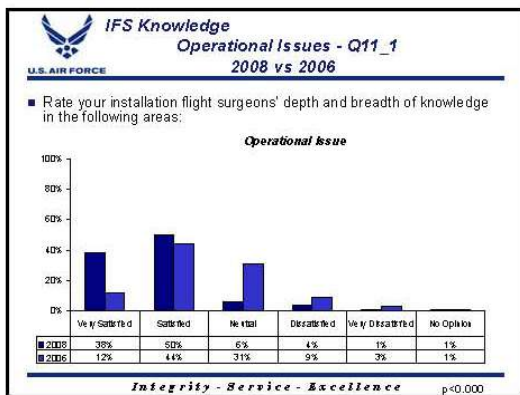
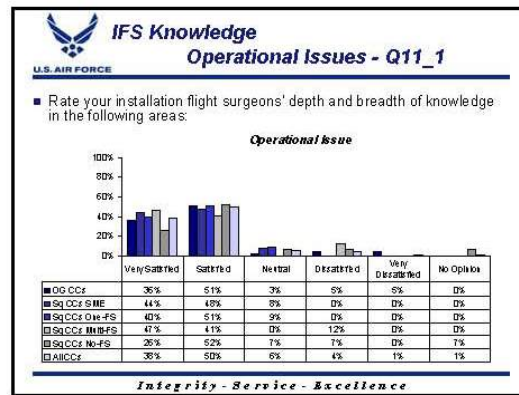
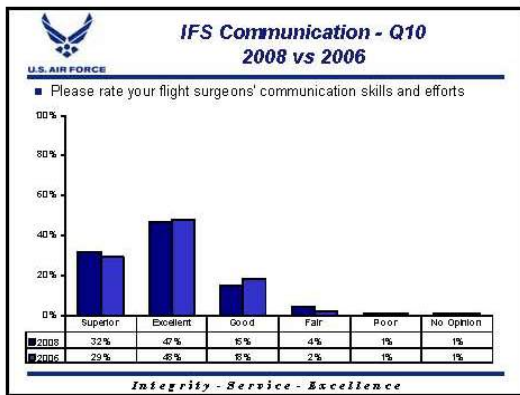
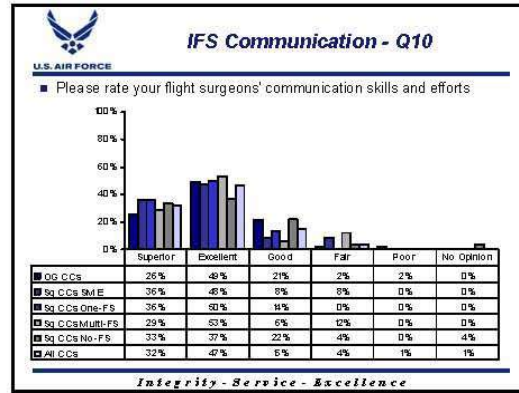
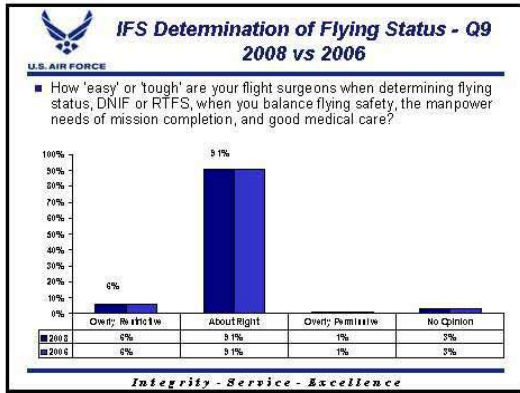
|      | Frequently | Occasionally | Never |
|------|------------|--------------|-------|
| 2008 | 48%        | 49%          | 3%    |
| 2006 | 48%        | 45%          | 7%    |

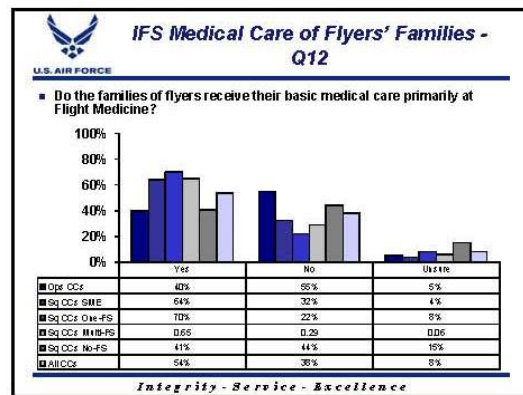
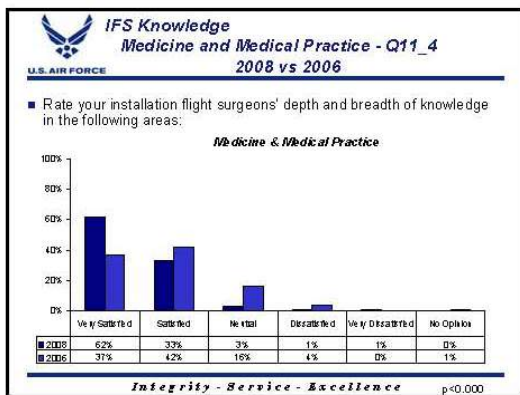
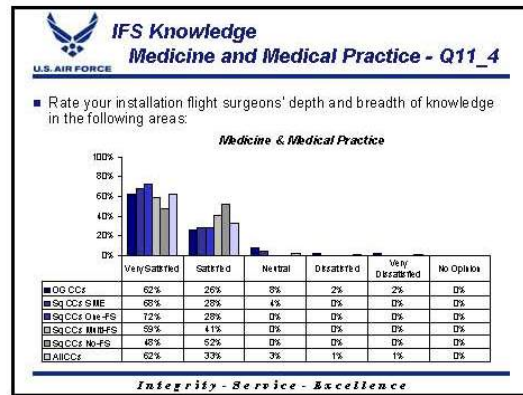
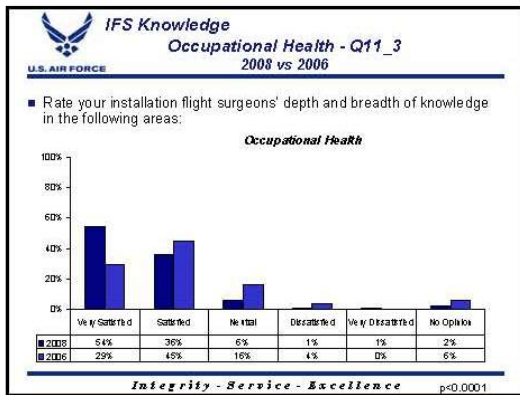
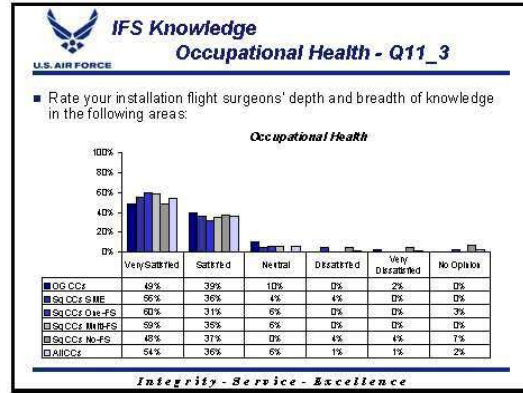
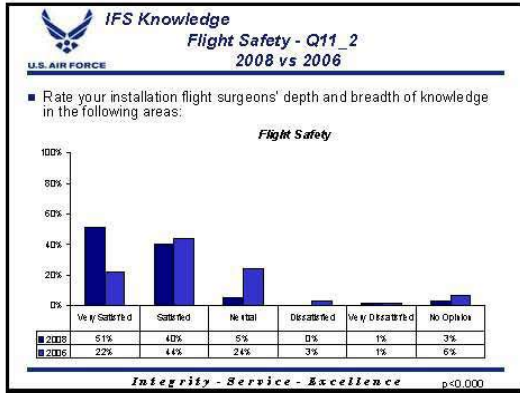
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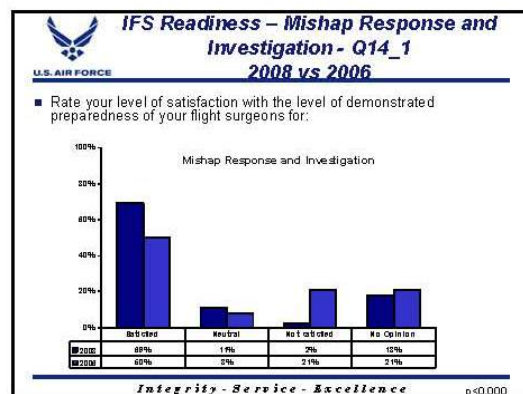
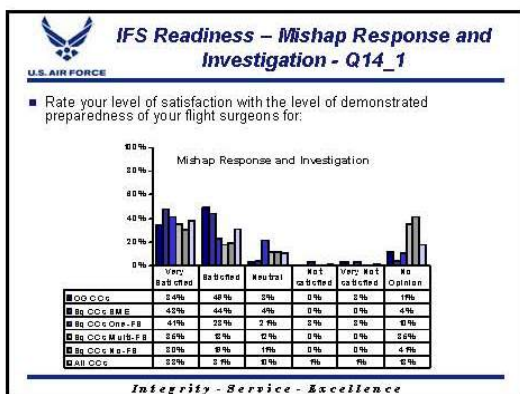
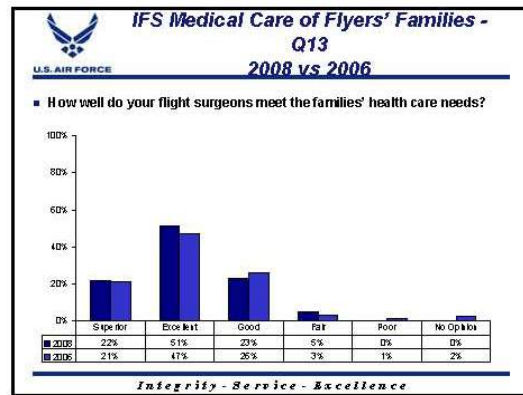
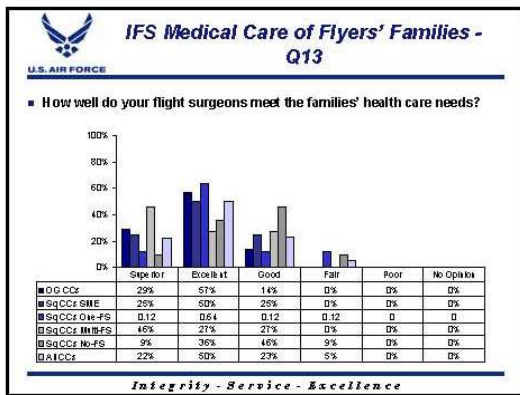
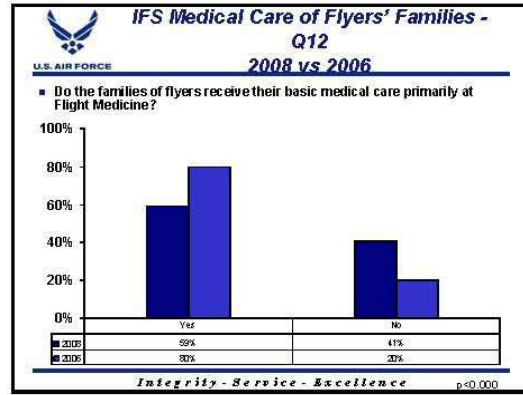
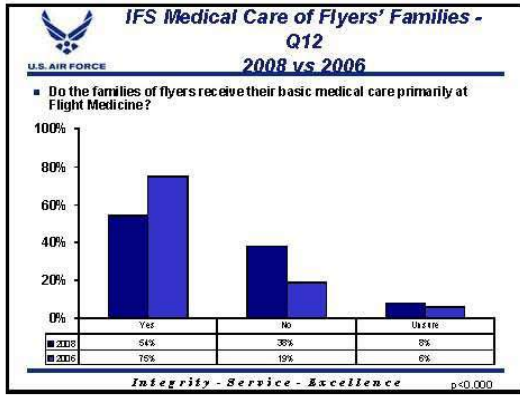


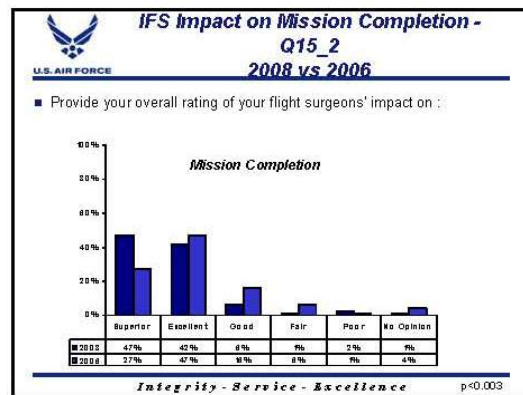
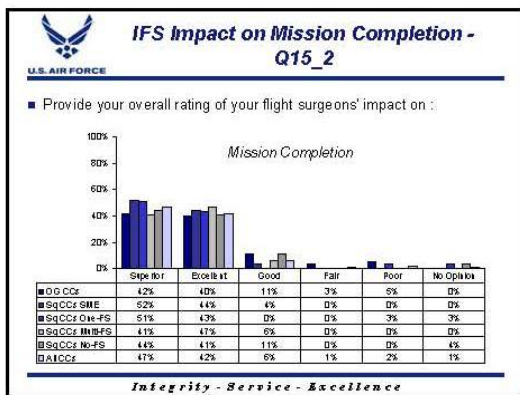
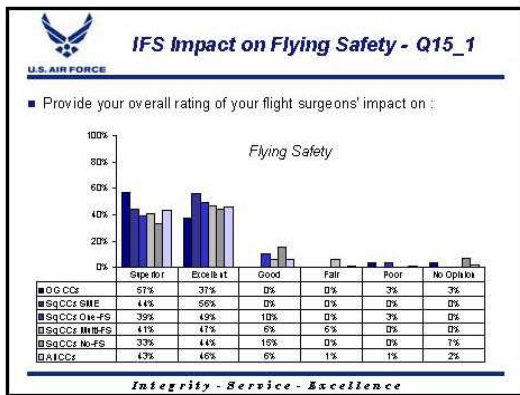
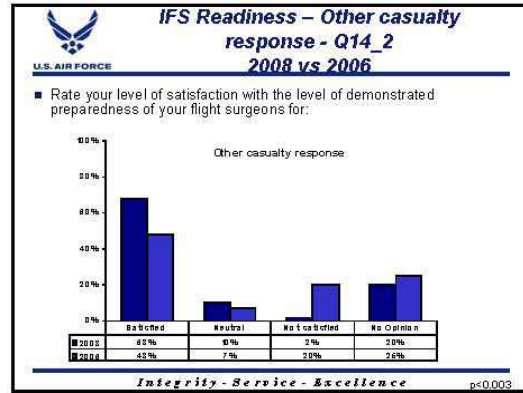
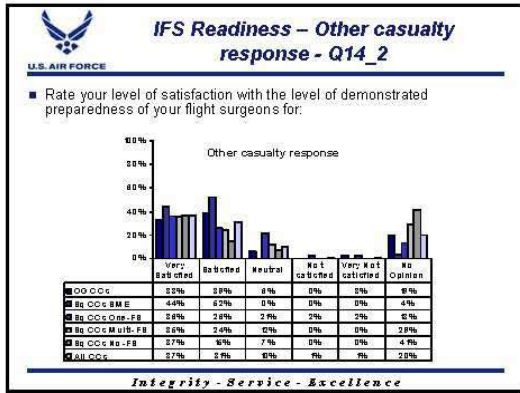






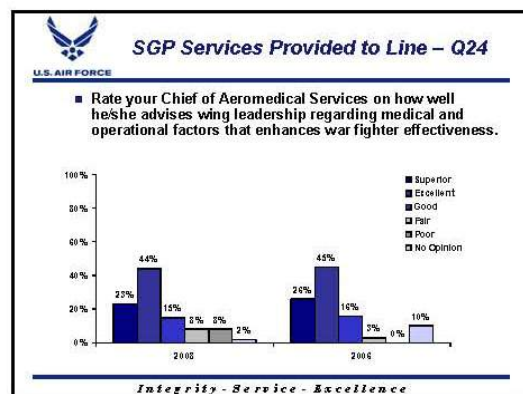
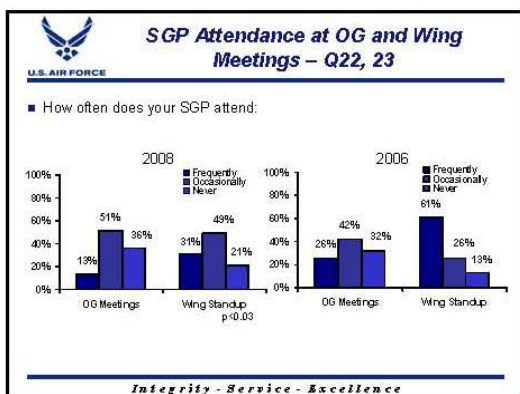
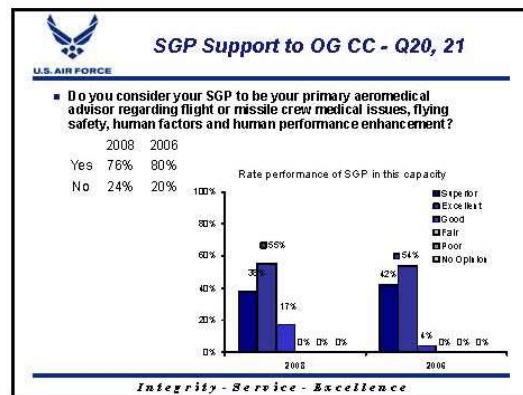
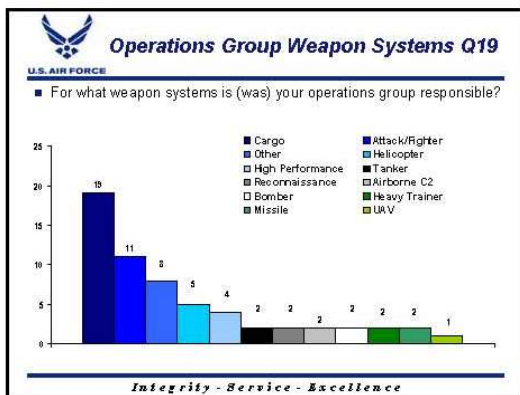
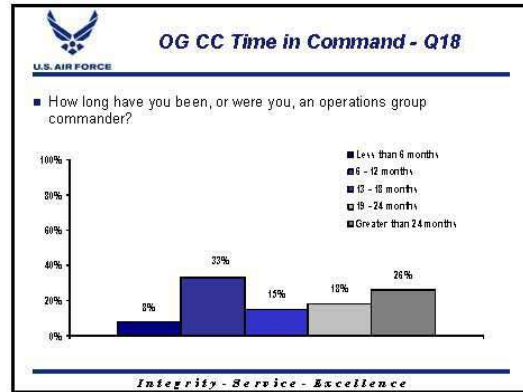


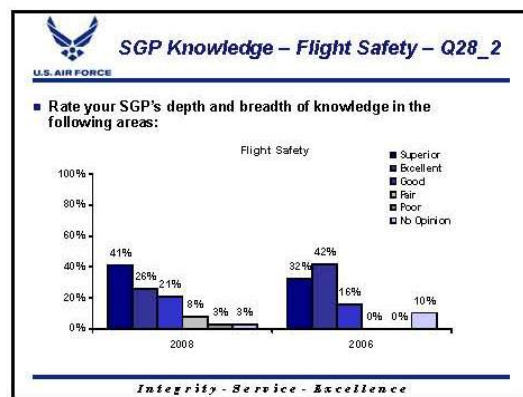
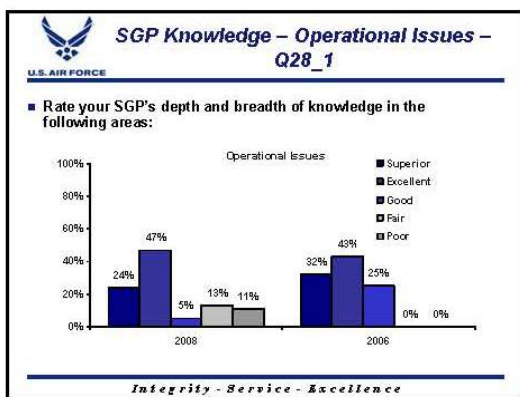
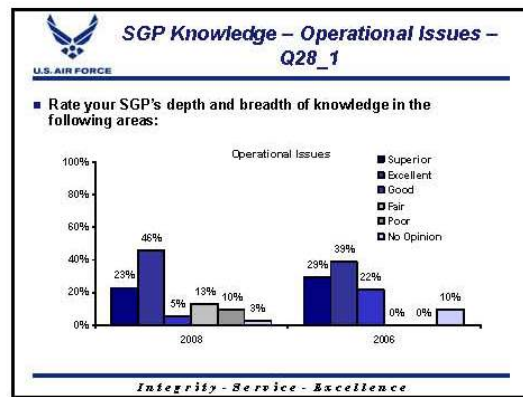
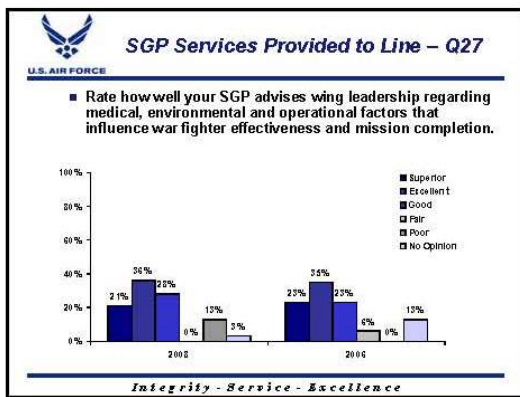
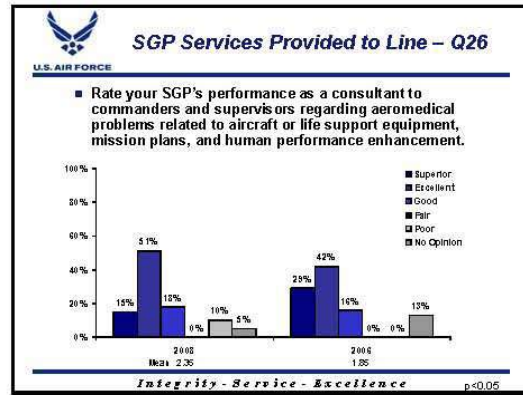
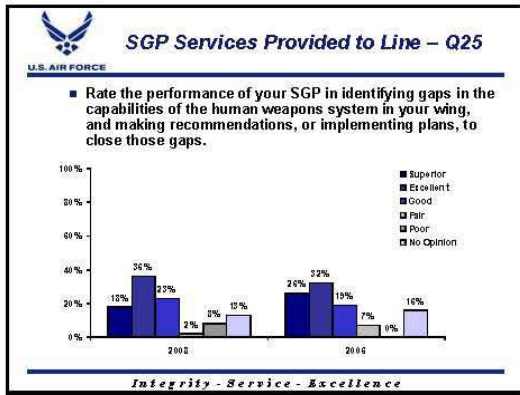




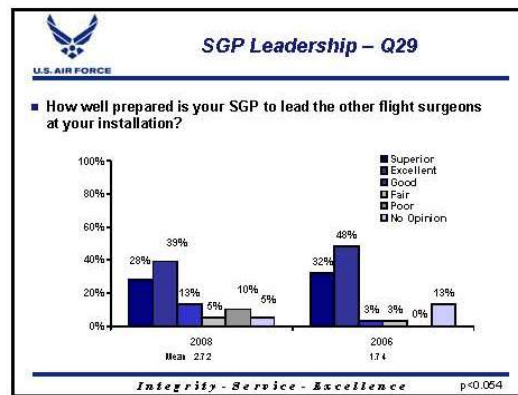
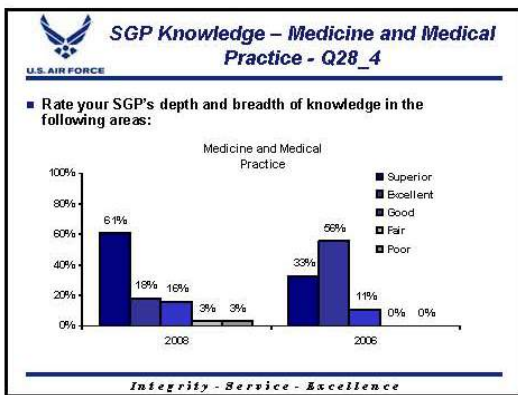
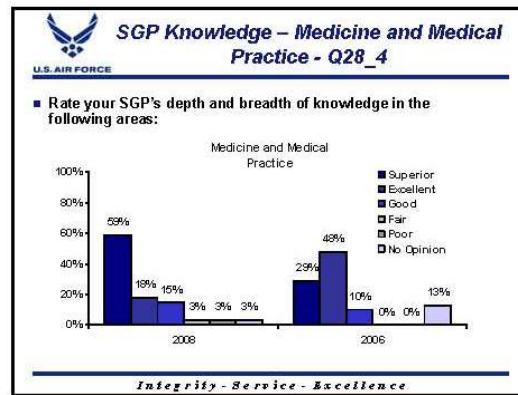
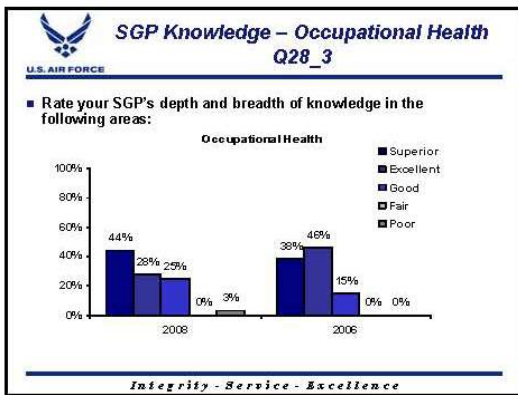
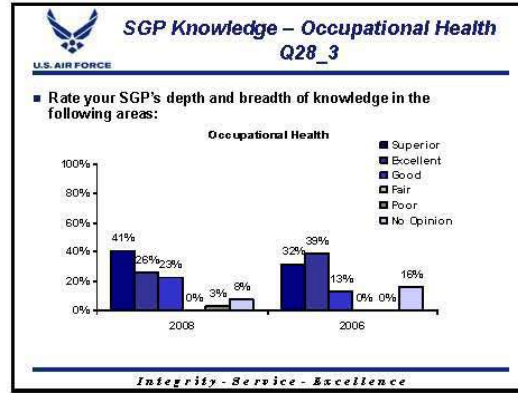
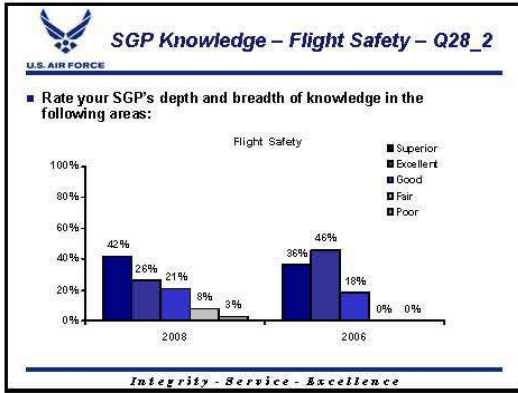
**Operations Group Commanders (OG CC) on the Chief of Aeromedical Services (SGP)**

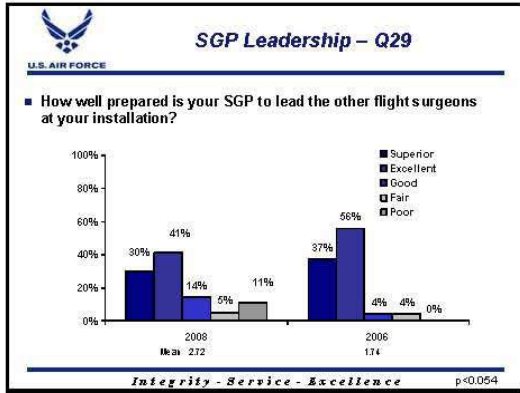
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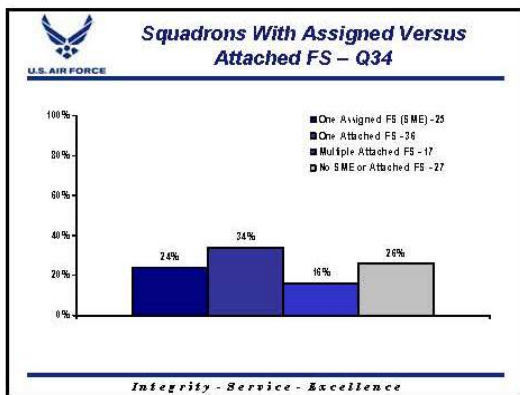
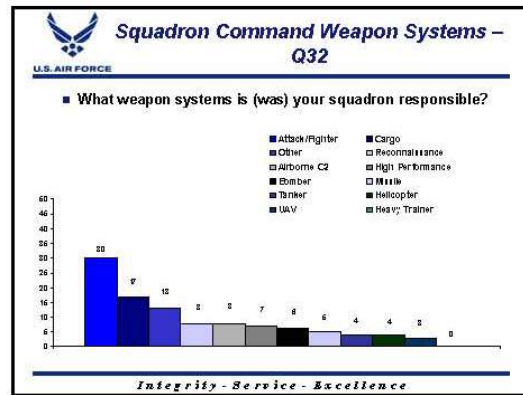
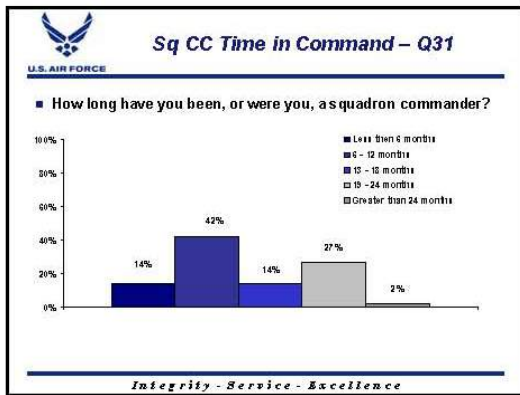




### Squadron Commanders (Sq CC)

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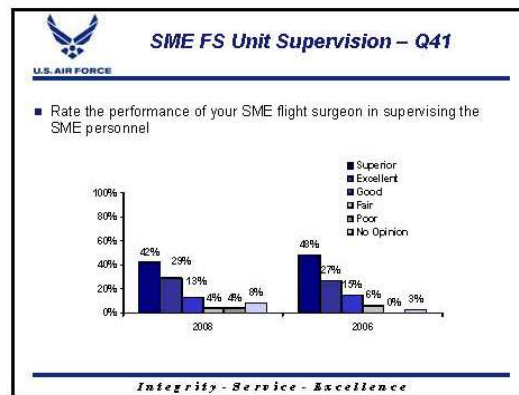
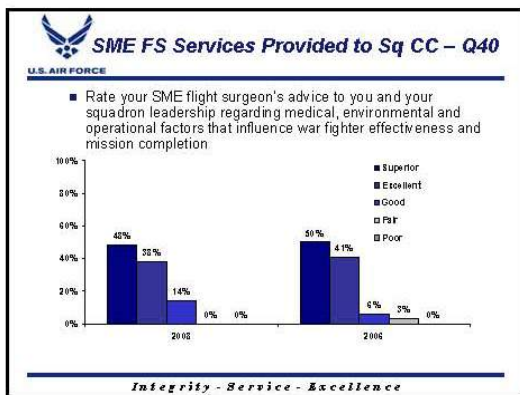
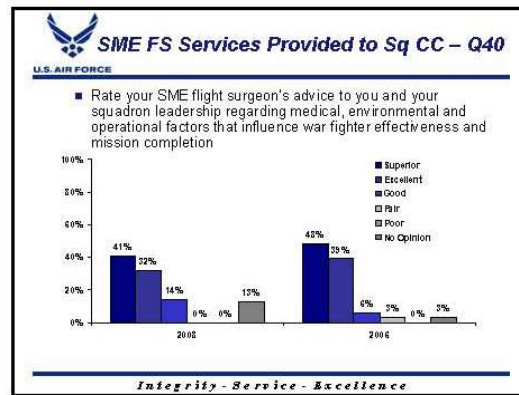
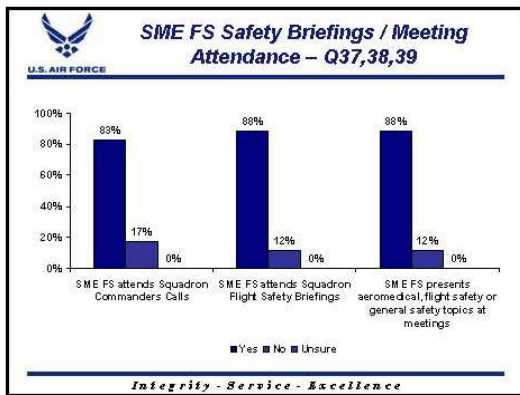
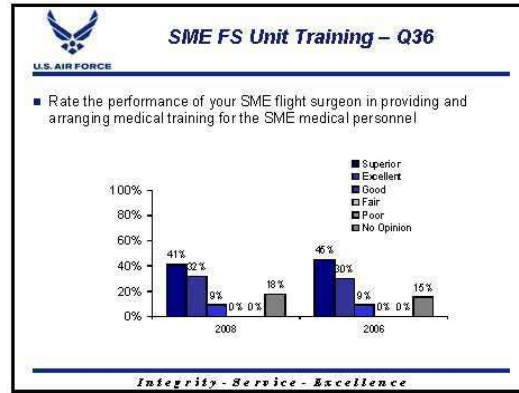
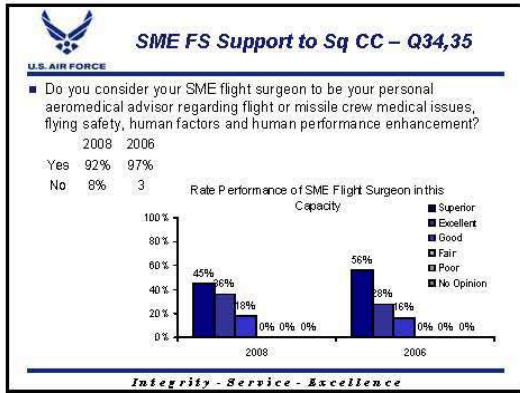
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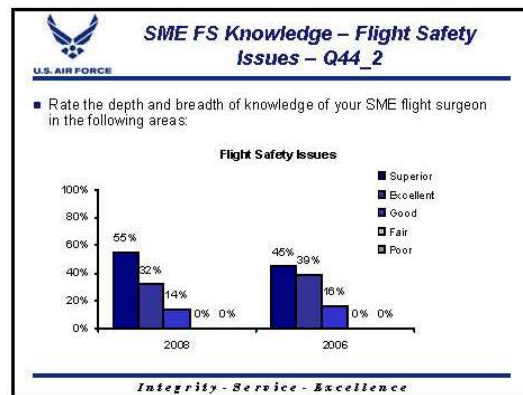
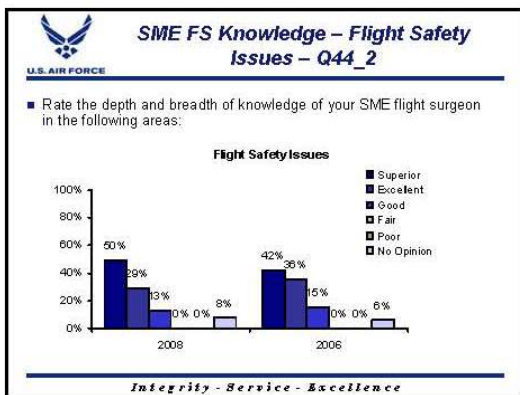
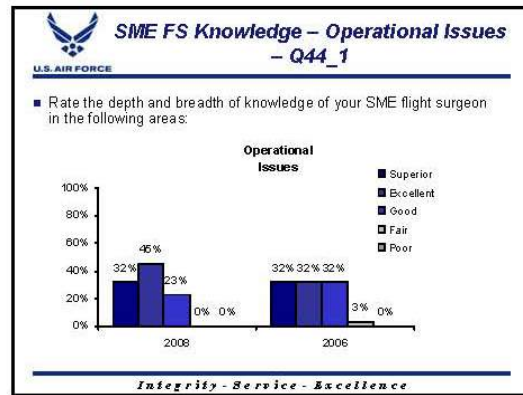
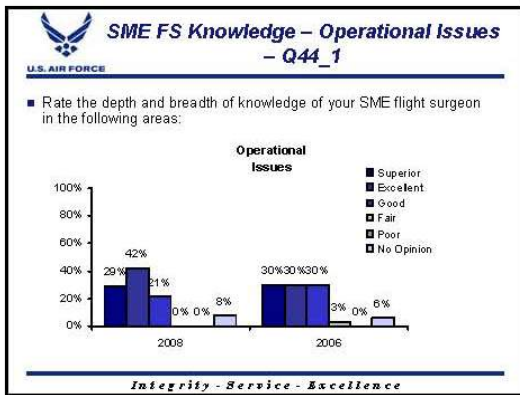
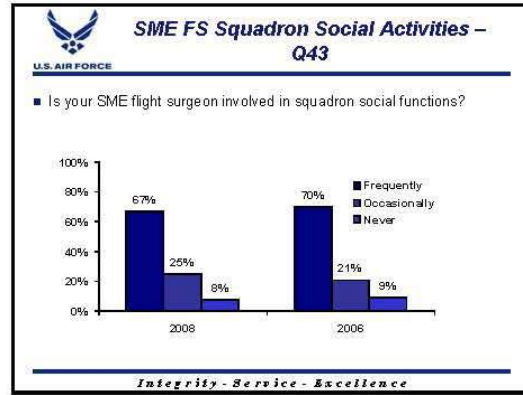
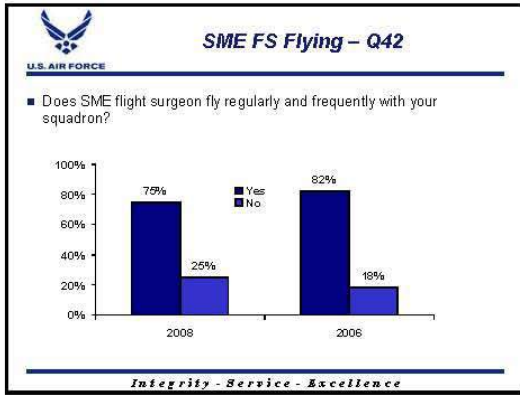


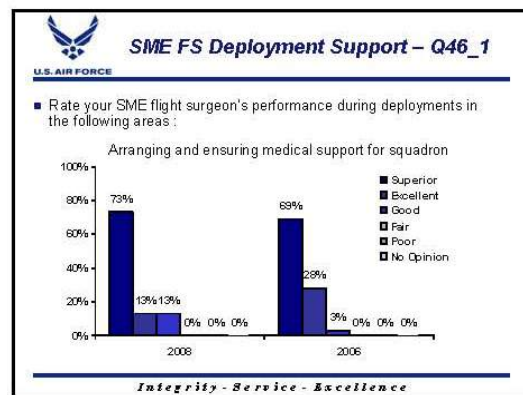
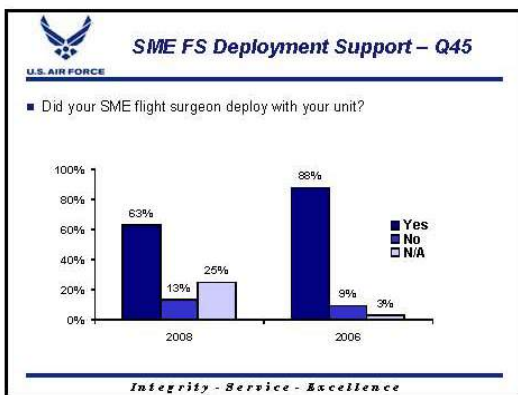
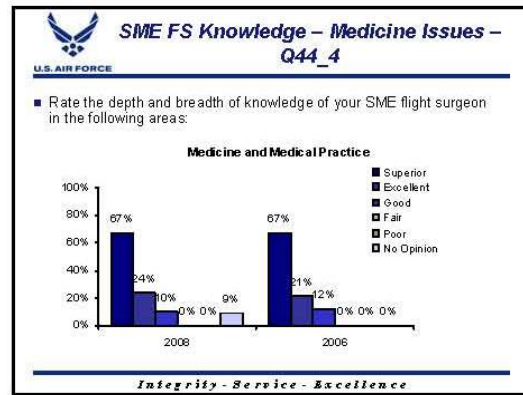
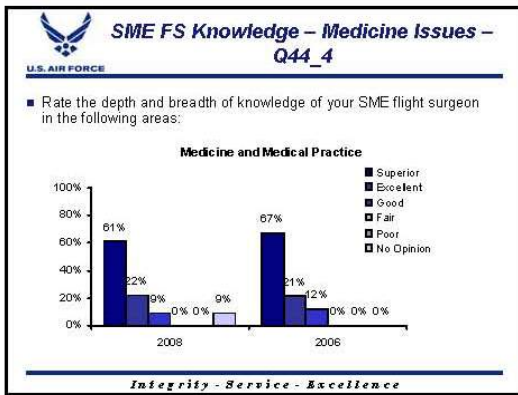
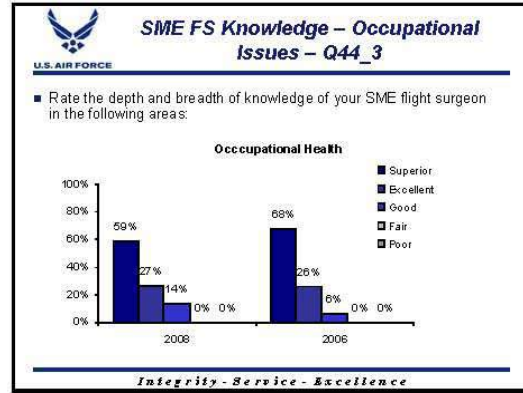
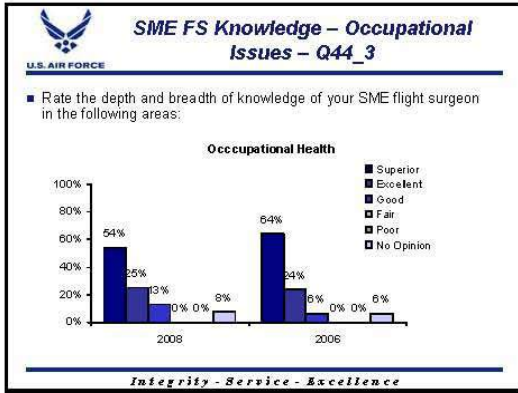
### Squadron Commanders with Assigned Squadron Medical Element Flight Surgeon (SME FS)

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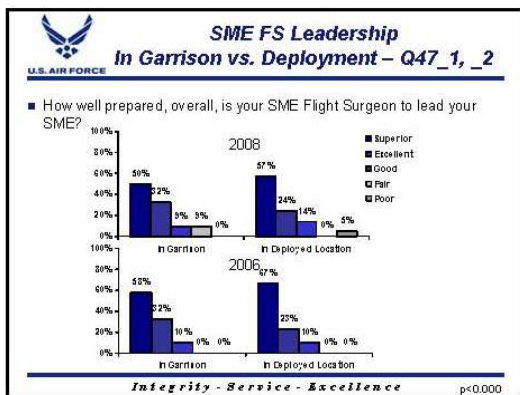
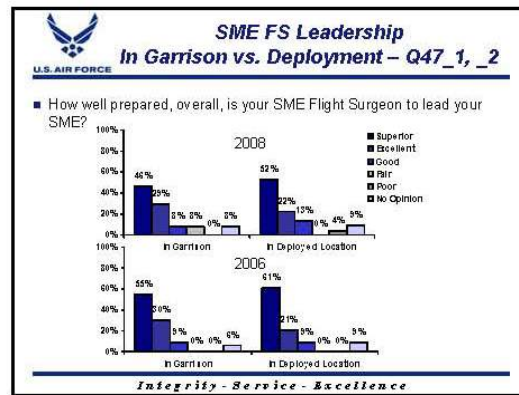
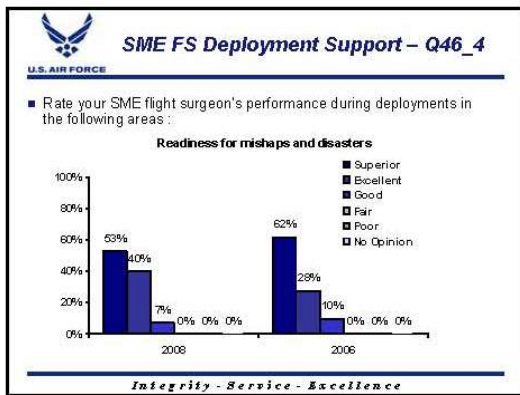
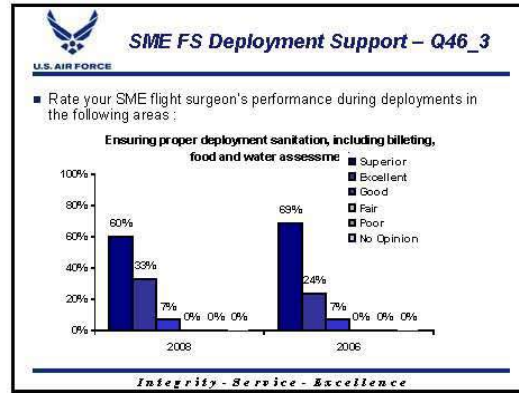
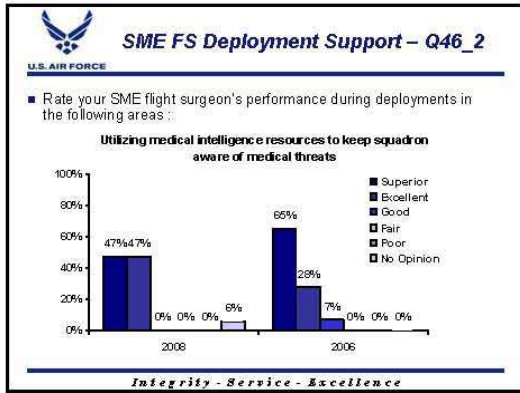
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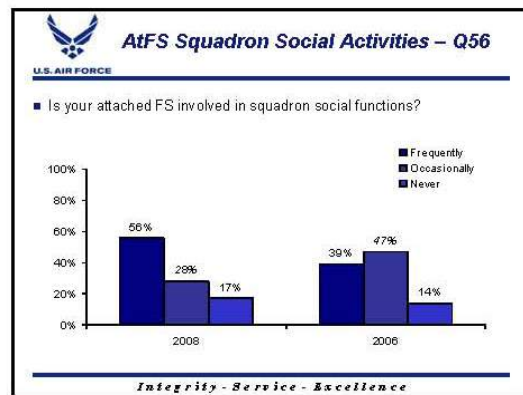
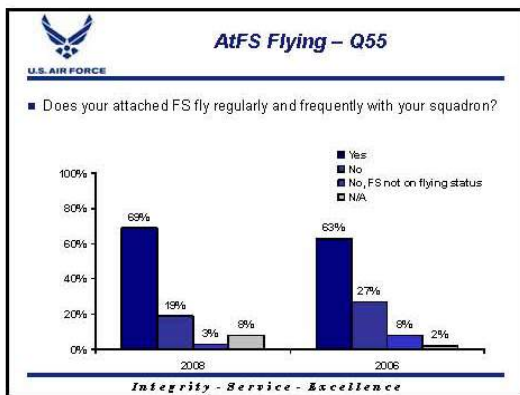
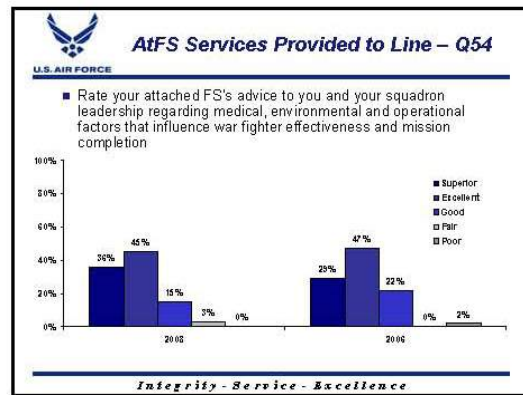
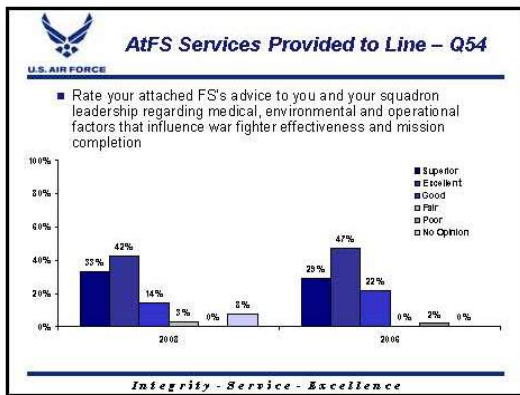
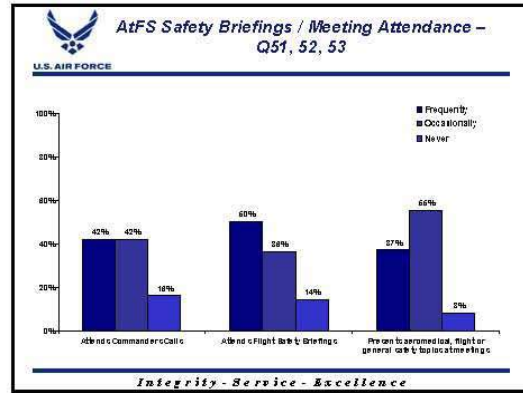
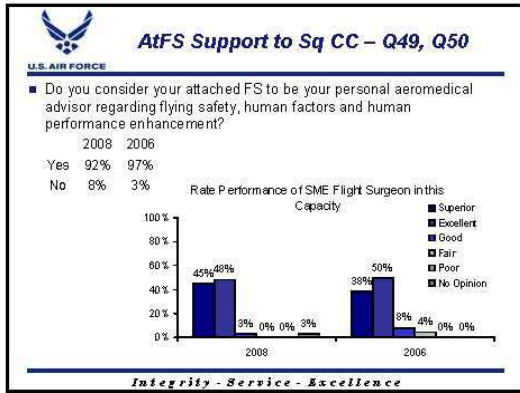


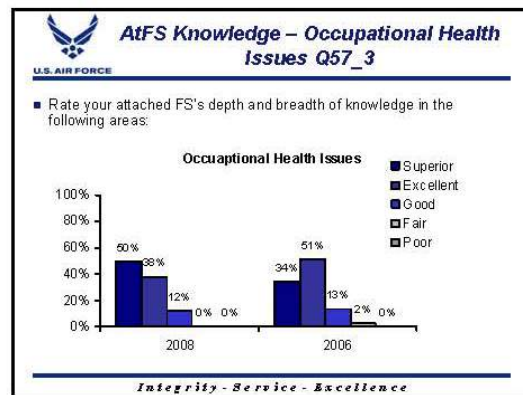
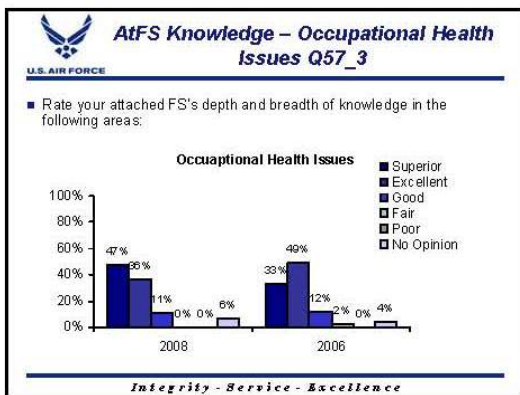
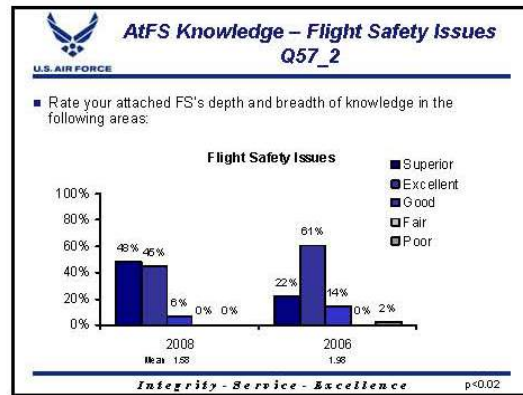
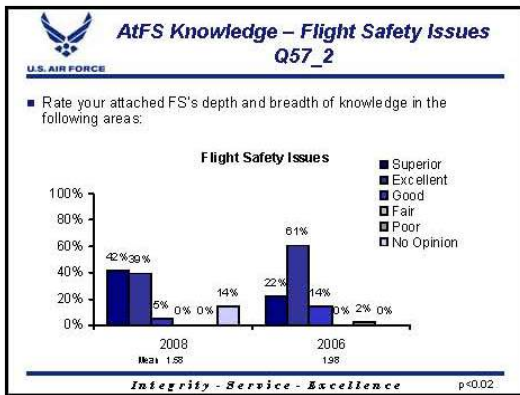
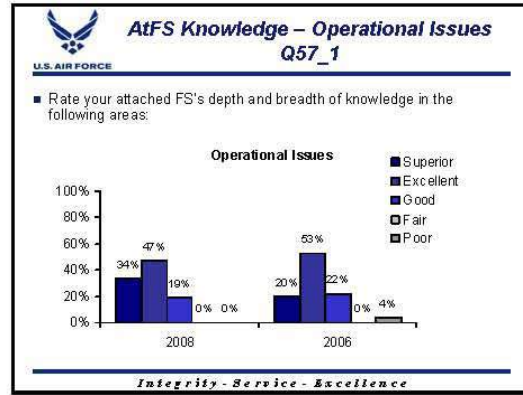
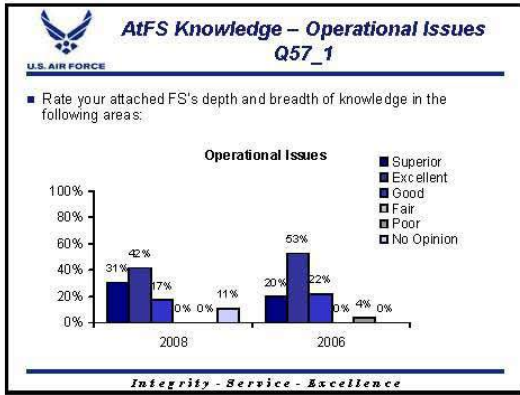




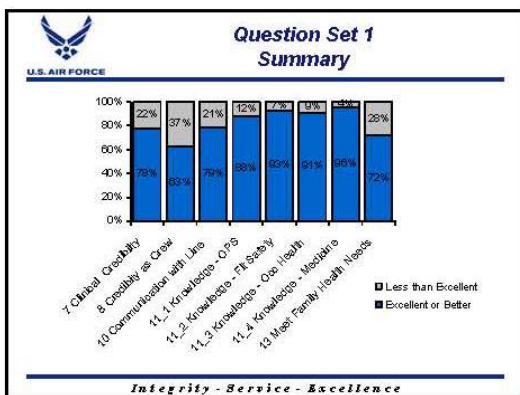
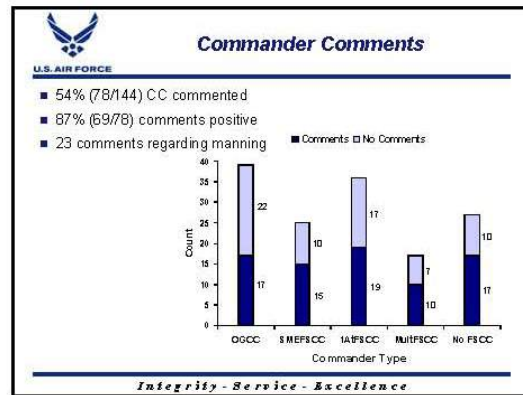
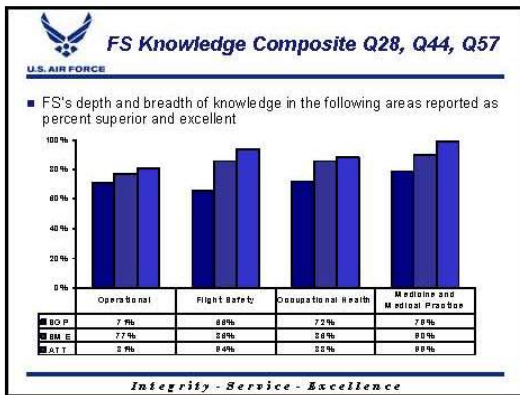
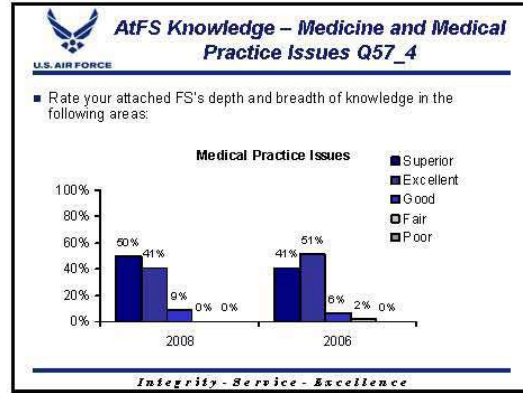
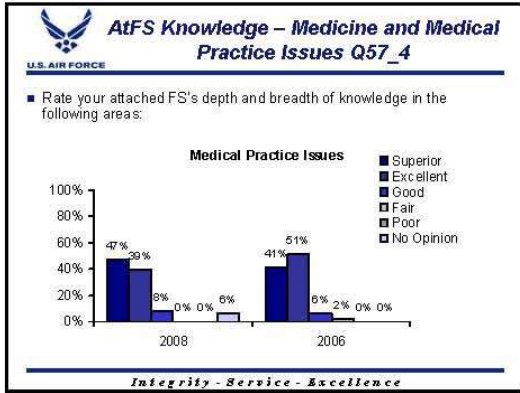
**Squadron Commanders with One Attached Flight Surgeon (AtFS)**

*Integrity - Service - Excellence*









FIN!