

AFCSG-11.1

Trip Report

13 May 1960

AFCSG-10

1. The primary purpose of this trip was to evaluate and discuss the Aerospace Crew Effectiveness Programs being carried on in two of our major air commands, TAC and ADC.

2. I departed Washington via military aircraft on Monday, 11 April 1960. I spent the remainder of the 11th and three-quarters of the 12th visiting TAC Headquarters at Langley AFB, Virginia. On the 12th I departed via military aircraft to MATS Headquarters, Scott AFB, Illinois, arriving on the evening of the 12th. This was an unexpected visit; however, it worked out as an additional opportunity in view of the military transportation available, and it was the only military aircraft headed toward ADC. I visited the Surgeon's Office of Headquarters MATS until 1600 hours on the 13th when I departed via commercial air for ADC Headquarters at Colorado Springs, Colorado, arriving there in the evening. I spent the 14th at ADC Headquarters and returned via commercial air on Friday the 15th.

3. Information which General Niess requested that we procure on each TDY visit is appended to this report. Varying quantities of information were obtained from all three commands. It appears that CSG-30 has requested much of this same information in a special report. ADC noted that they require this information to be submitted in a professional activities report. MATS stated that a report with RCS No. MED-152(R1) contains much of this information.

4. Comments concerning TAC.

a. I was met by Major Tracy W. Worley, the Physiological Training Officer in the Surgeon's Office, TAC. Reservations had been made at the BOQ and I was immediately transported to my room and then back to TAC Headquarters where I met the staff and discussed aircrew effectiveness with General Copenhaver; Major Donnell, the Chief of Aviation Medicine; and Major Worley. Major Worley stated that there were a number of six-man chambers ordered for TAC in order that each base

would have one. Since this early decision, 1955, there have been numerous modifications in the program and there are now chamber units at Langley, George, Williams, Shaw, and Cannon. These units are adequate to meet the needs of TAC. The F104's presently assigned to TAC use pressure suits only in a secondary mission they have assigned. The F105's will not use pressure suits. 6,547 people were trained during the past year. A strong plea for the return of physiological training flights was made. Under the present setup with physiological training personnel assigned to the Base Surgeon there is a great deal of raiding going on and every month three to six airmen are assigned to other sections of the hospital such as physical examinations, registrar, etc. This interferes with mission accomplishment of the physiological training units. The Surgeon still has nominal control of the units if they are assigned as a flight. However, these people are not on his WFO and he therefore does not feel compelled to move them about in other sections of the hospital. This sounds similar to the problem faced by many of our flight surgeons and the strong desire to be assigned directly to a squadron.

b. The line officers in TAC requested a program of vertigo indoctrination. The vertigo training program regulation, TAC Reg. 60-13, was issued 19 June 1959 and describes a number of maneuvers which are to be flown to demonstrate the sensations of various vertigo producing maneuvers. In general this program has been highly successful and enthusiastically received by both training sections and pilots. A copy of the comments from various TAC bases is on file in AFCSG-11.1. In a recent letter to Gen. Niess, Gen. Copenhaver had discussed this program and suggested that it should be publicized and the training instituted at an earlier period, namely, while the pilot was being trained in ATC. The program has been outlined to the appropriate personnel. A vertigo training device has also been built at Langley and is used by the physiological training unit in their training program. Incidentally, this is the most beautifully appointed physiological training unit I have ever seen. The morale of the section seems exceptionally high and they spend a good deal of their own time improving the physical appearance of the building.

c. It had been planned that I would visit one or two of the TAC bases. A lack of available air transportation and time precluded this and my only visit to the base level situation in TAC involved a few hours spent with the Base Flight Surgeon at Langley.

(1) There are four young flight surgeons assigned to the Flight Surgeon's Office. Three of these operate full time at this job and one is serving as the Chief of ENT and as such operates each

morning. Though assigned full time to the Flight Surgeon's Office the three other flight surgeons rotate through the outpatient department so that each spends the equivalent of one day per week at this job. They are all assigned to a flying unit on the base and at this job they attempt to be good squadron flight surgeons. A sick call is carried on "on the line" each morning. They are also responsible for one squadron lecture per month. At the present time they are doing no lectures in the physiological training program. They do lecture in the vertigo training program. Unfortunately, all physicals are still performed in the flight surgeon's office. In addition to this, the activities are further diluted by doing sick call for all officer personnel in the Flight Surgeon's Office. They do attempt to follow their patients in the hospital and at the present time this amounts to daily visits. They have three airmen on flying status in the office and these are used in the crash rescue helicopter. Coordination with other physicians in the hospital concerning the care of flying personnel is only fair.

(2) The physical plant for this office is a very run down World War II barracks type building. It is one of the poorest physical plants I have seen and this has been recognized by the base in that the unit will be moved into a two-story brick building in May.

(3) Occasional high flights are staged from Langley usually one time per week and thus the aircrew conditioning program is active here. A BOQ section is reserved for these people and their food is obtained from the in-flight kitchen. There is a good deal of uncertainty as to the use of drugs for at the present time all of the people conditioned here are from other bases and there is no time for pre-testing them to any drugs that might be used. It was suggested that this be done at local bases and the records brought with the individuals when they report to Langley. At the present time caffeine is being used rather than dexedrine.

(4) None of the flight surgeons had visited the control tower or crash facilities within the past year. The establishment of an aerospace medicine service to include the preventive medicine section is eagerly awaited at this base.

d. I also visited Lt Col. Stanley White, of the Space Task Group, NASA. We made a quick tour of the training facilities that the Astronauts are now using and discussed the medical monitoring program.

5. Comments concerning MATS.

a. The general MATS structure and command programs were discussed. The new Aerospace Medical Service has been discussed by Gen. Brua and Lt Col. Borman and they will align the various MATS base aviation

medicine and preventive medicine services with this concept. They questioned the need for sanitarians and public health nurses and at the time of my visit it was felt that they would submit no requirement for these. They have a need for industrial hygiene engineers at their headquarters bases, particularly Travis and Scott.

b. They have had a problem concerning the VC 137 aircraft. The operating people do not want to wear oxygen masks above 25,000 feet for they feel that they will have used enough oxygen by the time they reach the mid point or turn around point of the mission and that there will not be enough oxygen available for all passengers and crew at altitudes necessary to complete the mission should they depressurize. They are very desirous of obtaining a snap up mask similar to the British designed one and utilizing this in lieu of having one pilot on a mask. At the present time the Chief of Aviation Medicine is standing firm and I backed him in this decision.

c. The medical report on the "Big Slam" operation is available and will be forwarded as soon as it has cleared the headquarters.

d. An article entitled "The Flight Surgeon: Good Man to Know? Family Doctor? Confidant? Fixer?", submitted by Major James S. Garrison of the 1st Aeromedical Transport Group, Brooks AFB, Texas, was reviewed. This paper had been submitted to MATS for possible publication. It has several interesting comments but was not cleared for them by publication other than perhaps in the Medical Service Digest. I have a copy at present and the original correspondence will be forwarded for our review and consideration.

e. The MATS Surgeon is concerned about the aeromedical supervision of air traffic controllers by the USAF when FAA assumes responsibility for this function. They feel strongly that the USAF flight surgeons should have some medical control of these people.

6. Comments concerning ADC.

a. I was met at the aircraft by Major Frank Spiro, Chief of Aviation Medicine in the Surgeon's Office. Major Spiro and I spent several hours that evening discussing aircrew effectiveness in general and the ADC program in particular. The following morning a car picked me up and I was taken to the Surgeon's Office where a briefing had been arranged in General Strickland's Office with various members of the staff being present. The principal speakers were Gen. Strickland, Col. Kossuth, Maj. Spiro, Maj. Stopher, and Capt. Dye. The over-all organization of ADC was discussed and the point made that one-half of

the ADC squadrons are tenants on other bases -- MATS, SAC, TAC, etc. This is an Air Force wide problem at the present time and we have no bases which are purely MATS, SAC, etc. This indicates a changing aviation medicine problem for our bases. There are 133 ACAW sites and 30 hospitals and dispensaries, mostly dispensaries. Sixty-six per cent of the medical officers in ADC are two-year men. Career medical officers are badly needed. ADC is combat dispersed now. The enemy has the initiative and determines the time schedule thus differing from SAC. The command is dispersed on a combat footing and essentially at war now. They feel that they are constantly played down in relation to SAC while they are standing perhaps an even more rugged type of alert and certainly are on a combat footing.

b. The reporting of physiological incidents was discussed. In 1959 there were 24 hypoxia incidents which could be gleaned from all sorts of reports. At the present time a QOR has been established by SAC, ADC, TAC, and ATC for an hypoxia warning device. The device designed by Dr. Neville at the Aerospace Medical Center, Brooks AFB, Texas, would seem to meet the requirements and an OSR is being prepared at the present time in the Pentagon. Some sort of incident reporting is certainly needed and several of the commands have instituted physiological incident reports. Such a form is being developed by ADC at the present time. I had developed a form for the reporting of in-flight dysbarism incidents and will still develop this as an Air Force-wide form. A copy of the proposed ADC form is available in AFCSG-11.1. Some comment concerning the need for incident reporting will be inserted in the new AFR 160-69.

c. A comment was made that Chapter 25 in AFH 160-22 which outlines the mission of the Medical Service does not even mention aviation medicine.

d. The general need for a close review of the 9356 suffixes was discussed. This has already been initiated by our office. A suggestion was made that the Chief of the Aerospace Medicine Service be designated the Director of Base Medical Services for the combat support effort of the Medical Service and that the hospital commander be a separate clinically oriented individual.

e. Maj. Stopher is the Physiological Training Coordinator for ADC. He believes, however, that the role of the physiological training officer is more closely allied to the mission of the command than merely to serve as a training coordinator. He has a great deal of rapport with the personnel of the Surgeon's staff and has apparently been effective in this modified role. They have initiated a program to train the personal equipment officers in physiology. They have arranged to have

these people receive an abbreviated physiological training officer's course deleting the material on the operation of the altitude chamber. Thirty-six personnel are so trained at the present time in ADC. The personal equipment people in ADC are under the Director of Materiel. The physiological support program for the pressure suit using squadrons in ADC requires a large number of personnel who are capable of giving training at squadron level and who are trained in both disciplines. The flight surgeon at ADC units must give the physiological training instruction from a manual entitled "Squadron Physiological Proficiency and Protective Equipment Program," ADCM 52-4, which has been developed. This manual contains detailed training outlines for the giving of physiological training lectures. The wisdom of having personnel with extremely limited training give these lectures is doubted. If the policy of having the flight surgeon give these lectures is adhered to, this program could have great value. It should be closely coordinated with the regular physiological training course given by the physiological training units. A suggestion is being written up for submission outlining only seven physiological training units for the entire United States. Each of these units would have two 20-man chambers and two parasite chambers and approximately 50 airmen per unit. The units would be placed in ATC as this is the command responsible for training. Any personnel who might be left over in the manning of these units could then be utilized in the reorganized Aerospace Medicine Program. These units if so manned and equipped and strategically placed could carry on all training necessary in the view of Maj. Stopher.

f. Capt. Dye is the Radiological Control Officer or nuclear medicine man and he discussed the new ADC Reg. 160-5. This regulation is entitled "Responsibilities of Aviation Medicine Officers during Nuclear Hostilities." It is aimed at developing a practical approach to radiation exposure during nuclear warfare.

g. The problem concerning the exposure of radio operators on RC121 aircraft to x-rays from the magnetron of the APS-20E radar sets was discussed. This problem has apparently been solved by the development of an effective shield. One-eighth inch lead seems to solve the problem. The various squadrons have requested film badges from AMC due to this radar hazard. AMC agreed to monitor one radar type in each division with badges. Then the Lockport incident occurred in which a FPS-7 radar was having some maintenance done and the personnel took the lead shield off and worked several hours. Five personnel developed nausea, vomiting, and flushing that night and were hospitalized at Rochester. Lt Col. Hansen saw these people and Lt Col. Livermore is familiar with the incident. It is estimated

that they received between 300 and 600 r. At the present time all personnel in the 26th Air Division want film badges. This problem is being tackled at the present time by ADC personnel.

h. Another problem discussed was the psychiatric screening of personnel who might handle nuclear weapons.

i. The Chief of Aviation Medicine and the Deputy Command Surgeon suggested that ADC furnish requirements for Aviation Medicine residency program graduates. They also stated that they felt it would be wise to tie senior flight surgeons' ratings to certification by the American Board of Preventive Medicine in Aviation Medicine.

j. Two administrative problems have been of interest concerning flying personnel. The ADC personnel section appears to be confused concerning medical suspension and medical grounding. The recent Change C to AFM 160-1 outlines a number of conditions for which the Surgeon General retains waiver authority and requests notification. It seems the ADC personnel section believes that if an individual were struck on the head, for instance, with a bottle and thus lost consciousness the flight surgeon might write this up with the perfectly obvious explanation and desire to return this man to flying status. As unconsciousness is one of the causes listed in Change C, AFM 160-1, they would not allow the paper work to be forwarded until the man had been grounded for ninety days. This is a total misunderstanding of the wording and the intent of the provisions of AFM 35-13. This was explained in some detail and Maj. Spiro has agreed to forward me the next case which becomes involved in this misunderstanding. Another difficulty encountered concerns a pilot who had been suspended for more than a year for medical reasons and was then certified as physically qualified by Headquarters USAF. The ADC Surgeon desired to remove the physically disqualified suspension and have the individual administratively suspended prior to appearing before a flying evaluation board. Certainly if the individual is physically qualified he should no longer be medically suspended. A request for a decision on this matter was forwarded on 30 October 1959 to Headquarters USAF (AFPM). The answer received did nothing to clear up this difficulty. This correspondence is on file in AFCSG-11.1 and will be discussed further with AFPM.

k. A very active aircrew effectiveness program is carried on by personnel of ADC. The support rendered this program by Headquarters ADC is outstanding. Their views concerning the program have been so admirably expressed in their recent aircrew effectiveness report and again verbally on my visit that I am quoting a page from the report here.

"In considering AFR 160-69 and ADC Supplements, it is a fact that aircrew effectiveness programs throughout the command are only marginally satisfactory. The definitive medical care of crew members is generally excellent. Aircrew effectiveness programs are poor because too much is asked of too few. Our flight surgeons and AMEs do not lack enthusiasm, and a true desire exists to support the crew members as best they can in the time available. Token compliance is found in assigning a flight surgeon to each squadron. Frequently, there are more squadrons per base than flight surgeons assigned, and certainly there are too many nonflying jobs for which flight surgeons are responsible. As I see it a full time job does exist for a flight surgeon per squadron. Brief glad-handing visits to the line are appreciated, but do not constitute the program as directed. Many of our flight surgeons are also specialists in other fields. From the standpoint of aeromedical orientation this is good, but an operating surgeon finds little time to practice AFR 160-69. The dictum of physicians to care for the ill still applies to aviation medicine physicians. I am painfully aware of the general shortage of physicians Air Force wide but this does not condone neglect to crew members, our first echelon of defense. Our present aircraft, personal equipment, and flight envelopes present a colossal requirement for rapt and individual attention by officers in aviation medicine. As it now stands, we as aviation physicians are derelict in this area.

"As the Air Force develops it is apparent that dispersal, and offense and defense considerations have placed tenants on host bases representing all commands. The personnel, diversified flying and equipment requirements, and directives vary accordingly. This situation is frequently difficult to solve equitably. Actually, we are professionally jeopardizing our crew members from an aviation medicine standpoint. I know of no single base that has an aircrew effectiveness program in full consonance with directives.

"In order to remedy this deplorable situation, several proposals are offered for consideration. A good look should be taken Air Force wide to determine the number of aviation medicine officers (not also specialists in other categories) to provide a flight surgeon per squadron. Following this, increase the number we train in the primary course to meet the requirement. Then assign these physicians to the major commands as required. Each major command reassign to squadrons according to their requirements. These physicians to be directly assigned to the squadron and not to dispensaries or hospitals. They should be under the command of and directly responsible to the squadron commander. On a mixed command base, all these flight surgeons should

be amalgamated into an aviation medicine service technically supervised by the senior flight surgeon. Still, each operational squadron should have a 9356 medical officer designated as the squadron surgeon. This aviation medicine service to provide complete medical care such as sick call, physicals, consultations, dispositions, and referrals for all flying personnel on the base. This aviation medicine service to provide an aircrew effectiveness program and report with appropriate items relative each command. If it should develop that some time was being poorly utilized, the senior flight surgeon, usually the director of base medical services, could increase the activities of the aviation medicine service to include sick call and care of dependents of flying personnel. This office believes this is the only way that aviation physicians can become competent in the field and provide satisfactory support to aircrew members."

1. The following material was obtained at ADC and is on file in AFCSG-11.1 for review if desired.

(1) Reprint of article entitled "Aeromedical Support of Advanced Fighter-Interceptor Weapons Systems" by Colonels Strickland and Kossuth and Majors Estes and Stopher.

(2) ADC Supplement 3 to AFR 160-63, Report of Professional Activities of Air Force Hospitals.

(3) ADC Regulation 160-5, Responsibilities of Aviation Medicine Officers during Nuclear Hostilities.

(4) ADC Regulation 65-3, Personal Equipment.

(5) ADC Regulation 55-14, Flying Clothing and Survival Equipment.

(6) ADC Supplement 1 to AFR 160-10.

(7) ADC Supplement 1 to AFR 160-69.

(8) A detailed outline of the accomplishments of the past year in aircrew effectiveness in ADC.

(9) A copy of ADCH 52-4, Squadron Physiological Proficiency and Protective Equipment Program.

(10) A final report of Operation "Cold Tiger."

m. A very active executive physical program is carried on in ADC. The senior officers are given a very thorough history and physical examination, including a series of laboratory procedures. The results of this examination are discussed with the examinee by a representative of the Surgeon's Office, usually Gen. Strickland himself, the examining flight surgeon, and the Chief of Aviation Medicine. A copy of one of these executive physical examinations is also on file in AFCSO-11.1.

n. The enthusiasm with which I was received by ADC has been unmatched. They were extremely grateful for my visit and the interest shown in the Command and their program. They were emphatic in their statements that such visits are far too infrequent.

7. In summary, a very brief and rapid trip to these three command headquarters reveals problems with the aircrew effectiveness programs at all levels. The different approaches are of interest. I feel it is imperative that this office do everything in its power to keep a very close eye on these programs and to provide guidance, policy, and review at both command and base levels at frequent intervals. Every attempt will be made to evaluate this program personally at as many levels as possible in order to see that the primary mission of the Air Force is superiorly supported.

CHARLES A. HENRY
Major, USAF, MC
Aerospace Medicine Division

1 Atch
Info for Gen Niess