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USAARL REPORT NO. 71-5

FAMILY HEALTH EDUCATION AND ITS PLACE IN THE TRAINING OF STUDENT AVIATORS A METHOD

By

Stanley C. Knapp, LTC, MC, FS

August 1970

U. S. ARMY AEROMEDICAL RESEARCH LABORATORY

Fort Rucker, Alabama

ADA711927
Technical Report

Unclassified
Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author)	2a. REPORT SECURITY CLASSIFICATION
US Army Aeromedical Research Laboratory Fort Rucker, Alabama	Unclassified 2b. GROUP

3. REPORT TITLE

Family Health Education and Its Place in the Training of Student Aviators A Method

4. DESCRIPTIVE NOTES (Type of report and inclusive dates)

Paper for publication

5. AUTHOR(S) (First name, middle initial, last name)

Stanley C. Knapp

6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
August 1970	9	14

8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)
b. PROJECT NO. 3A0 6211 0A 819	USAARL Report No. 71-5
c.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)
d.	

10. DISTRIBUTION STATEMENT

This document has been approved for public release and sale; its distribution is unlimited.

11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY
	US Army Medical R & D Command Washington, D. C. 20315

13. ABSTRACT

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The aims of the discussions were twofold. In the first place, improving the image of the flight surgeon by early and informal contact and enlisting the help of the wives in the care of their husbands as part of the flight surgeon's mission, and the presentation of a number of vital aviation topics pertinent to the health and safety of the husband-aviators.

DD FORM 1 NOV 68 1473 REPLACES DD FORM 1473, 1 JAN 64, WHICH IS OBSOLETE FOR ARMY USE.

Unclassified
Security Classification

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Health Education Aviation Medicine Aviation Training						

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Flight Surgeons are often poorly understood; and their real missions are not realized by military aviation students and their families. The flight surgeon, because of his prominent position in selection and retention of the student aviator, may represent a threat to the aviator's career. The Army Aviation Training Program is rapidly expanding. Formal student-flight surgeon contact is rare. A need for improving the image of the flight surgeon was realized by the Department of Aeromedical Education and Training, Army Aviation School, Fort Rucker, Alabama. A method of health education discussions with the wives of student aviators was developed.

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APPROVED: Robert W. Bailey

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FAMILY HEALTH EDUCATION AND ITS PLACE IN THE TRAINING OF STUDENT AVIATORS A METHOD

INTRODUCTION

The military flight surgeon often has duties and functions that, to his patients, are poorly defined and nebulous. In contrast to a surgeon, or dermatologist, the practitioner of aviation medicine may not seem to have any specialized area of interest or practice. The flight surgeon's image among student aviators, and the families of nearly all aviators, is all too frequently distorted and unpopular.[10] He has been considered as somewhat of an ogre, who represents a direct threat to all flyers, and whose sole purpose in life is to ground pilots. This image has been created through misunderstanding of the flight surgeon's mission by the student aviator and his family.

This paper discusses some of the practical problems facing flight surgeons, student aviators, and the students' families in the training environment. A method for the health education of the student aviator's family is developed. The ultimate aim of the method is to dispel the unpopular image of the flight surgeon, and enlist the families' help and cooperation in the flight surgeon's mission of seeing the student successfully complete his training, and to be able to function effectively in the aviation environment.

While other such formal programs may be in effect, a review of the literature failed to turn up a single report. Much is written of the effectivenss of health education of air crew personnel;[3,4,13] but there is nothing on the effectiveness of health education of the family of these flyers as a means to improve performance.

That this should be a function of the flight surgeon, if not otherwise obvious, is outlined by Army publications.[7] "The duties of the flight surgeon involve the conduct of medical examinations for flying; the actual professional care and treatment of the sick and injured flyer; and the employment of preventive medicine." According to Leavell[11], health education is one of the primary phases of any preventive medicine program. Health education is an integral function of preventive medicine.[9]

THE FLIGHT SURGEON'S IMAGE

The flight surgeon, to a cadet or student, may seem to represent the key element in the student's ultimate failure or success in aviation training. Through inexperience and bias, the student often sees the flight surgeon as a man only interested in grounding him, or searching for some miniscule physical or psychological defect that will prove disqualifying. From initial selection until graduation, repeated physical examinations, psychological tests, health indoctrination, and the fear of grounding become, to many, a nuisance, or, to others, an overt stress-producing factor.[2]

During sessions of "hanger flying", the horrors, rigors, or "nonsense" of the aviation physical examination are discussed. Little understood portions of the examination, i.e., anthropologic measuring, tonometry, rectals, electrocardiogram studies, and visual testing perpetrate wild and stress-producing stories. Home cure methods for the common cold, obesity, fatigue, excessive smoking, and air sickness are widely circulated. To the uninformed student, these conditions are synonomous with grounding, and their presence is to be kept from the flight surgeon, sometimes at the cost of eventual long periods of grounding.

These distortions find their way into the home. They are discussed at dinner, over bridge games, and at cocktail parties. Wives see their husbands motivated with the thrills and challenges of flying. They can somehow understand how difficult it must be for their husbands to accomplish the mechanical and technical demands of their training. They may well find it hard to comprehend the place of the flight surgeon in this training. Through ignorance, this "special type of physician" becomes a threat to her husband, and, ultimately, to the family's economic and social security through the loss of flight pay, or perhaps actual elimination. This is more threatening when the family never sees the flight surgeon. This is so often the case in training commands. Social functions of the students are isolated from the instructors, and more so from support elements, further widening the chasm of misunderstanding through lack of contact.

Successful completion of training, and assignment of the aviator to a small aviation unit will, in time, hopefully change the unpopular image of the flight surgeon.

The physician of these small units is usually well-known. He and his wife are socially involved with the unit. The aviator is acquainted with the flight surgeon through informal health education talks and association on the flight line. The flight surgeon in this setting again becomes a physician charged with the handling of health care in general.

One must not infer that there is misunderstanding of the flight surgeon by every student aviator, or in every training command.

ARMY AVIATION TRAINING

The rapid build-up in Army aviation over the past four years has demanded an intense search for instructional and support efficiency. It has compressed a student's training into the shortest possible period. This does not allow for setbacks, failures, or even illness requiring grounding, if the student expects to graduate with his class. His day is one with little personal freedom. His home life is unnatural and occupied with studies, night classes, and night flying. Some students find it difficult to arrive at a compromise between their roles as husbands, fathers, and students.

Formal lectures on flying health, by the flight surgeon, are often overshadowed by the rigors of academic study. With the majority of its graduates going directly to a combat theater, the Army Aviation School gives emphasis to the areas of instruction that will establish the aviator's successful completion of his mission in the combat zone and ultimate survival of the environment.

Because of the limited informal access of the flight surgeon to the student, a means was sought to broaden the student's understanding of aviation medicine and of flight surgeons in general. A route of informal health education lectures and discussions with the wives of student aviators was explored, and the following method was evolved.

DEVELOPING A METHOD

The task of presenting a health education lecture to a group of wives was explored by the Department of Aeromedical Education and Training of the Army Aviation School, Fort Rucker, Alabama, in early 1963. It was deemed necessary to present these lectures or discussions as early in the training phase as possible, to as many wives as

possible, and in an informal and friendly atmosphere.

Army aviation training is conducted in two major geographical areas. Primary ground schooling and flight training is accomplished at Fort Wolters, Texas, and the advanced phases at Fort Rucker, Alabama. For some students, the entire training is accomplished at Fort Rucker or Fort Stewart, Georgia.

Since families do not accompany their husbands during the primary phase of training, Fort Rucker was chosen as the site of these lectures. The School of Army Aviation Medicine is located there, and facilities were available for meetings, i.e., large officer and NCO clubs.

The Army Aviation School has a broad basic policy of introducing the wives of the students to the School, the post facilities, the aircraft, and to the curriculum their husbands face. Within a few weeks of their arrival, the wives of each class are taken on a somewhat compulsory morning tour and briefing of the facilities. This is well accepted and appreciated. It was decided that a one-hour health education presentation at the conclusion of this tour, over coffee and sandwiches at one of the clubs, would be best.

Phase III Aerospace Medicine Residents and selected Flight Surgeons from the Department of Aeromedical Education and Training were chosen to present the discussions on a rotation schedule. Their background in preventive medicine, didactic training in health education principles, teaching skills, and prior service with aviation units, proved of extreme worth.

To achieve optimum impact, present the maximum information, and still allow for an open-ended question session, a basic lecture outline was written. The original outline was written by Major James E. Hertzog[10], then Deputy Director of the Department of Aeromedical Education. A group of 25-30 slides were developed to pictorially and graphically present the salient points of the discussion. These slides were originally of the animated type. The subjects are presented in a caricatured way, or with some other humorous approach whenever possible.

THE METHOD OF PRESENTATION

The flight surgeon is encouraged to join the group for coffee, and, after introduction, covers as a minimum

the areas developed in Major Hertzog's original paper. The wives are encouraged to ask questions as the material is presented.

At the very beginning, an attempt is made to establish confidence in the flight surgeon. A welcome from the hospital staff and commander, and all the departments and specialties is given. It is usually noted that there are a number of pregnant women in the group. Mention would then be made of the hospital's desire to serve their needs night or day, and, "...By casual observation, I see that perhaps we can be of service to you in the near future...," and etc. A slide outlining the hospital specialties and services is shown. The aviation medicine department is demonstrated to be part of the hospital's service organizations.

It is explained that there is at least one representative of every specialty who is a flight surgeon trained to care for the special problems of his specialty as they involve flying.

Showing a cartoon of a horned and fork-tailed flight surgeon sitting behind a desk giving the thumbs down sign to an aviator with a number of weeping children at his side, brings audience chuckles. Briefly, the unpopular image of the flight surgeon is described. After this, a corrected picture of the training, duties, and mission of the flight surgeon is described. The supportive, preventive medicine functions are especially stressed. "It is the primary mission of aviation medicine and the flight surgeon to provide medical support and care of the flyer and to prevent conditions which will jeopardize his ability to fly safely and successfully complete his training, in essence, to keep him flying."[10] With this quotation on the screen, the help and assistance of the wives is solicited in the mission of care for their husbands.

A discussion on weight and diet, eating habits and patterns, food fadism, and the use of coffee and tea is presented. The problems of obesity, hypoglycemia, fatigue, and resistance to infections as influenced by diet have appropriate accompanying color slides. Armstrong[5] strongly advocates indoctrination of wives on this subject.

Rest and relaxation as they apply to a student pilot's general effectiveness and well-being is then discussed. Here, as well as with diet, the wife's role is carefully

outlined. Dogmatic limits are not projected, but rather, a positive approach of "do's" is utilized. The wife's responsibilities in scheduling social commitments in such a way that they do not fall on nights prior to examinations, flight tests, or long periods of flying receives special attention.

The problems of self-medication and use of alcoholic beverages are explored from an aviation standpoint. Care is taken to point out that any individual illness, per se, may not always be serious or require grounding. However, many medications sold over the counter for the treatment of the common cold, or prescribed for others in the household, may be extremely detrimental to the husband's flying safety. Grounding may be necessary because of the drugs and not the illness. Early detection and prompt treatment of even seemingly insignificant illness is pursued as a major entity of the preventive medicine program. Leavell[11] describes this as the second level of the primary phase of preventive medicine. The wife is urged to send her husband to the flight surgeon at the first sign of somatic symptoms or unexplained personality changes no matter how minor. Again, it is stressed that the wife must assist us in the prevention of disease by early diagnosis.

The deliterious effects of alcohol on an aviator's performance are well-known.[5] These are explained in some detail to the group. The insidious dangers of a "couple of drinks several hours" prior to a flight are shown in such a way as to leave a lasting impression that alcohol and aviation fuel do not mix. Pictures of a crash scene, and the corresponding story of alcoholic intake prior to flying, is presented in a simple way. The audience is allowed to draw its own conclusions.

Smoking, as a hazard in the aviation environment, is given considerable time. Easily understood situations of impairment of night vision, lowered tolerance to hypoxia, and impaired judgement ability are mentioned. The purpose is not to advocate abstinence; but to make the wives cognizant of the problems that exist in this area. It is of interest that this area seemed to draw the largest number of questions.

Approaching problems of maintenance, fitting, and instruction in use of personal equipment may seem, at first, a long way from health education. However, a brief

sketch of why their husbands are expected to wear gloves, helmets, boots, and flight suits, especially on hot days, is well-received. A method of fireproofing flight suits, by the use of simple borax solutions during home laundering, never needed a second explanation.

One of the last topics to be presented is that of conflict and frustration. Its importance, in both the student's life, as well as the families, is pointed out. The problems of a rather unnatural family life, i.e., frustration, guilt, and emotional stress, are covered in such a way as to leave no question in anyone's mind of their importance.

The inevitable fact that every student aviator has a mistress during his training period is shown by means of a slide. Of course, the slide shows a man in love with an aircraft, about which he talks almost unendingly, even to the point of dreaming about it. Pointing out that it is normal and expected that the student should "eat and sleep" aviation, seems to impart some relief to the family. This is especially so when they realize it will be temporary.

This author found it easy to structure the entire presentation in the form of a prescription for good health--written by the flight surgeon and to be filled in a large part by the wife and family. The lecture title is logically, "The Care and Feeding of the Infant Aviator". TLC, tolerance, understanding, and, if necessary, sacrifice to be administered PRN in generous quantities. The proper use of this prescription would help insure their husband's success in his new career--aviation. Analogies of a pediatrician managing the growth and development of an infant helps many young wives understand the flight surgeon's mission.

DISCUSSION AND RESULTS

No formal study has been done to determine the overall effectiveness of the program. A survey of student pilots presenting themselves for weight reduction, desire to stop smoking, and marital conflicts, showed that a significant number were there on the advice or insistence of their wives, who had heard the lecture. Four or five lectures are presented monthly.

The aviator is an integral part of his environment. During his training as a pilot, he is expected to develop

the habits that will influence his adaptation to the hostile aviation environment for the rest of his career. The family, too often, is overlooked as a part of this environment. "Aviation medicine may be considered at its zenith when it achieves a comprehensive state of aeromedical effectiveness of pilots and other crewmen."[3] To attain this zenith, health education may be considered one of the challenges of the practicing profession of aerospace medicine specialists.

The flight surgeon's oath charges the physician as a pioneer in this new area of medical practice. The fifth paragraph states, "What I learn by my experiences may influence the world, not only of today, but the air world of tomorrow which belongs to aviation..."[1]

It may be valuable to incorporate a formal family health education program at all levels of aviation command. Historically,[8] the broad social factors affecting both health and disease were understood and appreciated long before the telling role of the family was recognized. The family is, in effect, the social microcosm. In both subtle and gross ways, the forces that play in the general aviation environment operate in the "envelope" of the family. The Navy stresses a "total man concept" of its aviators.[12] This totality is achieved in part by the appreciation of the family as an influence in the aviation environment.

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