FINAL REPORT
OF THE
USAF SURGEON GENERAL
AND STAFF OF
VISIT TO
SOUTH AMERICA

I. PURPOSE.

The Surgeon General, USAF, accompanied by several members of his staff comprising dental medicine, research, training, veterinary, clinical and aerospace medicine visited Panama and five South American countries during the period 22 January through 8 February 1961. The primary purpose of this visit was to obtain on-the-spot evaluation of the requirements for development of medical training programs devoting special attention to the coordination of actions of joint interest to the US Missions and recipient countries' Air Force Medical Services. The long-range objective was to assist in bringing about a better understanding of mutual medical problems.

II. PRINCIPAL PERSONNEL CONTACTED.

a. Albrook AFB, Canal Zone

1. Major General Leland S. Stranathan, Commander, CAIRC
2. Colonel Charles P. Alexander, Surgeon, CAIRC
3. Colonel Thomas L. Crystal, Commandant of USAF School for Latin America
4. Lt Colonel William W. Senn, Command Dental Surgeon, CAIRC
5. Doctor Juan R. Morales, Jr., President, Panama Dental Association
6. Colonel James L. Murchison, USA, Chief, Gorgas Hospital

b. Lima, Peru

1. Major General Eduardo Souza Peixota H., Surgeon General, Peruvian Air Force
2. Commander J. Humberto Ortiz Zegarra, Dental Surgeon, Peruvian Air Force
3. Colonel Donald R. Conard, Chief, USAF Mission
4. Doctor Enrique Barredo M., ARDC Contractor

c. Santiago, Chile

1. Brigadier General Marcial Baeza Martines, Surgeon General, Chilean Air Force
2. Doctor Jose Behm, Commandant, Chilean Air Force Hospital
3. Colonel Harvey L. Case, Chief, USAF Mission
4. Colonel Rodolfo Ugarte E., Dental Surgeon, Chilean Air Force

d. Buenos Aires, Argentina

1. Honorable R. R. Rubottom, Ambassador of the United States
2. Commodoro D. Ruben Edo Fio, Surgeon General, Argentine Air Force Medical Service
3. Commodoro D. Isidro J. Ortega, Director, Argentine Central Air Force Hospital
4. Commodoro D. Amilcar E. Arguelles, Deputy Surgeon General, Argentine Air Force Medical Service
5. Colonel Robert L. Rizon, Chief, USAF Mission
6. Commander Osjaloo N. Trotta, Assistant Head of Dental Department

e. Montevideo, Uruguay

1. Honorable Robert T. Woodward, Ambassador of the United States
2. General Luis M. Matos, Director of Military Health Service
3. Colonel Fransisco Sureda, Surgeon General, Uruguayan Air Force
4. Colonel Clure E. Smith, Chief, USAF Mission
5. Lt Colonel J. Craig Teller, United States Air Attache
6. Dr. Hugo Brugnim, Director General, Sanidad Militar
7. Dr. Rodadlfo Maran, Chief of Dental Services, Sanidad Militar
8. Dr. Miguel Cleffi, Chief of Dental Radiology, Sanidad Militar
9. Lt Colonel Jose P. Jaume Escudor, Uruguayan Air Force Liaison Officer to Foreign Air Forces
10. Dr. Olivior Pita Fajardo, Dean of Dental School, University of Uruguay

f. Rio de Janeiro, Brazil

1. Colonel Robert Kalb, United States Air Attache
2. Brigadeiro Uchon Calvacante, Commander Central Hospital of Aeronautics
3. Brigadier General Richard T. King, USAF, Chief, USAF Section, JBUSMC
4. Lt Colonel Edward M. Gervase, USAF, USAF Section, JBUSMC
5. Major Brigadeiro B. Fleury, Surgeon General, Brazilian Air Force
6. Brigadier Oriovaldo C. Lima, Head of the Physical Examination Center for Flying Personnel
7. Lt Colonel Paulo Soares, Flight Surgeon
8. Doctor Helio Paraizo Garica, Civilian Contract Dentist
9. Professor Chryso Fontes, Dean of Dental School, Brazil University

g. Sao Paulo, Brazil

1. O'Dain P. Pedroso, Superintendent, Clinical Hospital, University of Sao Paulo
2. Doctor Carlos Silva Lacaz, Professor of Bacteriology, Institute of Tropical Medicine, Clinical Hospital, Sao Paulo University

3. Doctor Joav Alves Meira, Professor, Tropical Medicine, Clinical Hospital, University of Sao Paulo
4. Professor Paulino Guimaraes, Chief, Dental Clinic Department, Brazil University of Sao Paulo

III. FINDINGS.

a. Training.

As in the case of all Air Force programs, the Military Assistance Program (MAP) requires the participation and full support of all concerned. In the past, in the countries visited there was evidence that the planning and programming of medical training under the auspices of MAP had not kept pace with the needs and requirements of the host Air Forces. While the United States Air Force generally met its obligations in providing for the needs of its allies it was felt that necessary emphasis was not placed upon the medical portion of the program, and as a result, was not effectively and efficiently discharged. In recent years, however, the implementation of an expanded medical training program was initiated which has broadened and encouraged participation not only of the Latin American countries visited, but on a world-wide basis as well.

Results of this program are expected to continue to improve as more emphasis is placed on the medical opportunities offered by the MAP and USAF Medical Service. Large dividends seem to have been gained as a result of Air Force medical personnel travelling into the countries concerned and apprising the various training officers and host Air Forces medical personnel of these opportunities for training.

It is suggested that to further publicize the medical aspects of the program, in addition to providing language training and MAP indoctrination, a block of hours on the medical problems and objectives be included as part of the curriculum at the Military Assistance Institute (MAI). It is felt by this means a clearer understanding would be developed in order to determine areas of programming responsibility and scope of assistance with respect to the medical field.

b. Aerospace Medicine.

Aerospace medicine does not hold the same place in Latin America as it does in the United States. Unfortunately, most all of the physicians holding commissions in Latin American Air Force Medical Services work on a part-time basis, usually half a day for the Air Force and carry out a private practice the remainder of the time. In addition, in some countries, Chile for example, they also work part-time at a hospital appointment for the government operated Medical Care Program. The primary reason for part-time military service is the low salary paid to military physicians and the necessity of several jobs to maintain an adequate standard of living. This system has stifled any real progress in military medicine as we know it. While most Latin American physicians are specialists to some degree, there is no specialist in aerospace medicine, as they could not make a civilian living in Latin America. The civilian airlines' aviation medicine support is provided by the Air Force as civilian aviation is under the Bureau of Aeronautics of these countries. There is no tie of the Latin American

flight surgeon to the mission of the Air Force, in fact the flight surgeon as we know him doesn't exist. There is a need for a few full-time aerospace medicine people in these countries and our efforts might be thus directed.

Many of the countries requested assignment of a USAF flight surgeon as an advisor. In the past, we have had flight surgeons assigned to Peru, Equador and Paraquay. Our experience has been that flight surgeons so assigned are used as general practitioners by all Americans in the area and little time is left for the primary mission of advising. Thus, it would be more advantageous for us to provide a travelling advisor at stated intervals and accomplish the same mission. In most instances, full-time advisors are not needed as the Air Forces are small, but Argentina and Brazil might be considered for some exchange program. Any officer assigned to either program must receive language training and be motivated toward the importance of the job.

Most of the military medical facilities seen were hospitals, either Army operated hospitals being used by the Air Force, or Air Force operated hospitals. There was no separation of flying personnel and all had large dependent loads. Small flight surgeon offices were present in all areas, and central examination for flying personnel existed in some instances. In Argentina there is a research institute which is part of the School of Aviation Medicine, but it is separated from the teaching and administration by about 30 miles. We could not visit this facility. A new combined facility is in the planning stage.

Several countries requested altitutde chambers. These are truely a research and examination tool of the flight surgeon, they also are a prestige item, and their procurement through MAP should be investigated. We should explore setting up a medical training center at Ramey AFB, Puerto Rico. The hospital there could be used and the Latin Americans would not feel out of place having some of their enlisted technicians trained there. Then the Panama unit could be dropped and the 16-man chamber could be installed at Ramey. Enlisted training is a relatively whole new idea in Latin America. Proficiency of enlisted men is much below the United States level, consequently, they are not used as effectively. Latin Americans attitude must change before such training will be of local value. At present the physiological training facility at Albrook AFB should be maintained for a tie to Latin America, even though it is realized this physiological training unit and the technicians would not be kept busy training personnel full-time. Their utilization should be worked out on a local basis with the Caribbean Air Command (CAIRC) Surgeon.

There is a great aerospace medical potential in many of these countries, if it were allowed to develop. Presently existing systems are not conducive to full development of this potential.

No organized preventive medicine program existed in the Air Forces of any country visited. A number of factors may have contributed to this, such as the heavy military and dependent workload being handled by an insufficient number of part-time physicians and an absence of allied professional and subprofessional preventive medicine personnel to assist the

physicians. Some countries, notably Brazil, had outstanding preventive medicine teaching programs within their civilian medical institutions. Preventive medicine capabilities should be encouraged within the Air Force medical services of the South American countries. The strengthening of the preventive medicine staff of CAIRC Surgeon would enable us to provide greater assistance. Training of qualified personnel from these countries should be encouraged. Sanitary and industrial hygiene engineering, preventive medicine technicians, and veterinary medicine technician courses available at Gunter AFB could be utilized. USAF medical service publications on preventive medicine should be distributed to the USAF Missions in South America, who in turn would forward copies to the Surgeon General of the Air Force in each country. Dr. Filiberto Debarnot, Deputy Director, Institute of Aviation and Space Medicine, Argentina, stated that they had a great need for sanitarians. A more detailed report of the Aerospace Medicine activities within each of the countries visited can be found in Appendix A, Aerospace Medicine. The Veterinary activities are reported in Appendix G, Veterinary Service.

c. Research.

In 1959, the Air Force Office of Scientific Research (AFOSR) initiated a small research grants program for selected scientists in South America who had submitted research proposals. This amounted to a total of $111,000 in the countries visited. High quality research is being done. An important secondary gain from this program is the promotion of good will and understanding. Scientists are impressed by the interest in their fundamental research. Additional research potential was discovered during these visits and information was provided for application procedures for USAF Research Grants.

Little research of aeromedical importance was noted. This is due to the lack of research support of military and part-time activities of the military physicians. In Peru, Air Force physicians have been studying EEG's on flying applicants and have followed their performance. This is a good study and will also be of value to us. Dr. Hurtado has been doing work on high altitude research which has been supported for years by the School of Aviation Medicine. His contract expires in April 1961 and will not be renewed. He has applied to the Federal Aviation Agency (FAA) and National Institutes of Health (NIH) for support and will need interim support to avoid losing personnel. This faculty and team should be maintained and efforts to provide the support should be made. A physician at the Brain Institute is investigating the properties of cocaine as a fatigue relieving drug which may have an interesting outcome for us.

In Brazil the collection of some 5,000 aircrew medical histories spanning 30 years is a valuable archive of information on aging and other medical problems in flying personnel.

In Uruguay an obstetrician/gynecologist physician is investigating labor and fetal hypoxia by some unique methods which may have very direct

application to our minimal hypoxia problem. Greater details regarding the AFOSR research grants program and research of aeromedical importance will be found in Appendix B, Research.

d. Clinical and Laboratory Medicine.

General Niess appointed Dr. Charles A. Berry as the project officer for a medical meeting in December 1961 to be held in Panama. This meeting will utilize facilities of the Latin American School and will be coordinated with Colonel Thomas Crystal, USAF Commandant of the School. Professional papers will be requested from each of the Latin American countries for presentation at the meeting, if necessary to balance out the program, suitable papers will be added from the United States.

All of the laboratories of the military establishments were poorly equipped and pathology services were nonexistent. The medical potential in the Air Forces of each country visited is great, with the exception of Uruguay. As previously mentioned, all Air Force medical personnel are employed on a part-time basis; they are also engaged in the private practice of medicine or work in a government hospital or both. Current trends in medical education are toward better selection of medical students, full-time professors, a less rigid curriculum, medical student participation in faculty selection and a greater participation in clinical and basic medical research.

Mutual exchange assignment of medical service personnel should be encouraged. This approach will counteract the onus of the big brother approach which is generally resented. Nonphysicians should be utilized to the greatest extent in such a program because physicians are diverted from the primary purpose of their assignment by demands from local United States personnel and their dependents for medical care. Detailed information is contained in Appendix C, Civilian Medical Education; Appendix D, Medical Personalities and Appendix E, Clinical and Laboratory Medicine.

e. Dental Service.

Air Force Medical Services of the countries visited have dental officers on duty except Brazil where dental services are provided by civilian contract dentists. Under present plans, the Brazilian Air Force will appoint approximately 50 dentists in July of 1961.

Routine dental care, including orthodontia, is provided military personnel and dependents to the extent that professional resources and facilities permit. Dentists in all countries perform military duty on a part-time basis (4-6 hours per day). They conduct a private practice to supplement their military pay. Under this arrangement the interests of the dentists are divided and their military effectiveness is compromised.

Inadequacies in dental equipment in some countries seriously interfers with the practice of dentistry. Dental operating room equipment in Peru and Uruguay are particularly old and in a poor state of repair. Dental laboratory equipment in Peru and Uruguay is inadequate to provide a dental laboratory service. Dental laboratory service in Brazil is obtained from civilian sources and the patient must pay the laboratory fee. In Uruguay the patient must obtain prosthetic service from a civilian dentist and pay his fee. Establishment of a dental laboratory service in these countries is desirable. Dental equipment should be provided for these countries through MAP.

The Air Force dental services in Chile and Argentina appear to have sufficient specialists to provide a complete dental service in at least one dental facility. In Peru, Uruguay and Brazil difficult cases are referred to civilian dentists because of the limited training of the dental officers. There are no specialists in the Air Force dental services of Peru and Uruguay.

Availability of specialists in the Air Force dental service is closely related to the availability of postgraduate training in dental schools. In some countries such training is very limited. It is most desirable that each Air Force dental service have at least one dental facility where complete dental service can be provided. All countries had a preponderance of small bases where only general dentists can be utilized. In the case of general dentists moderate proficiency in all branches of dentistry is desirable. The Air Force Dental Surgeons are eager to have their dentists attend the USAF postgraduate course in general dentistry.

The Air Force Dental Surgeon in Peru is particularly anxious to attend the dental staff officers course in order that he might become more familiar with dental administrative procedures and clinical management. The Air Force Dental Surgeons of other countries are also interested in such training.

The training mentioned above could be made available in USAF facilities. Participation of foreign dental officers in postgraduate courses in general dentistry at Lackland AFB and the Dental Staff Officers Course at Gunter AFB, at the earliest practicable date, is recommended, followed by specialty training to meet specific requirements.

Dentists in South American countries have limited knowledge of the English language. Some are able to read English but only a few know English sufficiently well to speak or understand it. Dentists selected for this training in the United States, in all probability, will need to attend a language course before the dental training is pursued.

United States dental periodicals are almost nonexistent in military dental offices. Those seen were obtained through subscription by the individual dentists. Subscriptions are difficult to obtain in some countries because the necessary dollar allocation cannot be obtained.

Since periodicals are excellent study and reference material, it is desirable that they be made available to the dental clinics.

No attempt has been made to carry out a program in preventive dentistry and no dental research is being conducted.

Dentists in South American Air Forces appear to be aware of the hazards to flying personnel resulting from dental pathology and treatment and coordinate these matters with the flight surgeon. In Uruguay the dentist is required to take administrative action to temporarily remove personnel from flying duties when indicated because of dental conditions.

Dental schools visited in Uruguay and Brazil have reasonably good operating equipment but are deficient in laboratory and research equipment. Additional training for staff members in these schools is most desirable. It was suggested that the request for urgently needed equipment and training be made through the International Cooperation Administration (ICA).

Support will be given the countries visited to obtain the training and material they require.

More detailed remarks regarding the dental service and the countries visited will be found in Appendix F, Dental Service.

IV. SUMMARY.

Continuous efforts are needed to promote better understanding to strengthen the bonds of friendship between the medical personnel of the South American countries' Air Forces and the United States to further the cause of peace. Efforts of this nature, include free exchange of medical information during visits to these countries, the invitation of the South American countries' Air Forces Surgeons General to accompany the USAF Surgeon General on an orientation visit to USAF medical facilities prior to the Aerospace Medical Meeting in April of this year and the South American Air Force Medical Conference sponsored by the USAF Medical Service at Albrook AFB in December 1961.

As an indication of the importance that these countries attach to the visits extensive publicity was received by the USAF Surgeon General and his staff in each country visited.

Some proficiency in the Spanish language is viewed by the South Americans as an indication of the interest and friendship. Therefore, it is imperative that all officers and dependents of the medical service assigned to CAIRC become proficient in the Spanish language prior to reporting for duty. Further, all Air Force personnel as possible should be encouraged to learn Spanish.

There is a need to increase the awareness of the Air Force medical personnel in South American countries of the availability of USAF sponsored medical training and to advise them on how to apply for such training.

Increased assistance must be provided in obtaining modern medical materials through MAP so as to provide a greater research and aerospace medical potential.

A detailed resume of the recommendations made throughout this report will be found in Appendix H, Resume of Recommendations.

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1. Appendix A, Aerospace Medicine
2. Appendix B, Research
3. Appendix C, Civilian Medical Education
4. Appendix D, Medical Personalities
5. Appendix E, Clinical and Laboratory Medicine
6. Appendix F, Dental Service
7. Appendix G, Veterinary Service
8. Appendix H, Resume of Recommendations

APPENDIX A

AEROSPACE MEDICINE

At the request of Dr. Arnold Schaefer, Executive Director of the Interdepartmental Committee on Nutrition for National Defense (ICNND) a number of persons were contacted in the South American countries in which nutritional surveys had either been accomplished or were anticipated in the future. In Lima, Peru, the following persons were contacted: Doctor Charles Williams, Jr., Division of Health and Sanitation, International Cooperation Administration; Dr. J. Emanuel Morante, of the Medico del Ejercito and Dr. Carlos Callazos, Director del Instituto de Nutricion, Servico Cooperative Interamerican Salud de Publica. Discussions were held regarding the proposed nutritional supplement survey which is to be a follow-up research program for the nutritional survey done in Peru previously. This supplement survey represents an attempt to develop an indigenious cereal protein supplement. Several Peruvian groups are collaborating in this project. These are Peruvian Institute of Nutrition; The Armed Forces Institute of Nutrition; the Research Division, British American Hospital; and the College of Agriculture at Las Molinas.

In Chile, Dr. Julio V. Santa Maria was not able to be contacted, however, Dr. Jose Behm, Commandant de Grupo, Sanidad, F.A.C.H. Hospital Chilean Air Force was contacted and a discussion was held with Dr. Behm regarding the preliminary report of the nutritional survey conducted in Chile. Dr. Behm was advised that Dr. Frank Berry; Dr. William Ash, and Dr. Arnold Schaefer wish to visit Santiago and finalize the preliminary nutritional report. Dr. Behm was requested to indicate the convenient time for such a meeting. He indicated that some time after the 5th of March would be agreeable.

In Montevideo, Uruguay, an attempt was made to contact Dr. Maria Luisa Saldun Rodriguez, Director of Nutrition Department, Hygiene Division, Ministry of Public Health. However, she was out of the city at the time of our visit. We left two copies of the Equador Nutritional Survey and two copies in Spanish and two copies in English of the Manual of Nutritional Survey.

In Rio de Janeiro, Brazil, attempts were made to contact Dr. Jair De Montedonio and Dr. Walter Joaquin dos Santos, however, neither could be reached. Consequently, we were put in touch by the U. S. Embassy with Dr. William Cope, the U. S. Operations Mission. A discussion was held with Dr. Cope relative to the possibility of a request from Brazil through normal channels for ICNND to institute a nutritional survey in Brazil. Dr. Cope promised to discuss this with Dr. Montedonio and Dr. Santos.

A. PANAMA

1. Captain Matejka is in charge of aerospace medical activities at Albrook AFB. He seems to enjoy his job and is very well liked on base. The reduction of the air rescue mission to a locally assigned helicopter and the removal of the T-33 aircraft have reduced areas of interest to aerospace medicine. In spite of this, Captain Matejka is applying for a residency in aviation medicine.

2. The medical care of USAF Mission personnel provided from Albrook AFB is handled on a routine basis. A schedule has been established for the medical team to visit these Missions. However one difficulty is that none of the medical officers' time is left for meeting, advising or discussing aerospace medical problems with local medical personnel. It is recommended that an aerospace medical advisor be included on each of these trips with no job other than contacting the local Surgeon General and his staff to render whatever assistance he can in the brief period of these visits. This should become a definite part of the medical mission of the CAIRC Surgeon.

3. The physiological training officer is intelligent, well-informed and effective. A locally modified 16-man altitude chamber is in use. This unit is undermanned from the standpoint of technicians. However the number of personnel trained is just not large enough to justify full-time operation and assignment. Importance of this unit to the Latin American group, however, cannot be overestimated and for this reason it should, for the time being, be maintained and local arrangements can be made to insure that physiological training personnel are utilized at other duties when they are not fully occupied with physiological training.

4. Presently, there are no courses for medical technicians, flight surgeons, assistants, etc., in the Latin American schools. An attempt was made to operate such courses, but the courses had to be dropped because of lack of enrollment. It is difficult indeed to procure enlisted men for training outside the local country. This bestows a prestige which is hardly compatible with the enlisted man status in most Latin American countries. A very favorable exchange rate of pay during such training also is not consistent with the status of the enlisted man. This is a problem requiring further investigation and negotiation if we are to be of assistance in the education area.

5. Dr. Charles A. Berry discussed the current status of the USAF Man In Space effort during a one hour lecture at the base and command officers call.

B. PERU

1. Our visit to Peru was very well organized and General Souza, the Peruvian Air Force Surgeon General, and his staff were grateful for our visit and assistance. They had prepared a list of questions which they wished to discuss at a general meeting. They also prepared a list

of equipment which they felt was necessary to obtain. Some of the aeromedical equipment they desired included a 16-man altitude chamber, vision test apparatus, audiometer, litter supports and tiedown straps for aeromedical evacuation, an electroencephalograph and medical equipment for emergency treatment during aeromedical evacuation.

2. Their altitude chamber had been requested through MAG, however, a preliminary request to CAIRC was turned down. This correspondence is presently in this headquarters for review. It has been recommended that this chamber is necessary for conducting a research mission by the Peruvian Air Force, even though Dr. Hurtado now has two altitude chambers. One of these is located in Morococha and the other in Lima, however, neither is available for use by the Peruvian Air Force. Furthermore, these chambers may be removed as the contract is being terminated.

3. The Peruvian Air Force is doing excellent EEG research, thus the chamber and the EEG are badly needed for the continuation of this project.

4. In the training area, they are desirous of obtaining both primary and advance courses in aviation medicine at the School of Aviation Medicine, Gunter AFB, for two of their medical officers.

5. Several medical problems were discussed at a conference consisting of Peruvian Air Force medical officers and our group. Questions discussed involved the electroencephalograms, visual acuity standards, hemoglobinapathies and various aviation medicine administrative problems. At their request, Dr. Charles A. Berry gave an hour and a half lecture on aeromedical evaluation, the latest advances in aerospace medicine, and on the hemoglobinapathies in flying personnel.

C. CHILE

1. Dr. Fredrico Cave, the Chief of Aviation Medicine, Surgeon General's Office, spent almost the entire time of our visit with us. Dr. Cave attended the School of Aviation Medicine at Randolph AFB, and also received some proctology training in the United States. He epitomized the basic problem with all military and aviation medicine in Latin America. He has an assignment in the government hospital where he spends roughly half a day. He then works for the Air Force as Chief of Aviation Medicine for half a day, and in the evenings he conducts private office hours, makes house calls, hospital calls, etc. Even his half day Air Force assignment is not full-time aviation medicine for he must also do proctology consultations. During our visits, he frequently excused

himself to make a house or hospital call. He seemed very interested in aviation medicine and realized that he was unable to do a proficient job. He maintained central records on all fliers in the Chilean Air Force.

2. Medical problem cases that could not be solved at the local bases are referred to the Central Air Force Clinic. There was a well-equipped Air Force Hospital at Las Condes which was formerly commanded by the present Surgeon General, Marcial Baeza.

D. ARGENTINA

1. Only one flight surgeon has been trained in the United States, he attended the primary course at the School of Aviation Medicine and had just returned from lectures in aerospace medicine. The remainder of the staff had been trained in Europe, most at the Italian Institute of Aviation Medicine. They were quite aware of the activities in France and seemed to know all of the current personage of the European area in this field.

2. Commodoro Pablo Ruchelli is the Director of the Institute of Aviation and Space Medicine and the second in command is Commandante Filiberto Debarnot. Dr. Debarnot seemed very well-grounded in the field of aviation medicine. Presently, the Argentine Air Force Medical Service is under direction of a nonmedical officer.

3. The civil aviation responsibilities are given to the military by law. They conduct a course of training in aviation medicine of about eight months duration. Unfortunately, their research center is about 30 miles from Buenos Aires, and we were unable to visit it. We did however see plans for the new institute which will be located at one of the airports in Buenos Aires. This institute will have an examination, teaching and research center combined in one building. It will also have altitude chambers and a centrifudge.

4. The staff was quite interested in American publications and were grateful for the few which we left. We were given some excellent publications including the Air Force Medical Journal of which Doctor Ruchelli is the editor and Dr. Debarnot his assistant.

5. The military hospital is a large, modern building with modern equipment, however it is located in a poor part of town. The current medical director of the hospital is basically an endocrinologist and has been doing some research work concerning 17 ketosteroids in stress. The primary stress used was the isolation but they also have been compounding stresses.

6. Several comments were made concerning the lack of space medicine activities in Argentina. Nothing was hinted of rocket activities, however, 24 hours after our departure, we read of a rocket being fired in Argentina. Perhaps they were unwilling to discuss this with us prior to actual accomplishment or the medical people have no contact with this activity in Argentina.

E. URUGUAY

1. Colonel Sureda is the current Air Force Surgeon General. He attended the School of Aviation Medicine at Randolph AFB. He is the only flight surgeon in the Uruguayan Air Force interested in aerospace medicine and physiology and could discuss the topic quite intelligently. He is most anxious that all his personnel be aware of the problems involved.

2. There is a 16-man altitude chamber available in Uruguay which was purchased by the government immediately following World War II. This chamber was obviously not being used, there is really little need or use for an altitude chamber in the Uruguayan Air Force. It seems a shame to have this valuable piece of equipment wasting away.

F. BRAZIL

1. The only thing of direct interest to flight medicine was the press conference. A local reporter had good searching questions concerning the effects of jet flights on stewardesses and crew, particularly in regard to their menstrual periods, emotional responses, etc. Dr. Ove Schirrm, a German, who during World War II was in Penemunde with Von Braun, is associated with a new organization, the Santos Dumont Aviation Medicine Laboratory at Sao Paulo. Dr. Schirrm's laboratory seems well established and equipped. They are currently doing research for the civilian airlines in Brazil, but are desirous of obtaining research to do for other agencies and are most anxious to secure United States support. Dr. Schirrm will visit us in the near future to discuss this activity.

2. We visited the university hospital which has one of the most active tropical disease wards in the world. We were privileged to see four adult tetanus cases in one room and numerous cases of blastomycosis and other tropical diseases. There is an excellent tropical medicine museum which has just been completed and several tropical disease laboratories under construction.

3. A course in tropical diseases has been initiated and will be repeated yearly. This seems an excellent location for training in tropical medicine.

4. We visited an Air Force training base on the edge of Sao Paulo. There is a rescue squadron utilizing SA 16's also assigned to this base and two flight surgeons are detailed to the squadron. Their equipment and emergency procedures seemed excellent and they keep quite busy with this activity. Our tour through the small base hospital, the flight surgeon's office of the medical facility and the rescue squadron was conducted by

the base commander, who seemed thoroughly familiar with all of the activities and personnel and would be the answer to any flight surgeon's dream.

5. In Rio de Janeiro, we visited the military hospital and found that most of the medical officers on the staff, as in all Latin American countries, are specialists of one sort or another. The majority are flight surgeons and they are required to take the course in aviation medicine. None of them, however, have ever served as squadron or base flight surgeons and have merely continued to practice their particular specialty. The doctors were most cordial and several of them have had training in the United States. The hospital seems well equipped.

6. We visited the Physical Examination Center, which is located in the Air Ministry Building. This is commanded by Brigadier General Oriovaldo Lima. All initial physical examinations are done at this center for both military and civilian pilots. Annual physical examinations are performed at local bases and copies of the examination are sent to this office so that the Central Medical Record is maintained for all personnel. They have an excellent archive of records going back, in many cases, for 30 years. There are some 5,000 current records on file with a large number of retired records available. The records were examined and, while they are not presently carded, they offer an excellent source for research on such things as aging and diseases of flying personnel. General Lima is quite concerned with the apparent lower standard for civil airmen than for Air Force, particularly when they are going to fly the jets. He intends to discuss this problem at the International Cooperation Administration Meeting in April in Montreal. All problem medical cases that require consultation are also seen at this center. They do electrocardiograms beginning at age 35 and do routine electroencephalograms, including hyperventilation records and metrazol activation, if indicated. They have excellent neuropsychiatric and psychiatric sections. They do audiograms routinely every five years, but on jet pilots they do audiograms every four months. They apparently have no program for audiograms in ground crews. The Brazilian Air Force Medical Service conducts a course in aviation medicine and also provides physiological training. Their flight surgeons wear special flight surgeons wings.

APPENDIX B

MEDICAL RESEARCH

A. PERU

1. Dr. Boncalari has been conducting an interesting EEG study on all applicants for flying training. This study has been in effect since 1957 and includes metrazol activation studies. The Peruvian Air Force at present is rejecting individuals with so called positive records even though they realize that they may be turning down some normal individuals. They have found 21% positive records in applicants and 6.9% in officers. Doctor Boncalari is also associated with the newly formed Brain Institute.

2. Dr. Cabieses, Director of the Brain Institute has been working on the cocoa leaf for many years. The Incas used this leaf to great advantage with their warriors and messengers who partook of it by chewing. Doctor Cabieses found that it is not addicting, if taken orally, but is markedly so if injected. This drug is a great reliever of fatigue, consequently, this research may be of great interest to us for prolonged space flight.

B. CHILE

1. The Air Force Office of Scientific Research (AFOSR) has a research grant of $6,000 for two years with Dr. Humberto Moturam, who is located in the School of Medicine, University of Chile, Santiago. This study is on visual mechanisms. AFOSR also has a $22,000 grant for one year with Doctor Croxatto, who is located in the School of Medicine, Catholic University. These studies concern the chemistry of the brain.

2. Dr. Joaquin Luco in the Catholic University and Dr. Samuel Middleton in the University of Chile both have extremely able and alert groups of investigators in their departments and represent additional research potential in this country which may be utilized by the United States Air Force.

C. ARGENTINA

1. AFOSR has a research grant of $25,000 for one year with Professor E. de Robertis, School of Medicine, University of Argentina, Buenos Aires. This study is on the microstructure of the eye.

2. Dr. B. Haussay a Nobel Laureate in physiology and Dr. Lelior an outstanding biochemist are leaders of an independent research laboratory which is adequately equipped to carry on a USAF research project.

D. URUGUAY

1. Dr. Caldeyro, an internationally known researcher is working at the Hospitalde Clinicas. At the present time, he has an international staff working with him including a physician from New York University Medical School. Their research centers around the determination of the effectiveness of labor by some rather unique means. He places polyethelene catheters directly through the abdomenal wall into the amnitotic cavity and thus measures uterine contractions. He also places catheters in the breast and measures contractions of the mammary tissue. He had previously placed needles in the fetus for obtaining a fetal electrocardiogram, but has since been successful in obtaining a fetal electrocardiogram by placing an electrode on the mother's abdomen. He has been able to successfully damp out maternal electrocardiograms. He has a very excellent PO2 electrode that can measure fetal oxygen levels. He is most interested in the effects of minimal hypoxia. This is an area in which we are vitally interested. To further his research, he is also interested in the altitude chamber belonging to the Uruguayan Air Force which is available and which he may use in his studies.

2. AFOSR has a $4,000 two year research grant with Dr. Haus Berger from the University of Uruguay in Montevideo. Dr. Berger is making a study of the new flicker-fusion test of visual function. AFOSR also has a $10,000 one year grant with Dr. Roman Arana of the University of Uruguay. Dr. Arana is studying the neurological mechanisms of habitation. AFOSR also has a $10,000 grant for one year with Dr. C. Estable of the University of Uruguay, who is studying the microstructure of the nervous system and the neurophysiology of certain brain mechanisms.

E. BRAZIL

1. AFOSR has a $10,000 research grant for one year study with Doctor M. Coviam, who is with the Medical School at the University of Brazil. The study is on brain mechanisms in learning and conditioning. AFOSR has a $24,000 grant for one year with Dr. Carlo Chagas of the Institute of Bio-Physics in Rio de Janeiro. This is a study of the particular capabilities of the many species of electrical fishes existing in Brazil.

2. Two outstanding research teams in Sao Paulo were Dr. DeValle, Head of the Department of Bio-Chemistry and Bio-Physics in the Paulesta Medical Schools and Dr. Jurquiero, Head of the Department of Cellular Physiology in the Medical School of Sao Paulo. Both of these teams would be worthy of USAF support in the future.

3. Dr. Walter Oswaldo Krauz is doing important work in the control of bleeding and will probably submit a proposal for research to the Air Force at a later date.

APPENDIX C

CIVILIAN MEDICAL EDUCATION

The medical curriculum in Latin America since the 19th Century has generally been fixed and influenced by Western Europe (England, France, Italy and Germany). Student representatives sit on faculty selection committees and curriculum councils. The impact of student representatives had tended to upgrade the medical teaching by over-committed part-time professors. On the other hand, it has provided a useful tool for political objectives. Academic professors and teachers are rarely full-time, and clinical investigation is limited. Laboratory resources are also limited. Medical research is left to highly specialized institutes which frequently have no association with schools of medicine and no academic responsibilities for their staff. The selection of students for matriculation in tuition-free, 6-year term, state-sponsored medical schools are inadequate. The basic requirement is to be a secondary school graduate which is equivalent to our high school.

Of the first year students approximately one-fifth ultimately graduate with a degree of Doctor of Medicine. Of those who graduate less than one-third practice medicine and associate themselves with allied medical fields. The majority of the academic medical school experience opens up other avenues of service rather than medical. Dr. Ernesto Guevera one of the current political bosses in Cuba is an example of the off-brand product of medical education in Argentina. A significant trend is being manifested in state and private medical schools in Chile, Argentina, Uruguay and Brazil to require entrance examinations for admission to medical schools, limitation of the student body, upgrading the professional competence of the instructors and the employment of full-time faculty members.

Information about medical schools in the various South American countries visited follows:

A. PERU

One medical school which was established in 1808. Total enrollment is 3,000 medical students. There are 450 first year students and a graduation class of about 150. Entrance requirements are minimal. Opportunities for medical research are limited and the teaching staff is composed of inadequate part-time teachers.

B. CHILE

There are three medical schools, the University of Chile located in Santiago, established in 1833 with enrollment of 2,000 medical students; Catholic University, established in 1930 with enrollment of 150 medical students, and the University of Conception, established in 1924 with enrollment of 200 medical students.

C. ARGENTINA

There are five medical schools, two of which are located in Buenos Aires. The University of Buenos Aires, established in 1821, with an enrollment of 8,000 medical students with 400 yearly graduates. The University National de Laplata, established in 1897. The University of National de Cordoba, located in Cordoba, established in 1897, with an enrollment of 2,000 medical students with 200 yearly graduates. Santa Fe has one medical school which is the University National Del Litoral, with an enrollment of 2,000 medical students with 200 yearly graduates. Mendosa has one medical school with only 50 students per class, here there is a good selection of medical students.

D. URUGUAY

There is one medical school located in Montevideo. The Facutad de Medicina de la Universidad de la Republica, established in 1876, with an enrollment of 2,000 medical students with 80 graduates. There is no medical student selection, anyone who applies will be accepted.

E. BRAZIL

Brazil has approximately 12 medical schools, with a total of 6,000 students. These schools graduate a total of 200 graduates yearly.

APPENDIX D

MEDICAL PERSONALITIES

A. PERU

1. Dr. Alberto Hurtado, Dean of the Medical School is internationally known for his work on physiological effects of altitude.

2. Dr. Fernando Cabieses, a civilian military contract neurosurgeon, an associate professor in the medical school is a Philadelphia-trained Peruvian. He has 75 excellent publications in recognized scientific journals. Dr. Cabieses has achieved support to establish a medical research institution in the Central Military Hospital. This medical research institution will be jointly sponsored by the Army, Navy and Air Force. The military hospital was selected because it was considered to be better supported by the government than the medical school. The first research institute to be established is the Instituto Militar de Investigaciases Cerebrales, although the concept of military-sponsored medical research is accepted, there is reluctance to adequately budget local funds for its support.

3. Dr. Rubello de Costro Arvello, civilian contract specialist in physical medicine and rehabilitation for the Central Military Hospital has generated considerable interest in this specialty. She is a graduate student of New York University working under Dr. Howard Rusk. Dr. Costro is interested in sending selected military physicians to New York University for training as physiatrists. She was advised that the project should be submitted to the USAF Military Advisory Group (MAG) in order that primary budgetary support might be established. This advise has been transmitted in a letter to Dr. Costro, copies of which were also sent to the Surgeon, Caribbean Air Command (CAIRC) and Chief of MAG in Lima, Peru.

4. Dr. Charles L. Williams, International Cooperation Administration (ICA), United States Operations Mission is accomplishing a locally appreciated service in upgrading the Peruvian Public Health Service in general and specifically in biometrics. He had established urban registration areas for births, deaths, morbidity, and mortality reporting which cover about one-fifth of the estimated population in Peru.

B. ARGENTINA

Dr. Bernaido Haussay, Nobel Laureate provides continued stimulation to physicians for work in endocrimology and intermediate matabolism. Dr. Haussay resigned from the medical school faculty more than 15 years ago, he was reported as dissatisfied with medical school selection of students. A student shot at him in the class room. Dr. Haussay works in a private research laboratory Instituto de Bilogiae Medicina Experimental.

C. URUGUAY

1. Dr. Ramon Arana-Iniguieguez is a neurosurgeon and neurophysiologist who was trained at the University of Southern California. He is presently doing work on the neurophysical mechanisms of habitation. Dr. Arana is eager to accept foreign exchange medical Fellows from the United States.

2. Dr. Roberto Caldeyro Barcia is an outstanding obstetrician and gynecologist who works in the field of physiologic obstetrics. He is well financed by the Macy Foundation and the National Institutes of Health (NIH). He serves on a fellowship selection board for the Department of Health, Education and Welfare (HEW) and NIH Fellows. He has four foreign exchange Fellows working in a laboratory from the United States and is eager to accept United States foreign exchange Fellows.

3. Dr. Clemente Estable is director of a highly productive independent basic science laboratory, Instituto de Investigacion de Ciencias Biologica. This laboratory gained status with the significant grant from the Rockefeller Foundation about 30 years ago. Although, not a part of the medical school, it employs many medical students, provides inspiration and leadership in basic medical research. Dr. Estable is a highly competent saintly and venerated neurophysiologist and molecular-biologist who has a large competent staff. Dr. J. Roberto Sotela is a ultracellular physiologist and electronmicrosopist who works for the Institute. United States exchange Fellows would be acceptable in this Laboratory.

APPENDIX E

CLINICAL AND LABORATORY MEDICINE

A. PANAMA

1. Gorgas Hospital is a 463-bed general hospital with a patient occupancy of 272 as of 22 January 1961. This hospital is managed by an officer assigned from the Office of the Surgeon General, United States Army. The hospital is a unit of the Panama Canal Company which establishes the over-all budget and administrative policies. Plans have been submitted to replace the present hospital with a modern 300-bed, air conditioned hospital. The general morale and rapport of the patients and the medical service appeared satisfactory. Those who knew this hospital prior to World War II recognized a loss of professional stature. There is minimal interest in clinical investigation. The stress on social economic differences between comparably qualified and equally competent professional personnel has produced a morale problem. Well-qualified civilian Panamanian physicians are the lowest paid group, whereas civil service Canal Zone physician employees are the best paid and enjoy the generous fringe benefits.

2. The Gorgas Hospital professional staff has virtually no contact with the Panamanian Medical Society or the Medical School except through consultant services. The hospital care for all federal employees, including members and dependents of the uniformed services, was established by Public Law 405, in 1954. This law closed all other military hospitals.

3. A visit to Gorgas Hospital grew out of a portion of the briefing given by the Caribbean Air Command (CAIRC) Surgeon regarding patient care in the Canal Zone. Some questions raised were the prolonged stay of the patients in the hospital, the cost of hospitalizing a patient in the Canal Zone hospitals, and the fact that two American Air Force doctors assigned to the Canal Zone hospital, one at Gorgas and one at Cocoa Sola, were not satisfactorily setup for the individuals concerned. A visit to the Commander of the Gorgas Hospital resulted in a frank discussion of these problems. The general output of the Gorgas Hospital and the Canal Zone hospitals from a professional standpoint leaves something to be desired. Perhaps, one of the problems is the pay differential between the civilian physicians and the military. A number of years ago the military physicians serving at Gorgas Hospital received a pay differential for this service which made Gorgas one of the choice assignments within the Army medical system, however, this has been discontinued. Perhaps reinstatement of this policy, if possible under existing laws or directives, might be beneficial in attracting and making this assignment more desirable to specialists within the military services.

4. Dr. Townsend visited with Dr. Michaelson, Assistant Chief of the Laboratory Services at Gorgas Hospital and a number of his residents. Gorgas Hospital is not sending the material to the Armed Forces Institute of Pathology (AFIP) to the extent that they would like to and to the extent that AFIP would like to receive this material. Dr. Townsend explained the policies to Dr. Michaelson and it is hoped that in the future more material can be sent to AFIP. Results of this discussion of course will have to wait for a time.

5. The Panamanian Hospital at Chorrea was fairly well-equipped, this is located about 20 miles northwest of the Canal Zone. It is a hospital extensively designed to take care of tubercular patients, however, it caters to all types of chest diseases. It has a bed capacity of 256 and was practically filled at the time of our visit. There is a staff of 8 doctors working on a part-time basis. Dr. Emanuel Roy, Jr., age 34, a 1958 Panamanian Medical School graduate, was formerly a University of California Los Angeles (UCLA) undergraduate student and a letterman in soccer, was on duty. He desires to come to the United States to do graduate work in plastic surgery. The operating budget for the hospital is half a million dollars per annum. This works out to be $6.50 per day per patient. The hospital is clean, well ordered, and apparently operated in an effective manner.

6. As far as the Air Force is concerned every effort should be made to make the present hospitalization system within the Canal Zone work more satisfactory. An effort should be made to look into the possibility of restoration of the pay differential for military physicians in the Gorgas Hospital which existed in previous years.

B. CHILE

1. The Chilean Air Force, Santiago Clinic and Hospital are fairly well appointed and well-staffed by military and civilian contract physicians. The downtown clinic averages more than 200 patients per day, the surburban places 50 bed Air Force hospital, formerly a convent, is too small. Project is under study for an additional wing to include a more adequate pathology department. An internist reported last year that he saw 18 infants delivered in this hospital with erythroblastosis fetalis, the incidence of RH positive blood of mother's was stated to be approximately 70%.

2. An inquiry was made regarding the activities of the nuclear school of medicine, Conception, Chile. Apparently, this school is going ahead and has not been deterred or at least stopped in its activities by the earthquake last year in the area. However, no further details were learned of this school.

3. Dr. Townsend was particularly impressed by training and background of a number of specialists who were assigned to the hospitals in Santiago. One man in particular, Dr. Alberto Sporerer is a cardiovascular surgeon

who received his training in the United States. Dr. Sporerer can well benefit by being permitted to come to the United States for a period of 6 weeks or more to study the heart collection at AFIP. This collection of cardiovascular diseases is probably the largest in the world and is being increasingly important to cardiovascular surgeons who study them in order to see the various heart conditions and leisons that they encounter in active surgical practice.

C. ARGENTINA

The Surgeon General of the Argentine Air Force recently retired. A non-physician administrator Commodoro Ruben E. Fio is the interim Surgeon General. His administration of the medical service appears to be very much appreciated by his professional associates. A deputy surgeon general and four directors are carrying professional responsibilities; these are Commodoro E. Amilcar E. Arguelles, Deputy Surgeon General; Commodoro D. Pablo B. A. Ruchelli, Director of Aviation Medicine Division; Commodoro D. Isidoro V. Ortega, Director of the Air Force Hospital; Commodoro Juan Logascio, Pathologist.

D. URUGUAY

Military medicine in Uruguay is largely a civilian physician responsibility. Nonphysician administrator, Inspector General Conrado A. Saex coordinates medical problems under the over-all leadership of the Ministry of Defense, Brigadier General Cipriano Olivera. The national interest in military affairs from an active participation standpoint is minimal.

E. BRAZIL

1. The Cancer Research Institute in Sao Paulo, directed by Dr. Antonio Penedente was visited. Other members of the staff included Dr. Tolorni, the pathologist and Mr. Harold R. Ley, the financial advisor. Dr. Penedente indicated a desire to apply for an Air Force grant to support his research in cancer.

2. A visit was made to the Butantan Institute in Sao Paulo which has one of the worlds largest reptile collection and is a world renown reptile laboratory. We were conducted through the Institute by Dr. Hoge.

3. At Rio de Janeiro, the Air Ministry was visited where the group attended a class being conducted in the use of ejection seats. Here General Niess on behalf of the AFIP presented to the Surgeon General of the Brazilian Air Force a set of fascicles of Tumor Pathology, that are printed at AFIP. Previously sets of these fascicles had been given to the Surgeon's General of the Chilean Air Force and the Argentine Air Force.

4. It is recommended that Dr. Aurelino Ferreira or some other pathologist assigned to the Brazilian Air Force be given the opportunity to come to the United States to spend some time. Preferably three months or more at the AFIP would permit a better understanding by the Brazilian Air Force pathologists of our methods of operating laboratories in the United States and also result in better liaison in scientific areas.

APPENDIX F

DENTAL SERVICE

A. PANAMA

The Dental Service appears to be providing satisfactory dental care for the military personnel and their dependents. Five officers are authorized and assigned. One Major and four Captains are authorized. The grade of Lt Colonel is most desirable for the Chief of Dental Service in view of the responsibilities entailed, which include the base dental service, the command duties, and the advisory function relating to dental matters of the Military Assistance Program (MAP) in Latin American countries.

There are six dental operating rooms, which meet the base minimum requirements. The clinic is located in a permanent dispensary building. Air conditioning and lighting are adequate.

The dental laboratory work is accomplished locally, except that partial denture castings are obtained from Andrews AFB.

The required precautionary measures have been taken to reduce X-ray radiation, and exposure to radiation is monitored with the film badge. The professional care rendered appears to be of a high standard. Difficult oral surgery cases are referred to Gorgas Hospital. Such referrals usually are necessary only when hospitalization is required.

Seventy-five per cent of the military personnel are in Class I. A waiting list is maintained for dependents. At present, 250 names are on the list. The waiting period is approximately three months.

One airman performs dental hygienist duties on a full-time basis. The base water supply is fluoridated. The fluorine level is maintained at .9 ppm.

The clinic appears to be well managed. Dental supplies and equipment are adequate. Administrative procedures are in accordance with current directives, except for a file of AF Form 521 for accountability of artificial teeth, facings, and backings has not been established. The forms are on requisition.

In addition to the dental service provided the personnel at Albrook AFB, an itinerant dental service is provided USAF personnel assigned to Air Attaches, Missions and Military Assistance Advisory Groups (MAAG) at eighteen different locations in South America. This is accomplished on TDY status. Each location is visited once or twice each year. The standard dental field equipment is used for this purpose. One-hundred and three days were spent on this task in 1960. The service provided constitutes only a fraction of the care required. A substantial amount of

dental care must be obtained from civilian dentists in these foreign countries. Dental care for military personnel is paid for with Air Force funds under the provisions of AFR 160-53. Military personnel must pay for dental care obtained from civilian dentists for their dependents.

It is considered desirable to expand the dental care program provided from Albrook AFB.

Colonel Crystal commented most enthusiastically regarding the training being conducted for personnel of Latin American countries by the Latin American School. The school is located at Albrook AFB and functions directly under Caribbean Air Command (CAIRC). From 200-300 students from various countries are in attendance at all times, participating in courses of two to five months duration. All types of training needed in an Air Force is given.

Colonel Crystal feels that this school serves a most beneficial purpose, not only because of the training that is provided but because of the friendship and good will that is established between the United States and Latin American countries, as well as among the various South American countries.

Colonel Crystal is concerned about the fact that only emergency dental care may be provided these students in an Air Force medical facility. He realizes that dental officer staffing at Albrook AFB is for military personnel, and that the dental staff is already carrying a very heavy workload because of the dependent population for whom limited routine dental care is provided. The dental health of the foreign students is reported to be of a low standard and their dental requirements are extensive.

Colonel Crystal feels that the foreign students have been most appreciative for all dental care they received and that much can be accomplished to further cement good relationships with these countries by providing these students somewhat more than emergency care. Possibilities of accomplishing this will be explored.

The visit with Dr. Morales, President of the Panama Dental Association, was most cordial. He is a graduate of a United States dental school and has obtained graduate work in orthodontia at Harvard. His practice is limited to orthodontia. He stated that the relationship between the Armed Forces dental officers and the Panamanian dentists is excellent.

The Armed Forces dental officers are organized in the Pan Canal Dental Society. They conduct monthly professional meetings. These meetings are separate from those conducted by the Panama Dental Society, because meetings of the latter are conducted in the Spanish language.

A joint Panama Dental Society and Pan Canal Dental Society Congress is held each year. The next Congress will be held February 3-4, 1961.

A Panamanian Dental Congress is planned for February 1962. This Congress will be sponsored by the Panama Dental Society. Dentists in Central and South America are to be invited. Dr. Morales expects 500 to 600 dentists to attend. He expressed the hope that Armed Forces dental officers from the United States might be obtained to participate.

Dr. Morales indicated that Panamanian dentists have comparatively few contacts with the Canal Zone dentists. They are employed by the Panama Canal Company. Of these, four are employed at Gorgas Hospital and three at Coco Solo Hospital. In these clinics dental care is provided for Canal Zone employees, Panamanians working for the Panama Canal Company and their dependents.

Dr. Morales indicated that Panamanian dentist have barely any contact with so-called "Contract Dentists", of which there are six on the Pacific side and two on the Atlantic side of the Canal Zone. They are United States dentists brought to the Canal Zone by the Panama Canal Company. They conduct a private practice in the Canal Zone, without a Panamanian license, charging their patients with the normal fee. The Panama Dental Society frowns upon this practice because these dentists threat Panamanians and United States civilians who would otherwise seek dental care from Panamanian dentists, and therefore are competing with the Panamanian dentists. Present indications are that these dentists will not be replaced when they return to the United States.

B. PERU

In a round table discussion among members of the Peruvian Air Force Medical Service and the team, the needs of the Peruvian Air Force Dental Service were mentioned. They expressed a need for training in dental staff duties, oral surgery and orthodontia. They expressed a need for a mobile dental unit, five air turbine units, and dental laboratory equipment. These requirements, and others, were discussed with Commander Ortiz following the conference.

Commander Ortiz is assigned to the Commando Division, Surgeon General's Office, Peruvian Air Force, as Air Force Dental Surgeon. There are eighteen additional dental officers assigned at eight bases. They have one dentist for approximately five-hundred military personnel. They are graduates of the Lima Dental School. All dentists work for the Air Force four hours per day. They have a private practice which is necessary to supplement their income. Some dentists know the English language in that they read and write English. They speak and understand English with great difficulty.

Commander Ortiz personally desires to attend the USAF Dental Staff Officers Course to help him develop an efficient dental service. They have a copy of AFM 160-13, Dental Administrative and Technical Procedures, dated July 1955, and a copy of AF Form 309, Dental Health Record. This form has been duplicated except for translation of the written matter into Spanish,

and is in use in the Peruvian Air Force. Examination and treatment are recorded as prescribed in AFM 160-13. The aim of Commander Ortiz is to pattern the Peruvian Air Force Dental Service after that of the USAF Dental Service.

The Peruvian Air Force Dental Service has no dental specialists. They have need for an Oral Surgeon and Prosthodontist. They would like to obtain training in orthodontia because they provide dental care for dependents. They provide prosthetic service for military personnel and, from a military standpoint, their need for training in dental prosthetics is actually greater than training in orthodontia. They are most anxious to attend the USAF Postgraduate General Dentistry Course.

No periodicals are being received from the United States. These would be very beneficial as they have dental officers that know the English language sufficiently well to understand and translate these publications.

The dental equipment available is of the type commonly employed in the early part of the 20th Century. Dental units are of the Ritter tri-dent type. These are incomplete because replacement parts are not available. Some of the dentists must work with field equipment. Dental laboratory equipment is almost nonexistent.

In order to provide training that would be most beneficial to the dental service, it is recommended that training be provided in the following priority:

1. Dental Staff Officers Course
2. Postgraduate Course in General Dentistry
3. OJT in Oral Surgery at an Air Force Base in the United States
4. OJT in Dental Prosthetics at an Air Force Base in the United States.

It is recommended that the following equipment be made available:

1. Dental operating units, complete with motor and light
2. Dental laboratory equipment
3. Field Dental Operating Unit (substituted for the mobile dental trailer)
4. Dental air turbine units.

It would be desirable that dental officers who travel to the United States for professional training also attend the Dental Staff Officers Course in order to provide training in both the professional and administrative areas.

All dental officers attending courses in the United States should first attend a language course in order that they will learn to understand and speak the English language well enough to comprehend what is being taught.

C. CHILE

The Chilean Air Force Dental Service appeared to be well-staffed and equipped to carry out its mission. Thirty-seven dentists, including eighteen officers and nineteen civilian dentists, provide routine dental care for military personnel and their dependents. All dentists work for the Air Force only four hours per day. They conduct a private practice to supplement their income.

The dentists generally know the English language sufficiently well to read and write it. They speak and understand spoken English with difficulty, except for two officers who have had postgraduate training in the United States.

The dental clinics appear to be well-equipped. Ritter Model G type 3 dental units are in use. Most clinics have a small dental laboratory. The laboratory at the Chilean Air Force Clinic in Santiago is equipped with chrome-cobalt equipment and provides vitallium castings for all bases. They have fifteen air turbine units.

The dental service has a specialist in Radiology, Maxillofacial Surgery, Exodontia, Periodontia and Orthodontia. Refresher or postgraduate training in General Dentistry is being sought. Training in dental prosthetics would be beneficial. Two officers attended advance courses in General Dentistry in the United States in 1955. They value the training received most highly.

United States Dental publications received include the Journal of the American Dental Association, Oral Digest and Oral Hygiene. The Journal of Oral Hygiene is printed in Spanish. There is a strong desire to receive United States publications such as the American Journal of Periodontology, Prosthetic and Oral Surgery.

Dental officers are cognizant of flying hazards associated with sequelae of dental treatment and medications, and coordinate these matters with the flight surgeon.

No effort is made in the field of preventive dentistry and no dental research is conducted within the dental service. A civilian research project has been in progress for four years to determine the effectiveness of water fluoridation.

Chile has three dental schools, located in Santiago, Valporaiso and Conception, which offer a five year course. There are approximately 2,000 dentists in Chile for a population of 9,000,000 people or one dentist for about 4,500 population.

It is recommended that the USAF Postgraduate Course in General Dentistry and the Dental Staff Officers Course be made available to dental officers of the Air Force of Chile. Prior attendance at a language course is desirable because Chilean dentists have a limited knowledge of the English language.

D. ARGENTINA

Vice Commodoro Torcuato Lombardi, Head of Dental Department, Argentine Air Force, was on leave and was not available. Discussions were held with Commander Trotta and Captain Jiminez.

The dental service has forty-five dentists. Routine care is provided military personnel and dependents, including orthodontia.

The dentists perform five hours in military clinics. All dentists conduct a private practice in addition to their military duty.

The Air Force Dental Service has a number of specialists, including two orthodontists, five posthodontists, two maxillofacial surgeons and two periodontists. All are assigned to the Central Aeronautical Hospital in Santiago. Difficult cases, of all types, are referred to this Hospital from other bases.

Dental facilities are equipped with dental units which are an Argentine copy of a Ritter unit made in the United States. The units are reasonably new and function satisfactorily. One air turbine unit is in use. Auxiliary equipment meets minimum requirements. Because of an Argentine - United States agreement, material cannot be made available through the MAP.

The policy regarding dental specialty training in Argentina appears to have merit. A dentist must have practiced general dentistry for five years to obtain a thorough background in general dentistry before he may be admitted for specialty training. Two years of graduate training are required to be classified as a specialist. There are five dental schools in Argentina and postgraduate training in the specialties is available.

Commander Trotta feels that specialists available meet the requirements of the service, particularly since all bases, except the Central Aeronautical Hospital, have only a small dental staff. However, further training in general dentistry for general practitioners is desirable. Only two dentists know the English language well. If training is provided in the United States, it would in all probability, be preceded by a course in English.

There is no evidence of a preventive dentistry program. No research is being accomplished.

Commander Trotta indicated that dentists are aware of the flying hazards from certain dental conditions and they coordinate with the flight surgeon on these matters.

Of the various dental publications, only the Journal of the American Dental Association and Oral Hygiene are received. Purchase of books is limited to three per year because of the limitation of dollar allocations. The dentists are anxious to receive dental publications from the United States.

The dental laboratory at the Central Aeronautical Hospital provides laboratory service for the bases in the vicinity of Buenos Aires. Ticonium castings are obtained from a civilian laboratory. At other bases, prosthetic appliances are obtained from civilian dentists through the Argentina Social Aid Program, which includes medicine, dentistry and pharmacy. All military personnel pay a monthly fee towards the program, the fee being based on the number of people in the family.

It is recommended that the USAF Postgraduate Course in General Dentistry and the Dental Staff Officers Course be made available to dental officers of the Air Force of Argentina. Prior attendance at a language course is desirable since dentists of the Argentine Air Force have only a limited knowledge of the English language.

E. URUGUAY

The Uruguayan Air Force does not have its own medical service. There is one medical service for the Armed Forces. One medical service provides professional care for the Army, Navy and Air Force. Medical service personnel are commissioned in the Army and the Army administers the medical service.

There are four dentists on duty with the Air Force, one at each of four bases. A dentist was not on duty at the Air Force Base near Montevideo, hence this base was not visited. A visit was made at the Military Hospital near Montevideo.

The military dental service has thirty-two dentists and several civilian contract dentists. They provide routine dental care for 120,000 military personnel and dependents. All dentists perform duty on a part-time basis and have a private practice in addition.

The clinic at the military hospital is poorly equipped. It has six prewar Japanese dental units which require considerable maintenance. Auxiliary equipment is almost nonexistent. There is no dental laboratory service. Patients desiring a prosthetic appliance must visit a civilian dentist and pay his fee.

There are no specialists in the dental service except a dental radiologist. Difficult cases are referred to civilian dental specialists. The Dental School, University of Uruguay, offers no postgraduate courses. Training following graduation from dental school is of the OJT type except for training obtained in other countries.

No foreign publications are being received by the dental service. No research is being conducted. No effort is made to conduct a program in preventive dentistry.

Aviation dentistry was discussed with Colonel Sureda. He is the only flight surgeon in the Uruguayan Air Force and can perform his duties only with difficulty since there are four Air Bases. He feels the dentists should take required administrative action to temporarily remove personnel for flying status when indicated by an existing dental condition.

Dr. Maran feels the greatest need of the Uruguayan Dental Service is dental equipment. The dental units are rapidly becoming nonfunctional. Other dental equipment is needed. Laboratory equipment is desired in order that a prosthetic service may be developed. Dr. Maran feels that advanced training in general dentistry is most desirable. However, training in the dental specialties also is desirable in order that a complete service may be provided at least at the Military Hospital in Montevideo.

Lt Colonel Jaume served as interpreter to obtain the above information.

It is recommended that dental units complete with motor and light and dental laboratory equipment be made available to the Uruguayan Air Force; and that postgraduate training in general dentistry be made available. The Dental Staff Officers Course may also be made available in order to provide training in dental administration and training. Prior attendance at a language school is desirable since dentists in the Uruguayan dental service have very little knowledge of the English language.

The Dental School, University of Uruguay, was visited. The Dean and Dr. Turell were most cordial and volunteered a tour of the building.

The school offers a five year course. Two years pre-dental are required. Postgraduate courses are not offered but are being planned for. The school has an enrollment of 620 students. There are in excess of 100 dental units of which approximately 70% are recent Ritter and Seaman units. The remainder are very old. Other equipment is very meager and old.

The dental library appears to be very good. The school subscribes to an excellent selection of United States dental publications.

Dr. Pita is doing research in dental materials and Dr. Turell is doing research in dental caries. Inadequate funds, materials, and equipment hamper these activities considerably. It was suggested that an attempt be made to obtain equipment urgently needed through the International Cooperation Administration (ICA).

Dr. Turell has had training in general dentistry and preventive dentistry at Northwestern University and was awarded a MS degree in dental sciences in 1950. He was a Fellow in Operative Dentistry of the O. R. Kellogg Foundation. He is chairman of the Joint Uruguay-Argentina Dental Congress to be held in Montevideo, 12-17 November 1961.

F. BRAZIL

The Medical Service of the Brazilian Air Force does not include a Dental Corps and there are no commissioned dental officers. Present plans provide for commissioning approximately 50 dentists in July 1961. At present, dental service is being provided for 35,000 military personnel and their dependents by 60 civilian contract dentists who perform duty on a half time basis in dental clinics of the medical facilities and all dentists have a private practice to supplement their income.

Dr. Paraizo has considerable seniority as a civilian contract dentist and will participate in the establishment of the Dental Corps. However, since he has a very successful private practice, he does not plan to accept a commission. He requested a copy of directives pertaining to the USAF Dental Corps. He hopes to use the directives as a guide in establishing policies and procedures for the Brazilian Air Force Dental Service.

The dental clinics are equipped with American dental units that are not new but function satisfactory. Auxiliary equipment meets minimum requirements. Most of the bases do not have a dental laboratory and, those that have one, are very poorly equipped. Laboratory work is obtained almost entirely from civilian laboratories and paid for by the patient. Dental laboratory equipment is desired in order that a laboratory service may be developed.

Two dentists have concentrated their efforts in a dental specialty - one in oral surgery and the other in ondodontia. Other than these, there are no specialists. Advanced training in general dentistry would prove most valuable in the immediate future, followed by training in dental specialties.

No effort is being made to conduct a program in preventive dentistry and research is not being performed.

It is recommended that dental laboratory equipment be made available to the Brazilian Air Force, and that postgraduate training in general dentistry and the Dental Staff Officers Course be made available, followed by specialty training. Prior attendance at a language school is desirable since dentists on duty with the Brazilian Air Force have only a limited knowledge of the English language.

There are 37 dental schools in Brazil, most of which are private schools. There is a State school in Sao Paulo and in Rio de Janeiro. The dental school course consists of three years pre-dental and four years dental training. Students enter pre-dental training after nine years of elementary training. Sixteen years are required to obtain a dental degree compared to eighteen years in the United States.

The dental staff appear to have limited training. Very few have had postgraduate training. Nearly all instructors are associated with the schools on a part-time basis. Dentists accept teaching positions largely because of their personal interest in a particular specialty.

Students are not required to pay tuition. Students are admitted on the basis of previous scholastic achievement and on entrance examination. Patients who receive treatment are required to pay a small fee for materials used.

Professor Chryso Fontes, Dean of Dental School, University of Brazil, Rio de Janeiro, was most cordial in offering a tour of his facility. The school has 250 students enrolled. There are 80 instructors of which

approximately 6 are full-time professors. Only one instructor has received training in the United States. His training was in Orthodontia.

This school offers postgraduate training in orthodontia and pedodontia. This appears to emphasize a strong tendency towards children's dentistry.

Research is conducted in microbiology and metalurgy. The library receives many periodicals from the United States.

As a whole, the school appeared to be equipped satisfactorily. Of 60 dental units, the majority were of United States manufacture, the remainder were a Brazilian product. They appeared to be reasonably new.

The absence of postgraduate courses in oral surgery, prosthodontia and periodontia points up the fact that dentists in general have little opportunity to improve their knowledge and skill once they have graduated from dental school.

Professor Correa A. Adamaster is Dean of the Dental School, University of Brazil, Sao Paulo. He was not available. Personnel contacted included Dr. Paulino Guimaraes, Chief of Dental Clinic Department (which includes operational dentistry, periodontia, endodontia and minor surgery) and Dr. J. P. Leite, head of the periodontia section. Dr. Guimaraes obtained postgraduate training in endodontia at the University of Chicago and the University of Pennsylvania in 1949.

The school appears to be equipped satisfactorily. Dental units are of Brazilian manufacture. It has excellent bacteriology, biochemistry and dental materials laboratories. Research is being done to determine the relationship between fluorine injection and deposit of fluorine in bones of rats. Also, the effect on dental caries incidence is being noted. The fluorine is added to salt. This project could prove to be most valuable from a dental caries standpoint.

Graduate training is offered in dental materials, periodontia, dental anatomy, histology and orthodontia.

Dr. Guimaraes is concerned about the fact that the training of his staff is too limited. Very few have had postgraduate training. He is most anxious that training be obtained in the United States in various dental specialties and in general dentistry. It was suggested that an attempt be made to obtain such training through the ICA.

APPENDIX G

VETERINARY SERVICE

A. PANAMA

A very satisfactory veterinary service is being provided at Albrook AFB. One officer is authorized and assigned and functions as a base veterinarian as well as advisor to the Surgeon, Caribbean Air Command (CAIRC). In addition, he provides support for USAF Missions in Latin America.

Subsistence comes primarily from ConUS, however, there is limited local procurement. Inspection requires diplomatic coordination between USARCARIB, Pan-Canal, and USAF personnel. The program is effective and a sound inspection program is functioning at Albrook AFB.

In addition to subsistence inspection, the veterinary officer also provides environmental health support and a zoonoses control program. Both are essential to an effective preventive medicine program in this area and are being effectively conducted.

Of particular note was the initiative demonstrated by the veterinary officer in providing support for USAF Missions. At the present time a survey and evaluation of milk and water supplies is being instigated which should be an important contribution to the health program for these activities (See Atch #1).

B. PERU

While metropolitan areas of Peru maintain a very acceptable standard of housing and facilities in most areas, the quality observed is superficial from a health standpoint. Water supplies cannot be considered safe for human consumption and should definitely be boiled and filtered. Laboratory analyses reviewed no chlorine residual indicating the possible inadequacy of water safety.

Milk supplies are not properly pasteurized, subjecting personnel to the hazards of tuberculosis, brucellosis and other milk-borne diseases, and the adequate processing of ice cream is questionable.

Meat supplies for USAF Mission personnel are available from the Canal Zone. However, for the general populus local supplies are definitely low in quality and must be carefully washed, trimmed and thoroughly cooked because of no or inadequate inspection.

Fruits and vegetables are of good quality, but because of contamination should be thoroughly scrubbed and disinfected prior to consumption.

Because of the rather wide spread existence of zoonotic diseases, a veterinary public health program should be considered as essential part of the total public health program. At present only a sporadic service is provided to Mission personnel which cannot be considered satisfactory.

C. CHILE

Sanitary standards in areas visited left much to be desired. Water supplies cannot be considered safe for human consumption and milk supplies were not pasteurized. There was no effective control of zoonotic diseases observed.

It was obvious that a basic need in this country is an effective health program aimed at prevention and control of disease and health hazards. Assistance in such an endeavor would be a valuable contribution to the progress of Chile.

D. ARGENTINA

While environmental health standards were much higher in this country than others that were visited, they must still be considered sub-standard. While there was a good supply of excellent beef of good sanitary quality, there is also an abundance of meats receiving no inspection or processed under unacceptable conditions. An excellent selection of fruits and vegetables was available, but all non-peelable items should be thoroughly scrubbed and disinfected prior to consumption. Milk supplies cannot be considered safe and water should be boiled as assurance against disease. As in other South American countries, the control of zoonotic diseases leaves much to be desired and is not emphasized as a major part of the health program. As a result these diseases exist in the native human population, the incidence of which would be totally unacceptable in this country.

E. URUGUAY

A surprisingly high standard of environmental sanitation was observed. An investigation of local water and milk supplies revealed that, in larger metropolitan areas, they could be considered safe for human consumption. Markets in cities were reasonably clean and acceptable.

The problem of control of animal diseases existed, and present programs can only be considered as unsatisfactory. Rabies vaccine is of dubious quality and cannot be considered acceptable for an effective control program.

F. BRAZIL

While a dynamic, progressive country was observed, emphasis was obviously being placed on material progress to the detriment of such important factors as an acceptable health program for the entire country. Sanitary standards for food, milk and water leave much to be desired in most instances and in many areas are totally lacking. The need for such programs was certainly recognized, but neither the trained personnel or facilities are available to cope with the magnitude of the problem which exists.

1 Atch
Mission Milk and Water Analysis
Record Work Sheet

5700TH USAF DISPENSARY, CAIRC
UNITED STATES AIR FORCE
Albrook Air Force Base, Canal Zone
Office of the Veterinarian

MISSION MILK AND WATER ANALYSIS RECORD WORK SHEET
(To be completed by Mission personnel submitting samples)

(PLEASE PRINT)

DATE: _____

MISSION TO: _____

NAME: _____ RANK: _____ BRANCH OF SERVICE: _____

ADDRESS: _____ PHONE NR. _____

NUMBER OF CHILDREN: _____ AGES: _____

NAME OF CARNICERIA UTILIZED: _____

NAME OF VEGETABLE AND FRUIT SOURCE: _____

BOTTLED MILK SAMPLE SUBMITTED? YES ___ NO _____ BRAND NAME: _____

IS THIS MILK ADVERTISED AS PASTEURIZED? YES ___ NO ___ UNKNOWN _____

****

FOR LABORATORY USE ONLY

BOTTLED MILK SAMPLE . . . . . SCHARER TEST UNITS _____

. . . . . SPECIFIC GRAVITY _____

. . . . . SEDIMENT _____

HOME PASTEURIZED SAMPLE . . . . . SCHARER TEST UNITS _____

WATER SAMPLE . . . . . CHLORINE RESIDUAL__ PPM__

. . . . . AMOEBA _____

_____
(Signature of Laboratory Technician)

APPENDIX H

RESUME OF RECOMMENDATIONS

A. General

1. From a medical view, the effectiveness of the Missions/Military Assistance Advisory Groups (MAAG) personnel could be increased by including a block of hours on medical problems and objectives as part of the curriculum at the Military Assistance Institute (MAI) in addition to providing language training and Military Assistance Program (MAP) indoctrination.

2. There is a need for a few full-time aerospace medicine positions within the Air Forces in each of the countries visited and efforts should be directed toward having the Air Forces of these countries establish these positions.

3. Many of the countries visited requested assignments of a USAF flight surgeon advisor. Our experience has been that flight surgeons so assigned and are used as general practitioners by all the North Americans in the area and little time is left for the primary mission of advising. Therefore, it would be more advantageous to provide a travelling advisor who would visit these countries at stated intervals and have no other function then providing liaison with these countries on aerospace medicine matters. Full-time advisors are not needed as the Air Forces are small with the exception possibly of Argentina and Brazil. In these countries consideration should be given for some type of an exchange program.

4. Several countries requested altitude chambers. Procurement of these chambers through MAP should be investigated.

5. There is a need for training some enlisted technicians, aerospace medicine technicians, medical technicians, physiological technicians, etc. We should explore setting up a medical training center at Ramey AFB, Puerto Rico. The hospital there could be used and the Latin Americans would not feel out of place.

6. The present physiological training facility at Albrook AFB should be maintained for a tie with Latin America even though it is realized that this physiological training unit and technicians would not be kept busy training full-time.

7. Preventive medicine capabilities should be encouraged within the Air Force Medical Service of the South American countries. The strengthening of the preventive medicine staff at the Caribbean Air Command (CAIRC) would enable us to provide greater assistance. The training of qualified personnel from these countries should be encouraged and the courses available at Gunter AFB could be utilized. USAF Medical Service publications

on preventive medicine should be distributed to the USAF Mission in South America who in turn could send copies to the Surgeons General of the Air Forces of each country.

8. Mutual exchange assignment of medical service personnel should be encouraged. This approach will counteract the onus of the big brother approach which is generally resented. Nonphysicians should be utilized to the greatest extent in such a program, because physicians are diverted from the primary purposes of their assignment by demands from the local United States personnel and their dependents for medical care.

9. Additional staff capabilities should be provided the CAIRC Surgeon. A Command Veterinarian, field grade, skilled in diplomacy and fluent in Spanish and assisted by a qualified senior veterinary technician should exist as a separate entity from the Base Veterinarian's Office.

10. Postgraduate training is desired by the dentists in the Air Forces of all South American countries visited. This training could be made available in USAF facilities. Participation of foreign dental officers in postgraduate courses in general dentistry at Lackland AFB and at the Dental Staff Officers' Course at Gunter AFB at the earliest practical date is recommended. This could be followed by specialty training to meet specific requirements.

11. Physicians and dentists in South American countries have a limited knowledge of the English language. Some are able to read it but only a few know English sufficiently well to speak or understand it. Therefore, personnel selected for training in the United States, in all probability, will need to attend a language course before such training is pursued.

12. United States dental periodicals are almost nonexistent in military dental clinics. Since periodicals are excellent study and reference material, it is desirable that they be made available to the dental clinics.

13. Support should be given in procurement of dental operating room and laboratory equipment for the Peruvian Air Force and Uruguayan Air Force. The Brazilian Air Force is in need of laboratory equipment.

14. Some proficiency in the Spanish language is considered by the South Americans as an indication of interest and friendship. Therefore, it is imperative that all officers and dependents of the Medical Service assigned to CAIRC become proficient in the Spanish language prior to reporting for duty. Furthermore, as many Air Force officers and airmen as possible should be encouraged to learn Spanish.

15. There is a need to increase the awareness of the Air Force medical personnel in South American countries of the availability of United States sponsored medical training and to advise them how to apply for such training.

16. Increased assistance must be provided for obtaining modern medical materials through MAP so as to provide greater research and aerospace medical potential.

17. Funding of medical research in Latin America should be limited to small amounts in order that the USAF does not become the sole supporter for a particular research facility. The minimum support is very valuable and also serves as a prestige factor in assisting and obtaining local funds.

18. We should orient USAF medical personnel in the tri-phasic responsibilities we hold for our neighboring nations in terms of living and working with the people we hope to serve, using the medical resources of American medicine to a maximum extent in order to upgrade medical teaching, patient care and research of undeveloped areas, and lastly to neutralize the threats to protract the cold war conflict.

19. The USAF life sciences basic research grants program should be extended to these countries.

20. When requested the USAF should support qualified South American investigators in the field of aerospace medicine.

21. Selected well-qualified medical service personnel on both active duty and ready reserve should be encouraged as participators, lecturers, panel members on programs of international scientific organizations. We should, however, require these participants to meet the minimum language requirements.

B. The following recommendations refer to a specific country:

1. Panama:

(a) Every effort should be made to make the hospitalization system within the Canal Zone work more satisfactorily as far as the USAF is concerned.

(b) An effort should be made to look into the possibility of restoration of the pay differentials of the military physicians at Gorgas Hospital which has existed in previous years.

(c) It is considered desirable to expand the dental care program provided by Albrook AFB.

2. Peru:

(a) Dr. Hurtado has been supported for many years by the School of Aviation Medicine and his contract expires in April 1961 and will not be renewed. He has applied to the Federal Aviation Agency (FAA) and the National Institutes of Health (NIH) for support and will need interim support to avoid losing personnel. It is recommended that ways and means for providing this interim support be investigated.

(b) It is recommended that assistance be given in providing the dental equipment requested by the Peruvian Air Force Medical Service.

(c) It is recommended that assistance be given in obtaining the aeromedical equipment requested by the Peruvian Air Force Medical Service. It is understood that a 16-man altituds chamber that had been requested was turned down by CAIRC. Every effort should be made to obtain this chamber for them so that they may continue to conduct the EEG studies under the monitorship of Dr. Boncalari.

3. Chile:

(a) It is recommended that Dr. Alberto Sporerer be invited to come to the United States to study the cardiovascular collection at the Armed Forces Institute of Pathology (AFIP) in order to round out his training in cardiovascular anatomy and better prepare him in his particular field of cardiovascular surgery. Dr. Sporerer speaks perfect English.

4. Uruguay:

(a) Assistance should be provided in obtaining dental equipment requested by the Uruguayan Air Force.

5. Brazil:

(a) Assistance should be provided in obtaining dental equipment requested by the Brazilian Air Force.

(b) Dr. Aurelino Ferreira or some other qualified pathologist assigned to the Brazilian Air Force should be given the opportunity to come to the United States to spend some time, preferably three months or more, at the AFIP. This would permit better understanding by the Brazilian Air Force pathologists of our method of operating laboratories in the United States and also result in a better liaison in the future.