



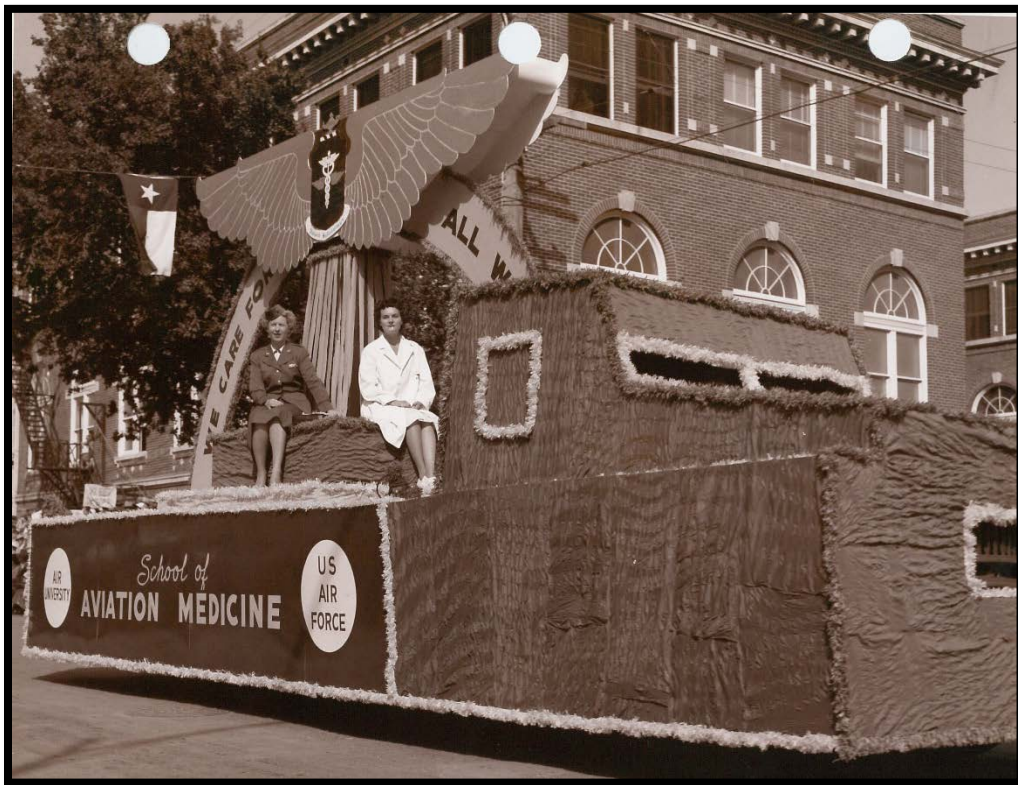
**The Untold History of Aerospace Medicine at
Randolph Air Force Base in San Antonio, Texas
from 1951-1957**

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Preface

11, August 1951 the time is 5:00 am at Randolph Air Force Base in San Antonio, Texas. Randolph's Airmen from around the United States of America are sleeping in their barracks, dreaming of flying and exploring new lands for what awaits them. All seems peaceful in these quiet little barracks, until the Drill Sergeant blows his powerful trumpet. All Airmen immediately wake up from the Drill Sergeant's tune and quickly follow the routine they been learning for the past few weeks. Once the Airmen lined up, they began their morning training. Some learned Flight training, Aeromechanics, Refueling Aircraft and other special training. There was one field that was becoming an important and professional field in the U.S. Air Force. This necessary field was Aviation Medicine.

Lt Kathryn Mehalick and Grace Haynes of the Department of Ophthalmology from the School of Aviation Medicine on a float from "SAM" for the San Antonio San Jacinto Fiesta Parade 1952



The untold history of Aerospace Medicine at Randolph Air Force Base in San Antonio, Texas 1951-1957

Aviation Medicine is the study of how air and space travel affects the human body and what ways can aviation doctors treat and overcome the obstacles that pilots face in aviation and space travel. In the 1950's, aviation medicine was not only being taught to officers in training, but to Airmen as well. To understand aviation medicine of the 1950's, the readers will have to look at the History of Aviation Medicine. To begin this journey, the readers must look back when and why aviation medicine started.

The History

Aviation Medicine began 100 years ago in 1917. The world was experiencing its first World War. World War I, or The Great War as it was called by many, started in 1914 and ended in 1918 with the Allies (U.S., Britain, France, Japan, Russia, China etc.) going up against the Central Powers (Austria-Hungary Empire, Germany, Bulgaria and the Ottoman Empire). In many ways, World War I was the first war to use aerial warfare and both sides were noticing that pilots were experiencing medical problems that were unheard of. This caused the Allies, especially the U.S. Military, to create a medical branch within the military that dealt with Aviation. Thus, Aviation Medicine was born and since then, has helped the U.S. Air Force achieved air superiority. The big question now is what was the best location of doing Aviation Medicine research that would shape the Aerospace community of the future? From documents and accounts of personnel, it seems that Randolph Air Force Base at San Antonio from the 1950s was the leading expert in Aviation Medicine research/education.

The School of Aviation Medicine (SAM) was created in 1931 at Randolph Air Force Base in San Antonio, Texas. The school soon became known around the world for their work in research, experiments and education of students in Aviation Medicine. The school included

students from all military branches, including international military students.¹ Many medically related historical events occurred at the SAM during the 1950s, with a number of notable people spending time at Randolph to learn and research new discoveries. Faculty at both Harvard and John Hopkins Universities made alliances with their counterparts at SAM. This in itself proved the norm rather than the exception as SAM personnel remained in contact with any number of universities from around the world. To have a better understanding of what was happening at the time, a chronological time line is best suited to show and explain the events that were transpiring at SAM during the 1950s.

Figure 1
The Logo of the School of Aviation Medicine²



¹ The International military Students that came to SAM were from Britain, France, Italy, Greece, Pakistan, India, Pacific Islands, Columbia, Brazil, Peru, Puerto Rico, Norway, Yugoslavia, Belgium, Japan, South Korea, Saudi Arabia, Iran, Egypt, Israel, Australia, Ecuador, Canada and other allies from around the world during the 1950s.

² "SAM's MOTTO/LOGO" Photograph from School of Aviation Medicine, USAF History Volume 15 1 July- 31 December, 1952

Chronological time line of events that happened from 1951-1957

In the Year 1951

- **Paper Clip Scientists** were included in the assigned strength for studying Aerospace Medicine at Randolph Air Force Base.³ These Paper Clip scientists were former German Nazi technologists that came to the U.S. and assisted the military; in part, they also did this to get away from the possibility of being kidnapped by the USSR who was engaged in abducting German scientists working in East Germany. These German ex-patriots did not believe in the Nazi cause, and thought that by working with the Americans and their allies, they could fix the mistakes they made during World War II. One of the most famous scientist in this group that was well known by both the scientific community and the U.S. Military was Dr. Wernher Von Braun⁴.

Doctor Wernher Von Braun was a rocket engineer who created the German V-2 rocket and later in his career, created the Saturn V rocket for the US. The Apollo missions used the Saturn rocket that transported American astronauts to the moon in the mid and late 1960s. Thanks to these scientists, SAM personal had a better understanding on aviation medicine.

Figure Dr. Wernher Von Braun⁵



³ Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951 page 5.

⁴ Wernher Magnus Maximilian Freiherr von Braun.

⁵ Edward Owen. "Wernher Von Braun would come to personify NASA's space exploration." *Smithsonian.com*, NASA, Science Faction, Corbis. August 2011. <http://www.smithsonianmag.com/arts-culture/wernher-von-brauns-v-2-rocket-12609128/>

- **Brigadier General Otis Benson Jr.** served as Commander of the School of Aviation Medicine from 1951-1953. He was a former graduate of the school in 1932. Also, he had the distinction of serving with General James H. Doolittle and General N. F. Twining during the 1940s and 1950s.⁶

Figure 3

Brigadier General Otis Benson Jr.⁷



⁶ Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951 page 7

⁷ Photograph from Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951.

- San Antonio Symposium for Aerospace Medicine began on 9 November, 1951. In this Symposium, there were three notable guests. Of these three notable guests were **Major Charles E. Yeager**, a United States Air Force Test Pilot that was the first person to break the Sound Barrier. **Bill Bridgman**, a former U.S. Navy Pilot and Douglas Aircraft company (now McDonnell Douglas Aerospace Company) Test Pilot who was the first person in the 1950s to break the world record of reaching the highest speed and altitude at that time. Finally, **Dr. Wernher Von Braun**, an Adviser on Rocket Design for the U.S. Armed Forces.⁸

Figure 4

Left to Right: Major Charles Yeager and Bill Bridgman⁹



⁸ Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951 page 27-30.

⁹ Photograph from Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951

Figure 5

Left to right: Jam E. Evrard (Belgium AF), Maj Gen Armstrong, Mr. Mayo Douglas¹⁰



Figure 6

Upper Atmosphere Symposium, San Antonio TX, Nov 1951¹¹



¹⁰ Photograph from Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951

¹¹ Photograph from Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951

Figure 7

**Maj Gen Armstrong with high school members of the
San Antonio Society for Space Travel**

12



¹² Photograph from Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951.

- The class of 24 November, 1951 (51-G) graduated with 79 officer students, making this the biggest medical examiner class to graduate at SAM since World War II. Four of these students that graduated, were foreign medical officers. One student was from Britain, two from Egypt, and one from Belgium.¹³

Figure 8

AME Class 51-G, Officer Students 24 Nov 1951 ¹⁴



¹³ Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951 page 30.

¹⁴ Photograph from Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951.

- On November 30, 1951, **Saudi Arabian Prince Mishaal Bin Abdulaziz Al Saud**, 13th son of King Abdulazi, and his physician **Dr. Aintaby** visited Randolph's School of Aviation Medicine.¹⁵

Figure 9

From Left to right: Dr. Noell, Dr. Aintaby the physician to Prince Mishaal, Major Zinnemann, and General Benson¹⁶



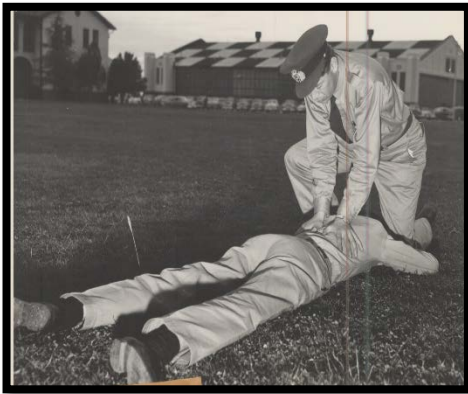
¹⁵ Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951 page 30.

¹⁶ Photograph from Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951

- **Dr. Steen Schleisner-Meyer**, nephew of **Col. Holger Nielsen**, was a student of Randolph's School of Aviation Medicine. His uncle, Colonel Holger Nielsen, who created the Resuscitation Technique and Dr. Schleisner-Meyer himself was a test subject for his Uncle's technique, when he was 12 years old. When Dr. Schleisner-Meyer came to the School of Aviation Medicine, he was surprised that the classes didn't use his uncle's technique. He became a teacher and expert on the Resuscitation technique for the School.¹⁷

Figure 10

Dr. Steen demonstrating the Resuscitation Technique¹⁸



- The 388nd Division was relocated from Randolph to Gunter Alabama Air Force Base. The reason for this was that there was too many Airmen on Randolph. So Gunter Alabama was chosen to take care of the 388nd Division for Randolph.¹⁹

¹⁷ Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951 page 32-33

¹⁸ Photograph from Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951

¹⁹ Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951 all pages

- By the end of the year, The US Air Force was concerned with how Aviation Medicine was being taught, since both Officers and Airmen were not meeting the U.S. Air Force expectations. By 1952, the U.S. Air Force found the answers that they were looking for.²⁰

In the Year 1952

- By the beginning of 1952, the U.S. Air Force did a thorough investigation into why flight surgeons weren't meeting the USAF's Expectation. The U.S. Air Force discovered that the way the USAF treated Aviation Medicine, as an unprofessional field, had caused many doctors to lose interest in the field. Due to the fact that the USAF did not have a Medical Service until 1949, the expectations of needing flight surgeons were slim. Hence forth the Air Force at that time was not demanding flight surgeons, which in turn caused a declined of medical officers to pursue aviation medicine. For those who became flight surgeons, they received low airmen salaries instead of receiving medical officer salaries.

Another discovery made by the USAF was due to the unexpected high number of Airmen taking Aviation Medicine, the School did not handle the situation properly. In order for students to graduate SAM on time, the School purposely made some students missed some classes. With some of the students missing some of their courses, they did not fully learn about Aviation Medicine. This was one of the major factors as to why some of the flight surgeons were not meeting the USAF's expectations.

After the USAF learned of these findings, they made some major changes and improvements in the USAF's education field and environment.²¹

- On 6 January, 1952, there was a Pan American Congress Ophthalmology in Mexico City, Mexico. At this session, there was an exhibit presented by **Colonel Victor A Byrnes**, head of the Eye Department at Randolph's School of Aviation Medicine. He Presented New Vision equipment and Diagrams depicting Visual Problems in Aviation from the USAF.²²

²⁰ Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951 all pages

²¹ School of Aviation Medicine, USAF History Volume 14 1 January- 31 March, 1952 page 6

²² School of Aviation Medicine, USAF History Volume 14 1 January- 31 March, 1952 page 26

Figure 12
Colonel Byrnes presents a demonstration of SAM night vision trainer²³



- On 18 January, 1952, **General Otis Benson Jr.** told visitors of Randolph Air Force Base, that even though aviation medicine is being led by the USAF and US Navy. Aviation medicine will be applied to commercial airlines for the new Turbo Jet aircrafts release. He also stated that emergency training should be taught to the passengers of commercial airliners to decrease the problem of bodily injury, during an emergency or crash landing.²⁴ This would later turn into the flight attendance safety/emergency procedures that are shown on commercial flights to the passengers, before their flight takes off.
- On 21 March, 1952, 15 medical officers from different nations visited Randolph Air Force Base. They were brought to San Antonio, Texas by two C-47s. The foreign officers were sent to Randolph to see SAM and how it could help them in their research in Aviation Medicine.²⁵

²³ Photograph from School of Aviation Medicine, USAF History Volume 14 1 January- 31 March, 1952

²⁴ School of Aviation Medicine, USAF History Volume 14 1 January- 31 March, 1952 page 27.

²⁵ School of Aviation Medicine, USAF History Volume 14 1 January- 31 March, 1952 page 35.

Figure 13

Foreign Medical Officers arriving at San Antonio, Texas on 21 March, 1952²⁶



Figure 14

Foreign Medical Officers arriving at San Antonio, Texas on 21 March, 1952²⁷



²⁶ Photograph from School of Aviation Medicine, USAF History Volume 14 1 January- 31 March, 1952.

²⁷ Photograph from School of Aviation Medicine, USAF History volume 14 part 2 1 April- 31 June, 1952.

- During 1952, there was a high demand for flight Surgeons and Nurses. Randolph had a maximum capacity of people trying to get into the School of Aviation Medicine, but lacked the instructors to teach the course. It was then decided, the students awaiting medical training would relocate to the 3882nd Division in Gunter Air Force Base Alabama to learn Aviation Medicine.²⁸
- The U.S. Air Force made its final decision of where the new Aeromedical Center was going to be at: **Brooks Air Force Base in San Antonio, Texas**. Once completed, Randolph's School of Aviation Medicine would move to this new facility. In the future, Brooks Aeromedical Center was going to be one of the world's best Aviation Medical Research facility during the 1960s.²⁹
- The Infamous **Loyalty Board**, a group led by **Senator Joseph McCarthy** that went after anyone suspected of being a Communist, requested the files on Paper Clip Scientists. The U.S. Air Force Headquarters decided not to give the Loyalty Board the files, but the Loyalty Board did find the location of them, (Director of Intelligence in Washington D.C.). In the end however, the Loyalty Board was unsuccessful of getting those files.³⁰

In the Year 1953

- General Otis was Relieved as Commandant of the School of Aviation Medicine. **Brig. General Edward James Kendricks** USAF took his place in May 1, 1953.³¹
(Photograph of Edward)
- In 1953, the structure in the School of Aviation Medicine changed for those who were Medical Officers and for those who were Officers/Airmen. For the Medical Officers who just graduated, they accomplished their Primary and Advanced Research in Aviation

²⁸ School of Aviation Medicine, USAF History volume 14 part 2 1 April- 31 June, 1952 page 2.

²⁹ School of Aviation Medicine, USAF History volume 14 part 2 1 April- 31 June, 1952 page 3.

³⁰ School of Aviation Medicine, USAF History Volume 15 1 July- 31 December, 1952 page 32.

³¹ USAF School of Aviation Medicine History Volume 16 1 January- 30 June, 1953 Forward Page.

Medicine at Randolph Air Force Base. As for the Officers and Airmen, they were taught at 3882nd Division of Gunter Air Force Base in Alabama.³²

- Prisoners were being considered as potential test subjects for Aeromedical Research. **Doctor Chinn** with **Lt. Col. Ellingson** of SAM department of preventive medicine, visited Louisiana State Prison, Angola LA. Prison, and Joliet Prison Statesville, Illinois to see if the prisons would accept their offers. The final plans did not go through and the idea of using Prisoners as test subjects was canceled.³³
- The Press information about the School was decided to be restricted, due to the few men power that the school had for the Press Information. Another factor that played into this was that the public interest, in information about the School itself, had declined.³⁴
- Some of the Paper Clip personnel left SAM to either get a better paying Job or for personal reasons. It was reported that personnel's moral was low, after hearing that the Paper Clip Scientist were leaving the facility. After they left, it took a while to find replacements for the School. Finally, the School was able to find replacements in Germany.³⁵
- SAM was interested with Anthropologist from University of Texas. SAM hoped that the Anthropologists could give the USAF a better understanding in mass behavior of personnel. Once the Anthropologists found the answers, it would give the USAF a better understanding of Airmen's personality and their daily life as an Airman.³⁶
- **Lt. Richard A. Rhamy**, age 24, died in an altitude chamber of the department of Physiology-Biophysics. His death was the first ever recorded in U.S. Air Force history as being the first person to die in an altitude chamber. His death would be investigated as to why he died in the chamber, as more than 10,000 Officers and Airmen who had gone

³² USAF School of Aviation Medicine History Volume 16 1 January- 30 June, 1953 page 1.

³³ USAF School of Aviation Medicine History Volume 16 1 January- 30 June, 1953 page 57.

³⁴ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 4.

³⁵ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 12.

³⁶ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 32-33.

before him, had no serious injuries in altitude chambers. The Lt. Rhamy's Incident would be highly talked about subjects in one of the Air Symposiums in 1953.³⁷

- **Major Robert B. Payne** of the United States Air Force, published a report that became declassified in 3 August, 1953. It was called "*The Human Factor in Accidents with Special Reference to Aircraft Accidents*". There were case files of World War II pilots that had similar aircraft accidents at Lackland's Human Resources in 1953.³⁸
- In 1953, Randolph Air Force Base had the largest colony of Primates in the United States Air Force. The number of Primates in this colony is unknown, since it was not written in the volume. Though the number was not recorded, it was record in the book that these primates would be used for aviation experiments. SAM was highly known by the Scientific/Medical Community for using Chimps in U.S. Air Force experiments in hopes of having a better understanding in aviation/space travel.³⁹
- From 1 July-1 September, 1953, there was low funding for Research/Development programs and Medical Dental stock funds. This caused a crippling effect on Randolph, putting the School behind of schedule. After September, things got back to normal, thanks to the funds that Randolph were able to receive.⁴⁰
- **Col. Clanton Ware Williams** gave a speech to the Graduates of SAM about his concerns of the USSR's main objectives/goals. He pointed out that the USSR was diverting from the original objectives of Karl Marx and turning Communism into a totalitarian force aimed at worldwide dominion. In his view, he did not see worldwide Communism as a real worldwide revolution, but a return to age-old tyranny. Colonel Clanton Ware Williams earned a Ph.D. in history, while engaged as an air intelligence officer and historian of the Army Air Force during World War II. In 1951, he was recalled to active duty and became director of faculty student research at the Air War College, while teaching students.⁴¹ (Photograph)

³⁷ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 40.

³⁸ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 54-55.

³⁹ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 67.

⁴⁰ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 82.

⁴¹ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 84-85.

- **Major General Harry G. Armstrong** Surgeon General of the U.S. Air Force received a Gold medal of Honor from French Air Force, which is considered the highest award of France Air Force.⁴²
- Officers in the medical field that wanted to go into Advance Aviation Medicine courses, were given the opportunity to be assigned to go to John Hopkins University in Baltimore. By doing this, this would give medical officers a greater opportunity of making Aviation Medicine a medical career.⁴³
- On 7 August, 1953 SAM Personnel researched zero gravity and created an artificial gravity environment to help prepare space travelers for space exploration.⁴⁴
- On 14 August, 1953 SAM Graduates will not have to go to combat due to the peace treaty that came into effect, although the Korean War (or the Korean Battle as some veterans have called it) was still on.⁴⁵
- On 15 August, 1953, the USAF reached 10,000 aviation medicine graduates.⁴⁶
- On 31 August, 1953, the United States Air Force Headquarters was considering the possibility that the Planet Mars might have once had an **intelligent Martian Civilization**. The USAF HQ discussed about the famous **Astronomer Percival Lowell** life work on researching Mars' Canals, while trying to prove that they were built by a Martian Civilization. The USAF HQ also had a briefing about how life can live on Mars and the possibility of meeting **“another civilization from another planet”**. **Doctor Hubertus Strughold**, the Director of the Department of Space Medicine at Randolph's School of Aviation Medicine, the man who coined the term Space Medicine and was considered by some as a controversial Paper Clip scientist, wrote a book called **“The Green and Red**

⁴² USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 Page 85-86.

⁴³ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 Page 86.

⁴⁴ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 90.

⁴⁵ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 92.

⁴⁶ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 93.

Planet". He theorized that it's possible that there might have once been life on Mars, since the planet has almost the right ingrediency to create life. He also believed that Mars has water and points out that the Polar Ice Cap of Mars might contain water.⁴⁷ Jump to the year 2015, were NASA was able to finally prove that Mars does in fact have water. This means that Dr. Strughold was right about his theory of Mars having water and was definitely on to something.

Figure 15

Doctor Hubertus Strughold, a Paper Clip Scientist, was the Director of the Space Medicine Department at SAM during the 1950s⁴⁸.



- On 18 September, 1953, **Doctor Truman G. Blocker** conducted research on victims of the Hiroshima atomic bomb attack, to help the school have a better understanding of the effects of nuclear fallout on the human body.⁴⁹
- On 24 October, 1953, **Doctor Edmund S. Nasset** talked about Nutrition and how it affects pilots. He gave good examples of the Native American tribes of the South side of America and Mexico on what nutrition they had and how did it affect their health.⁵⁰
- On 26 October, 1953, United States Air Force SAM was relieved of responsibility for the Aeromedical Center planning for Brooke's Air Force Base.⁵¹

⁴⁷ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 100-102.

⁴⁸ Unknown Photographer. "Doctor Hubertus Strughold." *Dirkdeklein.net*. 5 November, 2016. <https://dirkdeklein.net/2016/11/05/hubertus-strughold-father-of-space-medicinebut-at-what-cost/>

⁴⁹ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 107-108.

⁵⁰ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 112-114.

⁵¹ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 3.

- On 13 November, 1953, high ranking military surgeons from around the world came to Randolph Air Force Base to see the School of Aviation Medicine. They were guided by **Major General Harry G. Armstrong**, Surgeon General of the U.S. Air Force. There were 55 nation representatives that did the tour. After the tour, they visited Kelly Air Force Base and ended the tour by visiting downtown San Antonio and eating at La Villita Café for dinner.⁵²
- On 27 November, 1953, the U.S. Air Force Headquarters had a briefing about the different Foreign Medical Officers that came to SAM to learn about Aviation Medicine. The USAF HQ was reevaluating to see which countries would be allowed to study at SAM.⁵³
- On 17 December, 1953, **Colonel Edgar L. Olson** became the newly appointed Chief of Clinical Medicine at SAM. He served in the U.S. Navy, U.S. Army and finally the U.S. Air Force.⁵⁴

In the Year 1954

- On 22 March, 1954, **Mr. William Bloom** came to Randolph to gather Aviation Medicine information, so that he could create an accurate film about Aviation Medicine for **20th Century Fox film Studio**.⁵⁵
- **Military Air Transport Services (MATS)** had called 23 times for the School's Respirator, flight surgeons, and technicians to move acute polio cases on flights operated by MATS in 1954.⁵⁶
- During the 1950s, the School made a partnership with the **Institute of Andean Biology at the University of San Marcos in Lima, Peru** to learn about the effects of high altitude on humans. 1954 was the beginning point of a plan U.S. military expedition to

⁵² USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 114-116.

⁵³ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 116-118.

⁵⁴ USAF School of Aviation Medicine History Volume 17 1 July-31 December, 1953 page 119-120.

⁵⁵ USAF School of Aviation Medicine History Volume 18 1 January- 30 June, 1954 page 5.

⁵⁶ USAF School of Aviation Medicine History Volume 18 1 January- 30 June, 1954 page 20.

the Mountain, guided by the Institute of Andean Biology, to record and gather information about the locals that lived on the mountain. By researching these locals, the USAF could have a better understanding on humans living in higher altitude.⁵⁷

- In 1954, the School had a detachment (No.1) at Graham Air Base in Marianna, Florida, by the end of 1954, it was discontinued.⁵⁸
- The United States Air Force discovered that SAM was giving classified information to students, that didn't have the clearance, at aviation medicine classes. To protect this information, the USAF had a Top-Secret Control Officer that was put in charge of handling and handing over the classified information to the staff of SAM.⁵⁹
- In 1954, a child name **Larry Becker** from Los Angeles, California wrote a letter to **Brig. General Edward J. Kendricks**. Larry asked General Kendricks if he could give him Photographs of Flying Saucers. The General wrote back boldly, but nicely to the child, that the School of Aviation Medicine did not have any photographs of Flying Saucers, but thanked the kid for his efforts. He told the kid that the Airforce had an organization that did research on this subject, but so far, they had not found anything yet.⁶⁰ During the 1950s, the U.S. Air Force had an organization that was doing research about Flying Saucers that were supposedly appearing around the World. The group was called "**Project Blue Book**", which began in 1952 and ended in 1969.

⁵⁷ USAF School of Aviation Medicine History Volume 18 1 January- 30 June, 1954 page 10.

⁵⁸ USAF School of Aviation Medicine History Volume 18 1 January- 30 June, 1954 page 56 and School of Aviation Medicine, USAF History Volume 19 1 July-31 December, 1954 page 1.

⁵⁹ USAF School of Aviation Medicine History Volume 18 1 January- 30 June, 1954 page 49.

⁶⁰ USAF School of Aviation Medicine History Volume 18 1 January- 30 June, 1954 page 66-67.

Figure 16
The Staff of Project Blue Book during the 1950s⁶¹



Figure 17
PhD Astronomer Josef Allen Hynek, an essential member to Project Blue Book, shows to the press the infamous Adamski's Flying Saucers hoax photo.⁶²

⁶¹ Unknown photographer. "The staff of Project Blue Book". *Daily Mail.com*. 14 January 2015
<http://www.dailymail.co.uk/sciencetech/article-2908998/Can-solve-world-s-biggest-UFO-mysteries-Rare-microfilms-alien-sightings-available-online-free.html>

⁶² Unknown Photographer. "USAF Astronomer Doctor Josef Allen Hynek". *Futurism.com*. 2016.
<https://futurism.media/government-ufo-cover-ups>



Figure 18
United States Air Force Project Blue Book's
Official Logo from 1952-1969⁶³

In the Year 1955

- Colonel Edgar L. Olson was recognized by Sohn Won II, Korea's Minister of National Defense, for his remarkable interest and cooperation in providing facilities to train surgeons and other medical personnel for the Republic of Korea Air Force during his Far East Tour.⁶⁴
- Pilots at SAM were not performing well in their aviation duties. SAM decided to investigate the issue and found that the pilots were skipping their nutritious breakfast in order to perform their duties on time. With the help of the pilots' wives, the Pilots were made sure to eat their breakfast before they did their duties. Once the Pilots did this, SAM had the lowest pilot accident rate of that year with no accidents reported that year.⁶⁵
- The USAF that year did an Investigation into reports of missing personnel files. The U.S. Air Force soon discovered that some of the military bases, including some in San Antonio, did not create many profile files on their soldiers, sailors, and pilots during

⁶³ Photographer unknown. "Project Blue Book logo from 1952-1969". *The night sky.org*. 3 August, 2017. <http://thenightsky.org/pbb.html>

⁶⁴ USAF School of Aviation Medicine History Volume 20 1 January- 30 June, 1955 page 49-51.

⁶⁵ School of Aviation Medicine, USAF History Volume 21 1 July- 31 December 1955 page 10-11.

World War II. So the Air Force had to recreate some of these missing personnel files for these USAF officials.⁶⁶

- In August 1955, the **National Geographic Magazine** published their August issue about SAM called “*Aviation Medicine on the Threshold of Space*”.⁶⁷
- **Mrs. Helen K. Dodson**, age 35 and wife of **Airman John F. Dodson**, was deaf since birth. One day, her ear specialist in Wichita, diagnosed her trouble and explained to her that she had a condition known as otosclerosis. Her doctor explained to her that her hearing might be restored by fenestration, a delicate operation to remove the growth and reopen the oval window. The only problem was that the operation was too expensive for her, so she settled for hearing aids. By 1955, she meets Lt. Colonel Ralph N. Kraus, Chief of the School’s ENT Department. She learned he could do the fenestration operation at Randolph Air Force Base, by using her military pay benefits. She accepts his offer and was given the medical treatment. By the end of her operation, she soon discovered that she could hear for the first time and was overjoyed. After a couple of months of therapy and operations, Mrs. Dodson had her hearing restored completely and wrote a thank you letter to Dr. Kraus.⁶⁸

In the Year 1956

- During this year, the USAF had begun to redefine what the word **graduate** really meant.⁶⁹ During the mid and late 1950s, the United States Air Force was changing their education field and was beginning to create a new course for those who graduate college and plan on joining the military. This course would soon be called the **Officer Training Course**, or known simply as **OTC** by some and would began in the 1960s.

⁶⁶ School of Aviation Medicine, USAF History Volume 21 1 July- 31 December 1955 page 12.

⁶⁷ School of Aviation Medicine, USAF History Volume 21 1 July- 31 December 1955 page 40.

⁶⁸ School of Aviation Medicine, USAF History Volume 21 1 July- 31 December 1955 page 26-30.

⁶⁹ School of Aviation Medicine, USAF History Volume 22 1 January- 30 June, 1956 page 17.

- During 1956, there were representatives from 40 to 50 nations that were taking the Aviation Medicine Courses in SAM.⁷⁰
- **Doctor Jan H. Tillisch** was one of the notable physicians who were instrumental in securing recognition for Aviation Medicine as a specialty by the American Medical Association in 1953. By 1956, he became one of the founders' group of this specialists.⁷¹
- In 1956, SAM was starting to consider using Television as a new technique to teach students about Aviation Medicine.⁷²
- On February 17, 1956, **Brig. General Edward J. Kendricks**, Commander of SAM, passed away in his quarters. The cause of death was a heart attack. The school bid him a proper farewell and he was buried at Arlington Cemetery, Washington D.C.⁷³

Figure 19

Brig. General Edward J. Kendricks⁷⁴



⁷⁰ School of Aviation Medicine, USAF History Volume 22 1 January- 30 June, 1956 page 21-22.

⁷¹ School of Aviation Medicine, USAF History Volume 22 1 January- 30 June, 1956 page 27.

⁷² School of Aviation Medicine, USAF History Volume 22 1 January- 30 June, 1956 page 30-31.

⁷³ School of Aviation Medicine, USAF History Volume 22 1 January- 30 June, 1956 page 1.

⁷⁴ Photograph from School of Aviation Medicine, USAF History Volume 22 1 January- 30 June, 1956.



Figure 20
Brig. General Edward J. Kendricks
was given an honorable Farwell
Ceremony by the Men and Women
of SAM⁷⁵

- During the Construction of the new Aeromedical Center in Brooks Air Force Base, the construction crew discovered that there was a sewage pipe underground the construction site. The sewage pipe belonged to the city of San Antonio that was connected to the downtown sewage system, so the military and the city made a contract/deal. The sewage pipe would be removed and relocated by the military, while the city would give Brooks free sewage for 28 years.⁷⁶

In the Year 1957

- On 10 May, 1957, the ground was broken in Brooks Air Force Base, marking the beginning of the New Aeromedical Center and School construction.⁷⁷
- **Major General Otis O. Benson, Jr.** comes back as Commander of the School, following the death of **Brig. General Edward J. Kendricks.**⁷⁸

⁷⁵ Photograph from School of Aviation Medicine, USAF History Volume 22 1 January- 30 June, 1956.

⁷⁶ School of Aviation Medicine, USAF Semiannual History Volume 23 1 July- 31 December, 1956 page 4-5.

⁷⁷ School of Aviation Medicine, USAF Semiannual History Volume 24 1 January- 30 June, 1957 page 1.

⁷⁸ School of Aviation Medicine, USAF Semiannual History Volume 24 1 January- 30 June, 1957 page 8.

- **Dr. Hubertus Strughold** was the world's leading authority of the medical problems of Space flight and had been director of the department of Space Medicine Research for the past 10 years. He would lay the foundation for experimentation in the Space Cabin simulator in 1957.⁷⁹

The writer of this paper doesn't know what happens after 1957, due to the last book being USAF School of Aviation Medicine Semiannual History Volume 25 1 July- 31 December, 1957. What the writer does know is that as the years became decades, the School of Aviation Medicine was moved from San Antonio, Texas to Wright Patterson Air Force Base. By looking back at the 1950s, SAM had done some amazing research, teaching and accomplishments in that decade that helped the U.S. Air Force become the leading expert in Aviation Medicine.

The Science and Experiments

During the 1950s, The U.S. Air Force was trying to keep up with being superior of the Air and the only way they could achieve that goal was to advance in their scientific research. SAM received funds and support in researching some of the major obstacles that the U.S. Air Force dealt with. At the time, the U.S. Air Force was dealing with pilots that would crash for no apparent reason, getting infections in high altitude, vision becoming blurry in high altitude and other medical problems. That is where SAM came in, to research, find the root of the cause and fix the problem so that Airmen and Officers could perform their duties successfully without injuring themselves.

While Wright Patterson was the U.S. Air Force Research Center, during the 1950s, Randolph's SAM was the Aviation Medicine Research Center for the U.S. Air Force. SAM would do experimentations/research in the many fields of Medicine. These fields include Aviation Medicine, Clinical Psychology, Ear/Nose/Throat (ENT) Medicine, Internal Medicine, Ophthalmology, Biometrics, Microbiology, Pathology, Pharmacology-Biochemistry, Psychology, Psychology-Biophysics, Radiobiology, Dentistry and finally Space Medicine. They would use either Dogs, Chimpanzees or Volunteered USAF Airmen as test subjects, to see what reactions would result and how it could be beneficial for pilots. So far, no humans were injured

⁷⁹ USAM Historical Report School 1 July- 31 December, 1957, USAF School of Aviation Medicine Semiannual History Volume 25 1 July- 31 December, 1957 page 2.

in most of these experiments, but sadly some of the dogs and chimpanzees were either injured or killed in these experiments. In the end, these results would help both the U.S. Air Force's and NACA's Agenda in Exploring and Protecting the Aerospace field.



Figure 21

Doctor Alberto Hurtado, Director of the Andean Institute of Biology, visits SAM to give a lecture on high altitude adaptation.⁸⁰

⁸⁰ Photograph from Semiannual History S.A.M. Volume 13 1 July to 31 December, 1951.



Figure 22

Airmen experiencing Sub Zero temperatures at the chamber test in SAM. The main goal of this test is to see how Airmen can work in Artic Conditions. ⁸¹

⁸¹ Photograph of Airmen experiencing Sub Zero temperatures chamber test from USAF School of Aviation Medicine History Volume 16 1 January- 30 June, 1953.

Conclusion

The year 2017 marks the 100th anniversary of the establishment of Aviation Medicine, while at the same time, Kelly Air Force Base in San Antonio, Texas will turn 100 years old. For a 100 years, doctors and nurses from different generations have helped paved the way for Military, Private and Commercial Traveling in both Air and Space. These men and woman have helped the U.S. and its allies in so many ways that they will be remembered in history as the people who helped humanity overcome its biggest challenges and made flying possible. We don't know what the future will look like in the year 2117. Maybe our great great-grandchildren will have achieved the impossible of exploring and colonizing space. They may even encounter sentient/intelligent life from other worlds and made alliances with them. One thing is for sure, Aviation Medicine will be the forerunner in future Space Exploration Missions. There is already talks of a U.S. Space Corps being created in 2019, so it's very possible that Aerospace Medicine will be highly needed, for the U.S. Air Force/U.S. Space Corps to achieve Space superiority.

As the Sun goes down and stars begin to appear, the writer of this paper stands at the site of the once famous School of Aviation Medicine at Randolph Air Force Base in San Antonio, Texas. As he looks at the site, he moves his head up and stares into the starry night sky. He watches, waiting, to see what Space has for humanity in the coming years of future space explorations into, the unknown.

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⁸² Doctor McCall Robert T. "Accepting the Challenge of Flight". *McCallStudios.com*, collection of NASA/Dryden Flight Research Center . 1997. <http://www.mccallstudios.com/spirit-of-flight/>