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## Fighting Smallpox on the Texas Border: an Episode from PHS's Proud Past

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### Synopsis .....

*The motto of the Public Health Service (PHS) is "Service with Distinction." An example of how that motto was earned can be seen in the work of the professionals of the Marine Hospital Service (as PHS was then known) in a smallpox epidemic on the Texas border in 1895.*

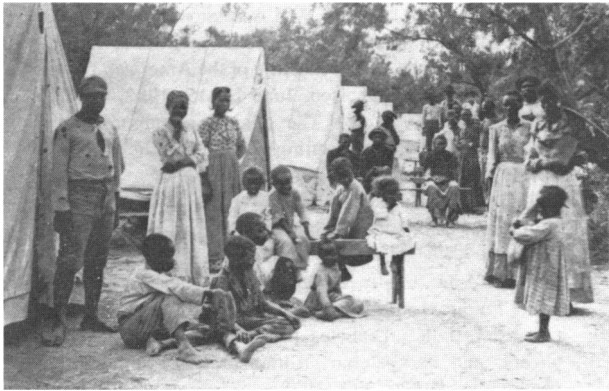
*Barely 2 years after Congress had given the U.S. Surgeon General the authority to intervene and prevent the spread of contagious diseases from one State to another, Surgeon General Walter Wyman, MD, stepped in. In response to a request from the Texas State Health Officer, Wyman sent a team of officers to assist the State and prevent the spread of smallpox. At that time the Surgeon General was head of the Marine Hospital Service, which became the Public Health Service in 1912.*

*In a period of slightly more than 2 months, the epidemic was contained in the population of 411 refugees. Sixty people had died at the camp, 51 from smallpox. Although that fatality rate would be incredibly high by current standards, it was low under the circumstances.*

*Milton Rosenau, MD, was a key to the containment of the disease and the humanitarian treatment of the survivors, a group of black Americans who had fled from Mexico after having been lured there with the promise of land that would be their own. Rosenau would later become the head of the Hygienic Laboratory, precursor of the National Institutes of Health.*

**T**HE U.S. PUBLIC HEALTH SERVICE was vastly different at the turn of the century from what it is today. In fact, it had a different name in the late 1800s—the U.S. Marine Hospital Service. In 1902 it became the U.S. Public

Health and Marine Hospital Service, and in 1912 the agency received its present name (1). But, even in the late 1800s, the service had many responsibilities other than the treatment and care of sick and disabled seamen,



*The refugee camp that housed the people who were not sick also used U.S. Army tents brought in from Waynesville, Ga. The camp was operated for a little over 2 months*

the purpose for which it was founded in 1798. Persons in the Service conducted quarantines, managed epidemics, performed the medical inspection of immigrants, and maintained the small Hygienic Laboratory in Washington, D.C., which eventually became the National Institutes of Health. Many of these early activities remain important functions today.

By 1900, there were 22 marine hospitals in service and 115 relief stations in place in port cities in the United

States and its territories, as well as many inspection stations around the world for emigrants embarking for a new life in this country. The marine hospitals, which were later named U.S. Public Health Service Hospitals, had served as hospitals for the U.S. Navy until 1811, when Congress authorized separate naval hospitals (2).

The Marine Hospital Service was staffed by a small group of dedicated professionals, primarily physicians, headed by a Surgeon General. On June 1, 1891, a bachelor physician, Walter Wyman, MD, became the Surgeon General, a position he held until he died on November 21, 1911. The Surgeon General directed 106 commissioned officer physicians and a professional corps of 45 pharmacists, then called stewards, who did all of the administrative work in addition to their clinical responsibilities (2).

### **Control of Communicable Diseases**

In February 1893, the Congress added to the duties of the Surgeon General, giving him the responsibility of preventing the spread of contagious and infectious diseases from one State or Territory to another (1). This authority permitted Dr. Wyman to set up a system of quarantine regulations and eventually led to the develop-



*The refugees, who were in poor physical condition in spite of special assistance from the State of Texas and the Federal Government, were*

*dressed in a combination of clothes from their home states of Georgia and Alabama as well as Mexico*

ment within the corps of a special group of officers capable of handling epidemics.

At the turn of the century, past assistant surgeon Milton Rosenau, MD, was one of the first of a strong line of epidemiologists who would bring special recognition to the Public Health Service. Rosenau, who at age 29 served as the influential head of the fledgling Hygienic Laboratory, would later write one of the most widely used textbooks in the field of public health. In referring to his fellow officers, Rosenau said that "The doctor who battles against the microbe is not as picturesque or as romantic a figure as the soldier who dies fighting on the field of battle, though each may be fighting to save his country against an invading foe. Bacteria are as deadly as bullets and many a medical officer has fallen from the infection of disease in saving his fellowmen" (3).

Rosenau faced many tests over the years, but one of special interest occurred in the remote community of Eagle Pass, Tex., in 1895. At that time, Rosenau not only demonstrated the epidemiologic aspects of his work, but also the humanitarian concerns of a member of a professional corps of dedicated physicians.

### **Smallpox Epidemic Among Black Americans**

In January and February of 1895, unscrupulous agents of the Tlahuialila Company, a syndicate owning large plantations located 30 miles east of Mapimi in the State of Durango, Mexico, induced approximately 1,000 black Americans from Alabama and Georgia to colonize that area of Mexico to raise cotton and corn. After a few months of enduring hard work, meager food, and poor living facilities, the workers recognized that their land contracts were worthless. When a disease appeared among them that was called "cotton pox" by their employers, they began leaving in large numbers.

Traveling slowly in crowded freight cars, subjected to numerous language and social problems, without provisions or money, and suffering from various stages of smallpox, they reached the Texas border in pitiful condition. During the week of July 23–30, 1895, about 300 of them arrived at Eagle Pass, where they were met by less-than-receptive people from the local community. The people there had learned the hard way over the years about the ravages of communicable diseases brought in by migrating agricultural workers.

Smallpox was diagnosed in the refugees by Texas State Department of Health representatives who were called in by the local mayor. The State Health Director, Dr. John Swearingen, visited the site himself and provided what assistance he could, but, recognizing the limitations of the State, the potentially high loss of life and the possibility of a broad epidemic, Swearingen called for help from the Surgeon General on August 4, 1895 (4). Dr.



*U.S. Army tents were set up along with small wood buildings to form a 200-bed field hospital for smallpox patients at Camp Jenner. Fifty-one of 411 refugees died of smallpox*

George M. Magruder, a surgeon serving at the Galveston, Tex., Marine Hospital, was ordered to travel to Eagle Pass. He soon relayed a devastating story of the conditions there to the Surgeon General.

Magruder reported that the refugees were in a location 3 miles from the city of Eagle Pass. They were camped on the north shore of the Rio Grande River, in the angle formed by the junction of Elm Creek and the Rio Grande.

The whole camp had only two small tents and a few dozen cooking utensils. No health care facilities were available. Management of the increasing number of smallpox patients was the responsibility of family and friends. The only treatments available were native "cures," such as burning rags and drinking "yarb tea." Food provided by State authorities was limited to bread, bacon, and coffee. The arid Texas countryside had only a low growth of stunted mesquite, which furnished little shade and effectively kept out any breeze that might blow. The sick lay on old rags, blankets, and quilts on the ground under the bushes. They moved painfully to change their position in a vain attempt to find relief from the burning sun.

No register of refugees had been made, and early attempts by the State to vaccinate the group were inadequate to prevent the spread of disease. Only four guards from the State were available, so no organized attempt could be made to quarantine the sick from the well. As a consequence, the outward movement of the refugees began, particularly as the number of deaths increased.

### **Service at Camp Jenner**

On August 11, Surgeon General Wyman agreed to assume full responsibility for the epidemic. In addition to Magruder, Rosenau from the Hygienic Laboratory was assigned to manage a 200-bed smallpox field hospital (4). Twenty guards were employed to organize two



*The guards, who maintained the quarantine of the refugee camps, kept order, and provided special services for the medical team, had their own camp separate from the refugees*

camps for the refugees—one for the well and one for the sick, a hospital camp.

Tents were brought in by train from Waynesville, Ga., and a commissary building was erected. A 100-foot bridge was built across Elm Creek to facilitate communication and control of the outward movement of persons suffering from smallpox. The old camp and all materials in it were destroyed. An extensive vaccination campaign was undertaken.

Rosenau named the enclave Camp Jenner in honor of Dr. Edward Jenner, the English physician who first developed the smallpox vaccination in the late 1700s (5). The refugees were regularly inspected by Rosenau twice a day, and persons with new cases of smallpox were moved to the hospital.

In short order, no further new cases occurred. From the opening of Camp Jenner on August 11, 1895, until it was closed on October 21, 1895, 411 refugees were received and 178 cases of smallpox were treated. A total of 60 deaths were recorded, 51 of which were from smallpox (4). Although the fatality rate was incredibly high by current standards (28.7 percent), it was low under the circumstances.

In his final report, Magruder noted that the surviving refugees were given provisions and transportation back to

their homes in Alabama and Georgia, “thereby preventing the Service from incurring the odium of turning adrift in a strange country 300 or more impoverished and helpless Negroes” (4). Of special importance was the fact that the spread of the dreaded disease to a broader area was averted. Surely it was through difficult experiences with successful outcomes such as this that the motto of the U.S. Public Health Service, “Service with Distinction,” was born.

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