

The Gillis W. Long Hansen's Disease Center at Carville

On November 30, 1894, five men and two women suffering from Hansen's disease, then called leprosy, arrived by barge at Indian Camp, Iberville Parish in Louisiana as the first patients of the Louisiana Leper Home. Indian Camp was an abandoned sugar plantation situated on the banks of the Mississippi River between Baton Rouge and New Orleans. On the recommendation of the Orleans Parish Medical Society, the State legislature of Louisiana passed an act that set up the "Board of Control for the Louisiana Leper Home" in September of 1894, with Dr. Isadore Dyer as its President.

The only housing then available to leprosy patients in New Orleans had been called a "pest-house" by Dyer, and he and the board searched for a site to establish a more humane facility. Because of community opposition, Dyer was unable to find a site in New Orleans, and he finally leased Indian Camp under the pretext that it would be used as an ostrich farm. The plantation was located near the hamlet of Carville, and the leprosarium came to be referred to simply as Carville.

Dyer soon arranged a contract with the Daughters of Charity of St. Vincent de Paul, who had served at the New Orleans Charity Hospital for 60 years, to provide the new facility with nursing services and domestic management. In 1896, the first four sisters arrived to take up their duties at Carville, beginning a tradition that continues up to the present. The sisters, most of whom have served as nurses, were eventually converted to regular Civil Service employees. They provided all of the nursing services at first, but after the Public Health Service (PHS) took over the hospital PHS Civil Service and Commissioned Corps nurses also came to work at Carville.

Carville comes under PHS control. Carville remained a State institution until 1921, when it was taken over by the Federal Government. For years Dyer promoted the concept of Carville as a center for leprosy research and treatment, but the State seemed content to operate it essentially as an asylum. Finally in 1917, Congress authorized the Public Health Service to establish a national leprosarium, with Dyer (by then Dean of the Tulane University Medical

School) testifying on behalf of a bill introduced by Senator Joseph E. Ransdell of Louisiana. After several other potential sites for such a hospital were abandoned due to resistance from local communities, it was decided to purchase the Louisiana Leper Home, which the State was quite willing to sell. Given the active roles played by Dyer and Ransdell in the movement to create a national leprosy hospital, it was not surprising that Louisiana should become the home for the new facility. In 1921, Carville became U. S. Marine Hospital Number 66 of the PHS. Dr. Dyer did not live to see his vision fulfilled, dying in 1920 at the age of 55.

As soon as the PHS took over Carville, it assigned to the hospital its first full-time, resident physicians and medical support staff, in addition to the nurses already there. Dr. Oswald Denney, who had served as director of the hospital for leprosy patients in the Philippines, was appointed as the first Chief Medical Officer. Under the 1917 law that authorized a national leprosarium, the PHS Surgeon General was authorized, upon the request of local health officials, to compel those suffering from leprosy to go to Carville even against their will. Patients at Carville were not free to leave of their own volition, and it was not until about 1960 that Carville became a voluntary hospital.

A decade after the hospital came under Federal control, it acquired its first bacteriologist, Dr. Bernice Eddy, who arrived in 1931 to begin conducting scientific research into the cultivation of *Mycobacterium leprae*, the pathogen that causes Hansen's disease. The bacillus had first been observed in biopsy specimens from patients with leprosy by the Norwegian physician G.H.A. Hansen in 1873, and the disease was later renamed after him in recognition of his contribution to understanding it.

Treatment of Hansen's disease. A major breakthrough in the treatment of Hansen's disease occurred at Carville in 1941. The principal treatment for the disease at that time was chaulmoogra oil and its derivatives, a remedy from India which had been introduced into Western medicine in the nineteenth century. There was considerable skepticism about how effective the oil and its esters were, but no better treatment was available. Dr. Guy Faget, a specialist in tuberculosis (like Hansen's disease caused by a mycobacterium), arrived at Carville

in 1940 to serve as Chief Medical Officer. Faget was aware that promin, a sulfone compound marketed by Parke, Davis and Company, had exhibited positive effects against tuberculosis in guinea pigs. Upon inquiring of the company whether they knew of any experiments with promin against other mycobacterial diseases, Faget was put in touch with Dr. E. V. Cowdry, a consultant to the Public Health Service, who was using the drug on rat leprosy at Washington University in St. Louis. Faget learned that promin showed significant promise against rat leprosy in Cowdry's experiments. In March of 1941, the first volunteer patients were injected with the drug at Carville, initiating the first of the clinical studies that were to prove the effectiveness of sulfones in the treatment of Hansen's disease.

In 1943, Faget published a progress report on his results with promin in this journal (volume 58, pages 1729-1741). By 1946, he was able to state confidently that "the use of promin in the treatment of leprosy results in improvement in all major chronic manifestations of the disease."

One of the success stories with the sulfones involved Betty and Harry Martin. Betty Parker and Harry Martin met at Carville, fell in love, ran away from the hospital together, and got married. When Harry's condition worsened, they returned to the hospital in 1939. When the clinical trials with promin began, they were among the first to volunteer. They were eventually pronounced cured and discharged from the hospital. Betty Martin's autobiography, "Miracle at Carville," was published in 1950.

Another well-known autobiography by a Carville patient is Stanley Stein's "Alone No Longer," first published in 1963. In 1941, Stein founded *The Star*, a bimonthly magazine that continues to serve today as an important source of information and education on matters related to Hansen's disease. The publication received its name because it was part of Stein's commitment to "cast the light of information on a disease that has been thrust into the shadows." He worked tirelessly to remove the stigma associated with Hansen's disease in the public's mind.

Other sulfone drugs followed promin. The most important of these was dapsone (DDS), in the 1960s. Dapsone was inexpensive and available in tablet form (unlike promin, which had to be injected), so that patients could readily treat themselves at home. Although the sulfones were a major breakthrough in the treatment of Hansen's disease, over time there was an increasing problem of patients who failed to respond to sulfone therapy because of

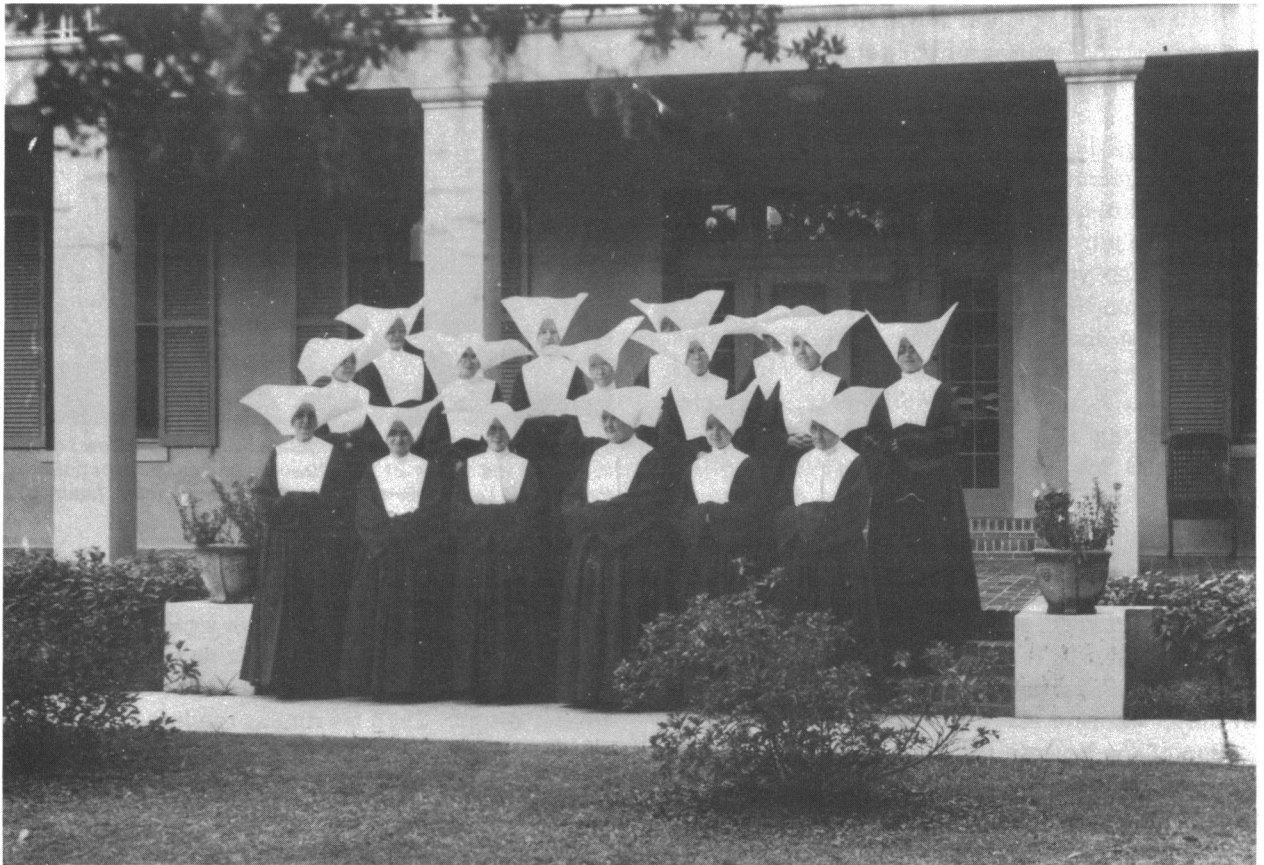


The original Indian Camp Plantation home (1857) now serves to house the office of the Director and other functions of the Gillis W. Long National Hansen's Disease Center. (courtesy, Hansen's Disease Center)

microbial resistance to the drugs. Fortunately, other drugs, such as clofazimine and rifampin, were discovered to be effective against Hansen's disease. Multi-drug therapy is now always used to circumvent the problem of resistance to particular drugs. Such treatment renders the patient noninfectious within a few days and relapse is uncommon in patients completing a standard course of multi-drug therapy.

Other contributions of Carville. Research on Hansen's disease was inhibited by the fact that no one had succeeded in culturing the causative organism in an artificial culture medium. There was also no success in growing it in any animal model until 1960, when Dr. Charles Shepard of the PHS Communicable Disease Center (now the Centers for Disease Control and Prevention) reported that he had succeeded in growing the Hansen bacillus in the footpads of mice. Although useful for evaluating anti-leprosy drugs, this method could not produce the volume of bacilli needed for extensive study of the microorganism. Then in 1968, Dr. Waldemar Kirschheimer, Chief of the Laboratory Research Branch at Carville, and Dr. Eleanor Storrs of the Gulf South Research Institute in New Iberia, LA, decided to try the armadillo. Their publications in the early 1970s reported their success in growing large quantities of the Hansen bacillus in the nine-banded armadillo. The bacteria produced in armadillos at Carville have been distributed to laboratories around the world for research on Hansen's disease. The Laboratory Research Branch is now housed at the Louisiana State University School of Veterinary Medicine in Baton Rouge.

Carville staff have also made other important contributions to improving the lives of those suffering



Daughters of Charity nurses at Carville, 1947. (Courtesy, National Library of Medicine)

from Hansen's disease. Reconstructive surgical procedures have been developed for straightening fingers to a functional position. Special footwear, constructed so as to permit healing of ulcers or blisters, has been developed for patients with insensitive feet. Special plaster casts are required for the more severe ulcerations. Some of these advances have been applicable to other diseases as well. For example, the techniques used for treating insensitive and ulcerated feet in Hansen's disease patients have been applied to benefit diabetics suffering from similar problems.

In 1980, Carville officially became the National Hansen's Disease Center. Congressman Gillis W. Long, of the Louisiana Long political family, played a major role in keeping Carville operating when the other PHS hospitals were closed in 1981. After his death in 1985, the hospital was renamed the Gillis W. Long Hansen's Disease Center in his honor. It is currently administratively located in the Bureau of Primary Health Care of the PHS's Health Resources and Services Administration.

Today there are only about 140 permanent resident patients at Carville, most of whom have lived there for many years. Although the hospital stopped

accepting new long-term residential patients in 1986, patients do come to the hospital for short stays for treatment purposes. The center also operates 10 regional ambulatory care programs. There are still more than 6,000 Hansen's disease cases registered in the United States, and the World Health Organization estimates that there are 2.4 million cases worldwide.

A hundred years have passed since those first patients arrived by boat at the Indian Camp plantation. And a century after this beginning, the Gillis W. Long Hansen's Disease Center at Carville remains an internationally famous center for treatment, training, rehabilitation, and research related to Hansen's disease.

—*JOHN PARASCANDOLA, PhD, PHS Historian.*