Chapter Two

Life at Fort Bayard

On 5 September 1904 Private (Pvt.) Richard Johnson reported for duty—not hospitalization—at Fort Bayard, yet he arrived with a sense of dread. Traveling from his previous assignment in the Philippines he had steamed across the Pacific to San Francisco, and then ridden on the Southern Pacific and Santa Fe rail lines to Deming, New Mexico. It then took almost four hours to travel forty miles on a branch line up from Deming, and a bumpy wagon ride for the final three miles to his new assignment. To his despair Johnson "found the surrounds fully warranted the lugubrious description I had heard about the place." Although he ended up enjoying his Fort Bayard assignment, Johnson later wrote that most enlisted men of the Hospital Corps "found conditions quite forbidding because of its isolation, lack of social contact, limited recreational diversion and a distaste for association with tubercular disease."[1] Tuberculosis, he explained, was "regarded as a much dreaded disease that was easily contracted by association."[2] In fact, so many hospital corpsmen requested transfers out that the Surgeon General established a policy that no such requests would be considered until after two years of service.[3] Consequently, Johnson noted, "During my time there we had a high percentage of desertions." For example, all four of the men who arrived with Johnson deserted within a year—"two of them," he dryly observed, "owing me money."[4]

Four years later another young man arrived at Fort Bayard. He, too, remarked on the long journey by rail through the "desert waste of New Mexico," and then the wagon ride over "dry desolate foothills," to the post. But his reaction was different from Johnson's. Captain (Capt.) Earl Bruns and his wife, Caroline, both had tuberculosis and came to heal. They ended up staying for almost ten years, as Bruns moved from being a patient to a physician at the hospital. For Bruns Fort Bayard was "a veritable oasis in the desert, studded with shade trees, green lawns, shrubbery, and flowers." He credited the hospital commander, Colonel (Col.) George E. Bushnell, writing that, "[i]n this one spot one man had made the desert bloom like a rose."[5]

Johnson's and Bruns' different views from 1904 and 1908, respectively, may reflect the fact that Johnson was healthy and assigned grudgingly to work at the tuberculosis hospital, whereas Bruns had few other options and came in hopes of regaining his health—or it may reflect the improvements Bushnell made during his first years in command. But every week for the more than twenty years that Fort Bayard was an Army tuberculosis hospital, workers and patients arrived with dread and foreboding, or joy and relief—or a mix of them all. Fort Bayard would be a pivotal experience for many; some would arrive dying and find life, others would arrive healthy and die, and all would wonder at their fate.

The approach Fort Bayard and George Bushnell took to tuberculosis was similar to how physicians manage the disease today in that it involved isolating the patient, treating the disease, and educating the patient and his family on how to maintain their health. But without the antibiotic cures of today, success was elusive. The community that Bushnell fostered at Fort Bayard was therefore a place of contradictions and tensions in several ways. First, the Army hospital offered patients sanctuary from the demands, fears, and prejudices regarding tuberculosis in the outside world; while some men embraced that refuge, others felt imprisoned. Second, Fort Bayard treated tuberculosis patients with prolonged bed rest, fresh air, and a healthy diet, but undertaking this "rest treatment"—confining oneself to bed for months—proved difficult if not impossible for many patients, so some rebelled and others fled. The third tension at Fort Bayard involved patients' adaptation to new lifestyles as people with tuberculosis, or "lungers." As one tuberculosis sufferer put it, "Once a T. B.…always a T.B."[6] For some this new identity simply required resting, using a spit cup, and guarding their health for the rest of their lives; for others, it meant the loss of their livelihoods and families. Some adjusted well to a new life of fragile health and circumscribed opportunities, but others despaired. Finally, Fort Bayard managed patients' transition back to the outside world. For the dead, it meant caring for their bodies and property and helping their loved ones come to terms with the loss. For the living, it meant providing shelter and medical care when their health broke down over the years. For the fortunate patients who recovered their health, Fort Bayard prepared them to reenter the outside world by educating their families about their disease, helping them get government disability benefits, or finding work suitable for a person with weak lungs. These aspects of the Fort Bayard experience—the hospital as a sanctuary or prison; the treatment as a *struggle* to *rest*; patient's acceptance and/or resistance to this new lifestyle; and finally, the departure from Fort Bayard—were all fraught with sorrow or joy, or both.

The World George Bushnell Made

When Johnson and Bruns arrived at Fort Bayard they entered a world apart from the desert around it. New Mexico did not become a state until 1912, and like most mining communities, the region experienced boom–bust economic cycles. But the local economy was generally thriving during much of Bushnell's command (1904–17) as open-pit mining operations extracted copper deposits to make

wire to carry electricity throughout the country. In contrast to the rugged life of mining and ranching, however, Fort Bayard was a place of infirmity.

One of the most striking aspects of Fort Bayard was that many of the medical staff had tuberculosis themselves, including George Bushnell. Tuberculosis weakened Bushnell's lungs and shaped his life in numerous ways.[7] He tired easily, had to carefully monitor his health, and as Earl Bruns observed, "was never a well man."[8] Bushnell had active tuberculosis five times in his life: first, in 1881 during his medical training; then in 1900–01, while working in Washington, DC; and again in 1909–10, when he took a six-month sick leave of absence from Fort Bayard for bed rest in the California Sierra Madres; the fourth time in 1919 with a breakdown from the strain of wartime work; and the fifth and the final illness in 1924 that lead to his death at age 70.[9] Tuberculosis interfered with Bushnell's role as an Army officer in a particularly public and perhaps embarrassing way. In 1909 medical officer Charles N. Barney (who himself had tuberculosis) detected active disease in the middle lobe of Bushnell's right lung and found that tuberculosis had also caused swelling in the testicles, which made it difficult for him to ride horseback.[10] This was a serious matter because the War Department required all officers to take an annual horseback riding test to demonstrate their fitness. Bushnell at first requested permission to substitute the test with a long hike, but by 1911 advised his superiors that, "I did not consider myself strong enough to carry on the work of commanding this Hospital and keeping myself in condition for active duty."[11] The War Department generally required officers in poor physical condition to retire, but the Surgeon General secured a waiver for Bushnell, because "the interests of the service would suffer by his retirement."[12] After a leave of absence in 1909–10, Bushnell's annual reports on the competency of his officers included his own name on the list of those competent for hospital duty, but "unfit for active field service."[13] This must have been a bitter pill for a career Army officer.

Bushnell was not unique, however, because scores of tuberculosis specialists in the United States had the disease. "What would our sanatorium movement and our anti-tuberculosis crusade amount to," wrote tuberculosis expert Adolphus Knopf, "were it not for the labors of tuberculous physicians, or one-time tuberculous physicians, who, because of their infirmity, had become interested in tuberculosis?"[14] Well-known leaders in the antituberculosis movement such as Edward Trudeau and Lawrence Flick established their sanatoriums after they recovered from tuberculosis in order to offer others the treatment. Twenty-one of the first thirty recipients of the Trudeau Medal, established in 1926 for outstanding work in tuberculosis, had the disease.[15] James Waring, a Colorado tuberculosis physician who arrived at a Colorado Springs sanatorium on a stretcher in 1908, later wrote, "It has been my good fortune to serve three separate and extended 'hitches' as a 'bed patient,' the time so spent numbering in all about nine years."[16] He, like many physicians, saw his personal experience as an asset in his practice. Most Army tuberculosis experts knew the disease well. The three key figures in the Army tuberculosis program during World War I were Bushnell, Bruns, and Gerald Webb of Colorado Springs who started a tuberculosis sanatorium after his wife died of the disease.[17] During World War II, the man

in charge of the Army's tuberculosis program, Esmond R. Long, also had the disease as a young man.

Bushnell turned tuberculosis into an asset for the Army Medical Department, making Fort Bayard a center of national expertise on the disease. His personal experience with chronic pulmonary tuberculosis gave him good rapport and credibility with many of his patients. Medical officer Earl Bruns wrote that, "[H]e went among the patients and talked to them individually" and thereby provided "a living example of a cure due to rational treatment." Bruns described how Bushnell spent his days attending to patients, carrying out administrative duties, and devoted hours to supervising the work in the gardens and grounds of Fort Bayard. Bushnell also had a scholarly side, said Bruns, so that "[a]ll spare moments were spent in improving his mind," as he continued to study languages at Fort Bayard and translate medical articles in German for the Army Medical Department. Bruns characterized Bushnell as "modest and sweet," but noted, "I have seen him angry in his office over official matters, but never at any other time."[18] Hospital corpsman Richard Johnson recalled that although Bushnell was in his early fifties, he had white hair, so "some of the witty guys occasionally referred to him as 'old cotton-top.'" But, he observed, Bushnell "was not the kind of person to whom a burlesque nickname would cling very tenaciously." He remembered him as "a wise old man peering over his glasses from behind his roll-top desk, or a somewhat ungainly, white-haired, figure plodding industriously across the parade ground in a short cut between the office and his quarters—with his ever-present pipe in his mouth." Bushnell, he concluded, was "mild mannered and dignified without ostentation, but could be stern on warranted occasions."[19]

Two incidents demonstrate this sternness. The first involved manure. While Bushnell was on sick leave in 1909, an Army inspector observed flies in the officers' mess room and blamed the proximity of a horse stable and a manure pile from the dairy herd, ordering their relocation.[20] When Bushnell returned to command in May 1910 he fired off a ten-page response to the inspection, refuting the notion that the "present location of the horses makes any difference whatever as to the number of flies in the officers' mess or elsewhere." Noting that he required the removal of manure from the stables every day to control flies, he launched into an exegesis on the *musca domestica*, pointing out that they lay their eggs in horse manure, not cow manure. The inspector, he argued, should have endeavored to "prove to himself that the manure pile was a nuisance before recommending its removal." Indeed, wrote Bushnell, "It is my opinion that the composting of cow manure is a praiseworthy act rather than an irregularity." That was apparently the last word on manure at Fort Bayard.

Fort Bayard Chaplain Cephas Bateman ran into a similar buzzsaw. In late 1912 he had questioned Bushnell's use of funds designated for the officers' stables to pay one of the guard post corporals, suggesting that it was "unmilitary" and "establishes a dangerous precedent."[21] When Bushnell took offense, Bateman apologized abjectly, stating he had been "crazy from grippe" when he complained, and "I have not found any rest in body or mind since I ran amuck like a juramentao in that letter to you."[22] The matter seemed closed until March 1913 when Chaplain

Bateman told the post teacher who had broken his collarbone that he was not well enough to teach and should cancel school for the day. Lieutenant (Lt.) Joseph Walkup, who had treated the teacher and cleared him to work, believed Bateman had undermined his authority and appealed to Bushnell who agreed with him. When Bateman characterized Bushnell's stance as "unwarranted and exasperating," the commander told the chaplain to request a transfer or face "official action" for insubordination. After more than seven years at Fort Bayard, Bateman and his family were gone within a few weeks.[23] Bushnell, while mild and white-haired, maintained command.

Bushnell presided over a community of more than 1,000 people, including patients, military personnel and their families, and civilian laborers and trades people. The hospital admitted 600 to 1,000 patients annually, many of whom stayed six months or more, and discharged almost as many.[24] Fort Bayard had about 400 hospital beds. The lowest patient population listed was 217, in October 1910, and the highest was 372, in December 1916. Hospital personnel generally included ten medical officers, an Army chaplain, ten to twenty nurses, and about 100 enlisted men of the Hospital Corps. Noncommissioned officers managed the post exchange, commissary, and any construction projects, and a quartermaster contingent was in charge of the guard house and patrol of the post reservation. Several dozen civilians served as laborers on the post. Although a creature of the federal government, Fort Bayard under Bushnell developed a degree of self-sufficiency in its isolated location, not unlike a ship at sea.

The Physical Plant

Upon assuming command in 1904, Bushnell, who had studied botany for years, immediately began to plant flowers, shrubs, and trees. When President Theodore Roosevelt created the Gila Forest Reserve in 1905, Bushnell ensured that Fort Bayard, which adjoined the Reserve, was part of a government reforestation project. The first year alone the Forest Service gave the hospital 250 seedlings of Himalayan cedar and yellow pine.[25] Bushnell also got approval to fence in land for pasturing dairy cattle and arranged to recultivate long-neglected garden plots. The first year he predicted that the garden would generate "about 1300 dollars worth of produce."[26] After the quartermaster located an underground water source, Bushnell redoubled his cultivation efforts, planting trees, flowers, and grass to mitigate the wind and dust, and "to beautify the Post."[27] In later years Bushnell successfully grew beans from ancient cave dwellers (Anasazi beans), and made a less successful effort to grow Giant Sequoia from California.[28] By 1910 Fort Bayard had four acres of vegetable gardens, a greenhouse, an orchard of 200 fruit trees, and alfalfa fields and hay fields for the dairy herd of 115 Holsteins, which the *Silver City Enterprise* proclaimed "one of the finest in the west."[29] The hospital also raised all of the beef consumed at the hospital (thereby avoiding Daniel Appel's purchasing problems) and consumed pork at small expense by feeding the pigs the waste food. The hospital laboratory raised its own Belgian hares and guinea pigs for experiments.[30]

Bushnell also oversaw years of construction at Fort Bayard. In the wake of Florence Nightingale's writings, nineteenth-century sanitation practices stressed cleanliness and ventilation, giving rise to pavilion style hospitals, narrow one- or two-story buildings lined with windows to provide patients with ample ventilation. In March 1904, Bushnell sent the Surgeon General plans for an "open court building" in modified pavilion style (Figure 2-1). The building consisted of a quadrangle of long, narrow dressing rooms around an open court with porches along both the exterior and interior of the building. The rooms could be used for sleeping in inclement weather and the porches allowed patients to seek sun or shade as they wished. Wide doors enabled the easy movement of beds between the rooms and the porches. "The object of this style of building is to facilitate sleeping out of doors, which is now considered so important in modern sanatoria for the treatment of tuberculosis," Bushnell explained. He added two-storied corner

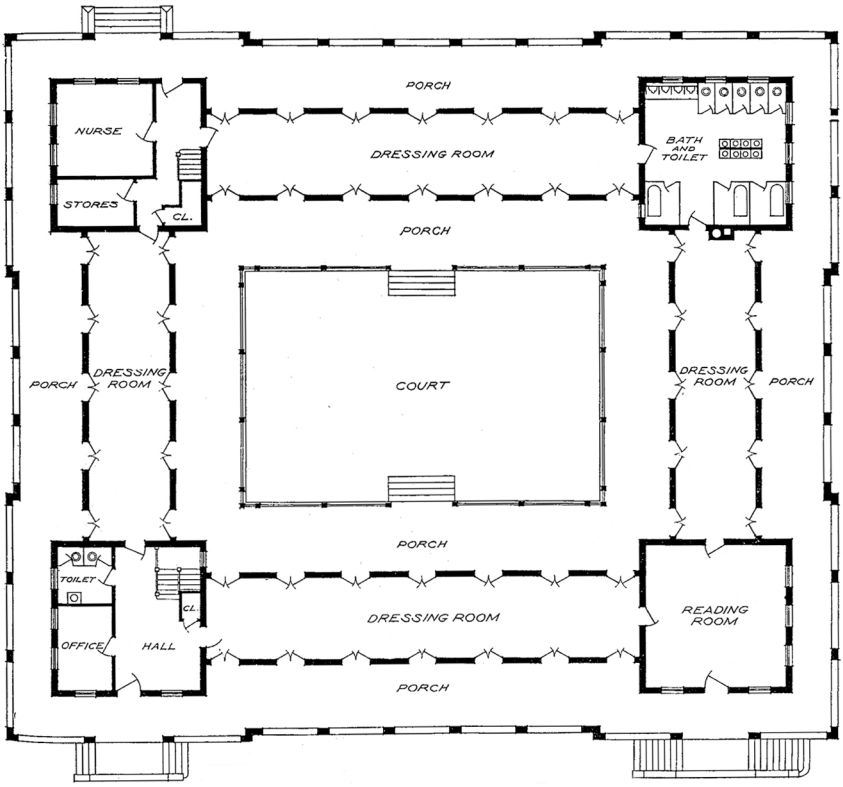

Figure 2-1. Plan for tuberculosis patient ward, as designed by George E. Bushnell, providing fresh air porches for each patient, in "United States Army Tuberculosis Hospital in New Mexico," *Modern Hospital* 3 (1914): 103.

towers to provide a reading room, storage, and bathroom facilities for the Hospital Corps, and to "add greatly to the architectural effect by relieving the monotony of the long and low sides."[31]

In his annual report for 1910 Bushnell provided a general overview of the hospital (Figure 2-2), noting that for the first time in years there was no construction underway.[32] His description would be familiar to a ship captain: an isolated, hierarchical

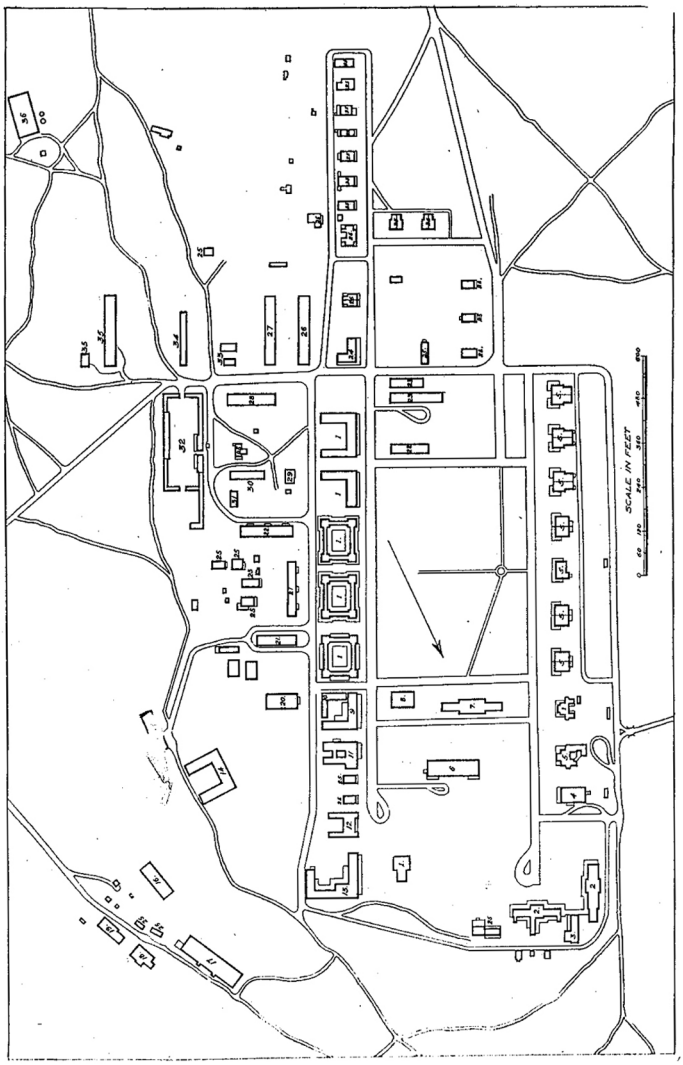

Figure 2-2. General plan of the Army tuberculosis hospital at Fort Bayard in 1914, from "United States Army Tuberculosis Hospital in New Mexico," *Modern Hospital* 3 (1914): 102.

Figure 2-3. U.S. Army, General Hospital, Fort Bayard, New Mexico, Interior view of a tent ward, circa 1907.
Photograph courtesy of the National Library of Medicine, Image #A030247.

social compound on a desert, supplying much of its own food, supplies, entertainment, and, of course, healthcare.[33] The post was a collection of almost 100 buildings, some from the old fort, others new, and patient wards (that were designated for patients according to rank and severity of disease). The sickest enlisted men were housed in the former post hospital, which had a glass porch for those too ill for exposure to extreme weather. Ambulant patients lived in the three new quadrangle buildings, which accommodated about forty men each. Others lived in tent wards of twelve beds, with wood floors, electric lights, and wood stoves, and had an open flap design to allow fresh air throughout the day and night (Figure 2-3). Officer patients lived in two buildings with their own kitchens: one for the infirm, and the other one for ambulant patients. One of the former Army barracks served as the detention ward for the "punishment of patients too sick to endure other disciplinary measures." The complex also included a solarium, amusement hall, library, and a laboratory and surgical facility near the infirmaries. Bushnell noted that the nurses' residence occupied "a commanding position on the hill west of the post," with twenty bedrooms, kitchen, dining room, office, and parlor. The hospital administration building was equipped with a telephone, telegraph, and post office, and wings for the officers' club on one side, and a court-martial room on the other. To support both patients and the staff, the hospital had a range of

resources and services such as shops for the carpenter, wheelwright, blacksmith, and plumber, as well as barns and granary for horses. Finally, Bushnell noted that, "pains have been taken to beautify the cemetery, installing underground irrigation to water the pine trees planted around it."[34]

The Patients

The majority of patients at Fort Bayard were, of course, military men. Unlike most civilian sanatoriums, which could limit admissions to members of a church or social organization, or patients whom physicians believed they could help, Fort Bayard had to admit all eligible individuals as space allowed. First priority was given to beneficiaries of the Soldiers' Home and military officers and enlisted men with tuberculosis, then family members of Army personnel, and finally civilians, with the Secretary of War's approval. Medical staff delivered several babies each year, and treated people at the post for a range of medical and surgical problems. In addition, from May 1904 to May 1905 Fort Bayard cared for 110 sailors and Marines. A hurricane destroyed a makeshift military tuberculosis camp at Pensacola, Florida, in 1906, and the War Department gave the Navy Fort Lyon, Colorado, for the care of tuberculosis sailors and officers, but Navy Surgeon General Preston Rixey still sent more than half of his tuberculosis patients to Fort Bayard. He told members of Congress, "There has been no question of the benefit resulting to many of the patients transferred for treatment at this institution."[35]

Fort Bayard periodically convened a board of three medical officers to determine which patients were so disabled by tuberculosis that they could not continue in active service. The War Department would then discharge them on a "certificate of disability," which made them eligible for military hospital care and the Soldiers' Home. A large percentage of patients did change from active duty status to beneficiaries of the Soldiers' Home during their treatment at Fort Bayard. Unlike soldiers and sailors, beneficiaries were generally free to enter and leave the hospital as they wished. Many chose to leave the hospital immediately, against doctors' orders. In 1905, for example, 33 percent of patients who were discharged from Fort Bayard with advanced tuberculosis were listed as "unimproved" when they returned to civilian life.[36]

Family members of military personnel gained admission to Fort Bayard only as beds were available. These patients included the children of Army officers, such as Daniel Appel's son, Robert, age nineteen, admitted by Bushnell in 1908, and Theodore Wilson, the stepson of a cavalry officer.[37] As Fort Bayard's good reputation spread, civilians also sought admission. Although the War Department referred many of them to private sanatoriums, people with political influence did get admitted. In 1908 Assistant Attorney General Alford W. Cooley came to Fort Bayard at the request of President Roosevelt, as did Congressman George Legare of South Carolina, at the advice of Secretary of War William Taft.[38] Some of the civilian patients developed tuberculosis while they were working on the construction and operation of the Panama Canal—of ninety-nine men sent home from Panama in 1915 due to debilitating illness, twenty-seven had tuberculosis.[39]

William C. Gorgas, who became Surgeon General in 1914 and had served in Panama for ten years, authorized the admission of several such patients. In one case, Harry C. Bradley, a United Fruit Company employee in Panama, came to Fort Bayard for treatment, and when he ran out of money to pay for his care, with Gorgas' approval, Bushnell arranged for the hospital to pay for his care.[40]

Fort Bayard had female patients from the start, most of them nurses who developed tuberculosis during service in the tropics or while caring for tuberculosis patients. The War Department also transferred Army officers whose wives had tuberculosis to the post so they could benefit from the climate and receive treatment. When medical officer Alexander Murray's wife was diagnosed, Bushnell offered him a position so she could be at Fort Bayard.[41] These arrangements were informal and unofficial; female patients stayed in the nurses' dormitory. In 1909, the Surgeon General told a member of Congress that women were not admitted to Fort Bayard.[42] But Bushnell sought permission to convert a dormitory into a ward for eight women, and beginning in 1910 the hospital formally admitted female patients.[43] Some of them had good connections like Helen Kress Gurley, the daughter of a retired brigadier general; Dena Watkins, daughter of a congressman from Louisiana; and Mrs. Edward C. Heasley, the wife of one of President Taft's office clerks. In the latter case, Secretary of War Henry Stimson also assigned Edward Heasely to duty at the Quartermasters Corps at Fort Bayard to facilitate his wife's admission and to maintain their income.[44]

Bushnell drew the line at young children, however. Army families had children at Fort Bayard, of course, but rules required them to stay away from hospital wards and messes, not only for the children's safety but also to avoid disturbing patients.[45] When the Secretary of War authorized the admission of Mrs. Donald P. Branson and her child, Bushnell noted that "noises made by one patient are very annoying to other patients," so that "the presence of a child in this institution would be in my judgement almost intolerable unless the child is extremely well trained and old enough to be left practically to its own resources." He strongly recommended, therefore, "that no authority be given in the future for the admission of children in this hospital."[46]

A variety of funding sources supported Fort Bayard patients. The War Department paid medical personnel salaries and operating costs of the hospital, and $1.00 per day for officers' and $0.50 per day for enlisted men's hospital subsistence. The Soldiers' Homes and the Navy paid $5.00 per week for patients under their jurisdiction, and civilian patients and family members of the military paid from $1.00 to $1.50 per day.[47] At all Army hospitals these monies went into the "Hospital Fund," which, after paying for patients' subsistence, hospital commanders could use to pay for special programs or patient services or for charity cases.[48] Patients used personal funds for laundry and postage, gambling, and drinking. Fort Bayard's costs compared favorably with those at other tuberculosis sanatoriums. The Saranac Lake sanatorium in the Adirondacks charged $8.00 per week in 1915.[49] When William Gorgas surveyed hospital costs in the United States, he found that in 1910 the costs per patient ranged between $1.00 and $2.00 per day.[50]

The different costs to support different classes of patients and military personnel

reveal the military and social hierarchy. A 1910 inspection report listed the average cost per diem to feed enlisted Fort Bayard hospital corpsmen as $0.29; nurses, $0.46; ambulant patients, $0.47; infirmary patients, $0.51; and officers, $1.31. The latter figure included about $0.20 for the labor in the dining room because officers were served individually, on china, rather than barracks style. Although both enlisted men and officers each consumed an average of fifteen pounds of beef in March 1910, enlisted men were also offered ham, mackerel, and canned oysters, while officers ate fresh pork, veal, and fish. Enlisted men ate canned goods, including fruits, vegetables, and meats, while officers consumed fresh vegetables and fruits and few canned goods.[51] A congressman receiving treatment at Fort Bayard no doubt was on officers' rations when he told his wife in February: "Last night I had strawberries for supper, large saucer full. Now what about that! Temperature fifteen above zero and strawberries for supper!"[52] Another rule reflected Fort Bayard's hierarchy: "Enlisted men who are on duty at the Officers' Infirmary or who have business there (orderlies, etc.) will enter and leave the building by the rear."[53] Thus, while united by a common bond of living with tuberculosis either as patients or workers, and sometimes both, Fort Bayard remained a stratified military community.

Medical Officers

Bushnell gathered around him medical staff that shared his dedication to tuberculosis. He told the Surgeon General that "it would be much better if Medical Officers of this institution were to permanently settle here so that they could feel that their life work was to become experts in tuberculosis," and recommended that medical officers be assigned to Fort Bayard for at least four years. "There is no doubt in my mind that tuberculosis constitutes a specialty," he wrote. Men who are in charge of the patients "should have expert knowledge."[54] When the Office of The Surgeon General asked Bushnell to train civilian physicians under contract with the Army, thereby "giving them an opportunity of studying tuberculosis and spreading the knowledge gained for benefit of the community at large," Bushnell agreed as long as the men were "desirous of studying deeply internal medicine."[55]

Like Bushnell, many of these physicians had tuberculosis (Figure 2-4). In 1906, for example, six of the ten medical officers at Fort Bayard had the disease, one too ill to work, two on light duty, and the rest on full duty.[56] In 1910, five of ten medical officers had the disease, one on medical leave, one in bed, one on light duty, and two recovered enough for full duty.[57] The War Department supported Bushnell's approach, promoting him twice during his command of Fort Bayard, and advancing other medical officers even while under treatment for active tuberculosis. Edward Munson, for example, was promoted to major in 1906, while he was a patient at Fort Bayard, and Earl Bruns was promoted as well in 1908, with the War Department's comment that "[t]he precedent for promotion of this officer, though he is suffering from tuberculosis, has already been established.…[and] his promotion to the rank of captain will not interfere with the promotion of any other officer."[58] The Public Health Service tuberculosis hospital at Fort Stanton

Figure 2-4. Colonel George E. Bushnell and medical staff, Fort Bayard.
Photograph courtesy of Silver City Museum, Grant County, New Mexico, #01771.

had a similar practice. In 1908, five of the seven medical officers at Fort Stanton had tuberculosis, three were under treatment and two, including the commander, surgeon Paul Carrington, had recovered.[59] Carrington also reported that the Public Health Service sanatorium "was fortunate in having the free services of a dentist, who himself was suffering from pulmonary tuberculosis."[60]

When critics worried that some medical officers at Fort Bayard were too ill to perform their duties, they were less concerned about the transmission of disease than they were that the officers did not have the energy to do their jobs. In May 1906, Bushnell did ask for temporary duty medical officers because six of his officers were ill—four with tuberculosis, and two with other ailments.[61] But he was never apologetic or defensive about having people with tuberculosis on duty. Instead, he pointed out that practically all these medical officers "are here on account of lung trouble," and criticism that they were being worked hard is "only deserved in case men who are sent here perform duty which is beyond their strength. I have done my best to prevent this."[62] Not all medical officers at Fort Bayard were ill. Capt.W. H. Tefft (1910–14), 1st Lt. Roy C. Heflebower (1911–12), and Capt. George Scott (1911–13) all served at Fort Bayard without ever having the disease. In one sad irony, Capt. Joseph O. Walkup did not have tuberculosis but was struck by lightning and killed while driving an open automobile near Fort Bayard in 1914 just weeks after his promotion to captain.[63]

Fort Bayard physicians, regardless of whether they had the disease, became familiar with all aspects of tuberculosis. They examined hundreds of patients, tested thousands of laboratory specimens, surgically removed or repaired infected or

damaged tissue, and conducted autopsies on the dead. The large number of cases provided an excellent opportunity to study the disease. Bushnell held weekly seminars on various aspects of tuberculosis and medical officers discussed cases and heard papers on one another's research.[64] According to Bruns, Bushnell at first scheduled such meetings after lunch, but after some men fell asleep, he "changed them to the evening and quizzed us over the previous lecture."[65] Medical officers also attended professional conferences; Bushnell was a charter member of the American Sanatorium Association and was made an honorary member of the New Mexico Medical Society.[66] Fort Bayard officers published a number of papers. In 1908 C. N. Barney published a paper on the use of tuberculin; in 1912 J. B. Van Horn reported on an experimental "modified flesh diet," which was heavy in meats, eggs, and prunes, for seriously ill patients; and in 1916 Thomas Johnson surveyed the various complications of tuberculosis at the hospital.[67] Bushnell and his staff also published a booklet in 1908, *Illustrations of Tuberculous Lesions*, containing case studies of patients who had died of tuberculosis with photographs of the damage to various organs found at autopsy.[68]

Other Staff

Fort Bayard also relied on a wide range of staff from hospital corpsmen, nurses, and post guards to gardeners, launderers, and cooks. And here Bushnell preferred to hire staff with a personal connection to tuberculosis because they were less inclined to be afraid of the patients. When the hospital chaplain left precipitously in 1905, Bushnell immediately requested the assignment of Chaplain Cephas Bateman to replace him, noting he "wishes to remain in the Southwest on account of the health of his wife."[69] Bateman's wife had tuberculosis and he would serve as Fort Bayard chaplain for seven years. Bushnell also recruited staff from among recovering patients. Cavalry officer Solomon Vestal arrived as a patient at Fort Bayard in 1903, and when he was well enough, served as quartermaster for construction.[70] Army engineer H. R. Robert, a patient in the hospital (1910–11), also served as Fort Bayard quartermaster, and artillery officer Stephen Abbot arrived as a patient, but later became the purchasing commissary officer.[71]

Bushnell's approach was not only practical, but also compassionate. He once told the Surgeon General, "It is better to admit some of the undeserving than to exclude any who has a right to admission."[72] In 1910, Walter Elliot, an infantry officer with fifteen years of service, came to Fort Bayard with his wife. They both had developed tuberculosis while in the Philippines, perhaps after bouts with malaria or dysentery. After examining Elliot, Bushnell determined that he would never recover his health, but instead of recommending retirement, which would have reduced Elliot's income and made his wife ineligible to stay at Fort Bayard, Bushnell asked that he be assigned as purchasing officer.[73] Elliot and his wife had both broken down with tuberculosis during military service, Bushnell pointed out, and "Captain Elliot's family affairs are in such a condition that they excite my sympathy and I believe should receive the consideration of the War Department." Elliot stayed at Fort Bayard and sat on several disability retirement boards, until the Army retired him on disability in 1913.[74]

In another example of compassion, when Congressman Nicholas Longworth of Ohio (Speaker of the House in the 1920s) requested admission to Fort Bayard for a constituent, a Mr. Barrett, Bushnell advised the congressman that admission of civilians was authorized only by the Secretary of War. Bushnell's current clerk was going to transfer to the U.S. Forest Service in Albuquerque, New Mexico, however, so Bushnell immediately arranged for Barrett, who had excellent clerical skills, to become his office clerk and take the Civil Service exam required for employment.[75] Bushnell thereby turned the problem of the loss of his clerk into an opportunity to get a new one, help a young man, and do a congressman a favor. Bushnell even built up the orchestra with tuberculosis patients when he arranged for the Hospital Fund to pay the costs of a destitute civilian patient, Julies Steyskal, noting "his services as director and musician much more than compensate for the extra expense involved."[76]

When Congress created the all-female Army Nurse Corps in 1901, Fort Bayard was one of the first assignments (Figure 2-5). Nurses generally cared for the sickest patients in the enlisted men's and officers' infirmary, feeding and bathing them, taking temperatures, giving medications, and assisting in surgeries. Like medical officers, some were patients as well. In 1910 four of ten nurses on duty had tuberculosis, two of them on "light duty" due to their illness.[77] Although most of these pioneer nurses welcomed the employment and the opportunity to serve in the military, some of them may have been dubious of their remote assignment. Jane Delano, Army Nurse Corps Superintendent, inspected the site in November 1909, and presented a positive report to the American Nurses Association. "One must expect to forego the pleasures of a city, but to any one who cares for the country, Fort Bayard offers many compensations." She explained, "Every provision for comfort has been made." Nurses lived in single rooms with balconies where they could sleep if they wanted to, and "electric lights, steam heat, and all the modern conveniences." Delano found that the hours of duty afforded time for outdoor recreation, and nurses could play tennis and have horses, "which are much cheaper than in the east, and can, as a rule, be sold without loss when the nurse is transferred."[78]

Created in 1886 to provide a cadre of soldiers trained in caring for the sick and wounded, the Hospital Corps, however, did the lion's share of the work. Richard Johnson, who had been so discouraged upon his arrival at Fort Bayard, wrote a memoir that provides a glimpse of life at the post. Johnson had three different jobs while at Fort Bayard—attendant in the ambulatory wards, worker in the hospital gardens, and orderly in Bushnell's office, doing errands, answering the telephone, and collecting and distributing the mail. He also served as bugler for the post, a job for which he considered himself "very fortunate."[79] He found his Hospital Corps colleagues were often better educated and from wealthier families than other enlisted men he encountered. "We had men who were medical students, law students, and at least one law graduate, pharmacist, one dentist, theatrical men and even one scion of British nobility." Most were in the Army because they had "back-slidden in some moment of weakness, and had resorted to the [A]rmy for solace, adventure or obscurity."[80] Johnson got to know some of these men by

Figure 2-5. Group of trained nurses at Fort Bayard. Cephas C. Bateman, *The Army Hospital at Fort Bayard* (Lawrence: Kansas Collection, University of Kansas Libraries), circa 1911. Photograph courtesy of Spencer Research Library at the University of Kansas.

drinking with them or lending them money. Sedrick Dirks, the British scion, for example, was a former attorney, whose alcoholism drove him into poverty. When Johnson met him on his trip out to Fort Bayard, Dirks was broke, so he bought him drinks along the way. When they got to their new assignment, "To add to his humiliation this middle aged man of culture and refined background was assigned

to the undignified job of mess attendant, which must have been the last straw in breaking his British pride."[81] Within a few months Dirks went absent without leave.

Hospital corpsmen could be an unwieldy bunch. During the first year of Bushnell's command, Fort Bayard had an average of 118 members of the Hospital Corps, and these men wracked up 123 disciplinary hearings and trials with 118 convictions.[82] Over the years Bushnell worked to reduce this rate and improve morale, and by 1910, he could report that he disciplined only 40 percent of the healthy soldiers who served in the Hospital Corps.[83] Most of the offenses involved minor rules violations for gambling, drinking, and fighting. Pvt. Charles Petersen, for example, was sentenced to confinement to his quarters for one month after being convicted of being drunk on the job and striking his sergeant.[84] Others, like Pvt. Clarence Miller in 1906, absconded to town without permission, and were tried by court-martial for going absent without leave.

The final category of Fort Bayard personnel was civilians from the local community who worked as laborers in and around the post. They included a Chinese laborer named Yee Hing, five members of another Chinese family named Fong, and workers with surnames such as Portillo, Delgado, and Villegas, mostly Mexicans and Mexican Americans, who worked in the kitchens, dairy, stables, and construction projects. Men working as teamsters and firemen with names such as Hill, Jones, Taylor, Harris, and Moore could have been black or white. These people left little trace of their experiences at Fort Bayard, though they do at times emerge in the historical record. African American Clara Blivins of the nearby town, Central, did laundry for some of the officers, and at one point complained to Bushnell that Chaplain Bateman owed her money.[85] Convalescent patients also worked in wards and the hospital gardens to earn a little money, test their health before returning to full duty, and, in Bushnell's view, "render men contented by giving them occupation."[86]

In this setting—an isolated place between mountain ranges, with trees, gardens, and flowers—lived a diverse community of medical officers, nurses, enlisted men, and civilian workers. Bushnell and his staff offered tuberculosis sufferers sanctuary from a busy and at times hostile world, providing rest and treatment for their disease, educating them on how to live with tuberculosis, and preparing them to rejoin the outside world.

Fort Bayard: Sanctuary or Prison?

Bushnell understood Fort Bayard as a sanctuary. "The primary object of the institution has not been to cure soldiers with a view to returning them to duty in the ranks," he wrote, but rather "to furnish asylum for all tuberculosis patients whose disease has been incident to the Military service as well."[87] Agnes Young, a nurse at Fort Bayard in 1906, compared this role to Fort Bayard's former one of fighting the Apaches. The post "now shelters those who fight a fiercer, more unrelenting and insidious foe than ever before stalked these wild plains, thirsting for victims."[88] Although many patients welcomed the protection and care of

Fort Bayard, others were ambivalent or outright resistant. "Consumptives as a rule are a sanguine, bright-eyed folk," observed Chaplain Bateman. "They are constantly over-rating their strength and the most intelligent appear frequently to be the poorest judges of their real condition." Consequently, he wrote, "[H]e who has led an active, efficient life may chafe under the confinement of a hospital and easily comes to regard an infirmary as a prison."[89]

Patients like Earl Bruns believed that Fort Bayard was their best chance to get well and welcomed the care they could not afford elsewhere. Some of these patients arrived begging. In 1905, civilian engineer L. C. Johnston arrived from the Philippines with advanced tuberculosis. As a civilian he was ineligible for admission, but he brought with him a letter from a medical officer he had met in Manila. Bushnell admitted him even though the hospital was full and requested authority to treat Johnson until he was well enough to travel to another sanatorium because "his condition is such that it is not considered humane to refuse him admission."[90] When Lt. Pedro A. Hernandez came to Fort Bayard in February 1915, he was well but his wife had tuberculosis and was pregnant. Bushnell requested permission for her to stay for several months to ensure a lesion on her lung cleared up and for Hernandez to be assigned to Fort Bayard. He noted that his wife did not speak English and "is quite helpless here since the personnel of the Hospital who come in direct contact with her are unable to speak Spanish. Under these circumstances her husband desires to stay here as long as she does."[91] At one point Bushnell detailed for the Surgeon General several cases of sick but ineligible patients, "in order to show the difficulties under which the Commanding Officer of this Hospital labors in his desire to avoid inhumanity on the one hand and on the other to reserve the funds of this Hospital for the class of patients for whom they are intended."[92] The Army Medical Department often supported Bushnell's practices, but occasionally resisted his charitable impulses. When he wanted to admit Joseph Fike, who had served two three-year periods of duty but was no longer in the Army, the Office of The Surgeon General gave permission with the caveat that it did "not view with favor the admission of discharged soldiers to the hospital under your command who are not beneficiaries of the Soldiers' Home."[93]

Fort Bayard served as home base or even a place to die for tubercular soldiers and veterans who had nowhere else to go for lack of funds, family, or both. One such man was 1st Lt. Olin R. Booth, a well-educated Army officer, born in Connecticut and graduated from Amherst College in 1895 with the ability to translate five languages. He enlisted in the Army shortly after graduation and served as an infantry officer during the Spanish-American War. After developing tuberculosis in the Philippines he arrived at Fort Bayard for treatment in March 1903 and stayed until he was retired on disability for tuberculosis in his entire left lung in 1906. Booth soon left Fort Bayard, but was in and out of the hospital four times, spending eight of a total of nine-and-one-half years at Fort Bayard until his death in September 1914. His records indicate that he never married and upon his death his body was shipped to his father in Brimfield, Massachusetts. Fort Bayard was the closest thing Booth had for a home during his adult life.[94]

Other men left Fort Bayard while they were sick but returned to die. Wilmot E. Brown, an Army contract surgeon, arrived in 1908 with advanced tuberculosis in both lungs. After two years, he left the hospital with a temperature of 100 degrees, and in "unfavorable" condition. He stayed in central New Mexico, but returned to Fort Bayard the following year so weak that Bushnell could not complete his physical examination. Medical staff kept Brown comfortable over the next months until he died in November 1911, at age thirty-eight.[95] In another example, William Gregg came to Fort Bayard with serious tuberculosis in April 1910, and six months later was granted a disability pension. He stayed on as a beneficiary of the Soldiers' Home only a few days. With a bad cough, pus in his sputum, and a low-grade temperature, his chart indicated that he "[l]eft the home at his own request." Gregg worked on a farm in Iowa and returned to Fort Bayard almost exactly four years later, in 1915, very ill. He stayed at the hospital for six months, recovered somewhat, and then left again. When Gregg returned three months later, he was dying. His last medical exam stated, "Patient is not doing well. Is a far advanced case with large involvement." On 24 January 1917 Gregg had a massive lung hemorrhage, died, and was buried at the Fort Bayard National Cemetery.[96]

Some patients wanted to leave but could not afford it. After receiving a grim prognosis, Pvt. Bernard Conroy wrote to his mother that he wanted to go home to die. She wanted him home, but asked Bushnell if her son would receive a pension if he were discharged from the Army. "I am a poor widow and am depending on his alottment [*sic*] of $10.00 a month which he made over to me and I still receive." Bushnell replied that it would be better for her son to stay at Fort Bayard because "your son is quite sick," and "he has every comfort here and his pay goes on, while if discharged he would probably have to wait some months before securing a pension."[97]

Not all patients had "every comfort" during their time at Fort Bayard, but they returned nonetheless. Pvt. Charles Tyler, an African American and member of the 9th Cavalry, had a long, sometimes painful relationship with Fort Bayard. He first arrived as a patient in late 1903 after he coughed up blood while on duty at Yosemite. During his stay at the hospital in 1904 he lost more than twenty pounds, going from 158 to 137, and requested a pension for disability.[98] Despite his weakened condition, a medical board denied his request and the Army returned him to duty at another post. Four months later, however, he was back at Fort Bayard, having lost ten more pounds, and finally received his discharge on disability in December 1905. Now at Fort Bayard as a beneficiary of the Soldiers' Home, Tyler gained back weight and began to work on the post for $30 a month and rations, the same as other laborers received.[99]

Although African American soldiers and veterans received similar pay and benefits as whites, and the Fort Bayard medical wards were not segregated by race, Bushnell and the War Department did impose the color line on social interactions. In 1907 Tyler complained to the Adjutant General that, "the CO [commanding officer] in command at Fort Bayard, N. M, has an Amusement Hall erected in that place and do[es] not want any of the colored patients to visit the Hall by no means." He continued in his letter, "There is no pleasure on earth for the Colored

Men at all in the BSH [Beneficiaries of the Soldiers' Home] in New Mexico they are barred from every thing there except the Guard House." Tyler was soon after suspended from Fort Bayard for three months, and while his medical chart does not give a reason for suspension, he told the governor of the Soldiers' Home that it was for writing a letter critical of Fort Bayard.[100] Diagnosed with tuberculosis, poor feet, and secondary syphilis, Tyler continued to cycle in and out of Fort Bayard six more times over the next eight years (1903–15). Tyler's medical record does not reveal his fate, but he was not buried in Fort Bayard's cemetery. The cemetery roster indicates, however, that many other "Buffalo Soldiers" did return to their old fort to die. The cemetery holds the graves of William Jones, a trumpeter in the 9th Cavalry (1903); Leon Ross, also of the 9th Cavalry (1907); and 10th Cavalry members George Cunningham (1905), Will Finney (1907), and William Ross (1914).[101] Unlike the amusement hall, the cemetery was not racially segregated. Men were buried in the order in which they fell.

Some patients did reject sanctuary entirely and left Fort Bayard at the first opportunity, usually the day after they received their disability pension. A patient who "left hospital at his own request" typically departed against medical advice. Pvt. Horace Smith, for example, was a twenty-year-old from North Carolina in the Hospital Corps, who had been in the Army only two years when in June 1910 he began to cough and lose weight. By the time he was admitted to Fort Bayard he had lost 25 pounds, down to 140 from 165. Medical officers found "very active lesions" in his lungs and tubercular laryngitis, and listed his condition as "unfavorable." Smith at first recovered some of the weight he lost, but was down to 130 pounds by the end of the year, with a persistent fever. In February, though he felt better, medical officers recommended that he be discharged on disability. Now a beneficiary of the Soldiers' Home, Smith was seriously ill with advanced tuberculosis in both lungs, a temperature of 101 to 102, and producing two cups of sputum daily. Smith chose not to stay at Fort Bayard, though, and as a very sick man he "[l]eft the home at his own request," most likely to die.[102]

Treatment: Rest and Effort

Fort Bayard became a tuberculosis hospital during a time of transition in tuberculosis treatment from a regime of exercise and fresh air intended to build up the body, to one of complete rest to allow the body to heal. George Bushnell made the transition complete stating, "upon taking command here I changed entirely the treatment and I believe with good results."[103] Under Daniel Appel and Edward Comegys patients had to rest two hours in the morning and two in the evening, but Bushnell established a more extensive rest regime, increasing both the daily time in bed and the length of time a patient would stay in treatment. Even before he took command, when he was only in charge of one of the wards in 1903, Bushnell began to implement the treatment regime and philosophy he had learned from civilian tuberculosis physicians Charles Minor in North Carolina and Carroll E. Edson in Denver. He asked volunteer patients to live in tents and spend longer periods in bed, and after several months reported to Comegys that patients

were improving when they rested more and slept outside.[104] Bushnell then began to lobby the Surgeon General on his approach, telling him, "it is my opinion that many patients do badly here because they do not take sufficient rest."[105] When he attended a national tuberculosis conference, he told the Surgeon General of "a gratifying unanimity among the speakers…as to the treatment of tuberculosis," and that "rest, relative or absolute, as the activity of the disease may require, an abundance of nourishing food and outdoor life were the three essentials insisted upon in the treatment."[106]

The premise of the rest therapy was that although medicine could not control the disease, rest could help make the patient stronger to fight the "bug." "Repose in bed acts in two ways," explained Earl Bruns. "It affords a relative amount of rest to the damaged lungs and also conserves the energy of the weakened body."[107] Not all specialists subscribed to rest therapy, but Bushnell believed he had benefitted from rest, and his experiments with volunteers at Fort Bayard had further convinced him of its value.[108] He recognized, however, that "it is up-hill work to break the prejudice of the older patients in favor of exercise as well as their natural inclination to go and come at will," but added, "[i]t is my belief that we can cure almost any case if we get it early enough."[109] Once he convinced the Army Medical Department to adopt his method, the rest regime prevailed in the Army for the next five decades. The actual effectiveness of rest therapy was unclear at the time and is still debated. Some physicians reason today that bed rest must have helped some patients' immune systems fight off tuberculosis, and others point to the falling death rates from tuberculosis as evidence of the success of sanatoriums and the rest cure. Other scholars are more skeptical. Historian Barbara Bates suggested that late nineteenth-century microscopy and X-rays enabled physicians to identify tuberculosis bacteria and shadows on the lungs and thereby diagnosed tuberculosis earlier and "cured" patients who may have gotten better anyway.[110] Physician and historian Thomas Dormandy argues that the rest cure was largely futile, and "the credit almost always belonged to the patient's natural resistance, and the recuperative power of nature."[111]

Although Fort Bayard had an X-ray machine, it was not used routinely until the late 1910s. Responding to a survey on X-ray use, Bushnell replied that the X-ray laboratory was "a very valuable adjunct" to a tuberculosis sanatorium if the "apparatus is first-class and the operators skilled."[112] But, he said, "on account of the unsatisfactory character of the present instrument it has not been used as much as it would have been otherwise in the examination of patients." His hospital instead diagnosed the disease based on physical symptoms such as weight loss, coughing, persistent temperature, a physical examination of the lungs, and sputum samples that were chemically stained to reveal tuberculosis bacteria. An individual's sputum had to be free of tubercle bacilli at least ten times in a row before Bushnell's team deemed a patient's case cured or at least quiescent.[113] Bushnell's advocacy of physical examination for diagnosis followed the prescription of his mentor and personal physician, Charles Minor, who wrote the section on diagnosis in a leading textbook, *Tuberculosis*, edited by Arnold Klebs.[114] Minor recommended devoting at least an hour to examining the chest, and developed a chart (Figure

2-6) identifying eleven sounds in the lungs and heart detectable by percussion and thirty-eight sounds detectable by the stethoscope.

Bushnell and his medical officers used lung sounds to identify where the infection was and how far it had proceeded—from infiltration, to caseation, to consolidation, to cavitation—and to distinguish tuberculosis from other lung ailments, such as bronchitis or lung cancer. Bruns, a meticulous examiner, described the examination of one patient's left lung in the following manner:

> Dulness [sic] and tympany to 2nd rib. Slight dullness 2nd to 4th ribs. Impaired percussion resonance 4th rib to base. Increased vocal fremitus [vibration] apex to base. Increased vocal resonance to 3rd rib. Cavernous breathing to 4th rib. Area of whispered pectoriloquy, more marked bronchial breathing and cavity rales 2nd and 3rd intercostal spaces, parasternal line. Many medium moist rales apex to base, elicited by deep breather and hear both on inspiration and expiration.[115]

These findings told Bruns that the patient had tuberculosis infiltration in both lobes of the left lung and a cavity in the upper lobe. Fort Bayard medical officers thus became masters of the chest exam and conducted research on chest sounds as well. Several officers compared the chest sounds of healthy men to those of patients at Fort Bayard, and in 1912 Bushnell published a technical paper on those chest sounds that could lead to erroneous tuberculosis diagnoses.[116]

In 1905, the Army Medical Department adopted the National Association for the Study and Prevention of Tuberculosis classification system for disease severity. Class I was incipient tuberculosis, Class II was moderately advanced, Class III was far advanced, and Class IV was miliary or systemic tuberculosis, almost always fatal.[117] Fort Bayard medical records, however, also gauged the extent to which the lungs were infected, so a patient with incipient tuberculosis in part of one lung would be "Class I, Involvement I," while a patient with advanced tuberculosis in both lungs would be "Class III, Involvement III." Patients with similar classifications were segregated into wards and staff moved them around as their conditions improved or worsened.

Once a patient was assigned to a ward, he entered into the hospital's routine. A bugle call awoke patients every day. Nurses took infirmary patients' temperatures first thing in the morning, and hospital corpsmen took ambulatory patients' temperatures. Patients with high fevers or recent lung hemorrhages stayed in bed all day, even for meals. Those without fevers in the ambulant wards rested in bed at least two hours in the morning and two in the afternoon, ate together in their designated messes, and retired at eight o'clock at night. Most patients lived outside on porches or in tents to benefit from the fresh air, even in the cold winter months, with blankets and hot water bottles to keep them warm. Staff weighed patients once a week and Bushnell increased physical exams to monthly instead of every two months to monitor the extension or clearing up of lesions. When Richard Johnson was an attendant in an ambulatory ward, his duty "was to take and record temperatures twice daily, issue linen and spit-cups, keep water coolers filled and

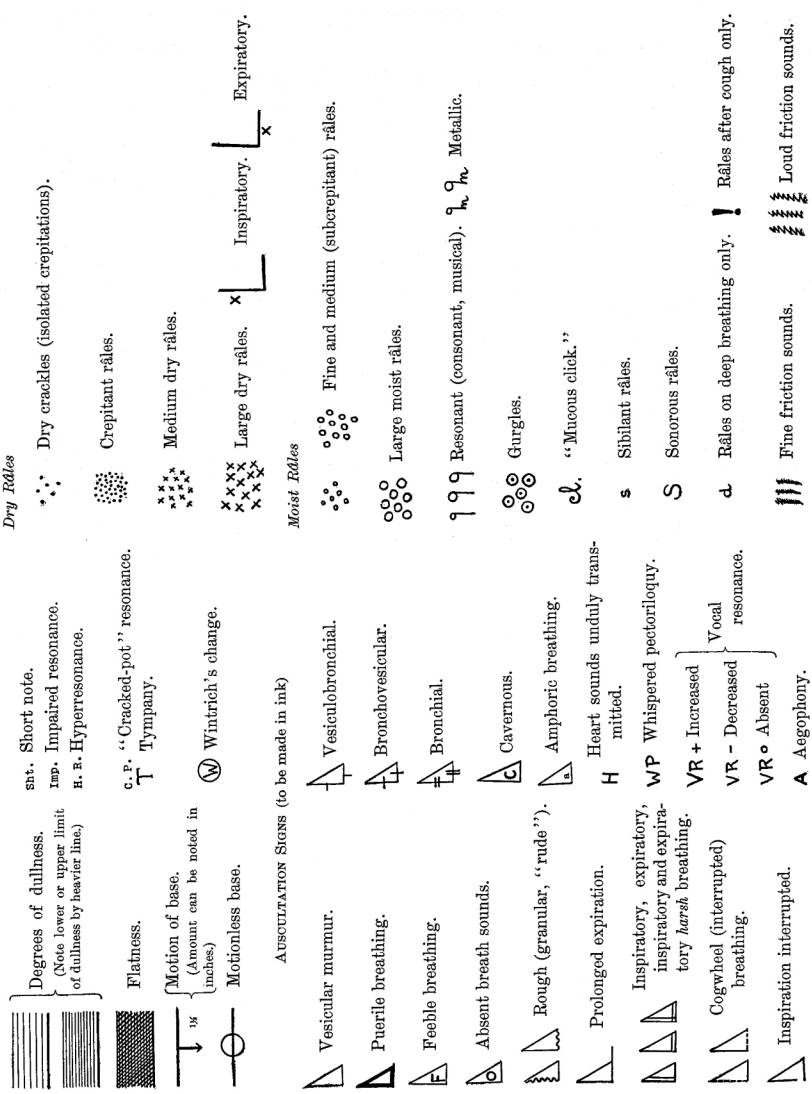

Figure 2-6. Auscultation chart. In Charles L. Minor, "Diagnosis," in Arnold C. Klebs, ed. *Tuberculosis: A Treatise by American Authors on its Etiology, Pathology, Frequency, Semeiology, Diagnosis, Prognosis, Prevention, and Treatment* (New York: D. Appleton and Co., 1909), 377–78.

to see that the tents and surrounding area was [*sic*] kept clean." He considered the work "a real soft job and I managed to hold on to it for six months."[118]

Bushnell discouraged strenuous exercise and stopped the practice of breathing exercises and hyperalimentation (overfeeding) found at many sanatoriums. He also did not use tuberculin therapy, which some tuberculosis physicians still

used to treat tuberculosis. When Robert Koch discovered tuberculin, an antibody (antigen) to tuberculosis in 1890, he thought he had found the long sought-after cure. He was soon disappointed, but while it failed as a cure, scientists put tuberculin to other uses. In 1908 Clemens von Pirquet developed a tuberculin test that could detect if individuals had been infected by tuberculosis: if they had they were "tuberculin positive," if not, they were "tuberculin negative."[119] Once somebody received tuberculin as medicine, however, they would always test positive for tuberculosis infection. Bushnell believed that tuberculin therefore was both ineffective and interfered with the diagnostic process. He did not prescribe heroin, either, to calm coughing and recommended alcohol less often than his predecessors, explaining to one physician that, "[W]e do not use drugs in this institution with the idea of directly curing tuberculosis. Such drugs as are used are given on symptomatic indications."[120] During this period investigative journalists or "muckrakers" and some in the medical profession were warning the public about quackery, nostrums, and narcotics, and the American Medical Association cautioned that "[n]o other sick people are so easily influenced for better or worse [by patent drug venders] as those who suffer from pulmonary tuberculosis."[121] When a patient's condition worsened, however, medical officers prescribed morphine for pain, first orally and then by injection, at increasingly short intervals to a maximum of four times a day as the patient neared death.

Bushnell did believe that anything that was good for a person's health was bad for tuberculosis, and maintained orchards, gardens, and a dairy to provide a healthy diet for his patients. Medical officers adjusted the diet according to the patient's condition, prescribing a "soft diet" or "liquid diet," as well as laxative powders to relieve constipation that could accompany prolonged bed rest or the administration of narcotics. The few medical treatments they did prescribe included plasters on the chest to relieve pain and ease coughing, antiseptic gargles to soothe tubercular laryngitis, pain relievers such as aspirin, and straps around the chest to contract the chest walls to rest the lungs.[122] To stop lung hemorrhages, nurses placed ice bags over the chest for at least twenty-four hours, and used ice packs and caps or hot water bottles for pain. Some patients medicated themselves. Walter Robbins, for example, took mercury, which he claimed improved his appetite and digestion; another patient took olive oil before every meal.[123] The surgical treatment of tuberculous was not common at this time, but medical officers operated on patients for appendicitis and other infections or wounds, or to remove tumors and tuberculosis tissue from patients' limbs. In 1913, Fort Bayard medical officers performed 107 such operations.[124]

One patient's medical record reveals the roller coaster of recovery and decline many patients experienced at Fort Bayard. In March 1910, Sergeant (Sgt.) Homer McQueen, a Fort Bayard hospital corpsman, age 32, accompanied a convalescent patient from Fort Bayard to Jefferson Barracks, Missouri. Upon return, McQueen complained of "slight indisposition." Bruns admitted him to the hospital with diarrhea and a 100 degree temperature, but laboratory tests revealed no signs of malaria, typhoid, or tuberculosis. A "feeble breath sound" at the top of the left lung, however, did suggest pulmonary tuberculosis, and in late April his sputum

revealed the telltale bacilli. By May Bruns found slight activity in the right lung and very active tuberculosis in the left, including a cavity that caused McQueen's heart to be displaced to the left. He received calomel and magnesium sulphur as purgatives, and a blister-producing plaster to his left side where the tuberculosis was the most severe, but little other medication. In June, Bruns classified McQueen's tuberculosis as Class III and Involvement II, but his patient recovered some weight, from 134 pounds to 141, and by the middle of June was well enough to eat in the mess hall.

After this rally, however, his condition worsened again. He was soon getting plasters on both sides and an antiseptic gargle, perhaps for tuberculous laryngitis. Nurses gave him quinine for his fever (which would have been ineffective unless he had malaria), but he continued to lose weight, and soon was spitting up blood. In September 1910 Bruns noted, "[g]eneral condition of patient at first improved has grown worse during last two months," and despite the fact that McQueen's left side had been strapped for four months, the "[l]eft lung seems to have broken down more with increased formation of fibrous tissue." He classified McQueen, "[a]bsolutely bed patient." Nurses gave him ice bags and phenacetin for fever and pain, and a soft diet, including eggs and brandy.[125] By his next examination, McQueen had lost seven pounds, had a "constant distressing cough," and was "losing ground rapidly." After a medical board found McQueen disabled on account of "far advanced" chronic pulmonary tuberculosis, the War Department discharged him on disability and immediately admitted him to the infirmary (Figure 2-7 and 2-8) as a beneficiary of the Soldiers' Home.[126] His condition stabilized.

In January, McQueen was improving. Medical officer Capt. Conrad Koerper noted that McQueen was sleeping better, had gained nine pounds in the last month, and "[a]ll lesions [in] both lungs show considerable decrease in activity." By mid-February he was able to return to the ward, but in less than a month was back in the infirmary with painful lung inflammation. Staff removed the straps from his chest, and for the first time gave McQueen morphine for pain. A nurse noted on March 30 that McQueen "appeared to sleep." Throughout April McQueen got morphine regularly, at first by mouth and then by injection. At this point medical personnel seemed to shift from combating tuberculosis to keeping McQueen comfortable. By late June he could not leave his bed for the physical examination and received four morphine injections daily, including one around midnight, as well as measures of whiskey. He also got a "cough mist" to ease the irritation of the constant coughing. On 2 July 1911, McQueen was too weak even to be examined, but staff observed that, "about twice daily he turns upon right side and empties cavity of large quantity of purulent foul smelling material." McQueen's nurses recorded the last days of his life:

> Cough medicine at 6 a.m.
> Whiskey, 15 cc
> Perspired profusely, considerable dyspnea [difficulty breathing] cough very severe at times, very restless from 9 P.M. to 1 A.M., slept about 1 hr.

Figure 2-7. General Hospital, Fort Bayard, New Mexico, East Ward, Enlisted men's infirmary, circa 1907.
Photograph courtesy of the National Library of Medicine, Image #A030247.

after 1 A.M. restless remainder of night.
Hypo Morph and Atropine at 8:30 A.M., Had weak spell at 8 A.M.
Whiskey 30 cc
Morphine at 3:30 P. M.
Did not take food
Very restless from 11:45 P.M. to 12:30 A.M.
Morphine and Atropine, 65 mg at 12:30 A.M.
Respiration labored at 1:30 A.M., pulse imperceptible at 3:00 A.M.
Appeared to be dead at 4:30 A.M.

Medical officer Roy Heflebower conducted an autopsy that afternoon, and found the internal organs distended and damaged, and the "thoracic cavity filled with 1,200 c.c. of foul smelling, greenish pus." He concluded the cause of death to be chronic pulmonary tuberculosis, with "associated conditions: empyema, [lung infection] unilateral, left. Addison's Disease. Chronic passive congestion all viscera." Only fifteen months had elapsed between his first diagnosis and his death due to tuberculosis. McQueen's father in River Sioux, Iowa, chose not to transport his son's body home, so Chaplain Bateman presided over McQueen's funeral and burial in the Fort Bayard cemetery on the hill behind the officers' quarters.[127]

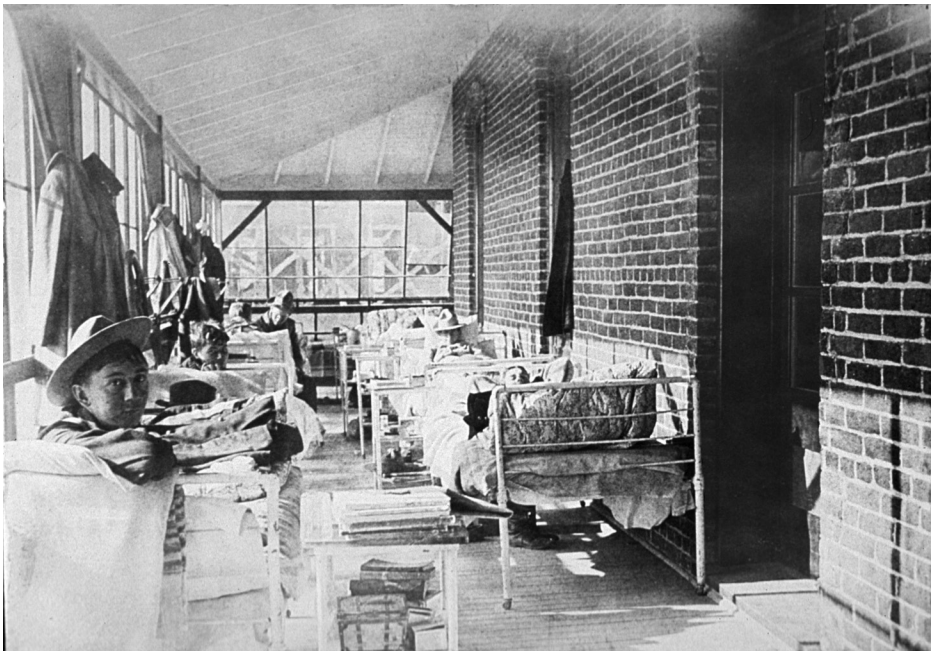

Figure 2-8. West Porch, enlisted men's infirmary, General Hospital, Fort Bayard, New Mexico, circa 1907.
Photograph courtesy of the National Library of Medicine, Image # A030248.

Homer McQueen's autopsy showed the destruction that tuberculosis could wreak on the body. In 1915–16, medical officer Capt. Thomas H. Johnson examined the records of 400 patients, 100 of whom died and were autopsied, to tabulate maladies that accompanied tuberculosis. He found that more than 20 percent of patients had syphilis, many at the secondary or tertiary stages that ravaged the body, and that 29 percent had tuberculosis complications, some more than one. Of these, 30 percent had pleurisy, an inflammation and collection of fluid around the lining of the lungs. Other common complications included tuberculous laryngitis (15 percent) and inner ear infections (11 percent). Some patients suffered inflammation of the gastrointestinal tract from swallowing tuberculous material, and Johnson also found that 90 percent of the autopsies showed kidney damage, a far greater percentage than had been diagnosed before death.[128] Another Fort Bayard study of cases showed a similar range of complications.[129]

Like all sanatoriums of the time, Fort Bayard's record in effectively treating tuberculosis was mixed. In the early 1900s many people believed that Fort Bayard and other sanatoriums could cure some cases of tuberculosis, especially those caught in the early stages. National tuberculosis rates were in decline in the early twentieth century, falling from 20 percent of deaths in 1900 to 15 percent in 1920.

By the time George Bushnell left Fort Bayard, tuberculosis had yielded first place to heart disease as the cause of death in the United States. During his tenure, the annual death rate at Fort Bayard dropped from around 21 percent in 1904 to less than 12 percent in 1917.[130] But if Bushnell was at first confident they could "cure almost any case if we get it early enough," a few years later he was more circumspect, telling one physician that "[i]t is dangerous to talk of absolute cure in tuberculosis."[131] In 1911 Chaplain Bateman observed, "the word 'cure' is sparingly used, when not evaded or omitted by the specialist in tuberculosis."[132] Death still resided in the hospital, claiming on average more than one patient every week. In 1908, 55 patients died; and in 1914, 66 patients died, 59 of tuberculosis.[133]

As the sanatorium movement expanded, people compared results among institutions across the country in hope of finding the best possible place for a cure. Admissions policies clearly affected sanatorium "success" rates. Some institutions, such as that run by Lawrence Flick in Pennsylvania, admitted only people with incipient or mild cases because they had the best chances for recovery, while others, such as the National Jewish Hospital in Denver, admitted only the very ill or indigent to provide them care and comfort as they died.[134] When people questioned Fort Bayard's record, Bushnell pointed out that comparisons with civilian hospitals were inappropriate because Fort Bayard admitted any eligible soldier or veteran, some of whom arrived moribund. It was not only a hospital, he explained, "it is also an asylum for discharged soldiers from the Regular Army who have tuberculosis, many of whom come and go for years and finally come back here to die."[135]

In 1908 Bushnell checked with the Army, Navy, and the Pension Office to determine how many former Fort Bayard patients from 1899 to 1904 had survived. He found that about 32 percent of Fort Bayard patients were still alive, 45 percent were dead, and 23 percent were unaccounted for.[136] A similar study by the Public Health Service tuberculosis hospital at Fort Stanton was "not gratifying in the number located or in the state of health of the individuals found." Of 1,924 patients who had been discharged for more than six months, only 149 were known living, 922 known to be dead, and 853 unaccounted for. Fort Stanton's director wrote, "The sanitary value of isolating a large number of open cases of tuberculosis can not be over-estimated," but "it must be admitted that the sanitarium for advanced cases plays no other part in the general campaign against the disease."[137] Given such evidence, many people began to consider tuberculosis sanatoriums more as places to isolate patients than as places to cure them.

Acceptance and Resistance of the Tuberculosis Lifestyle

The diagnosis of tuberculosis threatened a young man with disability, an uncertain future, and perhaps death, and could undermine his identity as warrior and wage earner, plunging him into depression.[138] The tuberculosis treatment itself was also a great trial for soldiers and sailors accustomed to a vigorous, masculine lifestyle. In addition to following the personal hygiene rules regarding coughing and sputum disposal, the patient's job was to accept total rest. Francis

Trudeau, who established one of the first and most popular sanatoriums at Lake Saranac, New York, said it required one to "[c]onquer fate by acquiescence"; another scholar called it "a draconian regimen of inactivity."[139] Bruns admitted, "[t]o me the news of the treatment came as a greater shock than had my tuberculosis diagnosis."[140] One had to rest for a long time. Thomas Johnson's 1916 study on tuberculosis complications revealed that the surviving patients in his sample population had been at Fort Bayard for an average of 3.3 years; those who had died had been there for an average of 1.9 years. The longest living patient had been at the hospital 15.9 years; thirty-eight had been "intermittently observed" for ten or more years; and sixty-nine for at least five years.[141]

As with any isolated Army post, boredom undermined morale. Many young, formerly active men on enforced bed rest, surrounded by sickness and death, forbidden to drink alcohol or to roam the hills, met their new life with despair and at times rebellion. Morale and discipline problems challenged Bushnell's medical and military authority.[142] Problems included promiscuous spitting, the scattering of spit cups, using foul language, disrespecting officers, engaging in sexual misconduct, possessing illicit firearms, going absent without leave, and smuggling whiskey into the hospital. Medical officer Paul Hutton even reported that one patient misbehaved by imitating the groans of others as they lay dying.[143] The use of opiates to control tuberculosis symptoms could also lead to drug addiction.[144] This was not a widespread problem for the Army Medical Department, but one Army study estimated that while fewer than 1 percent of enlisted men were drug users, they could tempt others into the habit, so that "a cocaine fiend is truly a loss as well as a danger to the Army."[145] Bushnell, therefore, refused to admit Soldiers' Home beneficiary Hugh T. Robbins, who California officials described as a "dope fiend," to protect his patients.[146]

One case involving sexual activity led to a dramatic arrest in Silver City. On a June night in 1909, Hospital Corps Pvts. Leslie Thomas and Charles F. Baker were found in bed together, against Army regulations. Thomas turned himself in the next morning, but Baker made a run for it. Medical officer Lt. Edgar Jones, also serving as the post constable, found Baker on a train departing from Silver City and confronted him with a revolver. Baker jumped off and reboarded the last car of the train with Jones in pursuit. Baker then climbed on a nearby freight train, only to be captured by Jones and taken to the Silver City jail. Fort Bayard officers wanted to dishonorably discharge both Thomas and Baker and thereby avoid publicly airing the incident, but the War Department insisted on a court-martial and both men were charged with sodomy—and Baker with resisting arrest—and tried within weeks.[147]

Illicit alcohol use and alcohol abuse were the biggest problems, leading to fights and unapproved absences. Patients snuck down "The Butterfield Trail" to a "gin mill" in the nearby village of Central, and once Bushnell caught a mail carrier smuggling whiskey in to a patient.[148] He cracked down especially hard on patient drunkenness. When a beneficiary of the Soldiers' Home, Thomas L. Kane, was convicted by court-martial of drunk and disorderly conduct, Bushnell suspended

him from Fort Bayard for six months, a harsher punishment than the usual three-month confinement for members of the Hospital Corps.[149] In another case, when a court-martial dishonorably discharged two sailors for drunkenness, Bushnell made arrangements to purchase their train tickets and escort them to the train, because "[i]f this be not done it is anticipated that Sheppard [one of the men] will spend all his money on drink and return to this Hospital as a charity patient," he told the Navy. Sheppard had advanced syphilis and tuberculosis in both lungs, and was most likely contagious, but Bushnell the military officer would not have him in his hospital. "He is a thoroughly vicious man and his conduct in confinement has been bad."[150]

Bushnell had legal control over the active-duty Army officers and soldiers at Fort Bayard and exercised it vigorously. He believed that the soldier-patient's job was to get well. Excused from active duty he must therefore avoid "the acts which would tend to aggravate his disease."[151] In a report to his superior in Washington, Chaplain Bateman put it bluntly: "I am endeavoring to arouse and keep alive a profound sense of moral responsibility among the men who are under treatment here. Men who undo by evil habits and practices that which is done for them here, deserve and receive no sympathy, and are 'weeded out.'"[152] Fort Bayard officers often blamed—with some reason—recalcitrant patients when their health worsened. When Navy patient Luther F. Steward returned after being absent without leave, a medical officer found that his health had deteriorated "due in all probability to his own misconduct since on his return he showed unmistakable signs of debauchery."[153]

But if he had clear authority over Army personnel, Bushnell spent the early years of his command clarifying his authority over other patients.[154] He obtained approval from the Navy and the Soldiers' Home to discipline their patients under Fort Bayard rules and the court-martial system, and at times asked the Soldiers' Home to withhold a patient's pension money as a disciplinary measure.[155] He settled on suspension from Fort Bayard as punishment for patients not in the regular military, establishing a rule that patients expelled for bad behavior could not return until three months after the date of their discharge, and that "patients who are dishonorably dismissed from this Hospital need not expect to be readmitted under any circumstances."[156] Bushnell persuaded the War Department to support his efforts. In 1906 he suspended several beneficiaries of the Soldiers' Home for drunkenness with the proviso they could not reenter the post for three months. When they gained admission to the California branch of the National Home for Disabled Volunteer Soldiers (the domiciliary system for noncareer veterans of the Civil War and Spanish-American War), they complained to the War Department that Fort Bayard was not helping them. In response to the Department's inquiry, an unapologetic Bushnell fired back that many of the complainants had left Fort Bayard against medical advice or had been suspended for rules violations. James Duffey, he noted, had been in and out of the hospital eight times in five years, and "[t]his record will show how little responsibility the management here can have for his failure to improve." Joseph McGovern had been admitted

and discharged from the hospital six times from 1902 to 1904, and had been punished four times. "He was the most troublesome and thankless patient I have known here," Bushnell stated. His staff often begged patients to stay because their health was not good enough to travel, so therefore "I wish to deny as emphatically as is in my power that patients with tuberculosis are ever sent away from here because they fail to improve." He closed his letter cautioning that, "[s]uspension from this hospital loses much of its force as a punitive measure if men suspended for misconduct are taken into volunteer homes without inquiry."[157] The War Department concurred, and the Soldiers' Home in Washington and the National Home for Disabled Volunteer Soldiers agreed thereafter to deny admission to patients expelled from Fort Bayard.[158]

Bushnell did negotiate with patients at times. Chaplain Bateman reported in 1909 that beneficiaries of the Soldiers' Home "created a mild sensation by a bill of grievances." The complaints, he said, "were heard and thrashed out by the Commanding Officer with marked tolerance and magnanimity and whatever could be done was done to restore contentment among the discontented." Putting the most positive face on it, the chaplain added that "discord will sometimes occur in the best regulated families."[159] Bushnell's discipline campaign seems to have made an impact because in February 1910 Bateman reported that "the guardhouse has been empty of prisoners for days at a time during this month."[160]

One of Chaplain Bateman's duties was to develop recreation programs and diversions to occupy staff and patients and improve morale at the isolated post. He relished the task, and opened a post exchange to sell items not available at the commissary, such as stationery and candy, and used the proceeds to fund entertainment. In 1906 he financed a Christmas party and bought a small printing press.[161] Over the years Fort Bayard acquired a moving picture projector, a camera and equipment to make lantern slides, a record player and "many excellent records," and a library, which subscribed to 82 periodicals and had 2,000 volumes of "light literature." Bushnell got funds to refurbish the amusement hall, which seated 400 for religious services, movies, dances, plays, and post orchestra performances. Medical officer Hutton loved the theater and one year wrote and directed a play, "The Tenderfoot Girl," that, according to the Silver City *Independent* "graphically depicted the cowboy life of Grant County, New Mexico."[162] Enthusiasm for the theater caused Bushnell to require that an officer preview plays or other entertainment to ensure "that the proposed production is free from vulgarity or indecency."[163] Fort Bayard also had a bowling alley and gymnastic equipment and fielded baseball and football teams.[164] Patients used a pool hall separate from that of regular duty soldiers and could not participate in all of these activities. As Bateman noted, "[a]ble-bodied men are forbidden to box with a patient, however good the latter's condition may be. No wise patient will play at ten pins, tennis or base ball."[165] Richard Johnson remembered "bronco-busting contests," with the local Mexican community, and hunting in the fall for quail, rabbit, or deer. "Thus life here was made tolerable for those of us who had the fortitude to make the best out of a bad situation."[166]

Reentry: Leaving Fort Bayard

Patients departed Fort Bayard in a number of ways. The majority entered as soldiers but left as beneficiaries of the Soldiers' Home, disabled by tuberculosis; others recovered their health and returned to duty and a long life; the unfortunate ones departed in a coffin. Due to their relative youth, active-duty enlisted men and officers had lower death rates than beneficiaries of the Soldiers' Home. In 1910, for example, the Regular Army death rate was less than half of the veteran death rate—4 percent versus 9.6 percent. Of the 496 officers and enlisted men discharged from the hospital, 260 were discharged on disability, 155 returned to duty, and 20 died. The same year, Fort Bayard discharged 383 beneficiaries of the Soldiers' Home, 37 of whom died, and 346 patients who simply "Left Hospital."[167] The War Department had different discharge policies regarding officers and enlisted men. Officers were kept on the active list "so long as there is a fair chance for cure," and the hospital sent the Office of The Surgeon General periodic reports on their progress.[168] Enlisted men disabled by disease, however, could be discharged from the Army rather quickly, sometimes within weeks. If the disability had been acquired during military service, a soldier could receive a pension—lower than duty pay—and be eligible for the Soldiers' Home and treatment at military hospitals. In 1907, however, Bushnell recommended that enlisted men be retained at the hospital at least six months before being discharged on disability. He argued that the longer period was required to determine a patient's prognosis, and would avoid "a possible injustice which may be committed if men of short service on admission here should be deprived of a pension and should not be admitted to the Soldiers' Home on the ground that the mode of their discharge showed them not to be disabled."[169] The Surgeon General agreed and approved the change.

The Army Medical Department did not provide systematic physical or vocational rehabilitation until World War I, but soldiers who recovered did a month of light labor before discharge to see if they were well enough to return to their units. The Army Medical Department advised against sending former tuberculosis patients to the tropics because it could be harmful to their health, but the War Department did not always oblige. Many disabled veterans stayed in the Southwest to take advantage of the climate; some stayed as close as Silver City, which had several private sanatoriums. Capt. Charles Barney was a patient and physician at Fort Bayard from 1906 until he was discharged on disability in 1910. He first went to Mexico, seeking a warm climate, but returned ill to Fort Bayard for a couple of months in 1911. After that he lived in Los Angeles and Tucson until his health deteriorated again in 1917, and he requested admission to Fort Bayard.[170] Hospital corpsman Charles Noyes was discharged on disability in 1910 and over the next five years was in and out of Fort Bayard at least four times, working at odd jobs in New Mexico, Texas, and Louisiana between his hospital stays.[171]

Many of these patients, like Noyes who had Class III, Involvement III tuberculosis, would have been highly infectious. Medical officers at the time, however, were more concerned that leaving treatment would jeopardize the patient's recovery

than that they could be a danger to others. In the early twentieth century people understood that tuberculosis was contagious, but most hospitals and public health agencies did not impose strict anticontagion controls because of an incomplete understanding of the nature of tuberculosis transmission. Several factors may account for this. First of all, tuberculosis was so ubiquitous and usually developed so slowly that it was impossible to identify a single source of infection. It was also clearly not as contagious as other infectious diseases, such as measles, or typhoid, or influenza, which could sweep a town or Army post in days—and thus containment seemed less urgent. Secondly, the prevailing view held that some types of people were more likely to develop tuberculosis than others, and the nineteenth-century theory that tuberculosis was hereditary lingered. Tuberculosis physicians therefore focused on an individual's ability to resist tuberculosis, referring to a person who developed active disease as having "broken down." They considered an individual's internal resistance to be more important than external infection in the development of disease.

Perhaps the most important explanation for this lack of concern about disease transmission is that scientists and physicians of the time believed that bacteria existed only in droplets of sputum, blood, or other tubercular material and did not understand that tuberculosis could be transmitted through the air. A leading textbook in 1909 stated: "The germs from consumptives are carried by the sputum, not by the breath. The breath itself is harmless."[172] Medical personnel therefore believed that the daunting array of rules regarding coughing, the proper use and disposal of spit cups, and the avoidance of dried sputum could control the spread of tuberculosis. Hospital corpsman Richard Johnson gained confidence from these measures. He had worried about contagion from tuberculosis patients, but he later wrote that "essential measures of precaution were taught and enforced until they became a routine habit, …and I do not recall a single case where an attendant contracted the disease during the time I was there."[173] Nonetheless, Fort Bayard active duty personnel had a tuberculosis rate almost double that of the next highest Army hospital, about 6 percent (seven cases among the hundred-plus active duty personnel) compared to 3 percent at the Presidio in San Francisco.[174] Although some of this was due to the transfer of military personnel with tuberculosis to Fort Bayard, staff may also have contracted the disease while caring for patients. But at the time, these differential rates prompted little official discussion about increased risk of infection at a tuberculosis hospital. The fact that Fort Bayard and other tuberculosis institutions allowed contagious patients to leave and reenter as they wished undoubtedly spread the disease to the larger population.

While some patients actively sought discharges from Fort Bayard for disability, others resisted it. Twelfth Cavalry Lt. Oscar Lusk's father, a judge in Los Angeles, wrote to U.S. Senator C. A. Culberson of California, in support of his son's retirement on disability. After the senator contacted the War Department, the Surgeon General supported the request, "if it can be done consistently with the public service."[175] Young Lusk soon got his pension and moved to Almagordo, New Mexico, where he survived five years until his death in 1908 at age thirty-seven.[176] Pvt. Charles Tyler, the former Buffalo Soldier, also sought retirement

on disability, more on account of stomach ailments and painful feet due to corns than tuberculosis, but it took him a longer time (more than a year and three medical boards) before it was granted.[177] On the other hand, when Major (Maj.) Ogden Rafferty, a Medical Corps officer who had had a mountain peak in Yosemite National Park named after him, was ordered to go before a retirement board, he objected. He blamed his poor diagnosis and prognosis on "animus upon the part of Capt. Barney," the medical officer who had most recently examined him. The War Department rejected Rafferty's claims and retired him as "totally incapacitated" by pulmonary tuberculosis in 1909.[178] Similarly, Capt. Solomon P. Vestal, an officer with the 7th Cavalry, developed tuberculosis in 1903 and served light duty as quartermaster at Fort Bayard. Though he vigorously objected, he was forced to retire for disability in May 1910. With Bushnell's help he stayed on at the post to oversee construction on a contract basis.

Most patients who died at Fort Bayard succumbed to tuberculosis, but typhoid, appendicitis, peritonitis, and pneumonia claimed a few people every year, as did suicide. In 1909, two men (a patient and an active-duty private in the Hospital Corps) killed themselves. Unfortunate tuberculosis patients such as Homer McQueen (Figure 2-9) often died in a morphine-induced haze. Chaplain Bateman ministered to all of them in their last days. His monthly reports recorded the patient's name, status, military affiliation, date and cause of death, nearest relative or friend, and whether the person's remains were buried at the Fort Bayard cemetery or shipped home.[179] The commanding officer advised the next of kin on record, usually parents or a wife, and inquired as to how to dispose of his personal property. Loved ones often wanted to know the circumstances of the patient's death. John McCarty's wife, Medora, wrote to Bushnell: "Please give me some idea of how he died did he suffer? Was he many days confined to his bed? Did he say anything?" She explained, "Oh! I am most crazy. I would have liked so much to have seen him once before his death." She added, "I want every piece of paper that he has handled." Bushnell responded that her husband had expressed a desire to return home as soon as he was well enough to travel, but he "was unconscious for three days before his death. He died quietly and without pain."[180] Bushnell informed Samuel Hill's father, "Your son was a good patient and asked that the nurses be thanked for their kindness to him." He added that the son "left no messages, but a few days before he died he asked the Doctor to have his remains prepared so that they would look as well as possible for his folks to see."[181] Less sympathetic family inquiries asked for property or life insurance policies a deceased soldier or veteran might have left behind.[182] In a long-established tradition, hospital staff auctioned off unclaimed property and put the proceeds into the hospital fund. Many active-duty patients had wives or parents willing and able to pay for the body to be shipped home for burial, but Bateman's reports for 1909 and 1910 show that the majority of deceased—almost two to one—were buried at the post cemetery. Many of them, especially beneficiaries of the Soldiers' Home, Bateman noted as having "no relatives." The Fort Bayard cemetery not only received soldiers, but also sailors, civilians, and children of men on duty at the post, including a few infants who died at birth.

Figure 2-9. Grave marker of Homer L. McQueen, Fort Bayard National Cemetery, Fort Bayard, New Mexico (author's possession).

A number of patients were able to recover and live long lives, some returning to military service. In 1912, for example, Bushnell sent the Surgeon General a list of fifty-six Army officers who had been treated for tuberculosis at Fort Bayard over the years and returned to duty.[183] Nurse Agnes Young described what must have been a spectacular recovery. One of her patients arrived at Fort Bayard a nervous, "almost hysterical man," enduring nineteen hemorrhages in a month, totaling more than 4.7 liters of bloody sputum. Five months later, however, he was "able to hunt arrowheads on the old battlefields among the hills surrounding our post."[184] Another patient, Corporal (Corp.) Howard O. Watson, struggled with tuberculosis for more than fifteen years, in and out of Fort Bayard four times from 1905 to 1920. Although the Army discharged him for disability in 1911, he became well enough to return to active duty in the Army in 1920.[185] Some Fort Bayard patients went on to serve with distinction in World War I. Army cavalry officer Capt. Walter C. Babcock mapped the trans-Alaskan trail in 1899 before he developed tuberculosis while serving in the Philippines. He had two stints of treatment in 1906 and 1907, but recovered enough to earn the Distinguished Service Medal for his command of the 310th Infantry in the Meuse Argonne, 1918.[186]

And Earl Bruns, who had arrived at Fort Bayard in a state of such desperation and hope, would become a key figure in the War Department's tuberculosis program, writing a definitive report on tuberculosis in the American Expeditionary Forces in Europe during the war.

Some patients thus welcomed their treatment at Fort Bayard, while others resented it; some recovered their health, but most did not. Under George Bushnell's command (1904–17) the post remained isolated and self-sufficient, but still very much connected to the outside world through scientific research and medical correspondence and the cycling in and out of patients. As patients and medical staff struggled against tuberculosis on the high New Mexican plateau, they encountered the contradictions of the human condition: hope and despair, acceptance and resistance, and life and death. A close look at one patient's experience at Fort Bayard reveals those complexities.

Notes

1. Richard Johnson, "My Life in the US Army, 1899 to 1922," unpublished typescript, Richard Johnson Papers, Military History Institute, Carlisle, PA, 83.

2. Johnson, "My Life in the US Army," 82.

3. Correspondence between G. E. Bushnell and Adjutant General, June 1909, Record Group [hereafter cited as RG] 112, Entry 386, National Archives and Records Administration [hereafter cited as NARA].

4. Johnson, "My Life in the US Army," 83.

5. Earl A. Bruns, "Colonel Bushnell: An Estimate of His Character and Work," *American Review of Tuberculosis* 11 (1925): 277.

6. William Garrott Brown, "Some Confessions of a T.B.," *The Atlantic Monthly* 113 (June 1914): 747.

7. Patricia Paton, *A Medical Gentleman: James J. Waring, M.D.* (Denver, CO: Colorado Historical Society, 1993), provides a revealing view of how tuberculosis shaped the life of another tuberculosis patient and expert, James Waring. For more on the role of personal experience in a physician's work, see Stanley W. Jackson, "The Wounded Healer," *Bulletin of the History of Medicine* 75 (Spring 2001): 1–36; Chris Feudtner, "Patients' Stories and Clinical Care: Uniting the Unique and the Universal?" *Journal of General Internal Medicine* 13 (1998): 846–49; and Lawrence K. Altman, "At the Helm: Oncologists with Cancer," *New York Times* (24 May 2005).

8. Bruns, "Colonel Bushnell," 282.

9. Bushnell later disputed that he had a tuberculosis relapse in 1909–10, believing instead that he had been misdiagnosed. He wrote in 1918, "I myself have spent six months in physically harmful idleness under the diagnosis of active tuberculosis resting on the erroneous interpretation of normal physical signs." See George E. Bushnell, "Lessons from the War as to Tuberculosis," *Journal of the American Medical Association* 70 (9 March 1918): 665.

10. "Application for Medical Leave of Absence," C. N. Barney, Record Group 94, Records of the Adjutant General, (hereafter RG 94), Appointment, Commission and Personnel Branch, Office of the Adjutant General [hereafter cited as ACP], Box 715, NARA. The report reads, in part, "left epididymis is distinctly enlarged, nodular and quite tender and is associated with hydrocele [accumulation of water]. The right epididymis appears to be somewhat thickened. The condition of the epididymis was not noted last year, but the hydrocele at least is of long standing."

11. G. E. Bushnell to Adjutant General, 26 August 1911, RG 112, Entry 386, Box 40, NARA.

12. Efficiency Record, George E. Bushnell, 1910, RG 94, ACP, Box 715, NARA. See also Surgeon General to Adjutant General, 21 November 1911, RG 94, Adjutant General's Office [hereafter cited as AGO] 1850340, Box 6734, NARA.

13. G. E. Bushnell to Adjutant General, 26 November 1911, RG 112, Entry 386, NARA; and George E. Bushnell's efficiency reports, RG 94, Box 715, NARA.

14. S. Adolphus Knopf, "Is There Any Relation between Tuberculosis, Mental Disease, and Mental Deficiency?" *Medical Record* 91 (6 January 1917): 7.

15. This is for the years 1926–56; Fred L. Ayvazian, "The 55 Trudeau Medalists," *American Review of Tuberculosis* (April 1980): 757; and Julius L. Wilson, "Five Great Teachers in the Field of Tuberculosis," *American Review of Tuberculosis* (May 1981). For discussion of physicians who had tuberculosis see Julius Lane Wilson, "Pikes Peak or Bust: An Historical Note on the Search for Health in the Rockies," *Rocky Mountain Medical Journal* 64 (1967): 59; Jake W. Spidle Jr., *Doctors of Medicine in New Mexico* (Albuquerque, NM: University of New Mexico Press, 1986); Jake W. Spidle, "Coughing and Spitting and New Mexico History," in Judith Boyce DeMark, ed., *Essays in Twentieth-Century New Mexico History* (Albuquerque, NM: University of New Mexico Press, 1994).

16. James J. Waring, "The Patient and the Physician," *American Review of Tuberculosis* 62 (1950): 68.

17. Helen Clapesattle, *Dr. Webb of Colorado Springs* (Boulder, CO: Colorado Associated University Press, 1994).

18. Bruns, "Colonel Bushnell: An Estimate of his Character and Work," 277 and 282.

19. Richard Johnson, "My Life in the U.S. Army, 1899 to 1922."

20. Correspondence regarding inspection of Fort Bayard, 29 September to 3 October 1909, RG 112, Entry 386, Box 27, NARA.

21. Cephas Bateman to G. E. Bushnell, 4 December 1912, RG 94, Box 1283, NARA. Bateman's letter opened, "No one will ever know, apart from ourselves, of the contents of this letter unless you disclose the same."

22. Cephas Bateman to G. E. Bushnell, 11 December 1912, RG 94, Box 1283, NARA.

23. Memoranda relative to the conduct of Chaplain Bateman, March 1913, RG 94, Box 1283, NARA. The conflict flared again during Bateman's efficiency evaluation in May 1913. When asked about the matter, Bateman wrote that he believed he was the "aggrieved party in this matter," but "soon charged the whole matter to the disease from which Colonel Bushnell is said to suffer." For his part, Bushnell wrote that, "[T]he question may be fairly raised whether the usefulness of this officer as a chaplain in the Army service has not ceased." Correspondence regarding the Bateman efficiency report, May 1913 and June 1913, RG 94, Box 1283, NARA.

24. Information in this paragraph is drawn from Fort Bayard's annual reports to the Office of The Surgeon General, and the War Department Annual Reports, 1904 to 1917.

25. G. E. Bushnell, "Report for the Calendar Year 1905. U.S. General Hospital, Fort Bayard, N.M.," RG 112, Entry 380, NARA. Presidential Proclamation, Theodore Roosevelt, 21 July 1905, regarding Gila River Forest Reserve. In 1905 the forest reserves were transferred from the Department of the Interior to the Department of Agriculture, and the Bureau of Forestry was reorganized as the Forest Service. In 1907, the forest reserves were renamed national forests.

26. G. E. Bushnell to Surgeon General, 8 August 1905, RG 112, Entry 380, NARA.

27. G. E. Bushnell to M. W. Ireland, 20 November 1905, RG 112, Entry 380, NARA. See also, "Improvements at Fort Bayard," *Silver City Enterprise,* 3 August 1906.

28. "Giant Sequoias Set Out at Fort Bayard," *The Independent*, 20 April 1915.

29. "Improvements at Fort Bayard," *Silver City Enterprise*, 3 August 1906.

30. Earl Bruns to G. E. Bushnell, 4 July 1917, RG 112, Entry 31-K, Box 16, NARA.

31. G. E. Bushnell to Surgeon General, 3 March 1904, RG 112, Entry 381, Box 2, NARA; and "United States Tuberculosis Hospital in New Mexico," *Modern Hospital* 3 (1914): 102–4.

32. The following description is drawn from Bushnell to Surgeon General, 18 February 1912, RG 112, Entry 26, Box 919, NARA; and "U.S. Army General Hospital, Fort Bayard, N.M., 1908," RG 112, Entry 31-K, Box 15, NARA.

33. Sanatorium designer Thomas Carrington "suggested that the sanatorium landscape should be a microcosm of the world, self-contained and self-supporting with forest, orchard, cultivation, and light industry." Susan Jane Edwards, "Nature as Healer: Denver, Colorado's Social and Built Landscapes of Health, 1880–1930," Ph.D. dissertation, University of Colorado, 1994, 86.

34. E. L. Munson to E. A. Pierce, 12 February 1906, RG 112, Entry 380, NARA.

35. Presley Marion Rixey, *The Study of Tuberculosis in the United States Navy* (Carlisle, PA: Association of Military Surgeons, 1908), 9–10; and U.S. Congress, House of Representatives, "Fort Bayard Hospital for Tuberculosis Patients; Army Hospital Enlargement to Accommodate Navy Tuberculosis Patients," 1902, CIS H71-0.35, 1. See also, George H. Kress, "Antituberculosis Work in the United States Army, Navy and Marine-Hospital Services," *American Medicine* 10 (19 August 1905): 319–22.

36. "Record of Complete Cases of Tuberculosis, 1899–1907, United States Army General Hospital, Fort Bayard, New Mexico," RG 112, Old Entry 399, NARA. Only six cases of 120 patients discharged unimproved were listed as "incipient."

37. G. E. Bushnell to D. M. Appel, 2 January 1908, RG 112, Entry 386, Box 10, NARA.

38. Correspondence regarding Alford W. Cooley, RG 112, Entry 383, Box 1, and RG 112, Entry 386, Box 15, NARA. See also George M. Torney to J. A. Jaqua, 2 December 1912, RG 112, Entry 26, Box 92, NARA. Paul M. Carrington, "Further Observations on the Treatment of Tuberculosis at Fort Stanton, New Mexico," *Military Surgeon* 14 (1904): 207. RG 112, Entry 26, File #140768, Boxes 1000 and 1001, contains correspondence regarding the admission of civilian patients.

39. *War Department Annual Report*, 1916 [hereafter cited as *WDAR,* year], vol. 1.

40. Information on this case can be found in RG 112, Entry 26, Box 1000, NARA.

41. Correspondence between George E. Bushnell and William C. Gorgas, April–May 1906, Philip S. Hench Walter Reed Yellow Fever Collection, Historical Collections and Services of the Health Sciences Library, University of Virginia.

42. Surgeon General to W. H. Andrews, February 1909, RG 112, Entry 26, Box 892, NARA.

43. *WDAR*, 1910, 155; and George Bushnell to the Surgeon General, 18 February 1912, RG 112, Entry 26, Box 919, NARA.

44. John Kress to George Torney, 16 June 1913, RG 112, Entry 26, Box 892; Bushnell memo, 28 June 1913, RG 112, Entry 26, Box 892; and Henry L. Stimson to Charles D. Hilles, 14 January 1913, RG 112, Entry 26, Box 892, NARA.

45. "General Orders No. 18," U.S. General Hospital, Fort Bayard, NM, 1 August 1905, RG 112, Entries 389–91, Box 1, NARA.

46. G. E. Bushnell to Surgeon General, "Admission of women to the hospital at Fort Bayard," 17 April 1915, RG 112, Entry 26, Box 892, NARA.

47. Correspondence between Inspector General and U.S. General Hospital, Fort Bayard, NM, October 1910, RG 112, Entry 386, Box 24, NARA.

48. Hospital Fund ledger sheet, 1901 and 1902, RG 112, Entry 382, Box 1, NARA;

"Statement of the Hospital Fund," May 1912, RG 112, Entry 399, Box 1, NARA and "U.S. Army General Hospital, Fort Bayard, N.M., 1908" report, RG 112, Entry 31-K, Box 15, NARA, 16.

49. Christine R. Whittaker, "Chasing the Cure: Irving Fisher's Experience as a Tuberculosis Patient," *Bulletin of the History of Medicine* 48 (1974): 404.

50. E. Chaves-Carballo, "The Cost of Running American City Hospitals: The Gorgas 1910 Survey," *Southern Medical Journal* 93, no. 2 (February 2000): 191–4.

51. Correspondence between Inspector General and U.S. General Hospital, Fort Bayard, NM, October 1910, RG 112, Entry 386, Box 24, NARA.

52. George S. Legare to Frances Izlar Legare, 18 February 1909, Legare Family Papers, South Carolina Historical Society, Charleston, South Carolina.

53. "General Orders, No. 18," U.S. General Hospital, Fort Bayard, New Mexico.

54. G. E. Bushnell to Surgeon General, 28 November 1905, RG 112, Entry 380, NARA.

55. P. F. Straub to G. E. Bushnell, 26 November 1906, RG 112, Entry 386, Box 2, NARA, and G. E. Bushnell to P. F. Straub, 3 December 1906, RG 112, Entry 386, Box 2, NARA.

56. These were George E. Bushnell, Charles N. Barney, Edward L. Munson, Paul C. Hutton, Fred W. Palmer, and Clarence Treuholtz, as recorded by J. L. Chamberlain, Inspection Report, 22 October 1906, RG 112, Entry 386, NARA.

57. "List of Officers Treated at GH, Fort Bayard," 19 March 1912, RG 112, Entry 26, #134220, NARA.

58. Efficiency Report, Earl Bruns, 17 September 1908, RG 94, ACP, NARA.

59. P. M. Carrington, "The U.S. Marine Hospital Sanatorium for Tuberculosis at Fort Stanton, N.M.," *New York Medical Journal* (27 February 1909): 420; and Paul M. Carrington, "Further Observations on the Treatment of Tuberculosis at Fort Stanton, New Mexico," *Military Surgeon* 14 (1904): 234.

60. *Public Health Reports* 27 (30 August 1912): 1418.

61. G. E. Bushnell to Surgeon General, 4 May 1906, RG 112, Entry 380, NARA.

62. G. E. Bushnell to Surgeon General, 28 November 1905, RG 112, Entry 380, NARA.

63. "Lightning Kills Army Man," *New York Times*, 2 June 1914.

64. See "Lectures on Tuberculosis, Fort Bayard, 1910–1914, United States Army, Fort Bayard, New Mexico," Manuscript Collection [hereafter cited as MS C] 12, National Library of Medicine.

65. Earl H. Bruns, "Colonel Bushnell: An Estimate of his Character and Work," 278; Efficiency Report, George H. Scott, RG 94, AGO 458840, Box 3230; Efficiency Report, C. E. Holmberg, RG 94, AGO 1737980, Box 6381; and Efficiency Report, W. H. Tefft, RG 94, AGO 506387, Box 3534, NARA.

66. Lewis J. Moorman, *The American Sanatorium Association: A Brief Historical Sketch* (New York, NY: National Tuberculosis Association, 1947); and *New Mexico Medical Journal* 6 (September 1911): 305. Bushnell and Paul Carrington also appear in an advertisement titled, "Climate of New Mexico, Nature's Sanatorium for Consumptives," *New Mexico Medical Journal* 5 (December 1909).

67. C. N. Barney, "Ophthalmo-Reaction to Tuberculin," *Medical Record* (1908): 96–101; J. B. VanHorn, "Preliminary Report on Experience with Modified Flesh Diet," Fort Bayard, New Mexico lectures, MS C 12, National Library of Medicine; and Thomas H. Johnson, "Diseases Complicating Chronic Pulmonary Tuberculosis," unpublished paper, 1916, RG 112, Entry 26, Box 466, NARA.

68. *Illustrations of Tuberculous Lesions* (Fort Bayard, NM: U.S. Army General Hospital, 1908), National Library of Medicine.

69. G. E. Bushnell to Military Secretary, 19 July 1905, RG 94, ACP, Box 1283, NARA.

70. Efficiency Reports, Solomon P. Vestal, RG 94, ACP, NARA.

71. C. N. Barney to Office of The Surgeon General, 6 December 1909, RG 112, Entry 386, Box 27, NARA.

72. G. E. Bushnell to the Surgeon General, 10 April 1914, RG 112, Entry 26, Box 10610, NARA.

73. Bushnell seems to have done exams on officers (Munson, Lusk, Van Horn) and those where Washington, D.C. made an inquiry, such as Oscar Lusk, the son of a judge in California who contacted a U.S. senator from Texas to intervene. See RG 112, Entry 396, NARA.

74. Efficiency Reports, Walter B. Elliot, RG 94, NARA.

75. G. E. Bushnell to M. W. Ireland, 21 January 1909, RG 112, Entry 386, NARA.

76. Bushnell to Office of The Surgeon General, 24 August 1907, RG 112, Entry 386, Box 8, NARA.

77. Howard Priest to the Adjutant, 25 February 1910, RG 112, Entry 386, Box 29, NARA.

78. Jane Delano, "The Army Nurse Corps, Changes During November and December, 1909," *American Journal of Nursing* 10 (1910): 278–79.

79. Johnson, "My Life in the U.S. Army," 88.

80. Johnson, "My Life in the U.S. Army," 84.

81. Johnson, "My Life in the U.S. Army," 85.

82. J. L. Chamberlain, Inspection Report, 22 October 1906, RG 112, Entry 386, NARA.

83. Inspection report of General Hospital Fort Bayard, 15 October 1910, RG 112, Entry 386, NARA.

84. "Charges and specifications preferred against Private Clarence Miller, Hospital Corps, U.S. Army," RG 112, Entry 382, Box 5, NARA; and General Orders No. 36, 1908, U.S. Army General Hospital, Fort Bayard, New Mexico, RG 112, Entries 389–91, NARA.

85. Card on C. C. Bateman, #15860, RG 112, Entry 381, NARA.

86. G. E. Bushnell to M. W. Ireland, 20 November 1905, RG 112, Entry 380, NARA.

87. United States Army General Hospital, Fort Bayard, New Mexico, "Record of Completed Cases of Tuberculosis, 1899–1907." Fort Bayard, New Mexico, 1908.

88. Agnes G. Young, "Notes from Fort Bayard, New Mexico," *American Journal of Nursing* 6 (1906): 370.

89. Cephas C. Bateman, "The Army Hospital at Fort Bayard: Fort Bayard, New Mexico," Lawrence, KS: Kansas Collection, University of Kansas Libraries, c. 1911, p. 9.

90. G. E. Bushnell to Surgeon General, 5 January 1905, RG 112, Entry 380, NARA. In another case he admitted a former soldier who came to the hospital without permission because "his physical condition was such that his medical officer did not think that he should be sent away." See G. E. Bushnell to Surgeon General, 25 April 1907, RG 112, Entry 386, NARA.

91. G. E. Bushnell to Surgeon General, 1 March 1915, RG 112, Entry 26, Box 1089, NARA.

92. G. E. Bushnell to Surgeon General, 26 January 1907, RG 112, Entry 386, Box 3, NARA.

93. Correspondence regarding Joseph F. Fike, May 1909, RG 112, Entry 386, Box 22, NARA.

94. Efficiency Record, Olin R. Booth, RG 94, AGO 224422, Box 1417, NARA.

95. Medical Record, Wilmot Brown, RG 112, Entry 396, Boxes 10 and 11, NARA; and correspondence regarding Wilmot Brown, RG 112, Entry 383 and Entry 386, Box 41, NARA.

96. Medical Record, William H. Gregg, RG 112, Entry 396, Box 33, NARA. Bushnell may have invoked the three-month suspension rule for misconduct by beneficiaries of the Soldiers' Home, because Gregg sought readmission exactly three months after his departure.

97. G. E. Bushnell and Ellen A. Conroy correspondence, RG 112, Entry 386, Box 3, NARA.

98. Charles Tyler to Adjutant, Fort Bayard, 24 January 1905, RG 112, Entry 381, Box 3, NARA.

99. Correspondence between Inspector General and U.S. General Hospital, Fort Bayard, NM, October 1910, RG 112, Entry 386, Box 24, NARA.

100. Medical Record, Charles Tyler, RG 112, Entry 396, NARA; and Charles Tyler to Governor of the Home, Washington, DC, 20 March 1907, RG 112, Entry 386, Box 5, NARA.

101. See Interment.net, Cemetery Transcription Library, Fort Bayard National Cemetery, http://www.interment.net/data/us/nm/grant/ftbaynat/index.htm, accessed 26 August 2012.

102. Horace E. Smith, Medical Record, RG 112, Entry 396, Box 77, NARA.

103. G. E. Bushnell to Surgeon General, 4 April 1908, RG 112, Entry 386, Box 12, NARA.

104. See Cephas C. Bateman, "The Army Hospital at Fort Bayard: Fort Bayard, New Mexico." Lawrence, KS: Kansas Collection, University of Kansas Libraries, n.d., c. 1911–12; and Earl H. Bruns, "Colonel Bushnell: An Estimate of His Character and Work," 277.

For another physician's explanation of how he adopted the rest treatment after visiting Minor's sanatorium see Joseph H. Pratt, "The Development of the Rest Treatment in Pulmonary Tuberculosis," *New England Journal of Medicine* 206 (1932): 64–69.

105. G. E. Bushnell to Surgeon General, 3 March 1904, RG 112, Entry 381, Box 2, NARA.

106. G. E. Bushnell to Surgeon General, 24 March 1904, RG 112, Entry 26, Box 91, NARA.

107. Bruns quoted in Bateman, "The Army Hospital at Fort Bayard," 13.

108. For example, in 1908 the Navy Medical Department circulated an article advocating mercury to treat tuberculosis, declaring "the only question remaining to be decided is: how long will it [mercury] take to effect a cure?" and in 1914 a Navy medical officer downplayed the importance of rest and advocated graduated exercise in the treatment of tuberculosis. Barton Lisle Wright, "The Treatment of Tuberculosis by the Administration of Mercury," *U.S. Naval Medical Bulletin* 2 (1908): 25; and G. B. Crow, "Some Prevailing Ideas Regarding the Treatment of Tuberculosis," *U.S. Naval Medical Bulletin* 8 (1914): 541–54.

109. George E. Bushnell to Charles F. Mason, 22 November 1904, RG 112, Entry 26, NARA.

110. Bates, *Bargaining for Life*, 265, and 318–21.

111. Dormandy, *The White Death*, 149. See also Carolyn June McQuien, "Tuberculosis as Chronic Illness in the United States: Understanding, Treating, and Living with the Disease, 1884–1954," Ph.D. dissertation, University of Texas at Austin, 1993, who calls it "a draconian regimen of inactivity," 145.

112. G. E. Bushnell to C. C. Slemons, Board of Health and Poor Commissioners of Grand Rapids, Michigan, 5 January 1911, RG 112, Entry 386, Box 37, NARA.

113. Earl Bruns, cited in Bateman, "The Army Hospital at Fort Bayard," 11.

114. Charles L. Minor, "Diagnosis," in Arnold C. Klebs, ed., *Tuberculosis: A Treatise by American Authors on its Etiology, Pathology, Frequency, Semeiology, Diagnosis, Prognosis, Prevention, and Treatment* (New York, NY: D. Appleton & Co., 1909), 297–324 and 377–78. This book was included in a list of medical books at the Fort Bayard library in a 1910 inspection report. See correspondence between Inspector General and U.S. General Hospital, Fort Bayard, NM, October 1910, RG 112, Entry 386, Box 24, NARA.

115. William H. Gregg, Medical Record, entry for 16 September 1915, RG 112, Entry 396, Box 33, NARA.

116. George E. Bushnell, "Some Extrapulmonary Sounds Which Simulate Rales," *Medical Record* 82 (20 January 1912): 1–24.

117. G. E. Bushnell, "Report for the Calendar Year 1905, U.S. General Hospital, Fort Bayard, N. M.," RG 112, Entry 380, NARA. For a description of the classification system, see Klebs, *Tuberculosis,* 361–74.

118. Johnson, "My Life in the U.S. Army," 83.

119. Thomas D. Brock, *Robert Koch: A Life in Medicine and Bacteriology* (Madison, WI: Science Tech Publishers, 1988), chapter 18. On the more recent use of tuberculin testing see "Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection," *Morbidity and Mortality Weekly Report* 49 (9 June 2000).

120. G. E. Bushnell to Millard Knowlton, 20 June 1906, RG 112, Entry 380, NARA. Also on treatment of tuberculosis, see Klebs, ed. *Tuberculosis*; and Paul M. Carrington, "Further Observations on the Treatment of Tuberculosis at Fort Stanton, New Mexico," *Military Surgeon* 14 (1904): 201–34.

121. *Nostrums and Quackery: Articles on the Nostrum Evil and Quackery Reprinted, with Additions and Modifications, from the Journal of the American Medical Association,* 2d ed. (Chicago, IL: Press of the American Medical Association, 1912), 76. For example, Oscar C. Young, "On the Use of the Opiates, Especially Morphine," *Medical News* (25 January 1902): 154–57, told of his own addiction and warned others to use morphine judiciously.

122. This discussion is based on examination of a number of medical charts in RG 112, Entry 396, NARA. Medical personnel kept charts only for medications given to patients while they were in the infirmary, and under the closest supervision and care. I am grateful to Mary Ann DeGroote, M.D., for helping me read the medical charts and diagnostics used at Fort Bayard.

123. Walter Robbins, Medical Record, RG 112, Entry 396, Box 70, NARA; and Charles S. Legare to Frances Izlar Legare, 4 December 1908, Legare Family Papers, South Carolina Historical Society, Charleston, SC.

124. Commanding officer to Surgeon General, "Annual Report for 1913," RG 112, Entry 26, Box 919, NARA.

125. According to Medline Dictionary, phenacetin is: "a compound [$C_2H_5O–C_6H_4–NHCOCH_3$] formerly used to ease pain or fever but now withdrawn from use because of its link to high blood pressure, heart attacks, cancer, and kidney disease."

126. A medical board had recommended disability discharge several months earlier, but the War Department did not approve it.

127. Details on Homer McQueen's case come from Medical Record, Homer L. McQueen, RG 112, Entry 396, Box 54, NARA; and Cephas Bateman, Monthly Reports, RG 94, ACP, Box 1283, NARA.

128. Correspondence regarding manuscript by Thomas H. Johnson, "Diseases Complicating Chronic Pulmonary Tuberculosis," unpublished paper, 1916, RG 112, Entry 26, Box 466, NARA.

129. *Record of Completed Cases of Tuberculosis at the United States Army General Hospital, Fort Bayard, New Mexico* (Washington, DC: GPO, 1917).

130. Fort Bayard annual reports, 1900 to 1917; and "Record of Complete Cases of Tuberculosis, 1899–1907, United States Army Hospital, Fort Bayard, New Mexico," RG 112, Old Entry 399, NARA.

131. George E. Bushnell to Charles F. Mason, 22 November 1904, RG 112, Entry 26, NARA; and G. E. Bushnell to Millard Knowlton, 20 June 1906, RG 112, Entry 380, NARA.

132. Cephas C. Bateman, "The Army Hospital at Fort Bayard: Fort Bayard, New Mexico." Lawrence, KS: Kansas Collection, University of Kansas Libraries, c. 1911, 9.

133. "The U.S. Army General Hospital, Fort Bayard, New Mexico, 1908," report, RG 112, Entry 31K, Box 16, NARA; and G. E. Bushnell to Surgeon General, "Annual Report for 1914," 15 February 1915, RG 112, Entry 26, Box 919, NARA.

134. Bates, *Bargaining for Life*, 135–38; and Jeanne Abrams and Maryann Fitzharris, *A Place to Heal: The History of National Jewish Medical and Research Center* (Boulder, CO: Johnson Publishing, 1997).

135. George E. Bushnell to Guy Hinsdale, 26 May 1908, RG 112, Entry 386, NARA.

136. United States Army General Hospital, Fort Bayard, NM, "Record of Completed Cases of Tuberculosis, 1899–1907," Fort Bayard, NM, 1908, Appendix, RG 112, Old Entry 399, NARA; and J. L. Chamberlain, Inspection Report, 22 October 1906, RG 112, Entry 386, NARA.

137. Public Health Service, *Annual Report,* 1913, 265.

138. Sheila Rothman makes this point especially well in *Living in the Shadow of Death*.

139. Quoted in Bruns, "Colonel Bushnell," 275; and McQuien, "Tuberculosis as Chronic Illness in the United States," 145.

140. Bruns, "Colonel Bushnell," 275. The boredom and difficulty of the rest cure are vividly described in tuberculosis memoirs such as Betty MacDonald, *The Plague and I* (Philadelphia, PA: J. B. Lippincott, 1948); and novels such as Thomas Mann, *The Magic Mountain*, 1924, various editions; and Eamon McGrath, *The Charnel House* (Belfast, UK: Blackstaff Press, 1990).

141. Thomas H. Johnson, "Diseases Complicating Chronic Pulmonary Tuberculosis," unpublished paper, 1916, RG 112, Entry 26, Box 466, NARA.

142. On the problem of patients who were absent without leave (AWOL), see Charles A. Byler, *Civil-Military Relations on the Frontier and Beyond, 1865–1917* (Westport, CT: Praeger Security International, 2006); on alcoholism among young men during this period, see David Courtwright, *Violent Land: Single Men and Social Disorder from the Frontier to the Inner City* (Cambridge, MA: Harvard University Press, 1996); and on discipline and the coercion of tuberculosis patients see Lerner, *Contagion and Confinement*; Barron H. Lerner, "New York City's Tuberculosis Control Efforts: The Historical Limitations of the 'War on Consumption,'" *American Journal of Public Health* 83 (1993): 758–66; and Richard Coker, *From Chaos to Coercion: Detention and the Control of Tuberculosis* (New York, NY: St. Martin's Press, 2000).

143. Paul Hutton to commanding officer, 20 January 1905, RG 112, Entry 381, NARA. Numerous records of discipline problems can be found in RG 112, Entry 380, NARA.

144. On drug addiction, see David Courtwright, "Opiate Addiction in the American West, 1850–1920," *Journal of the West* 21, no. 3 (1982): 23–31; David Courtwright, *Dark Paradise: A History of Opiate Addiction in America* (Cambridge, MA: Harvard University Press, 2001); and David F. Musto, *The American Disease: Origins of Narcotic Control,* 3d ed. (New York, NY: Oxford University Press, 1999).

145. Edgar King, "The Use of Habit-Forming Drugs (Cocaine, Opium and Its Derivatives) by Enlisted Men. A Report Based on the Work Done at the United States Disciplinary Barracks," *Military Surgeon* 39 (1916): 383.

146. Correspondence regarding Hugh T. Robbins, August 1909, RG 112, Entry 386, Box 24, NARA.

147. Correspondence regarding the court-martials of Leslie Thomas and Charles F. Baker, 1909, RG 112, Entry 386, Box 26, NARA. The records do not state the outcome of the trials.

148. Eve E. Simmons, "It Took Blood, Bravery to Make Ft. Bayard History," *El Paso Times* 20 January 1963; and G. E. Bushnell to Walter M. Murphy, 26 December 1905, RG 112, Entry 380, NARA.

149. General Orders No. 36, U.S. Army General Hospital, Fort Bayard, NM, RG 112, Entries 389–91, Box 1, NARA.

150. Correspondence regarding F. G. Sheppard, 1907, RG 112, Entry 386, Box 9, NARA.

151. G. E. Bushnell to Military Secretary, 27 December 1905, RG 112, Entry 380, NARA.

152. Cephas C. Bateman, Monthly Reports, RG 94, Box 1283, NARA.

153. E. L. Munson to Chief of Bureau of Navigation, 20 February 1906, RG 112, Entry 380, NARA.

154. See RG 112, Entry 26, Box 639, File #94449, NARA.

155. See documents in RG 112, Entry 26, Box 1000, File #149083, NARA.

156. G. E. Bushnell to Military Secretary, 27 December 1905, RG 112, Entry 380, NARA.

157. G. E. Bushnell to Chamberlain, 16 October 1906, RG 112, Entry 386, Box 1, NARA.

158. Military Secretary to the President, Board of Managers, National Home for Disabled Volunteer Soldiers, 1 December 1906, RG 112, Entry 386, Box 1, NARA.

159. C. C. Bateman, Monthly Reports, March 1909, RG 94, Box 1283, NARA.

160. C. C. Bateman, Monthly Reports, February 1910, RG 94, Box 1283, NARA.

161. G. E. Bushnell to Military Secretary, 5 January 1907, RG 94, Box 1283, NARA.

162. *The Independent*, 18 January 1907.

163. General Orders No. 32, U.S. Army General Hospital, Fort Bayard, NM, 30 June 1909, RG 112, Entries 389–91, Box 1, NARA.

164. J. L. Chamberlain, Inspection Report of General Hospital at Fort Bayard, New Mexico, 22 October 1906, RG 112, Entry 386, Box 1, NARA.

165. Bateman, "The Army Hospital at Fort Bayard," 8.

166. Johnson, "My Life in the U.S. Army," 86.

167. *Surgeon General Annual Report,* 1910, 153. In addition, two were discharged at the end of their term of service, two transferred to other hospitals, and fifty-seven were "otherwise disposed of."

168. RG 112, Entry 23, File #62565, NARA.

169. G. E. Bushnell to Surgeon General, 16 September 1907, RG 112, Entry 386, Box 3, NARA; and G. E. Bushnell to Charles M. Mason, 22 November 1904, RG 112, Entry 26, NARA.

170. Medical Record, Charles Barney, RG 112, Entry 390, NARA.

171. Medical Record, Charles H. Noyes, RG 112, Entry 390, Box 62, NARA.

172. Klebs, ed. *Tuberculosis,* 805.

173. Johnson, "My Life in the U.S. Army," 82.

174. *WDAR*, 1911, 70.

175. General R. M. O'Reilly, buck slip endorsement of U.S. Senate request, 30 November 1907, RG 112, Entry 386, Box 11, NARA.

176. Medical Record, O. S. Lusk, RG 112, Entry 396, Box 50, NARA; and Efficiency Reports, Oscar S. Lusk, RG 94, AGO, Box 1106, NARA.

177. Medical Record, Charles Tyler, RG 112, Entry 396, Box 41, NARA; and Charles Tyler to the Adjutant General, 24 January 1905, RG 112, Entry 381, Box 3, NARA.

178. Efficiency Reports, Ogden Rafferty, RG 94, Box 1142, NARA. Rafferty continued to pursue his military career, and was assigned to active duty at Fort Douglas, Utah, after the United States entered World War I.

179. Cephas C. Bateman, Monthly Reports, RG 94, Box 1283, NARA.

180. G. E. Bushnell and Medora H. McCarty, correspondence, March 1907, RG 112, Entry 386, Box 5, NARA.

181. G. E. Bushnell to S. H. Hill, 8 January 1909, RG 112, Entry 386, NARA.

182. See, for example, G. E. Bushnell to Richard Hepple, 9 May 1906, RG 112, Entry 380, and G. E. Bushnell and Henry K. Rymill correspondence, 27 March 1910 and 3 April 1910, RG 112, Entry 386, Box 30, NARA.

183. "List of Officers of the Army who have been under treatment for tuberculosis at the General Hospital, Fort Bayard, N.M.," RG 112, Entry 26, Box 938, NARA.

184. Agnes G. Young, "Notes from Fort Bayard, New Mexico," *American Journal of Nursing* 6 (1906): 372.

185. "Howard Watson," Medical Record, RG 112, Entry 396, Box 84, NARA.

186. Medical Record, Walter C. Babcock, RG 112, Entry 386, NARA; RG 95, Box 1451, NARA; and http://www.distantcousin.com/Military/wwi/units/usa/310infantry78division/, accessed 26 August 2012.