

**Lungs, land and laws: How legislation defined tuberculosis care in Minnesota**

by

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The student author, whose presentation of the scholarship herein was approved by the program of study committee, is solely responsible for the content of this thesis. The Graduate College will ensure this thesis is globally accessible and will not permit alterations after a degree is conferred.

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**DEDICATION**

For Theodora Batzer, the best grandmother I could have asked for.

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**ABSTRACT**

The Minnesota State Sanatorium for Consumptives opened in 1907 on the shore of Leech Lake, surrounded by piney forests. The location and laws ruling the sanatorium reflected the predominant medical beliefs about tuberculosis in the early twentieth century. Over the following three decades, clinical treatment for tuberculosis advanced quickly. These changes made keeping up with current standards of treatment for sanatorium patients difficult, as features of the sanatorium and its laws that had once been logical became dated or impossible to work with. During the 1920s, the sanatorium's superintendent was allowed to ignore or selectively invoke the laws and was able to compensate for changing treatment standards by having new buildings constructed or repurposed. When a new, less tactful sanatorium supervisor took over the sanatorium at the end of the decade and into the Depression years, the State Board of Control, which had oversight over the sanatorium, allowed him significantly less leeway. Although some new buildings were constructed, the sanatorium was consistently understaffed and underfunded, leading to a variety of conflicts as the sanatorium's location and state laws became a point of contention.

## CHAPTER 1. INTRODUCTION

It is possible that we sanatoria folks are not seeing our problem from a common vantage point; it is possible also that since we lack a sound standard of procedure, defects creep in reflecting upon one institution or another. If we had more uniformity in methods of operation, all ordinary defects would tend to correct themselves.<sup>1</sup>

In this excerpt from a letter written in 1940, the superintendent of the Minnesota State Sanatorium for Consumptives lamented that there were no consistent standards in the state's approach to controlling tuberculosis. His frustration made sense. The institution he was in charge of had opened thirty-seven years prior. Both its design and the laws regulating its work reflected the medical understanding from that earlier era, an understanding that was no longer consistent with the most up-to-date medical and scientific research. The superintendent's challenges reflected the broader trends of tuberculosis care in the United States.

Historians have approached tuberculosis in the United States from a variety of angles. In *The White Death: A History of Tuberculosis and Spitting Blood*, Thomas Dormandy and Helen Bynum tracked the history of the disease and how physicians and scientists approached understanding and treating it through the ages in Europe and the United States. Katherine Ott's *Fevered Lives* more closely interrogated the changes in treatments and social perceptions of the disease in the United States as germ theory displaced nineteenth century romanticized images of "consumption" with a more science-based analysis of infectious tuberculosis. Nancy Tomes's *The Gospel of Germs* discussed tuberculosis alongside other infectious diseases as strict ideas about hygiene and health

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<sup>1</sup> Herbert A Burns to Carl H. Swanson July 13, 1940, Box 106.I.12.4F, Folder Investigation Report on Sanatorium by State Medical Association, 1938, Superintendent Subject Files, Minnesota Historical Society.

swept across the United States in the late nineteenth and early twentieth century. Tomes framed the antituberculosis movement as religious in its zeal for hygiene as a solution to the disease.<sup>2</sup>

Other historians looked to the experiences of tuberculosis patients. Sheila M. Rothman's 1994 book *Living in the Shadow of Death* tracked how people afflicted with tuberculosis pursued health from the beginning of the nineteenth century through 1940. In her chapter on sanatorium care Rothman discussed how the sanatorium movement was driven by philanthropy, and how this motivated admissions criteria that sought to admit only the "worthy poor." Further, Rothman differentiated between private sanatoriums and their public counterparts, stating that county and state sanatoriums were more "prone to confusing cure with discipline and confinement with coercion."<sup>3</sup> Rothman's work invites more investigation into why county and state sanatoriums were so concerned with disciplining their patients.

Although tuberculosis sanatoriums spread rapidly across the United States in the early twentieth century, they were mostly local projects. The federal government was not involved with the sanatorium movement, so sanatoriums were either private or funded by states or counties. Some states with large sanatorium movements have already attracted

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<sup>2</sup> Helen Bynum, *Spitting Blood*, (Oxford: Oxford University Press, 2012); Thomas Dormandy, *The White Death: A History of Tuberculosis*, (London: Hambledon Press, 1999); Katherine Ott, *Fevered Lives: Tuberculosis in American Culture since 1870*, (Cambridge: Harvard University Press, 1996); Nancy Tomes, *The Gospel of Germs*, (Cambridge: Harvard University Press, 1998).

<sup>3</sup> Sheila M. Rothman, *Living in the Shadow of Death*, (New York: Basic Books, 1994), 207; For further reading on the tension between sanatorium nurses and patients, albeit in a British context, consult Stephanie Kirby's article "Sputum and the Scent of Wallflowers: Nursing in Tuberculosis Sanatoria 1920-1970," Jessica M. Robbins's "Class Struggles in the Tubercular World: Nurses, Patients and Physicians: 1903-1915" focuses more on tuberculosis and public health nurses outside of the sanatorium.

specific study from historians. Barbara Bates's social history of private and public sanatoriums in Pennsylvania in her book *Bargaining for Life* appears to have informed Rothman's own section on sanatoriums in the Northeast. Karin Larkin and Michelle Slaughter used an archaeological approach to investigate the Cragmor Sanatorium in Colorado Springs. This institution was notable for transitioning from catering to wealthy patients until the 1950s, when financial difficulties led the board of directors to make an agreement with the Department of Health, Education, and Welfare and the Bureau of Indian Affairs to treat Navajo patients.<sup>4</sup>

A couple of other, though not sanatorium-specific, histories of state antituberculosis initiatives illuminate the experience that non-white communities had with public health. In *Infectious Fear* Samuel Kelton Roberts explored how the politics of segregation defined access to tuberculosis treatment for Black Marylanders, particularly in Baltimore. Across the country, Clifford E Trafzer looked at the interactions between white field nurses and the residents of Southern California's Mission Indian Agency in *Strong Hearts & Healing Hands: Southern California Indians and field nurses, 1920-1950*. These nurses spearheaded antituberculosis efforts in the 1930s and 1940s. Trafzer explained that the antituberculosis movement among the Native American community in Southern California started later because the Mission Indian Agency lacked an X-ray machine and effective, widespread tuberculosis testing. In the late 1920s, field nurses began noticing more cases of suspected tuberculosis, and spearheaded efforts to accurately diagnose cases among Native Americans. Trafzer emphasized that these field nurses created mutual trust with the Native

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<sup>4</sup>Barbara Bates, *Bargaining for Life: A Social History of Tuberculosis, 1876-1938* (Philadelphia: University of Pennsylvania Press, 1992); Karin Larkin and Michelle Slaughter "Chasing the Cure at Cragmor Sanatorium: The Archaeology of a Tuberculosis Sanatorium," *Historical Archaeology* vol 57 (September 2023): 743-763.



Americans of the Mission Indian Agency, which was critical to their successful campaign against tuberculosis. Roberts and Kelton's works demonstrate the wide spectrum of experiences that BIPOC communities had with antituberculosis initiatives.<sup>5</sup>

There are already a few works on the history of tuberculosis in Minnesota. The state had a robust public sanatorium system, with one state and fourteen county sanatoriums. Even before the sanatorium movement began in earnest, many people believed that Minnesota's climate was especially healthy for people suffering from chronic lung diseases, which attracted health tourism in the state. *The People's Health*, by Philip D. Jordan and *Invited and Conquered: A Historical Sketch of Tuberculosis in Minnesota* by J. Arthur Myers, alongside "The Rise and Fall of Tuberculosis in Minnesota: The Role of Infection," by Leonard G. Wilson all mentioned the state sanatorium in broader context of Minnesota's antituberculosis efforts in the first half of the twentieth century. There are also a couple of books about patient experiences at public sanatoriums by Mary Krugerud. Her work on the Minnesota State Sanatorium for Consumptives, *The Girl in Building C*, consists of an annotated diary with some notes on how daily life in the sanatorium would have looked for a white, teenaged girl in the 1940s. While these works provide some helpful background about tuberculosis and sanatoriums in Minnesota, there are still major gaps in coverage.<sup>6</sup>

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<sup>5</sup> Samuel Kelton Roberts, *Infectious Fear: Public Health at the Intersection of Segregation and Housing Politics* (Chapel Hill: University of North Carolina Press, 2009); Clifford E. Trafzer *Strong Hearts and Healing Hands: Southern California Indians and Field Nurses, 1920-1950* (Tucson: University of Arizona Press, 2021).

<sup>6</sup> Philip D. Jordan, *The People's Health*, (St. Paul: Minnesota Historical Society, 1953); J. Arthur Myers, *Invited and Conquered: A Historical Sketch of Tuberculosis in Minnesota*, (St. Paul: Webb, 1949); Leonard G. Wilson "The Rise and Fall of Tuberculosis in Minnesota: The Role of Infection," *Bulletin of the History of Medicine* vol 66 no 1 (Spring 1992): 16-52; Mary Krugerud, *The Girl in Building C: The True Story of a Teenage Tuberculosis Patient* (St. Paul: Minnesota Historical Society Press, 2018); Mary Krugerud, *The History of Tuberculosis and Glen Lake Sanatorium* (St. Cloud: North Star Press, 2017).

State sanatoriums, such as the Minnesota State Sanatorium for Consumptives, are valuable resources for understanding sanatorium care in the United States, as there was no unified national effort. State sanatoriums acted as the most intensive interface between government public health policies and the citizenry. They were the point where legislation met human patients, through the filters of bureaucracy and sanatorium staff. The Minnesota State Sanatorium for Consumptives remains a mostly overlooked source of information on how individual states grappled with overwhelming health challenges. My thesis aims to help fill in this gap, by showing how medical care at the sanatorium was shaped by medical, economic, political, and geographic considerations up to the onset of World War II.

As an institution, the care that the Minnesota State Sanatorium for Consumptives provided was influenced by many factors. Sanatorium staff attempted to provide care that reflected the changes in medical science, as treatment shifted from environment-based therapies that emphasized the importance of fresh air to surgical interventions. The isolated location of the sanatorium, which favored the earlier environmental therapies complicated this shift, which required either expanded facilities and staffing or the logistical challenge of sending patients to distant hospitals to get treatment. This difficulty was compounded during the Depression years, as the Board of Control, the governmental body that oversaw the sanatorium, attempted to save money by cutting sanatorium staff. In the context of the Depression, impoverished tuberculosis patients likely seemed a waste of valuable taxpayer dollars.

This thesis will not focus on patient experience or how the Minnesota State Sanatorium for Consumptives contributed (or failed to contribute) to tuberculosis control

in the state. Rather, this study examines how three persistent factors affected patient care: the bacterium, the location, and the law, which came together to create a distinctive medical, economic, and social environment around tuberculosis care in Minnesota.

Chapter two looks at the disease as a microorganism and how Robert Koch's identification of the tubercle bacterium radically changed the way doctors and researchers understood tuberculosis. While the biological reality of what we call tuberculosis today did not change, the social and medical constructions of the disease shifted rapidly at the end of the nineteenth and beginning of the twentieth centuries. This chapter establishes how tuberculosis became conceived of as a "new" disease, which compelled states like Minnesota to build sanatoriums in an attempt to control the spread of disease.

Chapter three examines the land that the Minnesota State Sanatorium for Consumptives was built on and the buildings that made up the facility. Medical ideas about the ideal location for tuberculosis care changed over the years. In the late 1880s, country air was valued as an important feature of tuberculosis treatment, but by the 1920s, the remoteness of rural Minnesota seemed a serious obstacle to obtaining proper surgical care. Over the years, the sanatorium added buildings and facilities in an attempt to provide at least some patients with the best in current tuberculosis treatment. But during the Depression years, the sanatorium could not afford enough staff to perform all of the medical services that the facilities were equipped for. The location in north-central Minnesota also shaped who gained access and on what terms; starting in the mid-1930s, the State Sanatorium admitted and cared for Native American patients in a segregated building.

Chapter four focuses on the language of the sanatorium law, and how the same language came to take on different meanings with time. This chapter also explores how different parts of the law were selectively employed or ignored. As diagnostic techniques improved, the law became prohibitively selective in who was supposed to be admitted for care. Additionally, the requirement that patients have established Minnesota residency became an issue during the Depression years, as the number of transients in need of sanatorium care increased. Other state laws sometimes conflicted with the sanatorium law, forcing people to figure out which law took precedence.

By examining the sanatorium in this way, the reasons for the lack of uniformity that the superintendent lamented emerge. Although there *were* laws to dictate how the state approached tuberculosis care, changes in medicine forced medical professionals to interpret them differently, leading to an inconsistent approach towards tuberculosis control in the state. This study offers more insight into Bates's and Rothman's assertions about public sanatoriums by examining how legislative control influenced public sanatoriums into being highly disciplinary and coercive environments. It also takes a new approach at studying state sanatoriums and shows how much regional variation may have occurred, as interactions between the state bureaucracy and sanatorium staff greatly influenced patient care. Finally, this thesis suggests that historians should pay much greater attention to how state antituberculosis efforts affected Native American communities.

## CHAPTER 2. THE RISE OF TUBERCULOSIS AND THE PUBLIC SANATORIUM

During the final decades of the 19<sup>th</sup> century, the rise of germ theory in Europe and the Americas altered how diseases were treated in both the medical and public domains. Although the concept of contagion already existed, the ability to isolate and implicate specific organisms in the development of certain illnesses was new. Few, if any, diseases underwent as dramatic a shift in boundaries in diagnostic criteria and public reputation as tuberculosis. The rise of public sanatoriums in the United States at the beginning of the 20<sup>th</sup> century corresponded with this change.

Understanding why peoples' image of tuberculosis changed so much more than other infectious illnesses like smallpox or cholera requires some understanding of the bacteria responsible. The Mycobacterium Tuberculosis Complex (MTBC) consists of a group of closely related bacterial species, all of which can cause tuberculosis.

*Mycobacterium tuberculosis*, the original tubercle bacteria isolated by Robert Koch in 1882, is by far the most common. *M. tuberculosis* usually spreads when an infected individual coughs and respiratory droplets containing bacteria are inhaled by another person. Most other members spread less readily from person to person but can be transmitted to humans by another species. Notably, *M. bovis*, or bovine tuberculosis, is most often transmitted from cows to people by consuming raw dairy.<sup>1</sup>

*M. tuberculosis* in particular is incredibly good at evading the innate immune response, which is the body's first line of defense against pathogens. Most people have a

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<sup>1</sup>Ali Akbar Velayati and Parissa Farnia, *Atlas of Mycobacterium tuberculosis*, (London: Academic Press, 2017), 13-14.

strong adaptive immune response to tuberculosis infection, but it is delayed. Typically, *M. tuberculosis* has between two weeks and two months to establish itself in the body before the adaptive immune system reacts. At that point, white blood cells surround the bacteria in an attempt to kill the infection. The resulting balls of cells, called granulomas, are not formed exclusively in response to MTBC infection, but they are a defining characteristic of the disease. Tuberculosis and *M. tuberculosis* draw their names from tubercle, an older term for the phenomenon.<sup>2</sup>

In some cases, the immune response successfully sterilizes the infection, but in others the tubercle merely contains it. *M. tuberculosis* may subvert an effective adaptive immune response and become dormant, allowing the bacteria to persist until conditions are more favorable. Today, this reactivation from a subclinical, latent infection to an active one happens in around 5-10% of cases, although individuals with HIV are at much higher risk.<sup>3</sup>

The reasons for an insufficient immune response are numerous and often complicated. People who are pregnant, very young, or very old have weaker immune systems in general. Genetic variability, both in the bacteria and the host also play into how susceptible an individual is to infection and disease progression. Some strains are more

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<sup>2</sup> Chandra, Steven J. Grigsby, and Jennifer A. Philips. "Immune evasion and provocation by *Mycobacterium tuberculosis*" *Nature Reviews Microbiology*, 20 (Dec 2022): 751-59; Sheila M. Rothman, *Living in the Shadow of Death: Tuberculosis and the Social Experience of Illness in American History* (New York: Basic Books, 1994), 180.

<sup>3</sup> Chandra, Grigsby and Philips, "Immune evasion and provocation," 758-60.

likely to cause infection than others, and some strains are more aggressive. At the same time, some people are genetically more resistant or more susceptible to infection.<sup>4</sup>

External factors can also impair an individual's immune system; other illnesses, malnutrition, stress, smoking, even a vitamin D deficiency can all leave a person more vulnerable.<sup>5</sup> As an individual's circumstances change, for example getting sick but then recovering, or becoming vitamin D deficient in the winter but not during the summer, their susceptibility waxes and wanes. This likely accounts for some of the variability in disease progression. In some, the disease progresses quickly after they are infected. For others, the infection may progress slowly, or reappear suddenly and forcefully after something switches the balance within their body. Many go through periods of illness and apparent remission, shifting with their immune system's ability to keep the bacteria in check.

Variability in tuberculosis infection is not limited to the rate at which it progresses, as the bacteria can infect multiple tissues. Tuberculosis infections are typically classified as either pulmonary or extrapulmonary. Pulmonary tuberculosis, which affects the lungs, is the most common form of infection, and what most people think of as 'tuberculosis.' Classic symptoms include rapid weight loss, fatigue, fever, night sweats, chest pain, trouble breathing, coughing, and coughing up blood. Not every patient experiences every symptom, however, and even the most common—coughing—is not universal, especially early on.

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<sup>4</sup> Möller, Marlo, and Eileen G Hoal. "Current findings, challenges and novel approaches in human genetic susceptibility to tuberculosis." *Tuberculosis (Edinburgh, Scotland)* 90, no. 2 (2010): 71-72; Chandra, Grigsby and Philips, "Immune evasion and provocation," 757; Coscolla, Mireia, and Sebastien Gagneux. "Consequences of genomic diversity in *Mycobacterium tuberculosis*." *Seminars in immunology* 26 (2014): 431-32.

<sup>5</sup> Vincent Robert Bonagura and David Walter Rosenthal, "Infections that cause secondary immunodeficiency," in Stiehm's *Immunodeficiencies: Inborn Errors in Immunity*, Second Edition, eds Kathleen Sullivan, E. Richard Stiehm, (Academic Press, 2020): 1036-37, 1039-1041; Chandra, Grigsby and Philips, "Immune evasion and provocation," 757.

Extrapulmonary tuberculosis occurs when MTBC infects any other tissues in the body. Sometimes this happens because an infection in the lung spreads, but in other instances extrapulmonary tuberculosis occurs independently of a pulmonary infection.<sup>6</sup>

Despite having the same root cause, extrapulmonary tuberculosis can cause very different symptoms than when the bacteria infect the lungs. One of the more common sites for extrapulmonary tubercular infection is the lymph nodes, particularly in the neck. Here, infection typically causes sustained, painless swelling. Even with modern diagnostic techniques, distinguishing between this type of tubercular infection and lymphoma can be difficult. Other locations for extrapulmonary tubercular infection include (but are not limited to) the spine, bony joints, the genitourinary tract, and the central nervous system.<sup>7</sup>

Perhaps unsurprisingly, tuberculosis is a modern diagnosis. Without some way of looking inside the body, the tubercles for which the disease is named were invisible unless the patient was autopsied. A skilled physician with a stethoscope *could* hear the changes in a patient's breathing caused by tubercles, but that method could only detect them in the lungs. And before *M. tuberculosis* was isolated from tubercles and confirmed to cause the same growths and illness when introduced into a healthy host, their central importance to the disease was not obvious.<sup>8</sup> Not every patient experienced every symptom, after all.

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<sup>6</sup> Mirae Park, Clare Ross, and Onn Min Kon, "Pulmonary, Pleural, and Mediastinal TB: Clinical Aspects and Diagnosis" in *Tuberculosis in Clinical Practice*, ed. Onn Min Kon (Cham: Springer, 2021): 29-30; Ekaterina Kulchavenya, Kurt G. Naber, and Truls Erik Bjerklund Johansen, "Epidemiology of Extrapulmonary Tuberculosis," in *Extrapulmonary Tuberculosis*, eds. Alper Sener, Hakan Erdem (Cham: Springer, 2019): 2-3.

<sup>7</sup> Martin Dedicat, "Extrapulmonary Lymph Node, Abdominal, and Pericardial Tuberculosis" in *Tuberculosis in Clinical Practice*, ed. Onn Min Kon (Cham: Springer, 2021): 55; Anamika Banerjee, Kaljit Bhuller, and Amrita Bajaj, "Diagnostic dilemma of Hodgkin's lymphoma versus tuberculosis: a case report and review of the literature" *Journal of Medical Case Reports* 15, (2021): 2.

<sup>8</sup> Bynum, *Spitting Blood*, 52-53, 58-62, 106.



Consumption, the blight of industrializing Europe and America, drew its name from the dramatic wasting experienced by the afflicted. The symptoms of consumption and pulmonary tuberculosis are nearly identical. Today, most people think of consumption as an antiquated term for tuberculosis. American antituberculosis educational materials from the late 19<sup>th</sup> and early 20<sup>th</sup> century conflated the two and physicians often used the terms interchangeably in publications. But consumption proved an insufficient name for the disease. Not only did it exclude extrapulmonary forms of tuberculosis, but it could include other illnesses, some infectious, others not.<sup>9</sup>

The lack of specificity of a diagnosis of consumption, along with the irregular pattern of progression followed by tubercular infection, obscured the infectious nature of the illness. Prior to the isolation of the tubercle bacteria, determining when or where someone contracted the infection would have been difficult, if not impossible, even for those who believed it was contagious. Consumption could affect anyone, of any class, although cities, with their bad air and rampant vice, seemed to promote its development. Physicians could not agree on a cause. While there were those who believed the disease was infectious, that view was not universal. Some believed consumption was hereditary, given the tendency for multiple generations in a single family to fall ill. More philosophically, some physicians believed vanity and immoral behavior were the source of their patients' illness.<sup>10</sup>

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<sup>9</sup> Nancy Tomes, *The Gospel of Germs: Men, Woman, and the Microbe in American Life* (Cambridge: Harvard University Press, 1998), 115-132; Helen Bynum, *Spitting Blood* (Oxford: Oxford University Press, 2012), 13-15, 121-122; Katherine Ott, *Fevered Lives: Tuberculosis in American Culture since 1870* (Cambridge: Harvard University Press, 1996), 2,3.

<sup>10</sup> Bynum, *Spitting Blood*, 91; Barbara Bates, *Bargaining for Life: A Social History of Tuberculosis 1876-1938* (Philadelphia: University of Pennsylvania Press, 1992), 16-17; Katherine Byrne, *Tuberculosis and the Victorian Literary Imagination*, (Cambridge: Cambridge University Press, 2011), 30.

Ambiguity left room for imagination, and during the 18<sup>th</sup> and 19<sup>th</sup> centuries, consumption took on something of a romantic reputation. Cholera and smallpox, which sickened, disfigured, and killed quickly and horrifically, were not great targets for literary metaphor. Consumption, which counted a great number of authors in its pool of victims, made for better subject material. In literature and art, consumptives were often depicted as members of the social elite, whose sensitive souls rendered them vulnerable to sickness. Although cursed with frail and failing bodies, consumptive men were artistic geniuses. In women, consumption was typically associated with spiritual purity, and only enhanced their natural beauty. The emaciation, anemic pallor, fever-flush, and glassy eyes that marked the ill transformed through fiction into thin, pale, pink-cheeked, and bright-eyed ladies.<sup>11</sup> Consumption, or at least, an aesthetically pleasing imitation of it, was fashionable for women in the upper classes.

For the consumptive poor, who suffered infection at far greater rates than the wealthy, disease was not perceived as the result of their sensitive souls, but a natural consequence of their lifestyle. Poverty increases susceptibility to all infectious diseases. Crowded, poorly ventilated housing and work environments promote the spread of respiratory infections, and as few as three *M. tuberculosis* bacilli are estimated to be necessary to establish infection. While we have modern explanations for why the urban poor suffered from tuberculosis in such great numbers during the 19<sup>th</sup> century, the connection between poverty and consumption was obvious to observers at the time. The

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<sup>11</sup> Byrne, *Victorian Literary Imagination*, 28-29; Carolyn A. Day and Amelia Rauser, "Thomas Lawrence's Consumptive Chic: Reinterpreting Lady Manners's Hectic Flush in 1794," *Eighteenth Century Studies*, 49, no. 4 (2016):457-458.

explanation was equally obvious; filth and bad lifestyle choices bred disease, and the urban poor made bad choices and lived in filth.<sup>12</sup>

For some, this social perception of consumption was not compatible with a bacterial infection. One of the most important implications, that consumption was infectious, directly conflicted with the experiences and education of some physicians and public health officials. For public health officials especially, infectious consumption would have been a daunting prospect. The condition was ubiquitous, chronic, and affected the poor in great numbers. Doctor Lawrence Francis Flick, a physician from Philadelphia, demonstrated just how massive an undertaking dealing infectious consumption would be through his suggestions around 1894 to combat its spread. He suggested that it become a reportable disease, and that boards of health should visit every consumptive to ensure that their homes were properly disinfected and educate them on how to prevent spreading infection. Consumptives could not be permitted to do work where they might infect others, and as such, the government needed to pay for their maintenance.<sup>13</sup>

Following Koch's discovery of tubercle bacteria in 1882, some physicians attempted to fit the tubercle bacteria into their established views of consumption. These professionals were willing to consider the possibility that bacteria could cause disease, but if it was infectious, then why did some people who lived with other consumptives remain healthy? They proposed that if the tubercle bacillus was the "seed" of illness, then it could only develop in a susceptible body, or "suitable soil."<sup>14</sup> On one level, it was a reasonable

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<sup>12</sup> Chandra, Grigsby and Philips, "Immune evasion and provocation,"751; Bynum, *Spitting Blood*, 93-94.

<sup>13</sup> Bates, *Bargaining for Life*, 18-19.

<sup>14</sup> Bynum, *Spitting Blood*, 107-108; Ott, *Fevered Lives*, 57-59.

argument, confirmed now by scientific studies on the many, many factors affecting immunocompetence. But in the late 1800s and early 1900s, “seed and soil” arguments could be used to place the blame for sickness and death squarely onto the victims.

Accepting infectious tuberculosis and a simple understanding of germ theory, however, also had unfortunate consequences for the most affected communities. By the final decade of the 19<sup>th</sup> century, consumption was no longer fashionable in America, displaced by the athletic figure of the Gibson Girl. Consumption became increasingly associated with poverty, and the sick were villainized for spreading infection. One doctor warned that consumptives were especially dangerous because they could not always be easily identified. At the same time, public health leaflets warned the public against any physical contact with consumptives, allowing the infected into their homes, or allowing the sick to handle their clothing.<sup>15</sup> For those already struggling to get by, even the suspicion of sickness could be devastating.

Isolating the tubercle bacteria did not lead to the swift discovery of new, effective treatments, either. Koch claimed to have found one, later called tuberculin, in 1890. Tuberculin proved ineffective and even detrimental as a treatment, but the strong reaction it provoked in those who had been exposed to tubercle bacteria eventually made it a useful diagnostic tool. In the absence of a cure, many physicians and patients turned to patent medicines, home cures, and herbal remedies. The most consistent advice focused on preventing transmission through careful hygiene and restoring patient health through a

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<sup>15</sup> Ott, *Fevered Lives*, 70-71; Bates, *Bargaining for Life*, 23.

regime of rest, moderate exercise when possible, sunshine, clean air, and an abundance of healthy food.<sup>16</sup>

In 1885, the first American sanatorium opened at Saranac Lake in New York. Sanatoriums, similar in concept to health resorts, specialized in treating consumption and let medical and public health officials exert greater control over their patients' treatment. The first sanatoriums were all privately run, and thus only available to patients who could pay, plus a few who were admitted as charity cases. But as the Progressive movement gained steam and states took a more active role in managing tuberculosis, the sanatorium model proved appealing. The infectious sick could be isolated from the healthy public and would not take up beds needed for more acute disease outbreaks in local hospitals. At sanatoriums, the behavior of poor patients, whose care was paid for with public funds, could be closely monitored and controlled.<sup>17</sup>

At the beginning of the twentieth century, many states, including Minnesota, funded systems of sanatoriums as part of an effort to control the spread of consumption. Sanatoriums represented the highest degree of intervention, as staff took near-complete responsibility and control of their patients' lives. On the less interventionist side, states deployed educational campaigns to teach the public how to avoid contracting or spreading the infection. State health departments deployed visiting tuberculosis nurses to teach patients and their families how to properly manage their condition at home. Dispensaries

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<sup>16</sup>Bynum, *Spitting Blood*, 146-149; Tomes, *The Gospel of Germs*, 115; Ott, *Fevered Lives*, 49-51; Bates, *Bargaining for Life*, 22-23, 29-30

<sup>17</sup> Bates, *Bargaining for Life*, 54, 56, 123, 144.

provided medical evaluations and distributed aid, such as food, for the consumptive poor. Charitable organizations, religious and otherwise, also pitched in.<sup>18</sup>

Although consumptives made up the majority of tuberculosis patients, they did not account for all of them. Non-pulmonary forms of tuberculosis are much less infectious, and isolation and limited contact with the sick was not a priority for the already overwhelmed antituberculosis movement. But children especially tended to suffer from extrapulmonary tuberculosis, which was problematic for different reasons. Sickly children would grow into sickly adults and become a drain on society.<sup>19</sup> Although Koch vehemently denied that bovine tuberculosis could infect humans, the possibility that children could become infected through milk became the focus of a parallel antituberculosis movement in the United States that focused on tuberculin testing of cow herds and pasteurizing milk.<sup>20</sup>

When the Minnesota State Sanatorium for Consumptives, also known as Ah-Gwah-Ching, was built in 1905, it was part of a budding antituberculosis movement.<sup>21</sup> Although the broad public acceptance of germ theory and the discovery of the tubercle bacillus gradually changed how people conceived of disease, no new scientific remedies or solutions were immediately available. The sanatorium was the most intensive, specialized facility the state had to treat a disease that the medical community was still trying to find an effective treatment for.

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<sup>18</sup> Philip D. Jordan, *The People's Health: A History of Public Health in Minnesota to 1948*, (St Paul: Minnesota Historical Society, 1953), 271-273, 278-279; *Bargaining for Life*, 156-157, 247.

<sup>19</sup>Chandra, Grigsby and Philips, "Immune evasion and provocation," 60; Bynum, *Spitting Blood*, 161-163.

<sup>20</sup> Bynum, 170-171; Kendra Smith-Howard, *Pure and Modern Milk: An Environmental History Since 1900* (Oxford: Oxford University Press, 2013), 12-13, 32-35.

<sup>21</sup> Ah-Gwah-Ching means "out of doors" in the Ojibwa language.

### CHAPTER 3. THE ROLE OF LAND AND ARCHITECTURE

Between 1903, when funding to build the Minnesota State Sanatorium for Consumptives (State Sanatorium) was first approved and the onset of the Second World War, standards for treating tuberculosis changed drastically. Nineteenth century ideas for treating disease gave way to more drastic, clinical interventions. What made sense in 1903—a remote location, facilities that lacked surgical equipment or even a proper infirmary—quickly became problems that Sanatorium staff had to overcome or justify to the state legislature to secure funding.

Perhaps one of the greatest indicators of the changes that the State Sanatorium underwent came in how people referred to it. While “consumption” was synonymous with pulmonary tuberculosis at the very beginning of the twentieth century, the term soon fell out of favor. The name “Minnesota State Sanatorium *for Consumptives*,” then, was an indicator for how outdated the facility was. When the sanatorium’s post office changed its name to Ah-Gwah-Ching<sup>1</sup> in 1922, people began referring to the sanatorium by the same name. The official biennial report from 1926 referred to the institution both as “Minnesota Sanatorium for Consumptives” and “Sanatorium for Consumptives, Ah-gwah-ching.”<sup>2</sup> According to his obituary, Dr. Pearl M. Hall, who served as the superintendent from 1918 until his death in 1928, chose the new name. Originally, Ah-Gwah-Ching referred only to the post office at the State Sanatorium, but the name was soon used for the sanatorium

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<sup>1</sup> Capitalization is inconsistent; I will use Ah-Gwah-Ching, but it is also regularly written Ah-gwah-ching.

<sup>2</sup> Ian R. Stewart, “Minnesota State Sanatorium for Consumptives” National Register of Historic Places Nomination Form (Washington DC: U.S Department of the Interior, National Park Service, 2001) Section 7 p 1; “Consumptives Report of Superintendent to the Board of Control of Minnesota, Biennial Period Ended June 30, 1926,” Wangenstein General Collection.

itself.<sup>3</sup> Why, exactly, Dr. Hall chose that name is unclear, but his source of inspiration is obvious. The sanatorium was very close to the Leech Lake Reservation, home to the Leech Lake Band of Ojibwe (See Figure 1).

The State Sanatorium's design and location determined the type and quality of care that patients received. Although sanatorium staff attempted to keep up with the latest developments in scientific tubercular care, their facilities and remote location limited them. In other ways, the location of the Sanatorium may have been beneficial. Even as outdoor activity became less and less important to tuberculosis treatment plans, the park-like setting of the sanatorium allowed patients to enjoy nature. The sanatorium's expansive grounds and farm also meant that patients had fresh produce, milk, and meat even when economic pressures led the state legislature to make drastic cuts to the sanatorium's budget.

In addition to the very real, logistical benefits and drawbacks of the State Sanatorium's location, its remoteness had political ramifications. Its isolation, once deemed an advantage, became the all-encompassing explanation for any troubles the State Sanatorium had. Problems, such as understaffing, that could have been alleviated by funding were instead attributed to its remote location by the State Board of Control. Rather than investing in the institution, the Board acted as if these shortcomings were inherent to such a remote facility.

Finally, the State Sanatorium's location near the border of the Leech Lake Reservation ensured that the State Sanatorium was involved with antituberculosis efforts among the Ojibwe. Despite keeping Ojibwe patients out, and then in a segregated building,

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<sup>3</sup> "Pearl Mitchell Hall: 1860-1928," *The American Review of Tuberculosis* vol 19 (January-June 1929), 231.



proximity kept the State Sanatorium and its staff in close contact with the Native American community, whether they wanted to be or not.

### **Following the European Sanatorium Model**

About 30 years before Lake Saranac opened, the first sanatoriums dedicated to treating tuberculosis, or consumption as the disease was more commonly called at the time, were founded in Europe. This model, which emphasized fresh air, rest, and a nutritious diet proved popular in the United States in the late nineteenth and early twentieth centuries.<sup>4</sup> As a result, the sites for many American sanatoriums were chosen with regard to environmental considerations such as air quality rather than easy transportation or accessibility in mind.

Under this treatment paradigm, northern Minnesota seemed like an ideal area to build a sanatorium. Minnesota had acquired a reputation for a healthy climate in the latter half of the nineteenth century, particularly for those suffering from chronic respiratory diseases. During Minnesota's early years of statehood, it competed with Florida and California for business from the wealthy infirm looking for a healthy climate in which to recover. Northern Minnesota, with its piney forests, "stimulating" weather, and "tonic atmosphere" was already a destination for consumptives when the Minnesota State Legislature appropriated money to build a state sanatorium in 1903.<sup>5</sup>

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<sup>4</sup> Peter Warren, "The Evolution of the Sanatorium 1854-1904," *Canadian Bulletin of Medical History* vol 23 no 2, 458.

<sup>5</sup> Philip D. Jordan, *The People's Health*, (St. Paul: Minnesota Historical Society, 1953), 2-3, 7-9, 270.

When the Minnesota State Sanatorium for Consumptives opened in 1907, it reflected climatotherapy-centric tuberculosis treatment ideals. The sanatorium was built in a remote location in Cass County. The nearest town, Walker, with a population of 917 in 1910, was three miles away. The immediate surroundings were picturesque; the sanatorium was on a bluff overlooking the southern shore of Leech Lake.<sup>6</sup> And, perhaps most importantly, the area was surrounded by pine forests.

The presence of pine trees was a prime consideration for choosing the location of the sanatorium. As one member of the Committee on Legislation of the State Medical association stated in 1899, "The efficiency or curative value of large tracts of coniferous forests in the cure of pulmonary afflictions has been fully demonstrated by the large percentage of cures in the Adirondack region and the pine forests of Georgia."<sup>7</sup> This tradition of placing sanatoriums in or near pine forests had its roots in the European sanatorium tradition.

These forests had healthier air not just because they lacked the pollution associated with cities, but because of the pine trees themselves. In Europe, this belief that pine trees were helpful for people suffering from pulmonary tuberculosis dated back to Pliny the Elder and was carried forward through the centuries to the sanatorium movement. With the rise of germ theory, this special antituberculosis quality was attributed to the germicidal qualities of pine oil, which is used in cleaning solutions to this day. Although

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<sup>6</sup> Department of Commerce and Labor Bureau of the Census Thirteenth Census of the United States taken in the year 1910, Statistics for Minnesota, 577; Ian R. Stewart, "Minnesota State Sanatorium for Consumptives" National Register of Historic Places Nomination Form (Washington DC: U.S Department of the Interior, National Park Service, 2001) Section 7 p1.

<sup>7</sup> J. Arthur Myers *Invited and Conquered: Historical Sketch of Tuberculosis in Minnesota*, (Webb Publishing Company: St. Paul, 1949), 108.

pine products were used in many hospitals and sanatoriums, many people believed that the very presence of pine trees had purifying effect on the environment, through the “emanations” from pine trees into the air.<sup>8</sup>

The land near Leech Lake had a high density of pine trees for two reasons: recent legislation ordering that pine trees be replanted, and close proximity to the Leech Lake Reservation. These pine forests were ideal because they were not at risk for being cut down any time soon, therefore preserving a healthy environment for the foreseeable future.<sup>9</sup> The land was carefully selected to give patients the best chance for recovery under the prevailing treatment standards at the time the State Sanatorium was planned.

The treatment standards of the early 1900s were reflected in the architecture of the first buildings erected as part of the State Sanatorium. The main building was U-shaped and two stories tall, with all the primary functions of the sanatorium included. It was equipped with a physician’s office, laundry, kitchen and dining room, toilet and bathing facilities, a living area for staff, and separate men’s and women’s wards. There was a porch running the length of the southern side of the building. Several large, screened areas encouraged airflow.<sup>10</sup> The priorities for patient care were clear: fresh air, a clean environment, food, adequate rest, and outdoor activity when possible.

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<sup>8</sup> Clare Hickman, “Pine Fresh: The Cultural and Medical Context of Pine Scent in Relation to Health—From the Forest to the Home” *British Medical Journal* vol 48 no 1 (March 2022), 11, 17-19.

<sup>9</sup> Jordan, *The People’s Health*, 270.

<sup>10</sup> Ian R. Stewart, “Minnesota State Sanatorium for Consumptives” National Register of Historic Places Nomination Form (Washington DC: U.S Department of the Interior, National Park Service, 2001) Section 7, p 2.

## Location and Treatment

To take as much advantage of the fresh air available at the State Sanatorium as possible, patients were kept in very open housing. Weather permitting, patients slept in screened “sleeping porches,” which allowed them to both rest and take in the air. Of course, this housing was not always particularly pleasant. In *The Moccasin*, one of the sanatorium newsletters, residents of the Hall Pavilion decided to relay their gossip to the other sanatorium wards through “The Wind-Chills Column.”<sup>11</sup> Interestingly, although earlier sanatorium newsletters mentioned the cold, the references were less pointed. When the “Wind-Chills Column” was written, in 1938, climatotherapy, and by extension fresh air, were considered less important for tuberculosis treatment.

This initial belief in climatotherapy was also seen in the types of activities that patients were encouraged to engage in. In 1918, an article in *The Pine Knot* (the predecessor of *The Moccasin*), described the opportunities that State Sanatorium patients had to spend time in nature. The author described patients learning the names of robins, and identifying as many species of birds as they could on the grounds. Other patients took up identifying plants. The author of the article enthused about how spending time outside benefitted not only their health, but intellectual development, stating “all of these newly formed nature students claim that they are better for being here, not only in respect to health or increase in their length of life, but also in respect to one of the greatest parts of man’s education—a knowledge of mother nature.”<sup>12</sup> The author of this particular article

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<sup>11</sup> Lillian Becker, “The Children at the Sanatorium,” *The Pine Knot*, vol 5 no 7 (May 1918), 4; *The Moccasin* September 1938, vol 1 no 6 (September 1938), 18. All issues of *The Pine Knot* and *The Moccasin* were accessed at the Minnesota Historical Society’s Gale Family Library (referred to from here on as MNHS).

<sup>12</sup> “Another Point of View” *The Pine Knot* vol 5 no 9 (July 1918), 8.

was likely overly laudatory about the State Sanatorium. *The Pine Knot* also published articles emphasizing the importance of a “cheerful disposition” and compliance with staff instructions in recovering from tuberculosis. Even so, from references in other articles, outdoor activities were a major part of the day-to-day lives of patients who were well enough to leave bed.<sup>13</sup>

The importance of these outdoor activities dwindled with time, however. Articles about the importance of compliance and cheery attitudes persisted, and references to outdoor activities remained, but outdoor activity was no longer part of the treatment. An article from June 1938 suggested that many patients barely went outside at all, stating that “though most of us see only a part of this, we might hear of it, catch the fragrance of some flower on the air or enjoy bouquets and so we speak of ‘our’ lilacs and ‘our’ whippoorwhills.”<sup>14</sup> This was a departure from the bird and plant identification enthusiasts of just two decades earlier.

Changes in the types of exercise patients engaged in corresponded with a new sanatorium superintendent. Dr. Herbert A. Burns underwent his training after the discovery of the tubercle bacteria and the rise of germ theory. This, along with Burns’s training as an epidemiologist differentiated him from Hall, who had already worked as a physician for several years by the time Koch made his discovery.<sup>15</sup> Burns’s approach towards tuberculosis care contrasted sharply with Hall’s in many ways, and exercise was a

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<sup>13</sup> “The Cheerfulness Cure” *The Pine Knot* vol 6 no 2(December 1918), 12.

<sup>14</sup> Benno Watrin, “Cheerfulness” *The Moccasin* (November 1938), 3; “June at Ah Gwah Ching” *The Moccasin* (June 1938), 4.

<sup>15</sup> “Burns, Dr. H. A. (1883-1949)”, [mnopedia.org/person/burns-dr-h-1883-1949](https://mnopedia.org/person/burns-dr-h-1883-1949) accessed October 28, 2023; “Pearl Mitchell Hall: 1860-1928,” *The American Review of Tuberculosis* vol 19 (January-June 1929), 230.

good example of this difference. In 1934, Burns hired an occupational therapist. Six years later, Burns wrote a letter dismissing the “old theory of exercise accomplished by walking certain distances, playing games,” and doing other chores. Instead, he had patients get their exercise through “carefully supervised occupational therapy and educational work.” This new program was meant to “provide for the patient a much more useful and scientific exercise program.” Burns went on to state that individuals who were “not adaptable” to occupational therapy were allowed to get their daily activity outside, but this practice was discouraged as much as possible.<sup>16</sup>

As suggested by Burns’s reference to a “scientific exercise program,” this move away from outdoor activity was matched with a shift towards more clinical treatments for tuberculosis. By the 1930s, *The Moccasin* was populated with articles explaining laboratory testing and surgical treatments for tuberculosis. Many physicians, including Burns, no longer put stock in climate as an important factor in either contracting or recovering from tuberculosis.<sup>17</sup> Patients were urged to endure invasive procedures with good attitudes and spend their active time preparing to integrate back into and become productive members of society, rather than attempting to cure themselves by taking walks and identifying birds, trees, and flowers.

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<sup>16</sup>“Pneumolysis Versus Pneumonolysis,” *The Moccasin* vol 2 no 4 (July 1939), 12; Charlotte Zimmer, “Our Departments: The Sputum Laboratory,” *The Moccasin* vol 2 no 7 (October 1939), 3, 20; L. A. Gorenflo, “Pneumothorax,” *The Moccasin* vol 2 no 9 (December 1939), 4-5; Herbert A. Burns to Carl H. Swanson, July 13, 1940, Box 106.I.12.4.F (referred to as Box 4F from here on), Folder: Investigation Report on Sanatorium by State Medical Association, 1938 (referred to as Investigation 1938 from here on), Superintendent Subject Files (referred to as SSF from here on), MNHS.

<sup>17</sup> Burns to H.B. Hanson January 27, 1933, Box 106.I.9.9B (Referred to from here on as 9B), Folder “Correspondence Relative to Admission of Patients 1932-1934,” Ah-Gwah-Ching Sanatorium Patient Records (Referred to from here on as AGCPR), MNHS.

The State Sanatorium, as initially designed, was ill-equipped for more clinical treatment. This proved somewhat problematic when the influenza pandemic reached the sanatorium in October of 1918. Dr. Hall, the superintendent at the time, contacted the State Board of Control in St. Paul, informing them that “having no infirmary, I have isolated every one that has shown any symptoms or elevation of temperature in the recreation hall, which makes a very good hospital.” Hall did not seem overly concerned about the seventeen influenza patients, however, telling the board that “there have been among them two cases of pneumonia; the others are doing fairly well.”<sup>18</sup> Hall did not specify how many patients there were at the institution in total at the time, but the biennial report set the State Sanatorium’s capacity at 290. The first infirmary building was built in 1922, with a second was erected a decade later.<sup>19</sup> The funding of these new buildings may have been prompted by the influenza pandemic, or the increasingly elaborate interventions for tuberculosis.

Lack of infirmary aside, the State Sanatorium did not seem to take too many casualties during the influenza pandemic. Patients and staff were discouraged from leaving to attend gatherings, so the remote location may have prevented them from dealing with wave after wave of the illness.<sup>20</sup> Given the fragile state that the patients were already in, influenza could have been devastating for the sanatorium.

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<sup>18</sup> Pearl M. Hall to State Board of Control October 29, 1918, Box 106.I.12.2F (Referred to from here on as 2F) Folder “45-Board of Control Misc Correspondence 1918” (Referred to from here on as Misc. Corr. 1918), SSF, MNHS.

<sup>19</sup> “Consumptives Report of Superintendent to the Board of Control of Minnesota, Biennial Period Ended June 30, 1926,” Wangenstein General Collection; Ian R. Stewart, “Minnesota State Sanatorium for Consumptives” National Register of Historic Places Nomination Form (Washington DC: U.S Department of the Interior, National Park Service, 2001) Section 7 p1.

<sup>20</sup> “The Latest Wheeze” *The Pine Knot* Vol 6 no 12 (October-November 1918), 20-21.

Isolation and a lack of facilities were unambiguously problematic for the day-to-day medical issues that patients had to deal with. The sanatorium did not have a dentist on staff until the mid-1920s, so all patients admitted before then had to have dental work done before arriving at the sanatorium. Funding shortages in the 1930s led the State Board of Control to deny Dr. Burns's request to keep a dentist on staff in 1939, meaning that patients once more needed to be sent out for any necessary dental treatment.<sup>21</sup>

Tuberculosis treatments also became increasingly intensive, requiring more elaborate facilities. The earliest reports that pneumothorax, or lung collapse, might be therapeutic for tuberculosis patients dated back to 1696. In 1820 a Scottish physician suggested induced lung collapse as a potential therapy for consumption. The idea did not gain much traction until the end of the century in Europe and was first introduced in the United States shortly after that. Artificial pneumothorax, where inert gas (typically nitrogen), was injected into the pleural cavity, was the first of these techniques, and among the least invasive. Sometimes sterile oil was injected after the gas to help with pain from the procedure, and in oleothorax, oil was used in place of gas. An article from 1937 states that artificial pneumothorax was used in about half of all pulmonary tuberculosis patients who were treated in U.S. institutions. Although the procedure was popular it did have some drawbacks; spontaneous, undesirable pneumothorax was possible, and adhesions between the lungs and the chest wall or other tissues complicated treatment and were extremely

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<sup>21</sup> "Minnesota Sanatorium for Consumptives Report of Superintendent to the State Board of Control of Minnesota, Biennial Period Ended June 30, 1926," Wangenstein General Collection, p1.



painful. Artificial pneumothorax was also a temporary treatment, requiring regular “refills” to keep the lung sufficiently collapsed.<sup>22</sup>

Surgery promised to offer a permanent solution. Thoracoplasty, a procedure that involved removing ribs—either partially or completely—ensured that cavities in the lungs remained closed. Initially, the procedure involved moving sections of only a couple of ribs, but by 1937, thoracoplasty had expanded to a multi-stage operation involving the ten to eleven ribs, removed over the course of multiple surgeries over a period of weeks. This procedure had a high operative mortality rate of 10% but was generally a well-regarded treatment for pulmonary tuberculosis. Unlike artificial pneumothorax, thoracoplasty could be performed on patients with lung adhesions. And, although patients who underwent thoracoplasty required intensive care while they healed, they did not require ongoing “refills.” Thoracoplasty also reduced positive sputum tests, so physicians and public health officials felt more comfortable discharging tuberculosis patients who had undergone the procedure, believing that they no longer posed an infectious threat to society. Many tuberculosis patients were indigent, so the prospect of safely (at least for the sake of public health) discharging patients and getting them out of publicly funded sanatoriums was

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<sup>22</sup> Ravinda Kumar Dewan and Loven Moodely “Resurgence of therapeutically destitute tuberculosis: amalgamation of older and newer techniques” *Journal of Thoracic Disease* vol 6 no 3 (March 2014), 196-201; Spencer Schwartz and Fred H. Heise “Olive Oil in Pneumothorax and Its Influence on the Development and Course of Pleural Fluids during the Course of Artificial Pneumothorax,” *American Review of Tuberculosis* vol 39 no 5 , 651; Frank H. Washburn, “Collapse Therapy: One Phase of Treatment in Pulmonary Tuberculosis” *The American Journal of Nursing* Vol 37 no 4 (April 1937) pp 373-379.

attractive. After all, as a 1932 article on the economic considerations of thoracoplasty, stated, “the citizens want their taxes reduced.”<sup>23</sup>

Thoracoplasty was not popularized exclusively due to its economic benefits, though. Physicians genuinely believed that the procedure could help tuberculosis patients and not just remove their dangerous infectivity. In a 1928 study in California on nineteen thoracoplasty recipients, one physician described all the patients involved as “inevitably approaching death” before undergoing the procedure. Of thoracoplasty, he found that “it is a great satisfaction to find a surgical means of completely reversing this hopeless prognosis or of relieving distressing symptoms.”<sup>24</sup> For an institution like the State Sanatorium, surgery was an important tool, both for helping the individual and preventing the spread of disease further.

In keeping with the treatment standards of the time, the State Sanatorium added a surgical suite in the 1930s. Artificial pneumothorax could be performed by ordinary medical staff, but thoracoplasty required a skilled surgeon.<sup>25</sup> The State Sanatorium’s first surgeon, Dr. Herbert Carlson, appears to have been enthusiastic about his work. A single-panel comic from the December 1938 issue of *The Moccasin* depicts him preparing to conduct surgery on the Christmas goose (or turkey). Carlson is fully dressed for surgery,

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<sup>23</sup> “Thoracoplasty,” sciencedirect.com/topics/medicine-and-dentistry/thoracoplasty, accessed October 20, 2023; A.D. Ellsworth and John H. Pettis, “Thoracoplasty—Surgery of Pulmonary Tuberculosis,” *California and Western Medicine* vol 28 no 6 (June 1928), 795-800; Kennon Dunham and Eslye Asbury, “Thoracoplasty in Pulmonary Tuberculosis: General and Economic Considerations,” *Journal of the American Medical Association* vol 99 no 5 (July 30, 1932), 360-366.

<sup>24</sup> A.D. Ellsworth and John H. Pettis, “Thoracoplasty—Surgery of Pulmonary Tuberculosis,” *California and Western Medicine* vol 28 no 6 (June 1928), 795-800.

<sup>25</sup> Hazel M. Bullis “Pulmonary Tuberculosis: Nursing Care” *The American Journal of Nursing* vol 39 no 3 (March 1939), 271-272.

sharpening what appears to be a carving knife and attended by a similarly outfitted nurse. Carlson announces, "We'll do a complete job on this bird," while a woman, presumably his wife, replies "But Herbert!" A black dog seated at the table and a set of children's blocks complete the scene.<sup>26</sup> Despite this gentle teasing of Dr. Carlson, patients almost certainly preferred dealing with his antics over being sent to the University of Minnesota's hospital.

While the sanatorium had funding to send patients to the University Hospital, the arrangement proved troublesome. Securing authorization to send patients to the hospital for surgery was often a long process. Once the hospital authorized surgery, each patient needed to be transported individually, laid in the back seat of a car to make the trip down to Minneapolis. Even getting to the hospital was not the riskiest part of the trip, however, as recovering patients were sometimes put on trains without warning, stranding them in towns near the sanatorium with no way to make the final leg of the trip. The problem was widespread enough that after several complaints, Burns managed to secure an agreement specifying how the University Hospital was to care for and discharge State Sanatorium patients. Highlights from this agreement were that at least twelve beds had to be set aside for convalescing State Sanatorium patients, and that patients be "placed on a train that has first class train service which reaches the nearest point to the Sanatorium and have a Sanatorium car meet the patient at the railway terminal." Burns also made the hospital agree to provide care for patients until they were "strong enough to go back to the Sanatorium."<sup>27</sup> From this agreement and other letters, it seems as though the University

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<sup>26</sup> "Christmas Dinner at Dr. Carlson's" *The Moccasin* (December 1938), 4.

<sup>27</sup> Burns to State Board of Control, April 4, 1935, Box 4(F) Folder: : Requests for additional personnel, 1930-1942, SSF, MNHS; Burns to Carl H. Swanson November 24 1939, Box 4F, Folder Surgery-Correspondence With Board 1938-1942, 4F, SSF, MNHS.

Hospital was loading up patients onto any train going in the general direction of the State Sanatorium whenever they decided they needed the beds.

As treatment for tuberculosis became more involved, the State Sanatorium's remote location became more of an issue. By the onset of World War II, climate, fresh air, and outdoor activity had lost their places as central tenets of tuberculosis care. The State Sanatorium adapted to changing standards of care as much as possible, within the constraints of its architecture and location.

### **The Politics of Remoteness**

The State Sanatorium's isolation was not merely a product of early twentieth century treatment plans. Indeed, this very feature was considered an advantage at first. When planning the State Sanatorium, Dr. Henry Martyn Bracken, head of the State Board of Health, strongly believed that isolating tuberculous individuals was critical to controlling infection rates in the state.<sup>28</sup> During the Depression years of the 1930s, however, the remote location of the sanatorium became a target for budget-conscious members of the State Board of Control.

For the State Board of Control, the State Sanatorium's remoteness became the explanation for most of its problems. During the Depression years, the sanatorium had an ongoing nursing shortage. The board blamed the sanatorium's inability to get nurses on its location, but ignored other, potentially more critical problems with attracting and retaining nurses. Sanatorium nurses were paid far less than other nursing specialties that required

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<sup>28</sup> Jordan, *The People's Health*, 269.

less risk of contracting such a life-altering disease. The nursing staff was also critically short; a money-saving measure that was exacerbated by budget shortfalls during the Depression.<sup>29</sup> While an isolated work environment likely *did* make work at the State Sanatorium less appealing, the prospect of being overworked and underpaid in such a high-risk environment was probably a greater concern for potential nurses.

The Board of Control put other, more arbitrary limitations on hiring nurses, exacerbating the problem further. Nurses who had previously contracted tuberculosis could not be hired.<sup>30</sup> Recommendations from *The American Journal of Nursing* acknowledged that tuberculosis nurses were at constant risk for contracting the disease, calling for x-ray check-ups at least twice a year if a nurse had a positive tuberculin response. If they had a negative reaction, then they should retest every six months during physical examinations. Clearly, this could not have been an appealing career path for most nurses. Excluding former tuberculosis patients meant barring one group with the most dedication to the sanatorium enterprise from sustaining it. Barring tuberculous nurses was also an odd bit of hypocrisy, as one of the primary goals of the State Sanatorium was getting patients well enough to re-enter the workforce.<sup>31</sup>

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<sup>29</sup>Burns to Kenneth C. Pennebaker, September 6 1940, Box 4F, Folder "Salary Adjustments Correspondence 1933-1942" SSF, MNHS"; Burns to Swanson, May 22, 1940, Box 4F Folder: "Salary Adjustments Correspondence, 1933-1940" SSF MNHS; Burns to the State Board of Control, July 6, 1933, Box 4F Folder: "Salary Adjustments and Correspondence, 1933-1942", SSF MNHS; Downer Mullen to Burns March 6, 1939, Box 4F, Folder: Requests for Additional Personnel, 1930-1942, SSF MNHS.

<sup>30</sup> Mullen to Burns July 11 1935, Box 4F, Folder "Correspondence Concerning Regulations 1925-1941," SSF, MNHS.

<sup>31</sup> Hazel M Bullis, "Pulmonary Tuberculosis Nursing Care," *The American Journal of Nursing* vol 39 no.3 (March 1939), p267.

According to the Board of Control, nurses needed to be from Minnesota as well as tuberculosis-free, making hiring even more difficult. Nurses from Canada, or even out of state, were also undesirable. The Board went as far as demanding an explanation for each of the 'foreign' nurses that Burns had employed at the sanatorium.<sup>32</sup> Of course, low pay and arbitrary, discriminatory limitations on hiring were never considered as a reason that the State Sanatorium had staffing issues. The problem was exclusively attributed to its location.<sup>33</sup>

There was one major advantage to the remote, vast area of the State Sanatorium that was not diminished by updated tuberculosis treatments: food. The metabolic demands of tuberculosis meant that a nutritious, high-calorie diet remained a central point of sanatorium tuberculosis care. Based on the European model, the State Sanatorium grew a lot of its own food. Fresh vegetables, milk, and even meat were all produced, at least in part, on the sanatorium's grounds.<sup>34</sup> Growing these on-site, rather than having to pay to transport them from elsewhere, must have increased the quality of the produce while decreasing expenses.

But food production at the State Sanatorium was another sore point for the Board during the tumultuous 1930s. A 1938 investigation into Dr. Burns, conducted for the State

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<sup>32</sup> Burns to the State Board of Control June 29, 1937, Box 4F, Folder: "Personnel Problems-Miscellaneous 1934-1941," SSF, MNHS.

<sup>33</sup> "Regarding An Investigation Concerning the Adequacy of Medical Care of the Tuberculous Patients at the Ah Gwah Ching State Sanatorium and Regarding the Charges Bearing Upon the Competency and Temperament of the Superintendent, Dr. H.A Burns," Box 4F, Folder "Investigation Report 1938," SSF, MNHS.

<sup>34</sup> Steward (nl) to State Board of Control March 1 1934, Box 106.I.10.10F Folder "Farm Correspondence" AGCPR, MNHS; Steward (nl) to State Board of Control June 5, 1934, Box 106.I.10.10F Folder "Farm Correspondence," AGCPR, MNHS; "Report of State Farmer" May 31, 1934, Box 106.I.10.10F Folder "Farm Correspondence," AGCPR, MNHS.

Health Relations Committee of the State Medical Society, appeared to be prompted by the Board of Control. Many of the accusations had to do with deficiencies in patient care due to a lack of nurses, but one was that Burns was too invested in the management of the sanatorium's farms. The investigators dismissed most of these allegations, although they did suggest that Dr. Burns be given an assistant to help manage the less clinical parts of the sanatorium.<sup>35</sup> The farm, rather than being an advantage for the sanatorium, was framed as yet another problem associated with its remote location.

The State Board of Control also took issue with the Sanatorium when they relied on purchased food. When the Board caught wind of a rumor that patients were given condensed (what is today commonly referred to as evaporated) milk, they wrote to Burns demanding an explanation. In his reply, Burns told the board that they used some condensed milk to extend their own fresh milk for making coffee and in place of creamer in the dining halls and did not use it for drinking purposes. He assured them that "it is possible to discontinue the use of condensed milk even in this limited way as soon as our milk production increases in the spring."<sup>36</sup> Given other interactions between Burns and the Board of Control, it seems possible that the Board's vendetta against the State Sanatorium's farms and Burns's involvement with them began with this interaction.

The relationship between Dr. Burns and the State Board of Control was contentious from the time he took over as superintendent. As the investigation stated, Burns could be a

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<sup>35</sup> "Regarding An Investigation Concerning the Adequacy of Medical Care of the Tuberculous Patients at the Ah Gwah Ching State Sanatorium and Regarding the Charges Bearing Upon the Competency and Temperament of the Superintendent, Dr. H.A Burns," Box 4F, Folder "Investigation 1938" SSF, MNHS.

<sup>36</sup> Mullen to Burns Feb 25, 1929, Box 2F, Folder: "45-Board of Control Miscellaneous Correspondence 1928-1929" (Referred to from here on as BOC Misc Corr. 1928-1929) SSF, MNHS; Burns to the State Board of Control March 6 1929, Box 2F Folder: BOC Misc. Corr. 1928-1929, SSF, MNHS.

difficult person to deal with. His letters suggest that he was an intense micromanager and a combative personality. But Burns was also a passionate advocate for his employees and for improvements and expansions for the State Sanatorium at a time when the state legislature was looking to cut costs.<sup>37</sup> These personality traits inevitably brought Burns into conflict with the Board of Control. This antipathy towards Burns may have contributed to the Board's insistence that the remoteness of the State Sanatorium was to blame for its staffing shortages and consequently inadequate patient care. But the Board may have done so even if Burns was not in charge, and without his persistent resistance, they might have successfully lobbied to close the State Sanatorium in the 1930s.

Without any allies on the Board of Control, Burns had to secure funds to sustain the day-to-day operations of the State Sanatorium. The situation in the 1930s was dire. In 1934, Burns's request for funding for sewage treatment at the sanatorium was denied. He was told to have another septic tank installed, instead.<sup>38</sup> Around the same time, the State Sanatorium's location ensured that it was involved in another complicated financial and administrative task: the establishment of a new wing, dedicated to treating Native American tuberculosis patients.

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<sup>37</sup> Mullen to Burns, Jan 2, 1929, Box 2F Folder BOC Misc Corr. 1928-1929, SSF, MNHS; "Regarding An Investigation Concerning the Adequacy of Medical Care of the Tuberculous Patients at the Ah Gwah Ching State Sanatorium and Regarding the Charges Bearing Upon the Competency and Temperament of the Superintendent, Dr. H.A Burns" Box 4F, Folder: "Investigation 1938" SSF, MNHS.

<sup>38</sup> Mullen to Burns March 26, 1934, Box 107.I.12.3(B) Folder: Board of Control Miscellaneous Correspondence, 1933-1934, SSF, MNHS.



### Location and the Ojibwe

Just how close the State Sanatorium was to the Leech Lake Reservation is difficult to overstate. This placement was deliberate; the sanatorium was positioned to take advantage of the reservation's pine forests, after all. However, the Sanatorium's proximity made it impossible for sanatorium residents and staff to ignore the Ojibwe, on whose land they had built.<sup>39</sup> The Ojibwe and the State Sanatorium exerted a great deal of influence over each other.

The State Sanatorium was, in many ways, defined by the nearby Ojibwe. The piney forests that the State Sanatorium identified so heavily with were largely still standing because the nearby reservation prevented logging. The State Sanatorium's colloquial name, "Ah-Gwah-Ching" was taken from the Ojibwe language. Yet Native Americans were not admitted as patients until 1935.

Records of tuberculosis care for Native Americans before their admission to the State Sanatorium are spotty. A separate institution, the Onigum Sanatorium, which was opened and run by the federal government through the Indian Service in 1924, was located just across Leech Lake. Records for the Onigum Sanatorium were lost in a fire. Indeed, the hospital at Onigum, which included the Onigum Sanatorium experienced multiple fires.<sup>40</sup> One, in 1928, only burned a detached ward.<sup>41</sup> Another in January of 1935 was far more severe; patients were rescued and brought across the frozen Leech Lake to the State

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<sup>39</sup> Although the State Sanatorium was not technically on the Leech Lake Reservation, the point remains that it was built on land that was originally Ojibwe.

<sup>40</sup> Jordan, *The People's Health*, 239.

<sup>41</sup> Blanche LaDu to Pearl M. Hall March 16, 1928 Box 2F, Folder BoC Misc. Corr. 1927-1928, SSF, MNHS.

Sanatorium, where they cared for alongside white patients until a separate wing specifically for Native American patients was finished.<sup>42</sup>

Construction on the Indian Annex, also called “Building E” or “The Eagle Building” started in 1934 and was funded by the federal government. Despite the Indian Citizenship Act of 1924, the state of Minnesota did not consider Native Americans to have the same right to public health care funds as other Minnesota citizens. The implications of this in the actual medical treatment that Native Americans received at the State Sanatorium will be discussed in Chapter 4. In terms of facilities and building, this meant that Native American patients were to be housed completely separately. There was a 25% increase in the number of employees in the service departments, including nurses, but this number was far lower than what Burns thought necessary.<sup>43</sup>

A newspaper clipping reveals that this plan was not universally accepted—Native American leaders opposed the idea, pointing out that “if the ‘wing’ idea is carried out [...] the Indian building will become a secondary matter.” In a letter from Burns to the State Board of Control, he confirmed that he saw the care of white and Native American patients as competing, stating “the interests of the State Sanatorium must be considered paramount and cannot be made secondary because of this new and added activity.” But while Burns expressed an interest in keeping the Native American annex as close to the rest of the Sanatorium as possible to reduce costs, he did not oppose it being separate. The suggestion

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<sup>42</sup> Leonard G. Wilson “The Rise and Fall of Tuberculosis in Minnesota: The Role of Infection,” *Bulletin for the History of Medicine* vol 66 no 1 (Spring 1992), 45.

<sup>43</sup> Burns to J. G. Townsend, October 5, 1940, Box 106.I.12.3B Folder Indians: Re-Buildings, 1935-1940, SSF, MNHS.

that Native American leaders proposed, that they “be cared for along with the rest of the patients, and no cognizance taken of his race,” went completely disregarded.<sup>44</sup>

The placement of the so-called “Eagle Building” was something of a metaphor for the relationship between the State Sanatorium and its Native American patients; not quite integrated, but not quite separated either. Keeping funds entirely discrete between the two groups of patients proved nightmarish. If laundry for all patients was done together to decrease costs, how did funds for laundry supplies get divided? Dr. Carlson performed thoracoplasty on both white and Native American patients in the same surgical suite. The occupants of Building E had their own columns in *The Moccasin* (named in yet another obvious reference to the State Sanatorium’s close identification with Native American land, if not Native Americans as people), relaying the goings-on in their wards just like patients in the other buildings.<sup>45</sup> Sanatorium staff treated Native American patients differently and kept about as separate as possible given the proximity of the buildings. But their nearness made ignoring them impossible, just as the nearness of the State Sanatorium made ignoring the fire at Onigum impossible.

New buildings and facilities could be and were constructed to try to keep up with contemporary demands. The location, and its remoteness could not. New treatments and economic stressors transformed the State Sanatorium’s lakeside bluff from an advantage

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<sup>44</sup> “No “Wing” Wanted” *The Cass Lake Times*, Box 106.I.12.4(F) Folder: “Newspaper Clippings, 1914, 1920s-1961, 1970,” SSF, MNHS; Burns to the State Board of Control, Jan 10, 1934, Box 106.I.12.4(F)Folder: “Miscellaneous Correspondence, 1928-1937,” SSF, MNHS.

<sup>45</sup> Burns to the State Board of Control, January 10, 1934, 1934, Box 106.I.12.4(F)Folder: Miscellaneous Correspondence, 1928-1937, SSF, MNHS; Ira D. Nelson to Commissioner of Indian Affairs, November 21, 1939, Box 106. I.12.4 (F) Folder “Indians: Re Surgery 1939-1940” SSF, MNHS; Burns to Frank Thweatt, November 25 1939, Box 106. I.12.4 (F), Folder Indians: Re Surgery 1939-1940” SSF MNHS; *The Moccasin* vol 1 no 6 (September 1938),16.

into a challenge that the Sanatorium's founders could not have foreseen. The Board of Control used the State Sanatorium's isolation as a scapegoat for funding issues during the Great Depression. Finally, changes in policies towards Native Americans, and the State Sanatorium's proximity to the Leech Lake Reservation, made the State Sanatorium a central part of tuberculosis care for Native Americans starting in the mid-1930s.

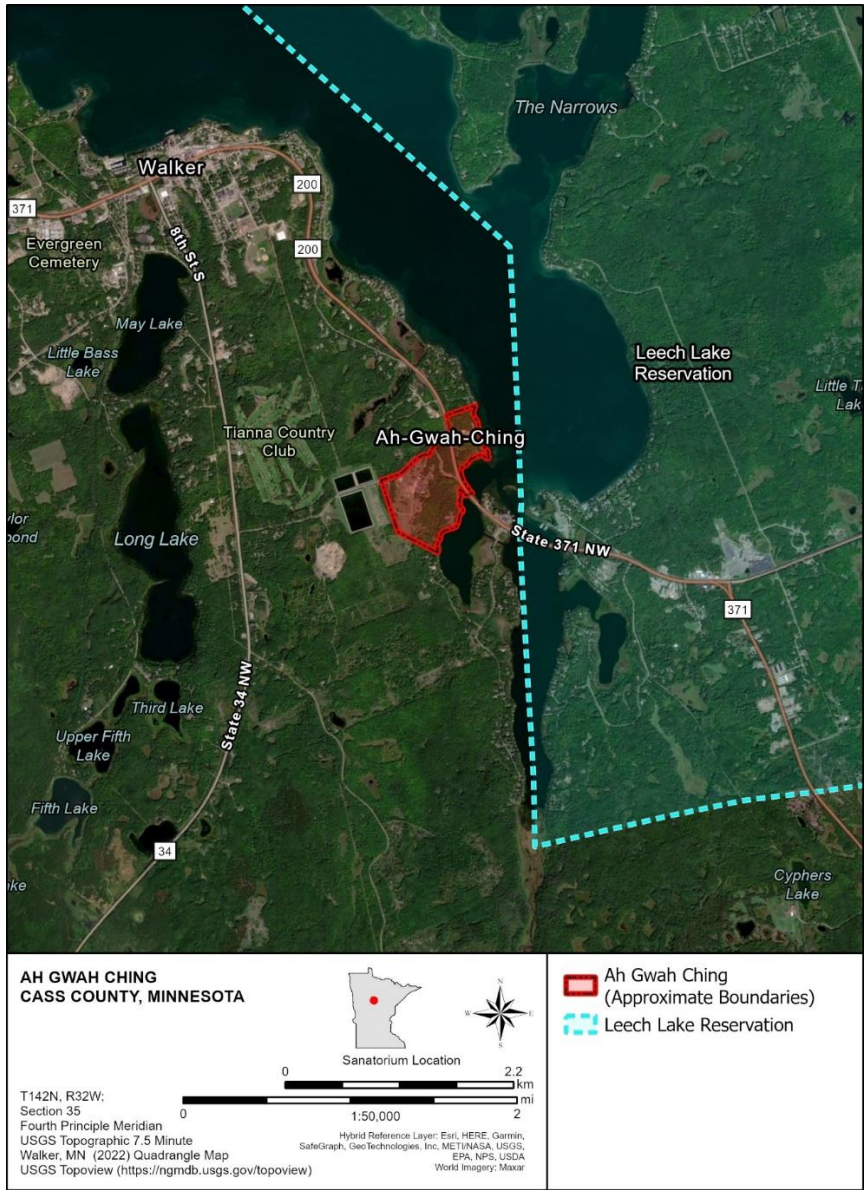


Figure 1. Boundaries of Ah-Gwah-Ching and the Leech Lake Reservation.

## CHAPTER 4. LAWS, PATIENT ADMISSIONS, AND TREATMENT

Only persons who have resided in the state throughout the year preceding application and who are inflicted with incipient tuberculosis, shall be received into the sanatorium.<sup>1</sup>

Although the 1910 requirements for admission to the State Sanatorium appear very simple at first glance, the incipency and residency requirements created a variety of administrative complications that defined the care that tuberculosis patients were able to access. The language of this law, like the placement of the Sanatorium, forced State Sanatorium staff to navigate around treatment standards and scientific understandings of disease from the late nineteenth and very early twentieth centuries. As diagnostic tools improved and as doctors created more precise definitions of what ‘incipient’ meant, the incipency requirement became impossible to follow. The Great Depression forced the State Sanatorium to grapple with its residency policy, as more patients without permanent addresses required care. Finally, Native American patients, who were entirely excluded from the original law, became patients at the State Sanatorium under a completely different set of guiding principles.

### How Sick?

Minnesota, like other states that implemented public tuberculosis sanatorium systems, faced an important decision: would policymakers and caregivers focus their efforts on the moderately or severely ill? Health professionals had strong opinions about which group should receive institutional care, based on epidemiological and logistical concerns as well as their own beliefs about what the goals of treatment at a sanatorium

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<sup>1</sup> Francis B Tiffany, *Revised Laws of Minnesota Supplement 1909* (St. Paul: West Publishing Co 1910), 526.

were. Of course, arguments for both sides of the issue shared a common weakness; actively sick patients, no matter how advanced their symptoms, were infectious.

Many doctors and public health officials were fully aware of that problem. According to social and medical historian Philip D. Jordan, Dr. Henry Martyn Bracken, chief executive of the Minnesota State Department of Health from 1893-1919, strongly believed that all tuberculous patients should be isolated entirely. With that in mind, Bracken supported the incipient tuberculosis sanatorium movement. But Bracken was also aware that Minnesota did not have the means to institutionalize every tuberculous individual. According to his 1907 report, tuberculosis killed approximately two-thousand people in Minnesota every year.<sup>2</sup> Given the limited resources available, supporting sanatorium care for incipient cases meant excluding care for more advanced cases by default. This exclusion was written into the language of Minnesota's sanatorium law.

The first problem with restricting admission to incipient cases was that physicians did not agree on what "incipient tuberculosis" meant. From a very literal standpoint, incipient tuberculosis would have meant the disease was in its earliest stage. The problem with that interpretation, however, was that diagnosing someone with tuberculosis at the very beginning of infection would have been unlikely, if not impossible given the diagnostic tools available when the legislation was first written.

Aside from symptoms, which generally appeared with later stages in infection, physicians in the early twentieth century only had a couple of tools to identify infection. Antibody tests, based on Koch's failed vaccine, such as the Mantoux test, were helpful for screening large populations for tuberculosis exposure. The problem with Mantoux and

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<sup>2</sup>Philip D. Jordan *The People's Health*, (St. Paul: Minnesota Historical Society, 1953), 269, 272.

similar tests was that any individual who had ever been infected, whether their infections were active, latent, or eradicated, would test positive for the rest of their lives. Additionally, false negatives were a distinct possibility, whether due to issues with the serum, the tester, or the individual being tested. Individuals who had a positive Mantoux test needed other tests to confirm diagnosis. Eventually, x-ray exams filled this role, but getting and accurately interpreting x-ray images in the early twentieth century was a challenge of its own.<sup>3</sup>

After Wilhelm Roetgen's discovery of the x-ray in 1895, it was quickly adopted by the medical community. At first, many physicians were skeptical of how useful x-ray images could be for identifying pulmonary tuberculosis. X-ray machines were also relatively rare in Minnesota. But by the mid-1910s, most physicians considered x-ray images an important part of tuberculosis diagnosis. Following this general trend, the State Sanatorium added x-ray equipment during the biennial period ending in 1916. By 1919, staff performed routine x-ray examinations on every new case.<sup>4</sup>

During the gap between the beginning of the American sanatorium movement in 1885 and the development of more precise diagnostic tools around 1910, physicians came up with their own definitions of what incipient meant. These definitions seemed to equate to "not too advanced," with varying opinions on what *too advanced* meant.<sup>5</sup> In 1916, the

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<sup>3</sup> Edwin G. Hubin to Herbert A. Burns, June 21 1937, Box 4F, Folder "Mantoux Survey-Dr. Mark 1937-38" SSF, MNHS.

<sup>4</sup> Barron H. Lerner, "The Perils of "X-ray Vision": How Radiographic Images Have Historically Influenced Perception," *Perspectives in Biology and Medicine* vol 35 no 3 (Spring 1992), 39; ; Ian R. Stewart, "Minnesota State Sanatorium for Consumptives" National Register of Historic Places Nomination Form (Washington DC: U.S Department of the Interior, National Park Service, 2001) Section 8 p 7; Jordan, *The People's Health*, 280.

<sup>5</sup> John Ritter, "So-Called "Incipient" Tuberculosis," *Journal of American Medicine* (February 1916), 592.



National Association for the Prevention of Tuberculosis (NAPT) had the following definition of incipient tuberculosis:

Slight or no constitutional symptoms (including particularly gastrointestinal disturbances or weight loss). Slight or no elevation of temperature or acceleration of the pulse, at any time during the twenty-four hours. Expectoration is usually small or is absent. Tubercle bacilli may or may not be present. Slight infiltration limited to the apex of one or both lungs or a small part of one lobe. No tuberculous complications.

The problem with using those criteria was that tuberculosis was concentrated among poor communities, and Minnesota's population was largely rural at the beginning of the twentieth century. A patient with slight or no symptoms, experiencing no complications would have been unlikely to see a doctor and get diagnosed.<sup>6</sup>

In 1932, Dr. Burns questioned what the actual intent of Minnesota's Sanatorium law was. In a letter to the executive secretary of the State Board of Control's Tuberculosis Division, Burns cited changes in diagnostic procedures which allowed for a more stringent definition of 'incipiency.' Burns also pointed out the tendency for tuberculosis patients to miss early diagnosis. He offered an alternative interpretation of the law, stating his opinion that "the framers of the statute were concerned in the treatability of the disease rather than the incipiency," and that any patient should be admitted, "regardless of the extension of the lesion, so long as treatment might give a good convalescence and possibly cure."<sup>7</sup> But even Burns's looser interpretation assumed that recovery was the purpose of the sanatorium, which other state legislation contradicted.

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<sup>6</sup> John Ritter, "So-Called "Incipient" Tuberculosis," 592; Leonard G. Wilson, "The Rise and Fall of Tuberculosis in Minnesota", *Bulletin of the History of Medicine*, Vol 66 no 1 (Spring 1992), 39.

<sup>7</sup> Burns to Arnold S. Anderson July 7, 1932, Box 106.I.9.9B, Folder "Correspondence Relative to Admission of Patients 1932-34" AGCPR, MNHS.

Minnesota's public health regulations indicated a different perspective on tuberculosis sanatoriums. Per the General State Statutes of Minnesota in 1923, health officers were able to "report [...] any person afflicted with tuberculosis whom he considers a menace to his family or other persons" to the board of county commissioners, who could order the person be "place[d] in a public sanatorium or hospital where he shall remain until discharged from therefrom by the superintendent of such institution."<sup>8</sup> There was no indication that the tuberculous individuals in question must have incipient or treatable infections as a condition for institutional admission. Because attention-attracting symptoms were a sign of much later stages of infection, most of the people targeted by this statute were unlikely to be deemed "incipient" by any physician.

Authorities at the State Sanatorium appear to have mostly ignored the "incipient" requirement for admission to the State Sanatorium during the early years. In the biennium period ending in 1912, out of the four hundred and two admitted patients, one hundred and twenty-two were judged 'far advanced' on arrival compared to seventy-eight 'incipient.' The remaining one hundred and fifty-two were 'moderately advanced.'<sup>9</sup> These statistics are unsurprising. Organized antituberculosis efforts in the state had only recently begun, and the State Sanatorium was specifically meant to provide access to care for Minnesotans without the means to go to private institutions.

These advanced cases strained the State Sanatorium's resources more than incipient or moderate ones. The sickest patients required constant monitoring and care from nurses,

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<sup>8</sup> Hubert Harvey, ed., *General Statutes of Minnesota 1923* (St.Paul: Review Publishing Company, 1924), 745.

<sup>9</sup> "Minnesota Sanatorium for Consumptives Report of Superintendent to the State Board of Control of Minnesota, Biennial Period Ending July 31, 1912," Wangenstein General Collection, p6.

while moderately ill patients who were capable of doing work could even help allay the costs of labor for a sanatorium. Incipient cases were also easier to discharge, as they either appeared to recover or could be instructed on how to properly care for themselves and reduce transmission after they were discharged to continue their recovery independently.<sup>10</sup>

The state attempted to reduce the number of advanced cases that went to the State Sanatorium by encouraging counties to construct their own sanatoriums. In 1909, Minnesota's legislature passed an act to enable counties to build and maintain their own tuberculosis sanatoriums, which were intended to take on advanced cases. Only two such sanatoriums were opened until another law was passed in 1913. The 1913 legislation offered funding for tuberculosis work, so long as reports were made to the Board of Health.<sup>11</sup> By 1920, there were thirteen county sanatoriums (See Figure 2).

While these county sanatoriums undoubtedly helped ease the burden on the State Sanatorium, they were not a viable solution for handling all advanced cases. Most obviously, there were too few. Even combined, all these county sanatoriums provided care for less than half of the counties in the state, leaving the State Sanatorium to cover the rest. And although these county sanatoriums did cover the most populous counties, they still sent patients—even 'far advanced' ones—to the State Sanatorium.<sup>12</sup>

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<sup>10</sup> Barbara Bates, *Bargaining for Life: A Social History of Tuberculosis, 1876-1938*, (Philadelphia: University of Pennsylvania Press: 1992), 138; Stephanie Kirby "Sputum and the Scent of Wallflowers: Nursing in Tuberculosis Sanatoria 1920-1970," *Social History of Medicine* vol. 23 3 (2010), 612.

<sup>11</sup> Jordan, *The People's Health*, 274.

<sup>12</sup> Burns to State Board of Control, May 27 1929, Box 2F, Folder Misc Board of Control Correspondence, SSF, MNHS.

Into the late 1920s, both the State Sanatorium and the Board of Control seemed to be aware that the incipency requirement was unenforceable. Application forms from 1927 specified that “*only* incipient or slightly advanced cases” could be treated at the State Sanatorium. Another version of the form from 1926 had lines to specify incipient, moderately advanced, or far advanced condition, but stated that “incipient or ambulant” cases could be admitted.<sup>13</sup> Given that these were official application forms distributed by the State Sanatorium, the Board had to be aware of what they said. Sanatorium staff’s continued use of these documents strongly implies that the Board approved of these parameters for admission.

Even these laxer admission requirements were not always enforced. Dr. Pearl M. Hall, Superintendent of the State Sanatorium from 1918-1928, exercised a great deal of personal discretion when deciding which patients to admit. In February of 1927, Dr. Hall rejected an applicant because he had a persistent temperature of 100.5 F. According to Hall, the reasoning was that the State Sanatorium was “limited by law to the admission of incipient cases only and I would like to be assured that he could come and go to his meals and is not running a temperature.” This patient had no history of pulmonary hemorrhage and was, according to the doctor filling out the application, able to get up for meals. Two months later, another applicant, who was bed-bound with a history of “moderate” pulmonary hemorrhage and a temperature ranging from 98.2 F and 102 F, received an entirely different response. Dr. Hall wrote to her doctor, telling him “I would advise that

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<sup>13</sup> Application for Mrs. Thos. Krane, 4/1/27 Box 106.I.9.9B (referred to from here on as box 9B), Folder: Applications on File-Female 1926-7, AGCPR, MNHS; Application for William Rodewald 2/4/27, Box 9B, Folder “Applications on File Children 1928,” AGCPR, MNHS ; Application for Lillian Erickson 12/8/26 Box .9B Folder: Applications on File-Female 1926-7, AGCPR, MNHS.

she be kept in bed so that her temperature will go down before making the long trip to the sanatorium.”<sup>14</sup> While Hall may have had other reasons for believing the first patient was sicker and less capable of making it to meals than the second, their respective conditions according to their applications suggest otherwise.

The Board of Control appears to have become far less permissive shortly after the death of Dr. Hall, when Dr. Burns took over as the superintendent of the State Sanatorium. Hall did not seem to get much, if any, pushback for his inconsistent policies about who to admit. Dr. Burns, on the other hand, was taken to task over his own uneven applications of the rule. Unlike Hall, however, Burns seemed to have at least some sort of consistent logic about who accepted and rejected.

One of the most dramatic demonstrations of how much more seriously the Board took Burns’s violations of the incipency requirement came from a meeting in December 1930. In the report of this meeting between the Sanatorium Council and the Board of Control in 1930, one member of the Council pointed out that Burns rejected ten ambulatory patients for transfer from Glen Lake the previous year. Burns had rejected them because they “were far advanced and chronic cases,” but he had “accepted a far advanced case from a home in Hennepin County” shortly after. The Council member felt that Burns was “very inconsistent.” Burns, who was absent from this meeting, wrote a letter in reply to the report, stating that because he was not told the name of the “far advanced” patient, he could not formulate a specific response. Burns assured the Board that “[he did] not feel that

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<sup>14</sup> Application for William A. Anderson 2/22/27, Box 9B, Folder: Applications of File Children 1927, AGCPR, MNHS (all following documents are from the same folder); H.P. Linner to State Sanitorium April 15, 1927;; Pearl M. Hall to Linner, April 12 1927 April 12 1927; Application for Waynetta Wuamett March 8, 1927; Hall to Charles C. Gault March 10, 1927.

there [had] been any serious inconsistency in our policy of admitting patients.” In a different letter, Burns described his belief that the incipiency requirement was out of date, due to new diagnostic tools and criteria. Indeed, Burns admitted that “we are always admitting far-advanced cases as early cases only to find their actual status after admission.”<sup>15</sup>

The degree to which the Board scrutinized and commented on Burns’s decisions was remarkable. In 1935, they sent a letter asking whether patients paid for barbering services themselves, or if the “service” was “furnished by the state.” In another instance, Burns wrote to them stating that the sanatorium needed a team of horses because its current mules had become too old. The Board did not reply with permission or a refusal of funds to buy the horses. Instead, the Board wanted to “be advised as to the reason that you did not dispose of these mules last fall instead of feeding them all winter and disposing of them in the spring.”<sup>16</sup> These incidents may be attributed to the Board’s concern over finances during the Depression. However, the micromanagement that Burns faced was extreme, especially compared to the lesser scrutiny that Hall experienced just a few years prior.

Other evidence suggests that the Board and some other parties had a problem with Burns specifically. In the report from Dr. Edward L. Tuohy and Dr. Everett Geer’s

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<sup>15</sup> Sanatorium Council, December 1 1930, Box 4F, Folder “Sanatorium Council Proceedings and Correspondence, 1930,” SSF, MNHS; Burns to Anderson December 5, 1930, Box 4F, “Sanatorium Council Proceedings and Correspondence, 1930,” SSF, MNHS; Burns to Anderson, July 7, 1932, Box 9B, Folder “Correspondence Relative to Admission of Patients 1932-34” AGCPR, MNHS.

<sup>16</sup>Mullen to Burns, Feb 8 1935, Box 106.I.12.3B (referred to from here on as 3B), Folder “Board of Control Misc. Correspondence 1935-1936,” SSF, MNHS (remaining citations from same folder); Mullen to Burns, March 6 1936.

(reluctant) investigation into Dr. Burns in 1936, the two nearly stated outright that the entire endeavor was motivated by personal grudge(s). In the first paragraph, Dr. Tuohy commented that he and Dr. Geer did not bother making several trips to the sanatorium, because “the complaint dealt with matters involving the temperament, attitude, degrees of cooperativeness and general capacity of the superintendent.” He continued, mentioning “it is unnecessary to dwell at length upon the circumstances dealing with the assignment of this investigation.” As a final indication as to the investigation’s motivation, Tuohy wrote that one of the primary goals of the investigators was “especially to shield the Board, if possible, from unwarranted interference on the part of pressure groups emotionally aroused or vindictively inspired.” As the introduction to the report implied, the investigation went nowhere. Dr. Tuohy and Dr. Geer’s suggestions were to increase employee wages and give Burns an assistant to lighten his administrative burden.<sup>17</sup> A burden, it should be noted, that included replying to inquiries about old mules and haircuts “as soon as possible.”

Many of the Board and Council’s more drastic suggestions for the State Sanatorium at this time were probably not the result of any personal dislike for Burns. Rather, Burns’s tactless resistance to these suggestions likely inspired animosity towards him. As mentioned, county sanatoriums covered fewer than half of the counties in Minnesota. In the 1930s and early 1940s, however, there was a growing desire among the members of the Sanatorium Council, which was comprised of public sanatorium superintendents—and by extension, county sanatorium superintendents—and the state legislature, to invest more

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<sup>17</sup> “Regarding An Investigation Concerning the Adequacy of Medical Care of the Tuberculous Patients at the Ah Gwah Ching State Sanatorium and Regarding the Charges Bearing Upon the Competency and Temperament of the Superintendent, Dr. H.A Burns,” Box 4F, Folder “Investigation Report 1938,” SSF, MNHS.

into county sanatoriums and less into the State Sanatorium. The Council wanted to make the State Sanatorium into a dumping ground for chronic and advanced cases, in order to make more space in their own institutions. They believed that the State Sanatorium was the ideal environment for cases where patients had little chance of recovery but could still move around. These patients took up beds for a long time, and keeping a patient at the State Sanatorium was cheaper than most county sanatoriums. A proposed, but failed, bill in 1941 would have made transferring such cases to the State Sanatorium easier. Burns, perhaps less gracefully than he should have, fended off this shift by turning to the legal requirement for incipency, despite his own disagreement with it.<sup>18</sup>

The incipency requirement was ultimately unenforceable and illogical, and only became more so with time. Because the definition of “incipient” changed with improved diagnostic tools, very few truly incipient cases were diagnosed. Instead, the incipency requirement was used to keep undesirable patients out of the sanatorium, while sicker, more desirable patients were admitted. Even had the State Sanatorium only admitted incipient patients, without a cure, many cases would have progressed. County sanatoriums, although designed to divert more severe cases from the State Sanatorium lacked the geographical coverage to do so, and in some cases attempted to send their own severe cases to the State Sanatorium.

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<sup>18</sup> Sanatorium Council, December 1 1930, Box 4F, Folder “Sanatorium Council Proceedings and Correspondence, 1930,” SSF, MNHS; Burns to Anderson, December 5, 1930, Box 4F Folder “Sanatorium Council Proceedings and Correspondence, 1930,” SSF, MNHS; Burns to Anderson, July 7, 1932, Box 9B, Folder “Correspondence Relative to Admission of Patients 1932-34” AGCPR, MNHS; Burns to the Board of Control, May 27, 1929, Box 2F, Folder “45-Board of Control Misc Correspondence 1928-1929,” SSF, MNHS.



## Residency Requirement

Minnesota residency was the other eligibility requirement for admission into the State Sanatorium. The facility was funded and run by the state, so restricting entry to Minnesota residents and ensuring that funding and space were not used for people from other states made sense. The residency requirement, however, turned out to have discriminatory applications. Individuals without home addresses to prove their residency status were ineligible for sanatorium care, which was especially troublesome given the concentration of tuberculosis infection among the impoverished. During the 1930s the number of transients, and by extension tuberculous transients, increased. The state was forced to figure out how and when to admit transient patients to the State Sanatorium, at least temporarily.

The State Sanatorium did get applications from tuberculosis patients who lived in other states. Because antituberculosis efforts were spearheaded by states, some applicants may have chosen Minnesota because they lacked a robust sanatorium system in their own states. Alternatively, some patients may have wanted to come to Minnesota for its ‘salubrious’ environment. In 1933, Burns fielded a letter from a man in Ohio asking about the benefits of going to Minnesota to treat his tuberculosis. Burns, like many in the medical community had already given up as climate as an important factor in tuberculosis treatment, but the idea still clearly had traction in the general population.<sup>19</sup>

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<sup>19</sup> Application for Lillian Erickson, 12/6/1926, Box 9B, Folder “Applications of file 1926-27,” AGCPR, MNHS; Hall to John Marti, December 11, 1926, Box 9B, Folder “Applications of file 1926-27,” AGCPR, MNHS; H.B Hanson to Burns, Jan 22 1933, Box 9B, Folder “Correspondence Relative to Admission of Patients 1932-1934,” AGCPR, MNHS; Burns to Hanson Jan 27 1933, Box 9B Patient Records, Folder Correspondence Relative to Admission of Patients 1932-1934, AGCPR, MNHS.

Transient patients were a special administrative problem for the State Sanatorium. Most patients at the State Sanatorium were unable to afford to pay for their care. The standard procedure was for the county where the patient resided to authorize funds for them to go to the State Sanatorium.<sup>20</sup> Transient patients were not able to access these funds, which further complicated their care. One such patient ended up at the State Sanatorium in 1918. Dr. Hall wrote to the Board, explaining the dilemma and asking for written authorization to keep the man at the State Sanatorium. Although the patient was only meant to stay at the facility until he recovered enough to be sent to his parents in Idaho, Hall expressed doubt that he would be able to leave, given his advanced illness, stating that “the outlook” was “extremely unfavorable.”<sup>21</sup> Very few transient patients appear to have been admitted, or even applied, until the 1930s, likely because of this issue.

During the Great Depression, public health officials looked for alternative ways to get transient patients into public sanatoriums. In some cases, counties attempted to use the public menace statute to get non-resident patients into sanatoriums. In at least one case, the Board of Control rejected this reasoning, stating that the transient patient in question was a resident of Kansas. These so-called “non-resident” transient patients were sometimes a point of contention even when they were admitted, because they took up beds that some county officials believed should be reserved for “actual” Minnesota residents.<sup>22</sup>

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<sup>20</sup> Most patients came to the State Sanatorium from counties without sanatoriums of their own, but some came from areas with county sanatoriums. The reasoning for this is unclear.

<sup>21</sup> Hall to Charles F Vasaly, March 29 1918, Box Supt 106.I.12.2F, Folder: “45- Board of Control Miscellaneous Correspondence 1918,” SSF, MNHS.

<sup>22</sup> Rosamund Atz to Burns, Jan 26 1935, Box 9B, Folder “Applications Female 1934/35” AGCPR, MNHS; Agnes B Corrigan to Blanche Merry, March 21, 1940, Box 4F, Folder “Residence of Patients 1937-1940,” AGCPR, MNHS (following citation in same folder); Burns to Carl Swanson November 17 1939.

Some temporary was available through the Minnesota department of Transient & Homeless Relief Activities and used to pay for the upkeep of transient patients in the State Sanatorium. The actual money came from the Federal Transient Bureau. But figuring out how and if these funds could be used to care for transient tuberculosis patients was difficult. Nevertheless, some transient patients that the Board of Control rejected under the public menace statute were admitted on the authority of the Transient Bureau. In this contest of power between the Board and the Transient Bureau, Dr. Burns deferred to the Transient Bureau.<sup>23</sup>

Funding from the Transient Bureau allowed patients who typically would not have been admitted to access sanatorium care. Notably, one of only a couple Black patients who were admitted to the State Sanatorium seems to have been a transient patient, originally admitted using Transient Bureau funding. The lack of Black patients at the State Sanatorium is notable, especially because the law did not specifically prohibit them. The records do not appear to show a large number of rejected applications from Black patients, either. One potential reason may be in the way that cases were normally funded.<sup>24</sup> Minnesota residents who could not pay for sanatorium admission *could* have their care paid for by their county of residence, but this was not guaranteed. As the Minnesota Revised Laws Supplement from 1909 states, “a person unable to pay such charges and without kindred legally liable therefore and able to pay may be admitted on request of his

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<sup>23</sup> Application for Dorothy Stormont September 28 1934 AGC Sanatorium Patient Records 106. I.9.9B Folder “Applications Female 1934-35,” AGCPF, MNHS (same folder for all following); Burns to Atz, October 1 1934; Margaret H. Lighthall to Burns September 29 1934; Atz to Burns, October 8 1934; Burns to Rose. E. Seiler February 1935; Atz to Burns January 26 1935; Seiler to Burns February, 11 1935.

<sup>24</sup> Burns to Swanson, November 17, 1939, Box 4F, Folder “Residence of Patients 1937-1940,” SSF, MNHS.

county board, and the charges shall be paid by the county.”<sup>25</sup> Counties had to pay for patients to be admitted, and they did not always want to do so. There were cases where counties attempted to get patients admitted and paid for by the state, rather than the county. This discretion meant that local, predominantly white county boards could decide whether or not they wanted to use their funds to pay for patients on a case-by-case basis. Black tuberculosis patients in Minnesota, which saw a lynching of six Black men in 1920 by a mob of between 1,000-10,000 individuals, were likely not given the same consideration as white tuberculosis patients.<sup>26</sup>

Another group that was excluded by residency requirements was Minnesota’s Native American population. Even after 1924, when Native Americans were formally recognized as American citizens, they were not recognized as Minnesota residents eligible for sanatorium care. Native Americans only started being admitted in 1935 because a separate, federally funded wing was built on State Sanatorium grounds. In fact, Native Americans were subject to entirely different requirements when the new wing opened.

### **Admitting and Treating Native Americans**

When Native Americans were finally admitted to the State Sanatorium in 1935, neither indigency nor Minnesota residency was required. These differences were likely because Native American patients were paid for using federal funding. This difference in funding source contributed to complications in treatment for Native American patients, especially with regards to getting surgery, a major component of tuberculosis treatment in

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<sup>25</sup> Francis B Tiffany, *Revised Laws of Minnesota Supplement 1909* (St. Paul: West Publishing Co 1910), 526.

<sup>26</sup> “Duluth Lynchings,” [mnhs.org/duluthlynchings/lynchings](http://mnhs.org/duluthlynchings/lynchings), accessed October 24, 2023.

the 1930s. Funding issues aside, Native Americans were subjected to unfairly restrictive conditions compared to white patients.

Starting in 1935, the State Sanatorium's so-called "Indian Annex" admitted Native American patients primarily from Minnesota, Iowa, and Wisconsin. The State Sanatorium's contract regarding the care of Native American patients allowed for the "admission of Indian patients to the Sanatorium from adjoining states." The superintendent of the Sac & Fox Sanatorium in Toledo, Iowa sent patients in need of surgery to the Minnesota State Sanatorium for care, where they stayed. Because these patients' care was paid for with federal funds, Minnesota residency was less of a concern. Only in 1940, when the Indian Annex reached capacity, was the State Sanatorium allowed to prioritize admissions for Natives from Minnesota over those from out of state.<sup>27</sup> Because the Indian Annex was part of the State Sanatorium, Native Americans who went to that building, segregated as it was, likely had more access to surgery and care that was considered a basic part of tuberculosis treatment for white patients.

While access to surgery really may have been better at the State Sanatorium, problems arose when Dr. Carlson, the surgeon, left without being replaced. Starting in December 1939, Native American patients at the Minnesota Sanatorium needed to go to the University Hospital in the Twin Cities for surgery. Compared to white patients, Native patients experienced much greater delays in getting necessary surgery. A letter from the Director of the Minnesota Department of Social Security's Division of Public Institutions, sent shortly after Dr. Carlson's departure laid out the problem; surgery at the University

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<sup>27</sup> F. J. Scott to Frank F Thweatt, Jr. April 8 1940 , Box 4F, Folder "Indians-Re: Surgery 1939-1940,"(Same for following) SSF, MNHS; Ira D. Nelson to Burns December 1, 1939; J.F. Worley to Scott December 30, 1940.

Hospital was much more costly than the funds from the Indian Bureau furnished for Native American patients covered. The state's agreement with the Indian Bureau, however, required that Native American patients receive surgical treatment. The result of this discrepancy, it seems, was significantly delayed surgical care for Native American patients, while Burns attempted to send them for care as economically as possible.<sup>28</sup>

Many Native American patients arrived with advanced tuberculosis. Burns advocated for admitting them anyway, because from an epidemiological standpoint, isolating as many contagious patients as possible was preferable, to decrease tuberculosis rates among Native Americans.<sup>29</sup> With sicker patients coming in, however, delaying surgical care seems an even more egregious lapse in care.

Burns's apparent lack of concern for expedient surgical care for Native American patients was matched by his concern about patients leaving before he deemed them medically ready. Although Burns expressed some annoyance with white patients who left prematurely, he was much more concerned about Native Americans leaving. The problem seems to have been especially pronounced among Ojibwe mothers, who were reluctant to be separated from their children. Burns, with encouragement from a member of the Chippewa Health Unit, proposed a nurse building be added to the Indian Annex, where Ojibwe children could be taken care of while their mothers underwent treatment. The

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<sup>28</sup> Swanson to Burns, December 5, 1939 Box 4F, Folder "Surgery-Correspondence with Board 1938-1942," SSF, MNHS (all citations from this folder); Burns to Swanson January 19, 1940; Mark Burns to Herbert A. Burns December 3 1940.

<sup>29</sup> Burns to Blanche LaDu, August 22, 1931, Box 4F, Folder "Miscellaneous Correspondence 1928-1937," SSF, MNHS.

proposal was ultimately rejected, because federal officials determined that a nursery was an inappropriate use of funds meant to pay for patient care.<sup>30</sup>

Children were not the only reason that Ojibwe patients were tempted to leave, however, and Burns instituted some harsh policies to force them to stay. A former employee at the Sanatorium recalled that many Native American patients left to attend community functions and would return once they were done. While the State Sanatorium was isolated from Minnesota's population centers, it was within easy walking distance from the Leech Lake Reservation. In response, Burns and his staff labelled these Native American patients "recalcitrant" and moved them into basement rooms, "locked up so they could not escape." Guards were stationed. This practice continued for approximately a decade. Incredibly, some patients managed to escape the sanatorium even under these conditions. The restrictions on physical movement of Native patients contrasted sharply with the experience of a white patient who recalled going to movies and "talkies" for entertainment and that "every day Dr. Burns [...] made rounds and said 'Good morning' to every patient."<sup>31</sup>

Although the different rules for admitting Native American patients and funding their care definitely affected their treatment at the State Sanatorium, racism also played a role. Federal rather than state funding pools partially explained differences in treatment between Native American and white patients, but there was no reason that Minnesota Ojibwe patients should have been considered ineligible for entry into the State Sanatorium

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<sup>30</sup> Percy T. Watson to Burns, August 23 1939, Box 4F, Folder "Nursery School-Adjunct to Indian Wing, 1939-1940" (following citation from same folder); M. Barton Greenwood to Swanson March 11, 1940.

<sup>31</sup> Clifford Bilben, Box 106.I.11.2F, Folder "Ah Gwah Ching Sanatorium Oral History Transcripts Undated [1970s]" AGCPF, MNHS, (following citation from same folder); Ernest R. Johnson.

alongside white patients. County and state funds, where county funding was not available, were already used to pay for indigent patients.

Beyond systemic exclusion, Native American patients also dealt with much harsher treatment by the staff at the Sanatorium. While leaving the sanatorium frequently might have undermined their treatment plans and the potential epidemiological benefit of isolating sick individuals, these same standards did not apply to white patients. And rather than making any real effort to work with the patients to come to a mutually acceptable solution, Dr. Burns had noncompliant patients locked in basements and put under guard. While other patients might have recalled the park-like atmosphere of the State Sanatorium, the same institution was functionally a prison for many Native American patients.

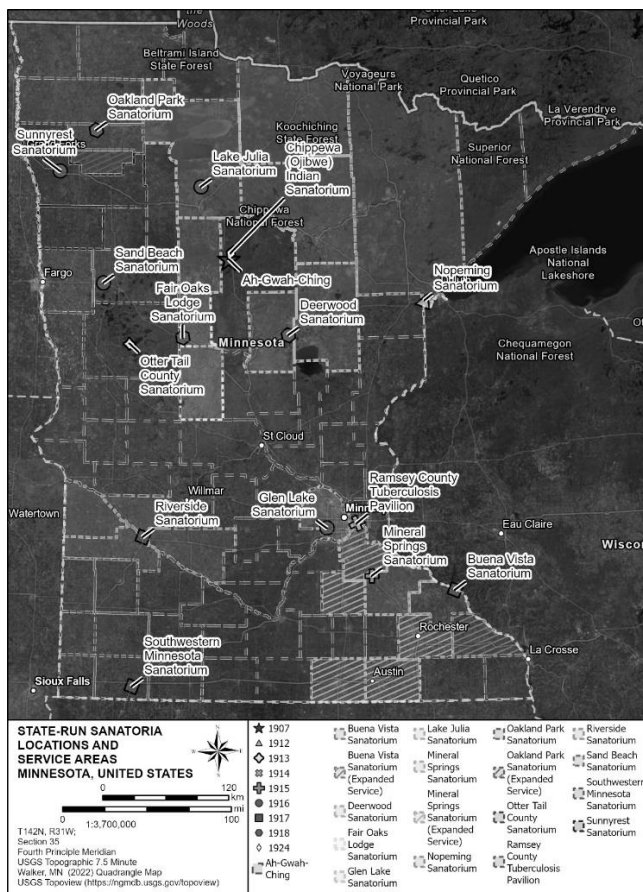


Figure 2. State-Run Sanatorium Locations and Service Areas.



## CHAPTER 5. CONCLUSION

Even before the discovery of effective antibiotic therapies, tuberculosis treatments developed rapidly in the early twentieth century. At first, scientists and medical professionals appeared to stick to existing treatments while justifying them in a new framework. Pliny the Elder's prescription of fresh pine air to treat phthisis could work under the new germ theory, because of the germicidal qualities of pine oil. Sunlight, which so effectively killed germs, could be harnessed for treating a bacterial disease. The Minnesota State Sanatorium for Consumptives was built during these early years, and its rules for admission made into law.

For years, the State Sanatorium was able to work around the limitations of their medical facilities and the law. During an outbreak of influenza in 1918, the recreation hall was converted into an emergency infirmary, and a new infirmary was built within five years. The sanatorium law's requirement that only patients with incipient tuberculosis be admitted was frequently ignored. By adding to the sanatorium's facilities and ignoring the law when it was impractical or interfered with the sanatorium's function, the State Sanatorium under Pearl Hall was able to cope with outdated legislation.

A new sanatorium superintendent, significantly more intensive surgical treatments, and the pressures of the Great Depression disrupted the system that the Sanatorium had developed for admitting and caring for patients during the 1910s and early 1920s. State-mandated pay-cuts and understaffing would have taken their toll on any institution, but the problems were exaggerated by physical isolation at the remotely-located State Sanatorium. Outsourcing invasive surgeries like thoracoplasty became a logistical nightmare. Dr. Burns had to manage not only the logistics of getting patients down to the University Hospital, but

also making sure that patients were cared for, discharged when they were sufficiently healed, and put on trains that would take them to appropriate places where sanatorium staff could bring them back to the institution. All this had to be managed remotely.

Burns and the State Sanatorium also ran into issues with the admission requirements of the sanatorium law. While Hall had been able to get away with applying it and ignoring it as he pleased for most of the 1920s, Burns was not given the same leeway during the Depression. Moreover, diagnostic procedures had changed so drastically between the time the law was written and his time as the superintendent that the term “incipient” meant something entirely different when applied to tuberculosis. But because of the language of the law, the Board of Control urged Burns to follow this new definition, rather than what the original legislators would have had in mind.

State legal requirements for admission were also muddled by the increased involvement of the federal government during the 1930s. Financial aid for transient (or homeless) individuals supplied at least part of the funding for admitting such patients, but the residency requirement remained. In a debate between the federal government and the Board over whether to admit transient patients, Burns sided with the national authorities and argued that everyone should be eligible for admission, including at least one Black patient. Burns may have been motivated by the genuine desire to provide care for the tuberculous transient, especially given his background as an epidemiologist. Or, as the supervisor of the financially struggling Sanatorium, Burns could have also been swayed by the money. It also may have simply been spite, as Burns and the Board of Control were frequently at odds with each other.

What the Minnesota State Sanatorium for Consumptives demonstrated most clearly was that while location and laws *could* cause problems for patient care, they did not have to. Surgery only became difficult to access for Minnesota patients during the Depression because the sanatorium was unable to pay surgeons enough to remain on the job; a surgical suite had already been built. The difference in expense between managing patient transport to and care at the University rather than the Sanatorium could not have been that much, especially given how negatively the change affected Native American access to surgery.

The law dictating patient admissions was similar. Patients could be denied care based on how advanced their disease was or their housing status. But those rules could be, and in certain situations were, ignored. During the Great Depression in the 1930s, the Board of Control chose to make both the location and the law into challenges for the State Sanatorium. Whether these decisions started because of the decade's intense financial pressure or Board members' dislike for Dr. Burns, they led to both the Board and Burns wasting energy and resources fighting with each other.

The most insidious way that legislation affected patient care was actually the one point that Burns and the Board did not argue over. Neither party necessarily noticed it, but the racial distribution of the Sanatorium suggests that by allowing counties to decide whether they wanted to pay for tuberculosis patients to get care or not, Black Minnesotans were silently, systemically excluded. And although Burns did not seem to have a problem with treating the few Black patients that *did* manage to get admitted, he did use funding to discriminate against Native American patients. Burns used funding to explain segregation

and delayed surgical care, but his treatment of Native American patients who he deemed “recalcitrant” suggests that the problem went deeper than money could justify.

The Minnesota State Sanatorium for Consumptives demonstrates just how influential legislation can be on public health campaigns. Rather than being more controlling or coercive by nature, as Rothman suggested, some county and state sanatoriums were likely influenced into treating their patients that way because of the language of the laws dictating their missions. Investigating how state sanatoriums and other public medical institutions chose to comply with or resist bureaucratic oversight may illuminate why some institutions were more successful than others in treating their patients for their ailments, and with compassion.

Further, this study demonstrates the importance of studying tuberculosis sanatoriums and other public health facilities in a more holistic manner. The troubles that the State Sanatorium had during the Depression years were the result of medical advancements, the sanatorium’s location, budgetary restrictions, and political factors. Looking at any one of these considerations alone would lead to an incomplete and potentially misleading idea of how the sanatorium functioned and why it struggled to provide adequate patient care during those years.

Understanding the many influences on patient care is critical to understanding the sources of healthcare disparities in state institutions. By including not only politics, economics, and medical care, but also factors such as the environment, historians can better identify how healthcare inequalities were either introduced or perpetuated by the very institutions meant to address them. At the Minnesota State Sanatorium for Consumptives, the interplay between medicine, politics, the environment, and the economy

was complicated. Each factor influenced the other from the institution's opening to the onset of World War II, and the way these factors interacted over time changed.

At the State Sanatorium, a variety of factors affected patient care. Although sanatorium staff attempted to provide care that reflected the most up-to-date treatments for tuberculosis, they were limited by their environment and location. And while the isolation of the State Sanatorium may have exacerbated the issue, patients still could have had better access to care if there was the political will and funding to support it. The Great Depression dampened political support for putting taxpayer funding into the State Sanatorium, which primarily treated impoverished Minnesotans. Disparities in tuberculosis treatment access for poor Minnesotans, then, was the result of these factors together.

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