Medicine Circles Defeating Tuberculosis in Southern California

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Abstract. In the late 19th and early 20th centuries, two medicine circles existed in Indian country: one Native and one Euro-American. Traditional doctors among First Nations peoples approached disease in spiritual ways and also used herbal medicine to treat their patients. First Nations people tried to treat infectious diseases brought by newcomers through plant medicine, ritual, and ceremony. Generally unsuccessful, First Nations people and doctors of California learned from practitioners of Western medicine to care for tubercular patients, to avoid the bacteria, and to remove active tubercular patients to sanatoria. Native agency and Western medical practices intersected and worked successfully from 1928-48 to reduce cases and deaths caused by tuberculosis.

Résumé. À la fin du XIXe siècle et au début du XXe siècle, deux types de médecine cohabitaient en Californie dans les milieux amérindiens, celle des autochtones et celle des Blancs. Les Amérindiens abordaient les problèmes de maladie à partir d’une approche spirituelle et utilisaient souvent des plantes. Pour lutter contre les maladies infectieuses, ils utilisaient des plantes et faisaient usage d’incantations et de cérémonies. En Californie, à cette époque, pour faire face au difficile combat contre le tuberculose, les médecins des deux milieux ont commencé à intégrer progressivement les nouveaux savoirs de la médecine occidentale et appris à se protéger contre la maladie en luttant contre le bacille et en isolant les tuberculeux dans des sanatoria. Entre 1928 et 1948, les efforts conjoints de ces deux groupes de praticiens ont permis de réduire considérablement le nombre de malades et de décès attribuables à la tuberculose.

Two independent and distinct medicine circles existed throughout Indian country of North America during the late 19th and early 20th centuries. One was of Native origin and the other of Euro-American. Both circles had been culturally constructed for thousands of years. In

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the late 19th and early 20th centuries, Canada and the United States experienced parallel spheres of medicine, one Native and one Western. Two unique circles of medicine had emerged from specific cultures and had evolved differently before merging in the early 20th century with a common goal of defeating tuberculosis. In southern California, the culture and medicine of the Serrano, Cahuilla, Cupeno, Chemehuevi, Quechan, Kumeyaay, Luiseño, Mojave, and others emphasized healing based on spiritual power, ceremony, ritual, song, dance, and herbs. Spiritual medicine with its many components had once been a part of Western medicine, but by the 20th century, Western healing had developed an emphasis on scientific methods, technology, an understanding of micro-organisms, and public health.

During the early 20th century, the Native and Western medical circles intersected and worked together to address tuberculosis. While Western medicine brought knowledge of bacterial diseases to American Indians, the First Nations people—including boarding school students—used their agency to learn about public health and inform each other of the causes and prevention of tuberculosis. As a result, during the 1930s, deaths caused by tuberculosis declined among Indians in southern California due to the self-determination of students and community members. The intersection of these two circles did not occur overnight but developed from roughly 1890 to 1930 when Indian students learned about public health and sanitation at off-reservation boarding schools and put their practical knowledge to work to protect their people from tuberculosis. They informed their families and communities about public health and through them, Indian medicine people and elders came to believe that non-Indians were best suited to address tuberculosis because it originated from newcomers, not Indians. As knowledge grew within the Indian communities, they became more receptive to Western medicine. By 1928 when the first field nurse arrived to work within the Mission Indian Agency, First Nations people were prepared to allow these skilled women into their homes and communities so Indians could better protect their families and save lives.

During the late 19th and early 20th centuries, First Nations people in southern California did not trust the newcomers. In California, the era of the Gold Rush and its aftermath proved highly violent and deadly for First Nations people, and non-Indians murdered thousands of California’s Indian people and stole millions of dollars in land and resources. To survive, many Indian people found separate spaces for themselves and tried to remain out of harm’s way. Most Indians sequestered themselves in enclaves within their traditional lands as far removed from newcomers as possible, but others set up communities near towns where they found work. Indian people sought sanctuary on lands where they could live as their fathers and mothers before them. Like other First
Nations people, Indians of southern California held onto their cultures, including their medicine ways. Both men and women practised Indian medicine, but over time, many practitioners of Indian medicine allowed elements of the new medicine into their worlds because non-Indians had greater knowledge of contagious or “travelling” diseases. However, this slow developing condition did not end traditional Indian medicine where both “common” and shamanistic medicine existed. Both men and women practised practical or common medicine, becoming bone doctors to treat and set broken bones and wound doctors to handle cuts and wounds from arrows, knives, and bullets. Several women became birthing doctors, providing prenatal and postnatal care as well as assisting mothers during labor, birth, and postpartum.

Common medicine also involved general knowledge of first aid, rituals, laws, prayers, and especially the use of medicinal plants. Elder women most often practised this form of medicine, and many still do. The southern Californian Indians approached medicine by gender. Men became the shamans and women practised herbal, bone, wound, birthing, and other forms of medicine. Women gained power from supernatural sources and many had elevated powers, but women did not become the shamans in this region of Indian country. They had detailed knowledge of plant use. For example, Serrano elder Pauline Murillo of the San Manuel Reservation is a master of herbal medicine and Cahuilla elder Katherine Siva Saubel of the Lost Coyotes Reservation grew up learning herbal medicine from her mother. Over the years, Saubel kept copious written notes of medicinal plants. In the 1950s, Saubel shared her notes with anthropologist Lowell Bean, and together they published a remarkable book, *Temalpakh: Cahuilla Indian Knowledge and Usage of Plants*. Nearly every extended family had experts in plant medicine, and these doctors treated a wide range of illnesses with ancient and spiritually inspired herbal remedies that they often kept a secret, sharing their knowledge only with family members. Indian doctors (shamans) practised a higher level of medicine, drawing negative medicine out of patients that had made them ill. Different levels of shamans existed in southern California, but all of them had a close, direct, and intimate relationship with supernatural powers that gave them healing power.

As in other parts of Indian country, shamans in southern California enjoyed a unique relationship with the spirit world, the source of their healing powers. Such Indian doctors held an elevated position among their people and cultures. Villagers in every community listened to the Indian doctors and often followed their advice. Indian doctors among all of the tribes in southern California received their powers through visions, dreams, and other encounters with supernatural beings, including spirits that appeared in the form of humans, animals, plants, rocks,
clouds, and other natural elements. According to the belief of the Ser-
rano, Cahuilla, Luiseño, Chemehuevi, Kumeyaay, Cupeño, Mojave, and
Quechan, Indian doctors received a small portion of the power available
in the world. First Nations people believed that at the time of creation,
supernatural forces placed power everywhere, but healing power could
be found clustered within special places of the landscape, including
deserts, springs, caves, mountaintops, and groves of oaks, mesquites,
and cactus. Healing power could also come to Indian doctors in visions
and dreams. Indian doctors in southern California, particularly relatives,
could pass along healing power and knowledge to others. The super-
natural gave Indian doctors the ability to harness healing power, which
they directed into their patients. First the doctors diagnosed the disease
and then removed the problem. Each doctor had their own healing
techniques, but all Indian doctors sang and prayed. Some used smoke
to find the physical, mental, or spiritual source of problems, blowing
smoke over areas of the body to locate the disease. Other Indians doctors
used their breath, moving their mouths and faces above the patient
while making quickened breath sounds such as haa, haa, haa, haa. Sucking
doctors used their mouths or pipes to suck out objects. The people
believed negative forces had become lodged in the patient and caused
the illness. In southern California, people called these medicine men
smoke doctors, breath doctors, and sucking doctors.

Traditional medicine usually affected the health only of Native people,
since its origins were Native. Indian medicine emerged out of Native
cultures and worked for First Nations people because diseases found
within Indian communities originated for the Native world. “Staying”
diseases were endemic and remained within Indian communities. They
did not spread like infectious diseases brought by newcomers. Thus,
Kumeyaays could be affected by staying disease within the Kumeyaay
villages and Kumeyaay medicine people knew how to prevent and treat
these diseases. These traditional Indian illnesses were not contagious
and did not travel from person to person or place to place like smallpox
or tuberculosis. Many tribes in southern California shared cultural con-
cepts of disease, medicine, and healing.

From the beginning of time, Native people of Southern California
believed that “good medicine” and “bad medicine” existed, and both
are extant. Good medicine is tied to spiritual beliefs and positive actions
within tribes. Indian medicine is intimately tied to traditional laws,
sacred space, and handling of objects. Bad medicine can attack individ-
uals or their relatives who violate ancient laws, such as marrying some-
one too closely related. Furthermore, negative medicine can emerge
from dangerous objects and sacred places which people have violated.
Thus, people are taught not to enter certain areas, climb specific moun-
tains, or touch certain objects. At one time, villagers had detailed
knowledge of dangerous objects and places, but over the years some of this cultural knowledge has diminished. In southern California many elders still know sacred laws that effect health, and they are familiar with oral narratives associated with material items and landscapes. In the early 1970s, Quechan elder Lee Emerson explained that Quechans, Mojaves, and Cocopas could not violate the top of their origin mountain of Avekwamé. This was and is a holy place that Indian people visit in their dreams to receive knowledge, healing, and instructions. In life, the mountain played a critical role in the health of the people who projected their spirits to the mountain to learn and grow, sometimes as healers. Tribal laws also prohibit people from desecrating the mountain or Dream Trail along the Colorado River. 

The tradition of sacred space separated Indian medicine from Western medicine. And one’s actions within sacred space could also result in illness or death. Serrano elder Pauline Ormego Murillo—the foremost elder, educator, and healer on the San Manuel Reservation—explained “you can get sick if you are not respectful in the Big Houses or in the cemetery.” Children “cannot run around or spit in the cemetery,” or “something bad” could happen to them or their families. The Big Houses or Ceremonial Houses were once found within all the Indian communities in the region, and people followed prescribed laws when entering the Big House or cemetery. Serrano elder Francis De Los Reyes (the former Francis Morongo) explained that the “Big House was very sacred and children couldn’t play inside since it was for the people who died.” Indian law, she explained, required all members of the tribe to “respect the dead,” who had power to help or harm the living. Spirits had power to sicken those who broke tribal ways, particularly those affecting the treatment of the dead. Tribal laws required people to conduct proper funeral ceremonies, sing death songs, and cry for the dead. Native people of southern California conducted funerals in the Big Houses or Cry Houses, where the people prayed and sang to help the living cope with the death and instruct the dead on their journey to the next world. This tradition continues today in mourning and memorial ceremonies, although not in the Big Houses, and the ceremonies are important elements of disease prevention and health maintenance. All Indians in southern California conducted annual memorials, remembering the dead, and today many families conduct memorial ceremonies or “Doings” one year after the death of a loved one to end the
mourning period. The continued good health of individuals and communities depended on conducting ceremonies, and affirmed the bond between the living and dead, an integral element of health preservation. At a memorial ceremony in 1999, Chemehuevi Salt Song singers sang while people danced and sang under a brush arbor, moving up and down an aisle to an altar and back, some holding a photograph of the deceased. In this way, they remained with the dead and remembered the person. The Chemehuevi memorial ended before sunrise when the family of the deceased burned articles belonging to the dead. In accordance with tribal law, health and well-being emerged from correctly performing rituals and ceremonies. For Cahuilla and Serrano people, the family of the deceased was required to walk the paths once trodden by the deceased, dragging cloth behind them to symbolically wipe away the footprints of the dead so the soul could take a new path to the next world. Furthermore, at the conclusion of these Doings, family members removed the black cross that had marked the grave for a year and burned it, sending their prayers skyward and placed a permanent marker on the grave. Many contemporary people follow these ancient laws as part of the medicine ways of Indian people.

Medicine men and women helped the people maintain and regain health. All “shaman” in the region had in-depth knowledge of pharmaceuticals from medicinal plants, but they also had knowledge of medicine power from visions and dreams. In the early 20th century, a Mojave Indian shaman named Ahweyama told photographer Edward Curtis that as a small child he gained power to be a breath doctor. Ahweyama reported that Homyavre or Tarantula, “who causes the mirage, came to me” in a dream. Tarantula told the boy that he would give him his breath filled with medicine power: “my breath is cold, my breath is warm, my breath is hot. I will give you my breath, that you may be able to cure sickness.” Then a female spider told the boy, “I will give you something. My breath is blue, my breath is green, my breath is red. I give you my breath to cure sickness.” Both spiders symbolically represented the Mojave creator, Mastamho. Then in the dream, a brown buzzard sang: “I blow my breath at the darkness, and it disappears like a mist before the sun, and day comes.” Through Brown Buzzard, Mastamho told the boy, “When you sing this song and blow your breath at the darkness of disease, it will disappear.” The dream continued as Ahweyama travelled to Avekwamé, where the boy dreamed that he built a lodge. He then saw a large “tarantula with a great long beard. It pulled some of the hair from its body and laid it on the ground to represent a sick man.” The hairs of Tarantula sang to the boy:

Come and stand beside me, boy,
and I will teach you how to cure sickness.
I blow my breath over the sick one, and he is well.39

Among the First Nations people of southern California, dreams provided healing power for Breath, Smoke, Blowing, and Sucking doctors.40 Ahweyama’s doctoring technique came from the Almighty, who gave healing songs to shamans so they could locate, diagnose, and remove sickness.41 Indian doctors in the region had power to cure and create illnesses. In the early 20th century, Serrano and Cahuilla Martha Manuel “stepped on some bad medicine” left by a Cahuilla Indian pul or Indian doctor named Ignacio Ormego.42 She stepped on the medicine Ormego had left for another person, and she became extremely ill. Her leg ached and she ran a high fever that threatened her life. At first, the Manuel family looked to Dr. John Evans for help.43 He admitted Martha to a hospital in San Bernardino but finding that she was not responding to treatment, the family took her to Palm Springs where Pedro Chino, a pul am-nah whet, (highest ranking shaman among the Cahuilla) worked on her.44 This pul did not know a great deal about the case, and because Martha was unconscious, he could not consult her about causations. Martha’s entire body was involved in the illness, so Chino placed her in the sun to help him diagnose the disease. Chino spent hours doctoring Martha, singing and praying while calling on his power to help him locate the problem in one of her legs. He made a breathing sound like Haaaa (breath of medicinal power) as he moved up and down her lower leg and found the bad medicine left by Ignacio Ormego.45 Pedro Chino worked the bad medicine out of Martha’s body, removing a small, dead white worm from Martha’s leg. He showed it to the family before destroying it in a fire. When Martha recovered sufficiently, she explained that Ormego had warned her and her cousin, Vincent, not to play in the wash, but they had disobeyed, placing their lives in jeopardy.46

In the early 20th century, anthropologist Alfred Kroeber recorded another medicine story. Kroeber learned from a Quechan shaman that the man had received his power while he was still in utero. The medicine man explained that before his birth, he “would sometimes steal out of my mother’s womb while she was sleeping” and take “a trip to Avekwame Mountain.”47 The future Indian doctor travelled along the Dream Trail north of the Quechan villages near present-day Yuma, Arizona, to Avekwamé. “It took me four days and nights to go there.” During his childhood, the shaman dreamt of travelling up the sacred mountain to “the willow-shade in front of the darkhouse,” where the Creator Kumastamho lived. In time, the medicine man worked his way up the side of the mountain to Kumastamho. “He was naked and very large,” the shaman told Kroeber. The medicine man saw “a few great doctors” inside the creator’s lodge.48
After reaching Kumastamho’s home, the shaman had sufficient power “to go to Kumastamho any time.”49 This man became a sucking and spitting doctor. Initially he had trouble curing people of tuberculosis, so he asked Kumastamho for help.50 Kumastamho responded, spitting up blood and telling the medicine man to suck his chest. The medicine man placed his “hands on his [Kumastamho’s] ribs and sucked his sickness out.” Then Kumastahmo told the shaman: “You are a consumption dreamer. When anybody has consumption lay your hands on him and suck the pain out continually, and in four months he will be well.”51 The Quechan shaman received power to cure a bacterial disease ravaging Indians of southern California.52 This rare account details the method by which a shaman received medical power from a traditional source to cure an infectious disease. The account provides a Native response to tuberculosis, which the shaman handled in a Native manner. Kumastamho’s response, however, did not preclude the use of Western medicine as an alternative method of handling tuberculosis, and some shaman in the region encouraged people to use both forms of medicine to fight the disease.53 Equally important, the account emphasizes the significance of tuberculosis among the Quechan and their neighbors, a dreadful disease acknowledged by Kumastamho.

By 1900, the Quechan and other First Nations of southern California had some experience dealing with travelling diseases, particularly tuberculosis, and Western medicine. After 1848 when the United States acquired California from Mexico, the government established forts where medical doctors treated soldiers and a few Indians. Roughly between 1850 and 1880, few Western doctors treated Indians in the region, but by the 1880s, the Office of Indian Affairs organized the Mission-Tule Indian Agency, which hired Dr. C. C. Wainwright and a few contract doctors to administer to Indians living from the Mexican border to the Central Valley and from the Colorado River to the Pacific Ocean.54 Between 1880 and 1900, the First Nations of southern California received their first introduction to Western medicine at a time that coincided with the growth of non-Indian populations in the West, including entrepreneurs who occupied mineral and hot springs formerly used by Indians.55 Non-Indians destroyed plant and animal habitats, and they introduced infectious diseases, especially among Native communities living close to hot springs where businesses established spas for tubercular patients.56 In the 1890s tuberculosis mortality continued to decline among the general population of the United States. At the same time, the disease increased among American Indians, becoming the foremost killer of First Nations people throughout Indian country of North America, including southern California.57 In Canada, “tuberculosis among Native people...was not declining at the same rate as the surrounding communities.”58 In her award-winning book, Medicine that Walks, Maureen
Lux pointed out that in Canada, as in the United States, “tuberculosis among Native people was seen as a threat to the nation as a whole.”\textsuperscript{59} This realization developed slowly in both countries, and Indians suffered as a result of neglect and lack of funding to fight tuberculosis.

In the early 20th century, the Office of Indian Affairs recognized tuberculosis as “the most serious disease problem among the Indians,” but bureaucrats did not effectively attack the disease during the first quarter of the 20th century.\textsuperscript{60} In fact, in 1928 researcher and reformer Lewis Meriam reported that Indian “sanatoria and reservation school have been operated far below acceptable standards.”\textsuperscript{61} In spite of the inattention and lack of funding in the early 20th century to fight tuberculosis among Indians, a change had taken place within Native communities. During this period First Nations people learned about new medicine and travelling diseases like tuberculosis. They gained knowledge of travelling diseases and then acted among themselves. Thus, the first quarter of the 20th century brought agency to the tribes, communities, and families of southern California. As a result of the boarding school experience, many Indian students learned about the developing field of bacteriology, micro-organisms, and public health. In southern California, Dr. Wainwright did not have sufficient time or energy to teach Indians about the budding “science of sanitation,” but Indian children attending off-reservation boarding schools received knowledge of bacteria and viruses through their school experience.\textsuperscript{62} This knowledge of public health and sanitation shared at Indian boarding schools developed out of a national awareness. As Lux has pointed out, Indian schools “were the battleground for the fight against tuberculosis among native people.”\textsuperscript{63}

The modern public health movement began in the 1890s at a time when the federal governments of the United States and Canada developed boarding and residential schools. Public health and sanitation became part of the message imparted to Indian school children.\textsuperscript{64} Lewis Meriam argued that “the real goals of [Indian] education are not ‘reading, writing, and arithmetic’—not even teaching Indians to speak English, though that is important—but sound health, both mental and physical.”\textsuperscript{65} School curriculums included public health lessons, and through lectures, slide shows, newspaper accounts, posters, essay contests, and films, schools pushed the concept of sanitation—even though they often did not follow their own instruction.\textsuperscript{66} As Nancy Tomes argues in\textit{ The Gospel of Germs}, “the germ theory provided its greatest utility as a guide to the prevention of disease through modification of individual and collective behavior.”\textsuperscript{67} The information provided at Indian boarding schools about public health encouraged First Nations people “to change fundamental personal behaviors” that introduced new medicine into their worlds even before the Medical Division of the Office of Indian Affairs made any concerted effort to fight tuberculosis among Native Americans in southern California.\textsuperscript{68}
The boarding school system brought American Indian students face to face with a new medical paradigm and Indian students brought elements of the Western medicine circle into their communities through the knowledge of public health they gained at boarding schools. The same non-Indian circle that had forced Native American children to speak English provided the site from which Indians could learn about contagious diseases like tuberculosis. Non-Indians first introduced public health messages into the schools, but soon Indian students shared their new knowledge with other Indians. In a dynamic exchange between non-Indians and Indians and then between and among First Nations people, Indian students shared ideas they learned in school. At all the boarding schools, teachers showed students graphic images from lantern slides depicting bacteria and viruses as monsters as well as slides offering drawings of *Mycobacterium tuberculosis*. Knowledge of contagious diseases empowered students to help their communities, but this transfer of knowledge took time, developing over a period of time from roughly 1900 to 1930. By the late 1920s when the Office of Indian Affairs struck a blow against tuberculosis, Indian students had prepared their communities within the Mission Indian Agency to receive the circle of Western medicine and invite it into the Native medical circle. After 1930, the two circles intersected and collectively worked to defeat tuberculosis among the First Nations of southern California, even before the discovery of streptomycin in 1944.

At the boarding schools, non-Indian superintendents, teachers, matrons, and disciplinarians taught a common message of public health and sanitation. At the federal Indian school of Sherman Institute in Riverside, California, and the Catholic contract school of St. Boniface Indian School in Banning, California, instructors taught these and other “commandments” with religious zeal. These public health mantras were intended to prevent the infection and spread of tuberculosis.

I will wash my hands before each meal today.
I will drink a glass of water before each meal and before going to bed.
I will brush my teeth in the morning and in the evening today.
I will take ten or more slow deep breaths of fresh air today.
I will play outdoors or with windows open more than thirty minutes today.
I will be in bed ten hours or more each night and keep my windows open.
I will try to sit up and stand up straight, to eat slowly, and to attend to toilet and each need of my body at its regular time.
I will take a full bath on each day of the week.

Educators at boarding schools asked children to act personally and responsibly in a crusade against tuberculosis. They taught students to eat nutritious meals, sleep at least several hours, breath good air, participate in sports, bathe regularly, wash their hands after using the toilet,
carefully handle food, and be mindful of weight loss, which could indicate the presence of tuberculosis. *The Sherman Bulletin*, the newspaper and voice of Sherman Institute, reported the life-saving public health initiative of one of their students. In 1914 this unnamed student had returned to the reservation and noticed, “that he was losing in weight, and exhibiting other symptoms which he had been taught in school.” The young student acted on the knowledge gained at school and realized he and his family had “tubercular trouble.” As a result, he had his family take “simple precautionary measures that not only saved other members of the family from contracting the disease, but eventually cured himself.” At Indian schools, students learned to identify “signs” of tuberculosis, particularly the rapid loss of weight, but they also learned to take proper care of themselves “in order to keep well and strengthen our bodies.” Students usually learned the health curriculum from teachers who weighed students, gave them cursory physical examinations, and offered a Protestant zeal for cleanliness: “cleanliness is close to godliness.” In addition, guest speakers, including the Assistant Surgeon General of the Public Health Service, sometimes addressed the students. In 1913, Dr. John Trask lectured the students at Sherman Institute, stating, “the germ that causes tuberculosis is usually present in sputum and mouths of consumptives.” Trask warned students not to share cups, glasses, spoons, forks, towels, combs, and brushes. He reminded students that sharing items often meant sharing saliva that contained tubercular bacteria, indirectly suggesting that they refrain from kissing and other sexual contact.

Students received many forms of health education at all of the boarding schools from lectures, posters, skits, and poetry. In 1918, the school newspaper *Native American* offered this contribution:

I am lurking in the dark,
I am watching for my prey,
I will attack and leave my mark,
I am watching for you every day.
When your strength is getting weak,
Then I'll devour your lungs through and through.
Yes, I'll fight with all my might,
Against your strength, your bones, your flesh,
When your room is dark as night
Instead of clean and nice and fresh.
I sit upon the food you eat,
Sometimes within the water you drink,
In filth and dirt I do retreat,
With joy on yon black grave’s brink,
I am a fiend within the air,
I ride on particles of dust,
I'm here, I'm here, I'm everywhere,
Your ignorance is my sole trust.
Do you know the cause of destruction
In your Lungs, such an oasis,
Of blood and pus and corruption?
I am TUBERCULOSIS.79

Students learned the insidious nature of tuberculosis, and how the disease spread. They learned “not to borrow handkerchiefs, not to spit on the floor, and not to blow their noses in the air with their fingers.”80 Students also learned to isolate tubercular patients and to take a wide berth around spaces where tubercular patients rested.81 On an emergency visit to the Soboba Hospital on the Soboba Indian Reservation of southern California, Chemehuevi student Joe Benitez remembered nurses warning him to stay away from the tents and small structures housing patients with tuberculosis. “I had heard about tuberculosis in school [St. Boniface Indian School], and I wanted nothing to do with it, so I staid away from there.”82 By the time Benitez visited the hospital, he had learned about isolating patients as one measure to prevent the spread of tuberculosis.83 One authority taught that any student “suspected of infection from tuberculosis…should at once be segregated and put on such special treatment.”84 This became one of the “commandments” taught at Indian schools, and one students shared with their families and communities. In physical education, home economics, and nursing classes, girl students learned to isolate patients, particularly members of their families they suspected of infection. Within all the Native communities, women cared for their families, feeding, cleaning, cooking, and caring for ill family members. Transferring public health and sanitation knowledge to girls tended to be more pronounced at the boarding schools than it was to boys who received similar instruction in health classes, physical education, and athletics. After learning this information, students took their new-found knowledge to teach friends and relatives on the reservations.85

They also taught fellow schoolmates. For example, in 1907, Mina Hill, a senior nursing student at Sherman Institute, reminded her fellow students to take care when dealing with tubercular patients, because their disease could “be taken from others.”86 She used the school newspaper to showcase her knowledge and inform other students who may not have had as much instruction in the area of public health.87 Students also learned that “houses where consumptives live or visit had to be examined and the occupant informed of the general sanitary rules touching the disease.”88 Tuberculosis often spread when people were ignorant of the disease, indifferent to its causes, and lacked proper facilities to deal with tubercular patients.89

In addition to health information, students and school officials sometimes acted on sanitary and public health measures. At Sherman Institute and other Indian schools, students participated in two distinct actions to
prevent the spread of tuberculosis. Students in the school band and music department helped disinfect band instruments, particularly the wind instruments that proved a “fruitful source of infection.” In order to use these instruments, students sucked on the reeds, using their saliva to soften the reeds so they worked when students used the instrument. They blew their saliva into the wind instruments and then left their germs for the next student to put their mouths upon the instrument and soften the reeds with their saliva. To prevent the spread of disease, students disinfected the instruments.90 Students also took part in a campaign to keep their books sanitized. Hundreds of students touched their books every day, sneezing and coughing on them, leaving their microorganisms on the books. To prevent the spread of contagions, students re-covered books “with manilla paper” so that “pupils having any contagious disease” like tuberculosis could not infect other students who touched their textbooks.91 Students periodically removed the old manila covers and remade new ones, burning the old paper book covers in the same manner as they burned paper tissue into which they used to spit, cough, and/or blow their noses.92 These actions typified the measures taken at some boarding schools that taught children that their personal acts as well as their knowledge could effect the spread of tuberculosis.

When students returned home, they carried with them preventive measures to combat tuberculosis, which was a very real threat to them at school. Maureen Lux provided an account of Alice Ironstar who spent her childhood—from age 8 to 19—in the hospital suffering from tuberculosis. For 10 years Alice fought tuberculosis until Canadian government officials released her to Lebert School where she worked as a maid, seamstress, and cook.93 At Sherman Institute, two sisters, Camilia and Flavia Ruiz from the Mesa Grande Reservation, contracted tuberculosis, and after receiving permission to return home from school, Camilia “died five minutes after arriving” and Flavia passed away “four days after being brought home.”94 The death of fellow students from tuberculosis taught students and parents powerful lessons. Losing children, loved ones, and friends encouraged Indians to learn more about the disease and Western medicine, encouraging them to invite the new medicine into the Indian medical circle.

During the early 20th century, the federal government studied tuberculosis and its ill effects on American Indians, but the government did little to relieve the tribal people from the epidemic.95 Contract doctors worked among the people and removed some people to Indian sanatoria, but the Medical Division of the Office of Indian Affairs did not make great strides in serving First Nations people in southern California until after 1928 when the United States began hiring public health nurses as field nurses.96 For Canada, the use of public health nurses blossomed in 1931, with similar results.97 Non-Indian and Native nurses worked with
and for First Nations people in their fight to defeat tuberculosis. The use of field nurses in the United States resulted in large part from the publication of Lewis Meriam’s *The Problem of Indian Administration*, which severely criticized the Office of Indian Affairs for its lack of health care among the tribes. The Indian Office turned to women to assist them in tackling tuberculosis and other illnesses on the reservation. Although the field nurses had worked for the Indian Office for some years, the nurses that followed her were county public health service nurses contracted by the agency to bring Western Medicine to the home of every Indian.98

In 1928, the Mission Agency hired Florence McClintock as the first field nurse. For the next three years, she attempted unsuccessfully to administer to all 29 reservations located within the agency’s boundaries.99 McClintock could not work on all of the reservations but concentrated most of her efforts in the northern areas of the agency, traveling to the homes of Indian people living on the San Manuel, Agua Caliente, Cahuilla, Soboba, Pechanga, Mission Creek, Morongo, Cabazon, Augustine, and Torres-Martinez reservations.100 Indians accepted her fairly rapidly and allowed her to their homes. Some Indians ignored some of her advice, particularly that surrounding cultural issues of ceremony and use of Native medicine men, but McClintock and her successors explained in their monthly reports that Indians received them well and were genuinely interested in their instructions to better Indian health. Each month, McClintock travelled about 3,000 miles, and subsequent nurses did the same, visiting patients, distributing health pamphlets, instructing school children in preventative medicine, and providing health clinics.101

McClintock and the nurses who followed her served as taxi divers, taking Indian patients to clinics, hospitals, sanatoriums, and sites where technicians took chest x-rays. McClintock once remarked, “The Indian does not want good advice.” She told Dr. W. B. Wells, head of the Riverside County Health Division, “He does want things done, and that brings results.”102 She was correct. By 1928, Indians in southern California wanted the United States to work with them to destroy tuberculosis. McClintock also considered First Nations people “a muddled people, trying to release themselves from the chains of superstition and traditions, yet afraid to do so.”103 Indians in southern California were not muddled at all, but many thoughtfully and purposely determined to incorporate Western medicine into their own circle in order to conquer tuberculosis. Indians had little interest in releasing “themselves from the chains of superstition” or abandoning their own medical system, spiritual beliefs, or cultural ways. They never ended their use of the ancient medicine or Indian doctors, but they gradually allowed the field nurses into their lives and communities. Correspondence and reports of field nurses, agents, school superintendents, and medical doctors indi-
cate that the various tribes of southern California allowed nurses into their homes and eagerly sought the help of nurses to treat and prevent tuberculosis.104

During the first half of the 20th century, tuberculosis took more Indian lives within the Mission Indian Agency than any other communicable disease or cause of death.105 At the same time, tuberculosis ravaged Indian people throughout North America, taking the lives of thousands of men, women, and children. Parents and agents sometimes misidentified tuberculosis as pneumonia, particularly in infants and babies, making the number of deaths caused by tuberculosis to be higher than recorded.106 The official Death Registers of the Mission Indian Agency indicate that as in other populations, young people suffered the most from tuberculosis. Those people roughly from the ages of 15 and 29 died most from tuberculosis (not counting any of the misidentified infants and babies). This was the wage earning population, future parents within the communities, and potential tribal leaders.107 Indian communities lost their young people, and lost their future to tuberculosis. Field nurses and a few doctors made special efforts to isolate and treat tubercular patients. This brought nurses, and to a far lesser extent, medical doctors into the homes of Indians on every reservation.108 Indians had come to believe that Indian medicine could not effectively deal with tuberculosis, so they looked to Western medicine to attack the disease. Indians came to rely on field nurses to identify tuberculosis and remove patients to sanatoriums, usually at Fort Yuma or Phoenix. On rare occasions, nurses asked Indian policemen to discuss the removal of patients from the home, and usually families acquiesced to the wishes of the nurses so that the police did not have to forcefully remove patients, although they had authority to do so.109 Of course, parents wanted to keep their children home, but they most often understood the rationale for removal and agreed to allow family members to be sent away to the sanatorium.

Most Indian families had to deal with tuberculosis in their homes, and they looked to field nurses to help them negotiate the disease, conduct preventive measures, and isolate patients. As with other diseases, Indians shared their newly acquired knowledge of tuberculosis. Through their efforts and that of the field nurses and doctors, tuberculosis cases and deaths declined throughout the 1930s and nearly disappeared by the late 1940s.110 Between 1925 and 1927, Indian within the Mission Indian Agency experienced a crude death rate caused by tuberculosis of 415 (N=34) per 100,000 population, but by the period between 1943 and 1946, the death rate had dropped to 99 (N=3).111

During the 1940s, field nurses noted in their monthly reports that Indians demanded health care and wanted to participate in clinics, health education, and preventive medicine. In 1938, Field Nurse Mary C. Wolking wrote, “all of the Indians on the numerous reservations have
been examined” for tuberculosis by an x-ray. She and other nurses had driven hundreds of First Nations people to have the x-rays taken willingly, often eagerly, because Indians realized that if the nurses detected the disease early, they had a superior chance of survival. “We are pleased to note,” Wolking wrote, “that the Indians themselves are taking an interest and are seeming to understand what is being done to help them, as several are anxious to hear of their [tuberculosis] reports and wondering if their x-rays are negative or positive.” Educators at Indian boarding schools and former Indian students had planted the seeds of sanitation and public health in the fertile soil of the Native communities, and the result became obvious in the 1930s. Indians invited nurses into their circles and accepted their help to make their communities healthy and free of tuberculosis.

From 1928 to 1948, field nurses engaged Indians on a local level, providing health information and practical assistance. They came to know every Indian family on the reservations and Indians got to know them. According to Mojave Michael Tsosie of the Colorado River Indian Reservation, families on his reservation still speak glowingly of the nurses, calling their era a “golden” age of health care, “especially when compared to what Indians get today.” They drove patients to clinics, hospitals, schools, and sanatoria. Nurses had taken children and adults to receive chest x-rays to detect tuberculosis, and they had personally accompanied people to hospitals and sanatoria. During an interview in 1999 with Serrano leader Martha Chacon, the elder produced from her purse, a photograph taken in 1935 of Chacon with Nurse Mabel Cowser and Dr. John Evans on the San Manuel Reservation. She held the field nurse and doctor in very high regard. Chacon and her daughter, Pauline Murillo, lauded the accomplishments of Cowser and Evans. Murillo explained that in the late 19th and early 20th centuries, the United States “didn’t care and did not send medical people to us.” Tuberculosis and other diseases attacked Indian people and “we didn’t know what to do when they came. Those were their diseases.” Cahuilla elder Katherine Saubel agreed, but the 86-year-old leader reported that she had learned about tuberculosis from her parents who had learned about tuberculosis from her elders who had attended boarding schools.

The off-reservation boarding schools and residential schools had a plethora of ill students and ill effects on First Nations people in the United States and Canada, but Indian students “turned the power” of their educational adventures and used lessons forced on them about sanitation and public health to inform their families and communities about tuberculosis detection and prevention. Former students not only informed their friends and relatives about tuberculosis, but they saved lives while introducing other First Nations people to public health and Western medicine. By the time the United States government became
serious about fighting tuberculosis among Indians of the Mission Indian Agency, Indian families and communities had already been introduced to the idea and some practices of public health. Since non-Indians understood the disease better than Indians, Natives looked to field nurses to help them conquer tuberculosis. Indian shamans allowed their people to seek this help, while at the same time continuing their own medical practices. Indians and non-Indians worked together to defeat tuberculosis, and by the 1950s, the intersecting circles of Indian and Western medicines virtually ended Native deaths caused by the dangerous travelling sickness, tuberculosis.

NOTES

1 I presented portions of this paper for the Bilson Lecture at the University of Saskatchewan, October 2003, and at the University of Manitoba History of Tuberculosis conference in 2004. The Ford Foundation Cloning Grant, University of California Senate Research, and University of California Humanities Research Institute contributed to research funding for this work. For disease causation, see Lowell Bean, ed., *California Indian Shamanism* (Menlo Park, Calif.: Ballena Press, 1992), p. 57-58.

2 Oral interview of Michael Tosie by Clifford E. Trafrzer, 28 April 2006, Colorado River Indian Reservation, Parker, Arizona. The general collection of the Sherman Indian School Museum, Riverside, California, contain many accounts by students of learning and sharing public health education with other Indians. Specific entries in the collection are found below.

3 The United States established the first off-reservation boarding school at Carlisle, Pennsylvania, in 1879. By the 1890s, the school newspaper, the *Indian Helper*, had many more articles on public health.

4 The best available information on Indian health within the Mission Indian Agency is found in the Mission Indian Papers, National Archives, Pacific Southwest Region (NAPSWR), Record Group 75, located in Laguna Niguel, California. Hereafter cited as MIA, NAPSWR, RG 75.


9 Saubel and Elliott, *A Dried Coyote's Tail*, Vol. 1, p. 64; Oral interview with Pauline Murillo by Clifford E. Trafrzer, 27 November 2002, San Manuel Indian Reservation. When the author became extremely ill with a sore throat that would not heal for four months, Murillo and Saubel provided herbal medicines that cured the ailment. Their mothers and grandmothers were herbal doctors who taught both of these women.


12 Saubel interview, 29 December 2002.

Murillo interview, 27 November 2002 and 23 December 2002; and Saubel and Elliott, A Dried Coyote’s Tail, Vol. 1, p. 285-86.
The author learned this information in conversations with Quechan elder Lee Emerson from 1973-1976 when the author was a museum curator for the Arizona Historical Society. Michael Tsosie confirmed this data in the Tsosie interview, 28 April 2006.
Tsosie interview, 28 April 2006.
Murillo interview, 27 November 2002.
Murillo interview, 27 November 2002.
Oral interview with Francis De Los Reyes by Clifford E. Trafzer and Leleua Loupe, 9 October 2001, San Manuel Indian Reservation.
De Los Reyes interview, 9 October 2001.
Saubel and Elliott, A Dried Coyote’s Tail, Vol. 2, p. 1311-1312. In southern California, First Nations people believed when the last shaman died the community should burn the ceremonial house or Big Houses. As a result of this tradition, no Big Houses exist today.
In 1989 the author attended a Karook Ceremony held on the Sycuan Indian Reservation where a Cocopa singer, one Mr. Hyde, explained that the people would dance with the dead when they returned during the ceremony.
Mike Memorial Ceremony, 1999.
Mike Memorial Ceremony, 1999.
Murillo, Living in Two Worlds, p. 176; and Murillo interview, 27 November 2002.
Murillo interview, 27 November 2002; and Benitez interview, 5 June 2001.
Oral interview with Ahweyama by Edward Curtis as found in Edward Curtis, The North American Indian 12 (Norwood, Mass.: Plimpton Press, 1908), p. 55. Curtis was a professional photographer, not an academic, but he had close personal relations with Indian people and kept copious notes of discussions. The account here is in character with other Mojave accounts and appears to this author to be accurate and insightful.
Murillo interview, 23 December 2002. Serious students of southern California Indian shamans must view the sucking and blowing pipes used by shaman, examples of
which are kept by the Twenty-Nine Palms Band and Cabazon Band of Mission Indians at the Cabazon Tribal Museum in Indio, California. Each Big House, including those once found on the reservations of southern California, had its own sacred bundle. The author knows of only one that exists, but others may have survived. Usually, when the last shamans died, the people within the communities burned the bundles and Big Houses, ending that chapter of their history. Pauline Murillo and other elders have suggested that young shamans will emerge within the communities, and they will be changed in comparison to the old shamans, just as tribal communities have changed. Nevertheless, Lowell Bean has reminded the author that the power still remains and the new shamans will harness the power in new ways, based on traditional medicine but not necessarily as those methods used by the old shamans.

42 Martha Manuel first married Pablo Ormego but after his death, she married Raoul Chacon, which explains the change in her name.
43 Murillo interview, 27 November 2002. Dr. John Evans began his work on the San Manuel Reservation in the early 20th century, receiving no pay until 1933 when the Office of Indian Affairs decided to hire him as a contract physician. The Indians of San Manuel held him in high esteem, and when he died, six men from San Manuel carried his casket, a high honour. See also Murillo, *Living in Two Worlds*, p. 268-72.
44 Murillo, *Living in Two Worlds*, p. 386-88. Murillo first told the author this account in the fall of 1999 with many more details in subsequent conversations. Bahr argues that Tohono O’dham people believe that a patient must continue to conduct a number of rituals in order to complete the medicine after the shaman has finished. Murillo argues that this was not the case with Cahuillas and Serranos, although people might hold feasts in the Big House as a blessing and a means of conveying to the Big House – a live entity – and the creator that the people appreciate all given to them, including good health.
53 Kroeber, *Indians of California*, p. 783. Notice that the number four is sacred to Quechans and many Indians of California and the Southwest and it took four months to cure someone of tuberculosis.
56 Murillo interview, 27 November 2002.
65 Meriam, *The Problem of Indian Administration*, p. 373.
66 Meriam, *The Problem of Indian Administration*, p. 393. Meriam offered a curricular list of items to be taught, “What Should be Included in a Health Education Program.”
70 Glass Slide, “Germs: Seen and Unseen,” slide L55069 and “Germs of Fact and Fancy,” slide L55068, California Museum of Photography, University of California, Riverside.
71 Benitez interview, 1 March 2001.
73 The Sherman Bulletin, 15 May 1918. The Sherman Indian School Museum in Riverside, California, has the only complete collection of the school newspaper.
74 The Sherman Bulletin, 23 September 1914.
75 The Sherman Bulletin, 23 September 1914.
76 The Sherman Bulletin, 6 April 1910.
77 The Sherman Bulletin, 26 November 1913.
78 The Sherman Bulletin, 26 November 1913.
80 Native American, 28 December 1912.
82 Benitez interview, 1 March 2001.
83 Benitez interview, 1 March 2001.
85 The Sherman Bulletin, 23 September 1914.
86 The Sherman Bulletin, 13 November 1907.
87 The Sherman Bulletin, 13 November 1907.
88 Commissioner of Indian Affairs to Harwood Hall, “Physicians Made Health Officers,” 19 February 1908, Sherman Indian Collection, National Archives Pacific Southwest Region, Record Group 75. Hereafter cited as SIC, NAPSWR, RG 75.
89 Commissioner to Hall, “Physicians Made Health Officers,” 19 February 1908.
90 Francis Leupp to Harwood Hall, 25 April 1908, SIC, NAPSWR, RG 75.
91 Leupp to Harwood Hall, 25 April 1908.


98 Meriam’s study culminated a national investigation into American Indian affairs, which included a condemnation of the Medical Division of the Office of Indian Affairs. In 1928, Meriam’s Report was published and the same year brought the Office of Indian Affairs to hire the first field nurses in the Mission Indian Agency.

99 H. J. Warner to Commissioner of Indian Affairs, 11 May 1928, Box 25, MIA, NAPSWR, RG 75.

100 Report of Field Nurses, 1928-32.

101 The reports by Field Nurse McClintock begin in 1928 when the Office of Indian Affairs assigned her to the Morongo Reservation near Banning, California. During her first three months of residence, she had no automobile, a necessary tool for field nurses in order to travel to the various reservations. She used her time at first to become acquainted with some of the families at Morongo and to establish a small clinic. Her reports are filled with information, and she provides the first statistics regarding tubercular cases, numbers of home visits, and, ultimately, her travel to the various reservations in the northern part of the agency. The figure of 3000 miles per month is an average of miles travelled by nurses during a 20-year period based on the monthly statistical reports of the nurses found in the Mission Indian Agency Papers, NAPSWR, RG 75.

102 Florence McClintock to W. B. Wells, 9 October 1930, Box 6, MIA, NAPSWR, RG 75.

103 Florence McClintock to W. B. Wells, 8 April 1931, Box 6, MIA, NAPSWR, RG 75.

104 McClintock to W. B. Wells, 8 April 1931; Report of the Superintendent of the Malki, Pala, and Soboba superintendencies, Superintendents Wadsworth of Soboba, Hoftan of Pala, and Games of Malki to the Commissioner of Indian Affairs, 1 November 1918, Box 426, MIA, NAPSWR, RG 75.


106 A medical doctor attending a session of the American Association for the History of Medicine suggested to the author that unless medical doctors conducted autopsies of infants and children, they could not know if the children died of pneumonia or tuberculosis. He suggested that since tuberculosis thrived on Southern California Indian reservations during the early 20th century, babies and children likely died of tuberculosis, not pneumonia as the agency recorded. Doctors did not conduct autopsies, and agency staff, not medical staff, created the Death Registers. The doctor suggested that agency officials incorrectly recorded the cause of death of many Indian children.


108 Florence McClintock to W. B. Wells, 9 October 1930, Box 6, MIA, NAPSWR, RG75.

109 Florence McClintock to W. B. Wells, 9 October 1930, Box 6, MIA, NAPSWR, RG75.


112 Mary C. Wolking to John Dady, 14 April 1938, Box 8, MIA, NAPSWR, RG 75.

113 Mary C. Wolking to John Dady, 14 April 1938, Box 8, MIA, NAPSWR, RG 75.

114 In September, 1999, the author met Martha Manuel Chacon and her oldest daughter, Pauline Ormego Murillo. They had attended a week-long workshop with school children at California State University, San Bernardino, where I was speaking. During this meeting, Chacon shared her photograph and comments praising Nurse Mabel Cowser and Dr. John Evans. I took no oral interview at this time but simply
had a conversation with these two tribal elders, relatives of several male shamans, and themselves herbal doctors.

115 Murillo interview, 27 November 2002.
117 Oral interview with Katherine Siva Saubel, September 20, 2005, Morongo Indian Reservation, Banning California.