

SMALLPOX ON CAPE COD

By Stuart Baker

Smallpox! That dreaded word held a special fear in the hearts of Cape Codders two centuries ago. By relying on ships to travel between ports, smallpox could arrive at any town almost unannounced and create havoc among the population.

In the 1700s, the Cape was struck with a series of smallpox epidemics. People arriving from Boston in 1721-22 brought germs from that outbreak. Additional outbreaks in Massachusetts came regularly. An epidemic in 1730 decimated the Indigenous population on Cape Cod. An outbreak in Harwich in 1747 started when a vessel came from Philadelphia to Martha's Vineyard and two of the men on board traveled to Harwich. Boston had another major outbreak in 1753, with an infection rate of 38%, enduring seven outbreaks between 1721 and 1792.

Barnstable and Yarmouth had outbreaks in 1757 and 1760, brought by soldiers, and some say from the Acadians who had been sent to Cape Cod as prisoners. Court was suspended in Barnstable as a result of this 1757 outbreak. Three years later, smallpox reappeared. Other outbreaks on the Cape occurred in 1763 and 1765-66. Chatham was hit so hard that it moved families to help prevent the spread. Boston's outbreak in 1774 spread to Cape Cod; Cape mariners visiting Boston were the most likely cause.

During the American Revolution, smallpox was spread by the movement of soldiers, as well as by people who were displaced. The British sent poor from Boston to the Patriot lines, hoping to save food and also infect the soldiers who were surrounding Boston. Smallpox and the plague had both been used for centuries as biological weapons. Blankets of sick who died of smallpox were sometimes given to Indigenous persons who were opposing expansion. George Washington had contracted smallpox at age 19 on a visit to Barbados with his brother and was immune.

On his second day in command outside Boston, on July 4th Washington had a strict quarantine for both civilians and soldiers who contracted smallpox. Soldiers were quarantined near a pond in Cambridge; civilians were sent to Brookline. Yarmouth's Captain Joshua Gray wrote that there was no smallpox with his men before they dug the fortifications and then manned Dorchester Heights. Feb 20, 1776 letter "There is no Small Pox in Roxbury Camp at Present"
Perhaps the letter was only to assure his wife; there is no knowing. The first troops into Boston as the British had evacuated were 500 that had already had smallpox and thus immune.

During the war, more than 90% of casualties were not from combat, but disease. According to the Library of Congress, variants of smallpox were the most vicious. Lack of proper food did little to prevent scurvy and 15% of the inhabitants in a hospital in Philadelphia in 1777 had scurvy.

Washington made the decision to inoculate all troops and they began on January 6, 1777. He knew that there was a “herd immunity” amongst British troops because a very high percentage had contracted the disease as children. That was not true for Continental soldiers, and one evaluation of data led to the belief that less than 25 % of men from North Carolina who enlisted in 1777 had contracted smallpox.

A less well-known fact is that during the miserable winter at Valley Forge in 1778, not only did all suffer from shortages of food and clothing, those who had not been inoculated also suffered from the inoculation. Of the 10,000 men at Valley Forge that winter, 1700 died, about 0.07% of the total population of the colonies. Yarmouth had at least eight deaths there, about 0.3% of Yarmouth’s total population. Why was it so much higher than the national average?

In 1778 there was outbreak on the Cape, with Sandwich and Yarmouth hit hard. A Sandwich town meeting was postponed. Sandwich also set up a “pest house” to help stop the spread. In Yarmouth, smallpox killed off most of the remaining Natives at “Indian Town”, the area where the Yarmouth Cultural Center now resides. This area had been an Indian Reservation. When smallpox hit the Indigenous people in South Yarmouth, they were treated at the “crooked house” on what is now Old Main Street. Boston also experienced an outbreak.

Early efforts to fight smallpox were restricted to keeping those with the disease away from others. People who died from it were not allowed to be carried past another’s house on their way to be buried. Their clothing and bedding often was burned. Animals found running loose near diseased areas, especially dogs and cats, were to be killed. Sandwich, Eastham, and Yarmouth authorized red flags to be hung from fences as warnings. In Eastham, the town meeting passed an ordinance that an exposed person could be fined if he or she didn’t give timely notice to the selectmen. The selectmen must have hoped for written, rather than personal notice!

Pest houses were maintained in several towns for those who were ill with the disease. Obviously, the NIMBYs were out in number during epidemics and kept these facilities a long way from their own homes. Yarmouth’s house was on Great Island.

Every town ended up with smallpox cemeteries. In Yarmouth, some specific cemeteries remain including one at Follins Pond and another by the 13th hole on the King’s Way Golf Course. Chatham had smallpox victims from the 1765-66 epidemic buried near Old Comers Road, Orleans near Tar Kiln Road. Dennis had two locations as well. In Truro, Thomas Ridley, a farmer, fisherman, and father of ten children, succumbed to smallpox at age 61 and was buried in 1776. He was buried far away from the village. His gravestone is called the loneliest because of its inaccessibility.

In China, back in the 1100s, it was discovered that exposing people to mild smallpox infections by (as grisly as it sounds) grinding up small smallpox scabs and blowing them up noses of people could create immunity. The infected material could also be rubbed into cuts. This was called variolation, named for the virus variola. In 1717, the wife of

the British ambassador in Constantinople learned about this and the knowledge was transmitted to rest of Europe.

African slaves knew of it as well, and Cotton Mather learned of variolation from his slave Onesimus. It was first tried in Boston in 1721 during that smallpox epidemic. Massachusetts thus became the location of the first large effort in either Britain or America to combat smallpox by variolation. While it didn't stop future outbreaks, it did lessen their impact and made people to think more favorably about cowpox inoculation when it arrived in 1801.

Ben Franklin lobbied for immunization in 1753, during an outbreak in Boston. Everyone noticed that those who had survived the disease were not affected by future outbreaks. John Adams, later our second president, was another who survived variolation and thus became immune.

On Cape Cod, Dr. Samuel Gelston first tried variolation on Martha's Vineyard in 1763. 81 people were inoculated before he was forced to stop by fears he was spreading the disease. He then set up a hospital on Gravelly Island near Nantucket, but town fears about smallpox spreading forced it to close. In 1772, Nantucket purchased the doctor's building and had it torn down.

Other Cape Cod doctors also tried variolation, including Dr. James Hedge of Yarmouth. Hedge was born in 1773, and had studied medicine under one of Cape Cod's great characters, Dr. Samuel Savage of Barnstable. Savage was eccentric. He wasn't afraid to advertise the fact that he was a doctor, and if he saw a stage approaching, he would climb on a rock and announce in his loudest voice that he was a physician and surgeon. The rock is still there.

When not busy treating patients, Savage would sit in a chair on his front porch. Woe to any girl who passed by without curtsying or a boy who failed to remove his cap. Savage would rap his cane on the floor and yell at the offenders, something that put fear into the hearts of Barnstable young people.

After training under Savage, Hedge set up a hospital on Great Island. A pest house (hospital) was set up in 1797 after a smallpox epidemic hit the town. The hospital was set up because the town felt it was cheaper than transporting patients to Falmouth. The epidemic continued into the next year and additional smallpox accounts were approved at town meeting. The town did not give permission for variolation until March of 1801 (Some Cape authors have mistakenly suggested that Hedge started variolation in 1797.) In September of 1801 the town closed the variolation inoculations. Documents relating to this are in the archives of the Historical Society of Old Yarmouth.

The 1797 hospital on Great Island must have been a private dwelling, for it wasn't until 1802 the town fathers voted to build a town smallpox hospital on Great Island and pay the land owners \$16 a year land rent.

Other towns were also taking action. Provincetown maintained a hospital in 1801. During an epidemic, a tall fence was built around it and schools closed. Animals were not allowed to run at large, and houses were smoked as a general fumigation. Falmouth's inoculation hospital was located on Shore Road. Dr. Francis Wicks was doing inoculations using variolation there by 1797. John and Sylvanus Gibbs' house in north Sandwich was used as an inoculation and recuperative center. It was near the Plymouth town line.

Dr. Edward Jenner of England noticed that people who were exposed to cowpox were immune to smallpox. In 1796 he inoculated children with a mild form of the cowpox virus and it worked. This new method didn't come across the Atlantic until 1800 when Benjamin Waterhouse of Cambridge introduced vaccinating using Jenner's discovery. He wrote two treatises about "exterminating smallpox," and obviously they were widely read because these new methods were rapidly adopted. In 1802, Yarmouth approved allowing the town physician to inoculate using a new method from Britain. Presumably, the town doctor was Hedge, but it isn't written down. Smallpox soon ceased to be the feared disease, but outbreaks still occurred.

Today, smallpox is a little thought about disease. The World Health Organization declared the disease eradicated in 1980. No longer do children have to be inoculated. Soon, a badge of old age will be evidence of a smallpox vaccination; on the arm for boys, on the legs for girls (so it wouldn't show)!