



Bicentennial Issue: Prepared as part of the celebration of the 200th Anniversary of the United States of America by the Center for Disease Control, Public Health Service, U.S. Department of Health, Education, and Welfare.

Recommendation on Inoculation Practices

Inoculation Against Small Pokkes* (Variolation)

Introduction

Inoculation for the small pokkes has been known to the West since 1714, when Dr. Emanuel Timonus published his account of the Turkish method in the *Philosophic Transactions of the Royal Society*. Lady Mary Wortley Montagu introduced the practice into Britain in 1721, and Dr. Zabdiel Boylston, with the encouragement of Rev. Cotton Mather, recorded 247 cases of inoculation during the huge outbreak of small pokkes in Boston in 1721. Since that time, controversy has arisen about the safety and effectiveness of inoculation, and the practice has fallen into disrepute in some quarters. The relative success of inoculation small pokkes in well regulated inoculation hospitals, under the guidance of such physicians as Boylston and Aspinwall, has demonstrated that the practice can be relatively safe if carefully performed.

Small Pokkes Occurrence

Since the epidemic in Boston in 1721, when a total of 5,759 cases of small pokkes occurred in 10,700 citizens of Boston, small pokkes has been continuously epidemic in Newe Englande. The 1721 Boston epidemic gave rise to 842 deaths, for a death rate of 15 per 100 cases. Since 1721, major epidemics have occurred in 1730, 1752, 1764, and 1775, with some cases occurring in all years.

Safety and Effectiveness of Variolation

Last year (1776) in Boston residents, 4,063 cases of small pokkes occurred. Approximately 90% of these resulted from inoculation of the patient. About 1% of the patients who contracted the small pokkes from inoculation died. By contrast, 35% of the patients whose small pokkes arose from natural contagion died. Thus, inoculation small pokkes is clearly less dangerous than natural variola.

The effectiveness of inoculation in unquestioned. The few reports of natural variola occurring in patients who had been previously inoculated are more likely caused by the political zeal with which this question has been greeted in some quarters than by sober and careful recording of fact.

Method

Small pokkes inoculation should only be practiced by a doctor of physik or a licensed lay inoculator. Patients selected for inoculation should be free of ague or flux and in a quiet state of mind. It is wise practice to purge and bleed such patients, and keep them on a prudent diet, free of meat and with moderate amounts of beer, wine, or hard cider, for 7 days prior to the operation.

Matter from the pokkes of a fresh patient with small pokkes, preferably of the mildest possible variety, should be used for the operation. Best results occur when matter is obtained on the fourth day of development of a ripe pustule. Some inoculators report success in keeping the matter in vials or dried upon cotton strings for several days if a fresh case of small pokkes is not at hand. Despite the original practices of Timonus and others, it is not necessary to inoculate the material directly into a vein. The patient's arm should be the preferred site of inoculation, although many physicians prefer the back, leg, or forehead. An incision should be made in the skin with a scalple, spatula, or lancet, and the small pokkes matter inserted into the incision. The incision can then be closed without sutures and a bandage applied to the site.

Patients may be expected to have considerable fever starting approximately 8 days after inoculation, and many patients will have several pokkes appear on their body, arms,

* See last page for modern terminology and explanation of this issue.



Small Pokkes – Continued

and face at approximately the same time. During the period of fever, the patient should be kept in a fasting state, given little more than wine, beer, or, if necessary, water. The pokkes which result from inoculation are by the fourth day excellent sources of material for further variolation, and some physicians believe that even milder small pokkes may result from such subsequent inoculations.

Patients receiving inoculation must be kept at home or at an inoculation hospital for at least 2 weeks. Dr. Aspinwall and others have recommended that patients be isolated fully for 30 days after inoculation. We are greatly disturbed to hear reports from New York of patients allowed to walk about the town 8 days after the operation, when it is our belief that this is exactly the time they may be most capable of further transmitting the disease.

Additional Protective Measures

We are greatly impressed with the observations of Dr. Haygarth, who believes that the small pokkes is "only caught by infection from another patient in the distemper, or by the poisonous matter, or scabs that come from a patient." Dr. Haygarth's 4 rules of prevention are prudent, and should be followed, where possible, with or without the use of variolation:

"I. Suffer no person who has not had the Small Pox to come into the infectious house. No visitor who has had any communication with persons liable to the distemper, should touch or sit down on anything infectious.

"II. No patient, after the pocks have appeared, must be suffered to go into the street, or other frequented place.

"III. The utmost attention to *cleanliness* is absolutely necessary *during* and *after* the distemper. No person, clothes, food, furniture, dog, cat, money, medicines, or any other thing that is known or suspected to be daubed with

matter, spittle, or other infectious discharges of the patient, should go out of the house till they be washed, and till they have been sufficiently exposed to the fresh air. No foul linen or anything else that can retain the poison should be folded up and put into drawers, boxes, or be otherwise shut up from the air, but immediately thrown into water and kept there till washed. No attendants should touch what is to go into another family till their hands are washed. When a patient dies of the Small Pox, particular care should be taken that nothing infectious should be taken out of the house, so as to do mischief.

"IV. The patient must not be allowed to approach any person liable to the distemper till every scab is dropt off, till all the clothes, furniture, food, and all other things touched by the patient during the distemper, till the floor of the sick chamber, and till his hair, face, and hands have been carefully washed. After everything has been made perfectly clean, the doors, windows, drawers, boxes, and all other places that can retain infectious air should be kept open till it be cleared out of the house."

Editorial Note [1976]: This article describes what the experts of 1776 might have considered good variolation practice. Inoculation was widely practiced throughout Colonial America both before and during the Revolutionary War.

Nevertheless, there was sufficient concern about the possibility of patients who had been variolated acting as vectors of smallpox that, at one time or another, several of the 13 colonies passed laws against variolation, or at least against its practice outside of very strictly maintained inoculation hospitals. Thus, by 1776 some cities in the Colonies were officially anti-variolation. Indeed, several authorities state the reason smallpox hit the Colonial troops so hard was that so few of them had been variolated.

There reigns an epidemical distemper, called by the genteel name of l'influenza. It is a little fever, of which scarcely any body dies: and it generally goes off with a little looseness.

Philip Stanhope, Lord Chesterfield

Epidemiologic Notes and Reports**The Agues—Pennsylvania**

Another outbreak of the epidemical fevers and agues has been reported in Pennsylvania. The missionary at Apoquinimink reported in a recent letter to his Society that during the past month 10 of the 18 brethren who were building the new church fell sick of intermitting fevers, the epidemical distemper that grows so common throughout the Colonies. The attack was very mortal, and 3 of the brethren dyed there. The remainder were sorely unfitted for their employments, and the utmost they could do was lay the floor of the church. Jesuit bark was not available; bitter herbs and roots were added to the workers beer but it had no effect on the recurring agues.

The missionary reported in his letter that Mr. Peter Kalm, a Swedish scientist who had been in Apoquinimink during the outbreak, stated that the agues were not so

common in New York as in Pennsylvania where 10 were seized by it to one in the former province. He was of the opinion that the fevers were occasioned by the vapors arising from stagnant fresh water, from marshes, and from rivers. Mr. Kalm stated that he had seen settlers with intermittant fevers throughout the Colonies where he has travelled and in his opinion the incidence was rising in many parts of the Carolinas, Delaware, New Jersey, Maryland, and Pennsylvania, but it appeared to be declining in New England. It was especially pernicious in fresh settlers who often succumbed to fevers, gripes, and dysenteries (1).

References

1. Duffy J: Epidemics in Colonial America. Baton Rouge, Louisiana State University Press, 1953.

Current Trends

Consumption—Salem, Massachusetts

A survey of bills of mortality for the town of Salem, Massachusetts, shows that during the period 1768-1773 consumption accounted for 117 (18.2%) of 642 deaths from all causes (1). The death rate from consumption is estimated to be around 440 per 100,000 population. These data are consistent with reports from other cities in the Colonies (New York, Philadelphia, Baltimore, Providence, Charlestown), indicating a mortality from consumption ranging from 400-600 per 100,000.

Of all deaths, the proportion ascribed to consumption ranges from 14-30%. When there are no prevailing epidemics of cholera, smallpox, yellow fever, or typhus, it is undoubtedly the leading cause of death.

Editorial Note: Pulmonary consumption is a protracted or chronic pneumony, always preceded by debility which pervades the whole system. Sometimes it occurs in a form intermediate between the catarrh and pneumony; in this case it sometimes kills in 6 weeks and is called the "galloping consumption." (2)

Although it does not cause death, a tormenting ailment known as the Itch is afflicting the Continental Soldiers at Valley Forge. General Washington has ordered that all men with the condition be annointed with sulphur by the surgeons.

The Itch is caused by little insects lodged in the skin, and some authors affirm they have seen its postules by the help of a microscope. The disorder, which brought more

Predisposition to consumption is thought to be hereditary, and it is often a family disease even when no hereditary predisposition exists. Moist and variable climates predispose to it; there are more deaths near the sea shore. Very cold or very hot climates never produce it but they are both unfavorable to it. Consumption is most likely to be fatal in the month of March.

Pulmonary consumption has been said to be contagious and is believed to be so in Spain and Portugal. It may be acquired from inhaling the breath of those who have it, from being exposed to their sweats, and from sleeping with them (2).

References

1. Holyoke EA: A bill of mortality of the town of Salem for the year 1782. *Memoirs of the American Academy of Arts and Sciences* 1:546, 1783
2. Manuscript (150 pages of handwritten notes), dated December 24, 1806, by an unknown physician or medical student who attended Dr. Benjamin Rush's lectures on the Practice of Physic, delivered in Philadelphia, Pennsylvania (from the personal library of AM Lowell)

The Itch

patients to British hospitals during the Seven Years' War than any other ailment, causes great scratching, wherein the postules, full of a sort of clear water, break. By this means are the postules communicated to neighboring body parts (1).

Reference

1. Gillett MC: (unpublished manuscript) The Army Medical Department, 1775-1818

International Notes

Measles—Small Pokkes on Shipboard

Twenty-nine of the 97 North Irish children aboard the ship *Brittania*, which arrived in Savannah, Georgia, January 18, died of measles-small pokkes during the 12-week winter voyage from Belfast. No deaths occurred among the 109 adult immigrants, according to a letter concerning the incident issued by Acting Governor James Habersham to Lord Hillsborough, President of the Board of trade in England (1).

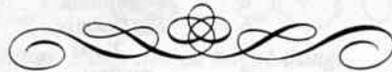
Because of the outbreak, the *Brittania* was quarantined at Tybee Island for 12 days before docking at Savannah.

Investigation revealed that the suggested commercial allowance of 3 passengers for each 4 tons of ship's burthen permits only 20½ square inches of deck space per passenger. Crowding aboard the *Brittania* appears to have exceeded even this, as 5 persons were in a space normally allotted for 3 (2).

Editorial Note: The death rate for this outbreak is exceedingly high; it is comparable to the rate for all deaths of children under 5, as recorded in the *Bills of Mortality, London*, for the same period (3). Overcrowding clearly facilitated spread of this malady and illustrates the need for an enforced method of ascertaining the burthen of merchant vessels (2,4).

References

1. Green ERR: Queensborough Township: Scotch-Irish emigration and expansion in Georgia, 1763-1776. *William and Mary Quarterly* 17(2): 183-199, 1960
2. Dickson RJ: *Ulster Emigration to Colonial America 1718-1775*. London, Routledge and Kegan Paul, 1966
3. Gale AH: *Epidemic Diseases*. Baltimore, Penguin Books, Inc., 1959, p 133
4. McCroan JE, State Epidemiologist, Georgia Dept of Human Resources



Some men also have strange antipathies in their natures against that sort of food which others love and live upon. I have read of one that could not endure to eat either bread or flesh; of another that fell into a swooning fit at the smell of a rose . . . There are some, who, if a cat accidentally comes into the room, though they neither see it, nor are told of it, will presently be in a sweat, and ready to die away.

Increase Mather

Epidemiologic Notes and Reports

The Bloody Flux—Massachusetts

Reverend Samuel Danforth of Roxbury, Massachusetts, in describing an outbreak of the bloody flux, wrote on July 20, 1776, "It was a very sickly time [with] many being visited with gripings, vomiting and flux, with a fever which proved fatal to many infants & little children esp'y but also to some grown persons." (1) A colonist involved in the outbreak claimed that his condition was "truly pitiable" for he had "not had one day or one Nights Ease or rest these days past & no less than 15 times a night I am obliged to get up and that accompanied by the Most excruciating pains in my Bowels, my Back and my Loins!" Noting that this outbreak might be of a mixed blessing a colonist stated that British soldiers were "Vastly [more] liable to the bloody flux and Fever and some dyed of it." (1)

Many of the involved took a variety of cures. A colonist described the disease as "an Obstinate Diarrhea, that will yield to no Medicine or Skill of the Physician." A physician beseeched his patient to take some "pilles . . . made of grated pepper made up with turpentine, and some pepper

withhall." "Butter or Oil with a Portion of Beer and Molasses" was a popular cure advanced by the *Boston Weekly News Letter*. (1) Another physician urged affected patients to "Take an Egge and Boyle it very hard and then pull off the Shell and put it as hot as you can well endure, into the fundament of the patient grieved and when it is much abated of the heat put in another Egge in the same manner and it will cure." (1)

The outbreak ended but not before "many both elder and young Persons (were) taken down with Fever and Flux (and) died after less than a Weeks Illness."

Editorial Note [1976]: The actual effect of dysentery on colonial health cannot be exactly determined. However, the fact that "Fresh Europeans" had a higher incidence implies that the disease may actually have assisted the colonists in their fight against the British.

Reference

1. Duffy J: Epidemics in Colonial America. Baton Rouge, Louisiana State University Press, 1953.



Surveillance Summary

Hospital Patients—New York, 1777

TABLE 2. Number of Various Diseases found in Patients at the Albany (NY) Hospital, 20 August 1777

Disease	Number of Patients	Disease	Number of Patients
dysentery	81	jaundice	2
intermittent fever	79	rupture	2
diarrhea	61	scorbutic	4
rheumatism	22	pleurisy	3
cough	25	hemorroid	1
convalescent	17	hemoptus	2
debility	17	nephritis	3
lues venera	14	asthma	1
fever	13	paralysis	2
whooping cough	10	cholera	1
head itch	9	hypochondria	1
measles	8	scrophula	3
putrid fever	6	ophthalmia	1
bilious fever	4	Total	396
dropsy	4	surgical	53

Source: *A Return of the Present State of the General Hospital at Albany (sic) 20 August 1777, in Potts Papers, II, #283, [This Return, however, gives an incorrect total of 296.] in Gillett MC: (unpublished manuscript) The Army Medical Department, 1775-1818.*

Current Trends

The Large Pokkes—July, 1776

Dr. John Morgan, Director General of the Military Hospital, by appointment of Congress October 17 last(1), announced today that the Large Pokkes is not rampant in our Troops (2) as it was in the Armies of Europe in Past Conflicts, but that the major source of the Disease today is still the Same, namely the Camp Follower. Because of the limited number of the Ladies who are with our Troops in the Field of Battle, Dr. Morgan assures us that Our Soldiers are not suffering severely but that some effort must be made to reduce the amount of the Large Pokkes among our Troops.

Dr. Morgan was trained under Dr. John Hunter, the Great European Venerologist, who in 1767 established by Experiments on himself that the Large Pokkes and Gonorrhoea are one Disease, Gonorrhoea being only the earliest stages of the Large Pokkes. Dr. Morgan holds the chair of Theory and Practice of Medicine in the Medical School in Philadelphia, which he has helped to establish (1).

Suggestions that have been made to reduce the Large Pokkes include using the same procedures now in use in Other Nations. Many of the procedures of Great Britain are Acceptable and would apply to our Troops also. The Sailors in the Navy of The King must pay a "surgeon's fee" in the amount of 15 shillings when they are ill with Venereal Disease (3). This fee is paid to the Surgeon and taken from the pay of the Sailor. Dr. Morgan is considering asking Our Congress to enact a Resolution similar to that—with the fee to go to the Army rather than to the Surgeon. Such a fine could serve 2 purposes: It would help to keep our Troops' Behavior in line with our Expectations, and it would benefit the Troops themselves, since many funds are not now available to outfit them, and many of our Troops must wear their own clothing instead of uniforms. Such fines could serve to purchase Blankets and Clothing for the coming winter. The fine could be collected by the Paymaster after the Surgeon reported such a case of Venereal Disease to the Paymaster when the Troop came to the Surgeon for treatment.

Dr. Morgan reports that the Treatment used against this disease is still disputed. In 1773 a severe Epidemic struck Lower Canada, infecting many Innocent Persons; this

Epidemic was successfully halted by intense Treatments with very large doses of Mercury (2). Dr. Morgan stated that although Mercury is quite effective in curing the Venereal Disease, it has severe Aftereffects and the doses must be large to effect the cure, making these Aftereffects even more damaging.

Other Medicants that have also been used to treat the Large Pokkes include Calomel (mercurous chloride), which also serves as a Purgative when given in large dosage. George Weed has advertised that he "was bred to the practice of Physick & Surgery, and undertakes to cure the Venereal Disease in all its Stages, even when attended with the Ulcers." (2) Dr. Weed, however, has not detailed his Treatment for publication herein. Another Treatment now available is Keyser's Famous Pills, which have been advertised as "well known all over Europe and in this and Neighboring Colonies for their Superior Efficacy and peculiar Mildness, in perfectly eradicating every degree of a certain Disease, without the least trouble or confinement." (2)

Editorial Note [1976]: Dr. Morgan was fired by Congress in 1777. In 1778, Congress passed a resolution to fine soldiers \$4.00 and officers \$10.00 when they were sent to any hospital for venereal disease. The money was to be deducted from their pay and used to purchase blankets and clothes for soldiers (1). John Hunter's experiments led the medical world to consider gonorrhoea and syphilis one disease until 1837 when Phillippe Riccord proved them to be 2 diseases.

References

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2. Duffy J: Epidemics in Colonial America. Baton Rouge, Louisiana State University Press, 1953
3. Hinrichsen J: Venereal Disease in the Major Armies and Navies of the World. Am J Syph Gonor & Vener Dis 29:80-124, 1945
4. Parran T: Shadow on the Land. New York, American Social Hygiene Association, 1937



*Hot things, sharp things, sweet things,
cold things
All rot the teeth, and make them look
like old things.*

Benjamin Franklin

Epidemiologic Notes and Reports

Update on Bilious Plague—Pennsylvania, 1793

The severe outbreak of the bilious remitting plague that struck Philadelphia in August of this year has subsided.

The epidemic reached its height the second week in October, with 720 deaths recorded. Cases declined steadily during the last 2 weeks of the month—after a spell of cold weather—and only scattered cases were reported through November. Because of disruption in the maintenance of statistics, mortality can only be approximated. For the city population of less than 45,000 there were records of 4,044 burials in the period August 1–November 9. The excess mortality for the 14-week period approaches 8% of the total population (1).

The panic and suffering of the citizens during the course of the epidemic are difficult to describe. Because of their number, victims were usually buried, without change of clothes or preparation, within an hour or 2 of their death. At least 191 children whose parents died during the epidemic were admitted to the emergency city orphanage. Thousands of citizens left the city to escape the contagion, the functioning of city and state governments was interrupted, the residence of President Washington was moved to Germantown, and cabinet meetings were conducted in the neighborhood of the temporary White House (1).

Characteristic symptoms of this malady are a chilly fit of some duration, then a quick, tense pulse, hot skin, pain in the head, back, and limbs, flushed countenance, inflamed eyes, moist tongue, oppression and sense of fullness at the stomach, and dry wretchings. These symptoms generally continued 1–5 days and then gradually abated. However, in severe cases the febrile symptoms subsided but were succeeded by severe vomiting, often of matter resembling coffee grounds in color, commonly called “the black vomit.” This was sometimes accompanied with or succeeded by hemorrhages from the nose, gums, and other parts of the body, a yellowish purple color and putrescent appearance of the whole body, hiccups, agitations, deep and distressful sighing, comotose dilerium, and finally, death. When the disease proved fatal it was generally between the fifth and eighth days (2).

There prevails a great diversity of opinion on the origin of the disorder. Captain Falconer, health officer of Philadelphia, notes that the outbreak has been attributed to the importation of putrified vegetable and animal matters (in particular one unusually offensive quantity of damaged coffee that rotted on the docks) or to spread from one of several vessels docking at the port in late summer.

Official notice was taken of the disorder on August 22 by the Mayor of Philadelphia, Matthew Clarkson, Esq. Mr. Clarkson ordered city commissioners to have the streets properly cleansed and purified and to have all the filth immediately hauled away. Similar orders were given

to the clerks of the market. On August 29, the Governor of Pennsylvania addressed the legislature and assured them that the health officer and physician of the port would make every effort to remove the public inquietude (2). Earlier, on August 26, the Philadelphia College of Physicians met and subsequently published an address to the mayor and the citizens of Philadelphia. It contained the following recommendations:

- § avoid all unnecessary intercourse with the infected;
- § place marks on the doors or windows of the infected;
- § pay great attention to cleanliness and airing of the rooms of the sick;
- § provide a hospital in the neighborhood of the city for reception of the infected;
- § put a stop to the tolling of the bells;
- § bury those who died of the disorder as privately as possible;
- § keep the streets and wharves clean;
- § avoid all fatigue of body and mind and standing or sitting in the sun or in the open air;
- § accommodate the dress to the weather; dress rather in warm than in cool clothing; and
- § avoid intemperance but use fermented liquors, such as wine, beer, and cider, with moderation.

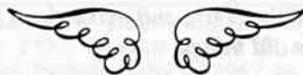
The College likewise declared that, in its opinion, fires in the streets were a very dangerous means of stopping the progress of the fever; the College, itself, places more dependence on the burning of gun powder. The benefits of vinegar and camphor, the College added, were confined chiefly to infected rooms, and they could not be too often used on handkerchiefs, or in smelling bottles, by persons who attended the sick (3).

Dr. Rush has been highly successful in treating patients with a regimen of heroic doses of calomel and jalap, copious blood letting, a low caloric diet, high fluid intake, and local application of cold water. Dr. John Redman, President of the Philadelphia College of Physicians, advocates a somewhat different regime with only one purge followed by administration of antimitics, wine or cordials, and 2 spoonfuls of decoction of snake root every 2 hours.

When the epidemic subsided, there was such relief that a special day of thanksgiving was proclaimed throughout the state on December 12 (1).

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2. Carey M: A short Account of the Malignant Fever, Lately Prevalent in Philadelphia: With a Statement of the Proceedings that Took Place on the Subject, in Different Parts of the United States. Philadelphia, printed by the author, January 16, 1794. Reprinted by Arno Press Inc, 1970
3. Henry FP (ed): Founders' Week Memorial Volume. Philadelphia, F.A. Davis Company, 1909



Cynanche angina—Connecticut

The epidemic of cynanche angina (also known as angina maligna or malignant quinsy) that appeared in Guilford in 1769 and has spread through a series of Connecticut towns has most recently caused increased deaths in Litchfield. The colonial surveillance system based on reporting of burials by selected religious societies identified excess mortality last year in Guilford, Hartford, and Middletown (Table 1) but until earlier this year Litchfield was spared. The relationship of the angina epidemic to the spreading malady of prim, the popular hedge in Connecticut that began mysteriously to die in 1770, continues to be a cause of speculation. Likewise, whether the increase in the epidemic is related to the meteor of 1775 is unknown (1).

Fear has been expressed that the angina epidemic may reach the proportions of the epidemic of 1735-1740. That epidemic began in Kingston, New Hampshire, in May 1735 and was fatal to the first 40 persons afflicted. Spread was slow, the disease taking 3 months to reach Boston. The disease gradually travelled westward and was 2 years in reaching the river Hudson, distant from Kingston about 200 miles in a strait line. By 1740 many thousands had died including half the children of Haverhill, Massachusetts.

First reported in the colonies by Cotton Mather in 1659 (as "the Malady of Bladders in the Windpipe"), angina maligna has affected mostly children and persons less than 20 years of age. Its symptoms generally are a swelled throat with white or ash-colored specks, an efflorescence of the skin, great debility of the whole system, and a tendency to

putridity. In general, the larger cities—Boston, New York, Philadelphia and Charleston—have been spared the worst of the epidemics, which have been more severe in smaller towns and villages. The malady has not been restricted to the Colonies, as epidemics in Europe have recently been reported from Utrecht in 1769-70 and from several towns in Normandy (including Forges and Licieux) in 1774 (2).

References

1. Webster N: A Brief History of Epidemic and Pestilential Diseases. New York, Burt Franklin, originally published 1799, reprinted 1970
2. Hirsch A: Handbook of Geographical and Historical Pathology. Cheighton C, translator, London, The New Sydenham Society, 1883-1886

TABLE 1. Mortality Bills of Selected Religious Societies in Connecticut Towns, 1768-1776

	Guilford	Hartford	Litchfield	Middletown	New Haven
1768	21	17	31	30	21
1769	43	27	19	27	31
1770	14	34	18	41	15
1771	10	32	35	38	18
1772	17	33	36	38	19
1773	35	32	36	39	42
1774	13	31	27	30	21
1775	29	74	31	63	21
1776*	32	79	82	78	31

*Annualized from reports of first 6 months.

One of the most successful physicians I have ever known, has assured me, that he used more bread pills, drops of colored water, & powders of hickory ashes, than of all other medicines put together. It was certainly a pious fraud.

Thomas Jefferson



His [George Washington's] illnesses were of rare occurrence, but were particularly severe. His aversion to the use of medicine was extreme; and, even when in great suffering, it was only by the entreaties of his lady, and the respectful, yet beseeching look of his oldest friend and companion in arms (Dr. James Craik), that he could be prevailed upon to take the slightest preparation of medicine.

George Washington Custis

* In celebration of the nation's bicentennial, this companion issue of the *Morbidity and Mortality Weekly Report* was written as it might have been in the eighteenth century with the exception of an occasional twentieth-century editorial note, always so dated. The articles were written by Center for Disease Control experts on the various diseases and are based on historical accounts or trends.

Although there were registration laws in the Colonies, they were often ignored. As a result, there were no good bills of mortality kept by the Colonies. The best mortality data from this period came from private sources—often a physician or a clergyman who kept such figures for a town or for a congregation. The United States did not begin officially keeping federal mortality records until the 1850 Census. Morbidity statistics for this period are even scarcer; where they exist, they are very localized in nature, with the exception of data on smallpox and yellow fever.

The current medical terms for the diseases discussed in this issue are: Small Pokkes—Smallpox; Agues—Malaria; Consumption—Tuberculosis; Itch—Scabies; Measles—Small Pokkes—Measles; Bloody Flux—Dysentery; Large Pokkes—Syphilis; Bilious Plague—Yellow Fever; Cynanche angina—Diphtheria.

