

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

Vaccination, Dispossession, and the Indigenous Interior

SETH ARCHER

SUMMARY: This article explores a poorly understood smallpox vaccination campaign targeting Native Americans in the 1830s. While previous scholars have addressed the motivations of U.S. officials in launching the campaign, the author focuses on Indigenous people's interest in disease prevention and their reception of American physicians and vaccine technology across a broad swath of North America. Resistance to vaccination was not uncommon among Native people, yet many were open to the new form of preventive medicine, including some who sought it out and others who demanded it from the government. Departing from a scholarly consensus, the author argues, first, that the federal vaccination program should be viewed as a successful public health intervention in Indian Country and, second, that this success owed to Indigenous nations' desire for protection against a singularly destructive pathogen.

KEYWORDS: American Indians, smallpox, vaccination, U.S. government, nineteenth century

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

In the spring of 1832, a mixed group of Shawnee and Seneca people faced imminent expulsion from their homes in western Ohio. Under duress the previous year, they had signed a treaty enabling the federal government to remove them beyond the borders of the nation. Since it seemed there was no fighting expulsion, the Shawnees and Senecas strategized. If they could not remain on lands earlier promised them, they could at least protect their health on the long journey west: they refused to budge until the United States vaccinated them against smallpox.¹ In fact, the people had some basis for this demand. One month earlier, Congress had appropriated funds for a major public health campaign. Over the next decade, tens of thousands of Native people across a vast stretch of the North American interior accepted the prophylaxis against *variola*. Indigenous leaders actively sought vaccine from the nation that had invaded their homelands and was orchestrating their dispossession; in a similar paradox, the United States immunized people it had slated for ethnic cleansing.

This article considers the origins and outcomes of this public health program, paying special attention to Indian Country where Native Americans met with U.S. medical personnel and their vaccine technology. While the Bureau of Indian Affairs papers have been mined by

¹ James B. Gardiner to Lewis Cass, June 3, 1832, in *Correspondence on the Subject of the Emigration of the Indians* (Senate Doc. 512, 22nd Cong., 1st sess.), 5 vols. (Washington, D.C., 1834–35), 1:692–93. Following the practice of scholars in my field, I employ “Native American,” “Indigenous,” and “American Indian” alternately depending on context. Whenever possible, I use the ethnonym recognized by the people themselves, e.g., Kaws rather than Kansas. To avoid confusion, some Native groups are identified by multiple names the first time they appear in the text, e.g., “Eastern Dakotas (Santee Sioux),” with the preferred term appearing thereafter.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

generations of scholars, all but a few have overlooked the detailed correspondence relating to vaccination; even those scholars tend to assume that “little in the archival record reflects the views of Native people themselves.”² This assumption is incorrect. Though typically mediated by those who recorded them, Native voices can be heard—and their actions and decision-making are broadly visible—in the archives.³ Several petitions discussed below were authored by Native or mixed-descent people themselves. Government documents thus tell a novel story about a diverse set of Indigenous communities and about the empire against which they struggled to preserve their sovereignty. Remarkably, the archival record also reveals individual beneficiaries of the public health campaign, including tribal leaders and other prominent Kaws, Ojibwes, Menominees, Shawnees, Weas, and Dakota (Sioux) people.

Native American interest in vaccination distinguishes this research project from a host of important studies elucidating the experiences of nonwhite peoples at the hands of antebellum

² Ruth Bloch Rubin, “State Preventive Medicine: Public Health, Indian Removal, and the Growth of State Capacity, 1800–1840,” *Stud. Amer. Polit. Dev.* 34, no. 1 (2020): 24–43, quotation on 34.

³ Indigenous historical narratives (including oral traditions) for the nineteenth century tend to focus on the destructiveness of smallpox, settlers’ weaponization of the virus, and spiritual power marshalled against it, as opposed to immunization or local containment of *variola*; see, e.g., Larry Cebula, *Plateau Indians and the Quest for Spiritual Power* (Lincoln: University of Nebraska Press, 2003), 37–38; Joshua L. Reid, *The Sea Is My Country: The Maritime World of the Makahs* (New Haven, Conn.: Yale University Press, 2015), 117–21; and John Lutz, “Smallpox, Bioterrorism and Colonialism in Northwest America” (paper, Western History Association, Albuquerque, N.M., October 15, 2020). Nation-specific histories of public health and preventive medicine in this era largely await their historians; an exception and model is Paul Kelton, *Cherokee Medicine, Colonial Germs: An Indigenous Nation’s Fight Against Smallpox, 1518–1824* (Norman: University of Oklahoma Press, 2015).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

American medicine.⁴ Enslaved people endured all manner of nonconsensual medical procedures, including vaccination to propagate lymph and to prevent the spread of *variola* on plantations. (Instances of Indigenous children exploited in this manner also appear in government documents.)⁵ Yet the 1830s campaign in Indian Country is a different story: Indigenous people were largely receptive to vaccination, and the broader campaign helped to protect hundreds of Indigenous communities just a few years before the most destructive smallpox epidemic of the nineteenth century. Some of these Native American nations went on to mount a spirited, decades-long defense of their homelands against U.S. empire. While there is no direct evidence that increased resistance to smallpox contributed to a broader resistance to empire (much less the persistence of sovereignty), it is apparent that the federal government was working at cross-purposes by extending an important form of preventive medicine to rising Indigenous adversaries such as the Lakotas and Western Dakotas.

Indigenous people's responses to this opportunity were mixed. Many in the Mississippi and Missouri river watersheds refused or resisted the vaccine, suspecting a Trojan horse or germ

⁴ Recent exemplary work in this vein includes Deirdre Cooper Owens, *Medical Bondage: Race, Gender, and the Origins of American Gynecology* (Athens: University of Georgia Press, 2017); Jim Downs, *Maladies of Empire: How Colonialism, Slavery, and War Transformed Medicine* (Cambridge, Mass.: Harvard University Press, 2021), esp. chap. 7; and Christopher D. E. Willoughby, *Masters of Health: Racial Science and Slavery in U.S. Medical Schools* (Chapel Hill: University of North Carolina Press, 2022), chap. 5.

⁵ W. L. Wharton to Elbert Herring, February 4, 1832, roll 223 (Creek Agency, 1831–32), M234: Letters Received by the Office of Indian Affairs, 1824–81, Records of the Office of Indian Affairs, RG75, National Archives, Washington, D.C. (hereafter OIA Letters Received).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

warfare; others, like the Senecas and Shawnees, sought it out or demanded it.⁶ In some Indigenous communities, the arrival of vaccine was momentous. For others, it seemed crucial to surviving the disruptions caused by dispossession and settler encroachment. In the pages that follow I argue, first, that the federal vaccination program should be viewed as a successful public health intervention in Indian Country and, second, that its success owed to the desire of Indigenous communities for protection against a singularly destructive pathogen. Taken as a whole, Native American responses to vaccination in this era repudiate the common conception of Indigenous medicine as determined solely by local culture, policed by tradition and adverse to change. Tens of thousands of Native people—in ancestral villages, on the seasonal round, in diaspora, and in new polyglot communities—proved ready to try something new against the old, shared threat of smallpox.

Vaccination sits in a complicated relationship with broader U.S. goals in this period. Previous scholarship understandably viewed the campaign as a form of “biopower” or realpolitik, in harmony with U.S. programs of ethnic cleansing in the East and pacification in the

⁶ It is unclear whether Shawnees and Senecas had learned of the recent legislation or only of the “prevalence of the small-pox west of the Mississippi” that spring (Gardiner to Cass, June 3, 1832, in *Correspondence on the Subject* [n. 1], 1:692). Five months earlier, Ohio Shawnee headmen had demanded “good and wholesome provisions” but not medicine specifically (Lalloway [John Perry] et al. to OIA, January 5, 1832, roll 601 [Ohio Agency, 1831–38], OIA Letters Received [n. 5]). A local physician ultimately vaccinated some 900 people at Lewistown and Wapokoneta with vaccine matter couriered north from Dayton; that vaccine apparently proved inert, as did other matter used to revaccinate; thus, the Ohio Indians were likely unprotected on their journey west (A[biel] H[ovey] Lord to J[ames] B. Gardiner, September 12, 1832, roll 601, OIA Letters Received [n. 5]; James B. Gardiner to Lewis Cass, February 25, 1833, in *Correspondence on the Subject* [n. 1], 4:111–16, esp. 113; David Robb to Elbert Herring, July 20, 1833, roll 601, OIA Letters Received [n. 5]).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

West.⁷ While the politics are important (and are addressed in the next section of this essay), the *effectiveness* of this new form of preventive medicine was the principal concern of the tens of thousands of Indigenous people who received vaccinators into their communities or met them at federal Indian agencies. If we shift our attention from the interests of the federal government to the needs of Native Americans and the labor of American medical personnel sent to work among them, a new story emerges about people for whom public health became not only a priority but a survival strategy. The U.S. campaign to vaccinate Native Americans broadens our understanding of the history of medicine by revealing the central role of Indigenous people in protecting their communities against *variola* while at the same time reasserting their sovereignty in the face of American imperial ambitions.

Disease, Expansion, and Federal Power

In 1831, smallpox erupted across the interior lowlands of North America. Predictions were dire. Tribal nations from what is today eastern Kansas to southeastern Wisconsin and northwest to the Dakotas lay in the path of likely infection. Federal agents on both sides of the Mississippi issued the alarm to the secretary of war, who was responsible for Indian affairs. With pressure from the war department, the Committee on Indian Affairs in Congress prepared a bill to allocate funds. The government's campaign ultimately reached a broad swath of Indigenous societies across an

⁷ For “bio-power,” see Michel Foucault, *The History of Sexuality*, vol. 1, trans. Robert Hurley (New York: Random House, 1978), 140–44. The scholarship alluded to is discussed below.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

enormous territory. By one tally, as many as fifty thousand Native Americans were vaccinated with federal funds between 1832 and 1841.⁸

The principal question attracting scholarly attention is why a government that authorized Andrew Jackson’s genocidal plan to drive Indians out of the United States would then implement a philanthropic program to preserve their health. In an influential study, historian J. Diane Pearson argued that the “real motivation” of Congress was to assist Indian removal and to “expedite westward expansion.” Prophylaxis, that is, served the interests of the government first; Native groups not in its good graces were “purposely excluded.” The campaign, according to Pearson, was short-lived and served to “legitimize and justify an otherwise intrusive federal presence” in Native communities.⁹

U.S. policies and attitudes toward Native peoples in this era, particularly among Jackson’s supporters, lend credence to this argument. The United States was a rapidly industrializing society with population growth in the North and South, territorial expansion into the West, plantation slavery exploding across the Deep South, and a concerted effort—mostly by

⁸ J. Diane Pearson, “Lewis Cass and the Politics of Disease: The Indian Vaccination Act of 1832,” *Wicazo Sa Rev.* 18, no. 2 (2003): 9–35, esp. 14–17. Pearson’s figures—the only published tally to date—do not include communities that self-administered vaccine, about which see below.

⁹ Pearson, “Lewis Cass and the Politics of Disease” (n. 8), 9 (“real motivation”), 18 (“purposely excluded”), 10 (“legitimize and justify”). For similar perspectives, see David S. Jones, *Rationalizing Epidemics: Meanings and Uses of American Indian Mortality since 1600* (Cambridge, Mass.: Harvard University Press, 2004), 113–17; Stephen J. Rockwell, *Indian Affairs and the Administrative State in the Nineteenth Century* (Cambridge: Cambridge University Press, 2010), 152; and Rubin, “State Preventive Medicine” (n. 2). An important contribution by Pearson is tracing the legacy of the campaign in federal health provisions of the 1850s and 1860s.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

planters—to eliminate Native people for the sake of land. The spread of disease along the frontier posed a threat to U.S. expansion and to the resettlement of dispossessed eastern Natives. Pearson’s argument would seem to resolve the contradiction of a hostile state protecting the health of its victims.

The evidence, however, is mixed. Several Indigenous societies covered by the program were not U.S. allies; some were enemy combatants. Bands from at least four tribal nations had taken up arms against the U.S. at the exact moment physicians and surgeons were dispatched to the frontier to vaccinate them.¹⁰ Others posed a constant threat to American traders. Vaccination may have been “good politics” for Democrats hoping to expedite removal of Indians out of the slave South, but this cannot explain either the “constant demand” for vaccine among embattled southern Natives preparing for deportation or the more than eleven thousand Native people across a vast expanse of northern Michigan, Wisconsin, and Minnesota, who chose to get vaccinated on the government’s dime.¹¹ Pearson also struggles to explain why Plains nations such as the Pawnees and Kaws were included in the program: residing on homelands hundreds of miles west of U.S. territory, these semisedentary bands were neither slated for removal nor well enough known by federal agents to be considered allies, despite vague treaties of “peace and

¹⁰ These included Ho-Chunks (Winnebagos), Kickapoos, Potawatomes, and Meskwakis (Foxes) in the Black Hawk War of 1832. For Meskwaki participants, see John Robb to Taimah et al., September 4, 1832, roll 9, M21: Letters Sent by the Office of Indian Affairs, 1824–81, Records of the Office of Indian Affairs, RG75, National Archives, Washington, D.C. (hereafter OIA Letters Sent).

¹¹ Pearson, “Lewis Cass and the Politics of Disease” (n. 8), 12 (“good politics”); Wharton to Herring, February 4, 1832, roll 223, OIA Letters Received (n. 5) (“constant demand”).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

friendship” drawn up by William Clark in the 1810s.¹² Just weeks before vaccine legislation reached the House floor, the war department and Congress were notified of Pawnee violence against refugee Indians deported to their territory, posing a threat to Indian removal generally.¹³ Reports of Pawnee violence against American traders on the Santa Fe Trail also alarmed lawmakers.¹⁴

As for Native nations in the East, a top U.S. official in 1833 suggested that *removal* plans were impeding *vaccination*: a flurry of activity among American Indians finalizing treaty terms and preparing for deportation had “conspired to retard the progress of the physicians, and to limit

¹² “Treaty with the Kansa, 1815,” in Charles J. Kappler, *Indian Affairs: Laws and Treaties*, 7 vols. (Washington, D.C.: Government Printing Office, 1904), 2:123–524; “Treaty with the Pawnee Republic, 1818,” in *ibid.*, 2:158–59. Pearson argues that Native groups unfriendly to the United States received vaccine because they were “economically important” (“Lewis Cass and the Politics of Disease” [n. 8], 9, 29). In fact, the trade supplied by Pawnees was marginal by 1832; see Richard White, *The Roots of Dependency: Subsistence, Environment, and Social Change among the Choctaws, Pawnees, and Navajos* (Lincoln: University of Nebraska Press, 1983), 190.

¹³ Isaac McCoy to Lewis Cass, February 1, 1832, H.R. Doc. 172, 22nd Cong., 1st sess. (The letter was read aloud in the House on March 16.)

¹⁴ Isaac McCoy, *History of Baptist Indian Missions* (Washington, D.C., and New York, 1840), 441. Congressional activity raises still more questions about Pearson’s thesis. Of the thirty senators who voted in favor of vaccination, eighteen had been seated and registered a vote on the 1830 Indian Removal Act; ten voted against and eight in favor. A slim majority, then, of those who voted against removal voted in favor of vaccination, as might be expected. But among the eight who voted for both removal and vaccination, no pattern emerges: pro- and anti-Jackson, they represented southern, western, and northern states. Jackson was a polarizing figure but apparently played no role in the vaccination legislation, signing it without comment (Rubin, “State Preventive Medicine” [n. 2], 37). It is unclear how many representatives opposed vaccination as the House did a voice vote. Full transcripts of the congressional record were not set down until later in the nineteenth century.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

their labors.”¹⁵ This is not to suggest that the commissioner of Indian affairs was opposed to the removal policy he was charged with carrying out. Indeed, scholars have established that the federal government aimed to execute dispossession as cheaply and efficiently as possible.¹⁶ Yet when it came to the smallpox prophylaxis, the commissioner “willingly accede[d]” to requests by federal agents and by Native American petitioners.¹⁷

Posing essentially the same question as Pearson, historian Andrew C. Isenberg arrived at a different explanation by homing in on the frontier. For Isenberg, Indian vaccination offered U.S. leaders a solution to the “tenuousness” of American presence in the West. Medical personnel and government agents could expand that presence and help the U.S. “realize [its] claim to sovereignty” in the region. For the same reason, Congress hoped to demonstrate its beneficence to western Natives, with vaccination operating as a lever to “detach” them from alliances with Mexico and Great Britain. Finally, Isenberg argues that white Americans’ own fears of contracting smallpox trumped their fear of Indigenous people.¹⁸

Isenberg’s Western gaze fills an important gap, though this framing, too, is incomplete. Advocates of Indian vaccination certainly viewed it as a form of medical philanthropy, yet many

¹⁵ Elbert Herring to Lewis Cass, January 31, 1833, in H. R. Doc. 82, 22nd Cong., 2nd sess. (1832 [sic]).

¹⁶ Claudio Saunt, *Unworthy Republic: The Dispossession of Native Americans and the Road to Indian Territory* (New York: Norton, 2020).

¹⁷ Elbert Herring to George B. Porter, May 18, 1833, roll 10, OIA Letters Sent (n. 10). Annuities negotiated by Indigenous leaders in this era also compelled U.S. financial obligations for one to three decades and, in a few cases, in perpetuity (Emilie Connolly, “Fiduciary Colonialism: Annuities and Native Dispossession in the Early United States,” *Amer. Hist. Rev.* 127, no. 1 [2022]: 223–53).

¹⁸ Andrew C. Isenberg, “An Empire of Remedy: Vaccination, Natives, and Narratives in the North American West,” *Pacific Hist. Rev.* 86, no. 1 (2017): 84–113, quotations on 88 and 92.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

had rationalized that dispossession itself was benevolent: Indians would be better off separated from Americans, in lands of their own where they could continue the “civilization” process without incursions by land-hungry settlers and without the temptation of overtures by European powers seeking assistance in military conflicts.¹⁹ Deploying vaccine to gain competitive advantage against Britain and Mexico is an intriguing notion that deserves further research. Yet irrespective of geopolitics on the frontier, it is clear that the United States was following a European precedent by offering vaccination to trade partners and by mandating it for indigent and colonized peoples.²⁰ As a late arrival to public health interventions, the United States aimed

¹⁹ See, e.g., McCoy to Cass, February 1, 1832, H.R. Doc. 172, 22nd Cong., 1st sess.; T. Hartley Crawford, “Report of the Commissioner of Indian Affairs,” November 25, 1838, in *Annual Report of the Commissioner of Indian Affairs* (Washington, D.C., 1838), 3–19, esp. 3–4. “Vanishing” Indian ideology also exerted a strong pull, with both proremoval and antiremoval Americans believing that Indigenous populations were in steep decline and that contact with whites would only hasten their demise; see, e.g., Brian W. Dippie, *The Vanishing American: White Attitudes and U.S. Indian Policy* (Lawrence: University Press of Kansas, 1982), 60–65; Nicholas Guyatt, *Bind Us Apart: How Enlightened Americans Invented Racial Segregation* (New York: Basic, 2016), 281–305.

²⁰ European immunization campaigns among poor and frontier populations in the first decade of the nineteenth century alone included the Spanish, British, French, and Russian empires, the German states, Italy, the Netherlands, Denmark, and Sweden. Millions were vaccinated in British-controlled India from 1802; widespread variolation (inoculation with the smallpox *variola*) in South Asian medicine seems to have aided in the reception of the new prophylaxis, which was also facilitated by Indian vaccinators employed by the British (Michael Bennett, *War Against Smallpox: Edward Jenner and the Global Spread of Vaccination* [Cambridge: Cambridge University Press, 2020], 243–66). Like Native Americans, a “significant number” of Indians and Sri Lankans “sought out” vaccination (*ibid.*, 257). Some West African populations in contact with Europeans were also receptive (Manuel Barcia, *The Yellow Demon of Fever: Fighting Disease in the Nineteenth-Century Transatlantic Slave Trade* [New Haven, Conn.: Yale University Press, 2020], 178–79).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

to demonstrate that the young nation was no less enlightened and progressive than its predecessors. While white Americans remained vulnerable to smallpox, as Isenberg claims, and while the disease exacted a toll in U.S. communities, smallpox had long since proven especially lethal in Indian Country, where most communities had no access to vaccine. Many American citizens had access to cheap or free vaccine in case of an outbreak; New England and the mid-Atlantic states were broadly vaccinated by 1830.²¹ The disease had, for a time, been eradicated from Maryland.²² As early as 1809 an alarmed New York physician warned that the “spirit of vaccination” had spread so rapidly that the “fear of smallpox vanished” to the point that people no longer bothered getting immunized.²³ Between 1816 and 1824 not a single smallpox death was reported in Massachusetts.²⁴ A half-hearted and short-lived federal vaccination program (repealed in 1822) suggests that the threat of smallpox was insufficient to warrant either the expense or the risks to federalism.²⁵

²¹ Bennett, *War Against Smallpox* (n. 20), 279–89.

²² Tess Lanzarotta and Marco A. Ramos, “Mistrust in Medicine: The Rise and Fall of America’s First Vaccine Institute,” *Amer. J. Pub. Health* 108, no. 6 (2018): 741–47, esp. 743.

²³ Samuel Akerly, “Practical Remarks on Vaccination as a Preventative of Small-Pox,” *Med. Repository* 2 (May–July 1810): 30–35, quotation on 33.

²⁴ Ian Glynn and Jenifer Glynn, *The Life and Death of Smallpox* (Cambridge: Cambridge University Press, 2004), 139–40.

²⁵ The Act to Encourage Vaccination (1813) created a one-man vaccine institute in Baltimore. Opposition on the grounds of federalism dogged the program from the outset. Funding expired after five years, and the legislation was repealed after faulty vaccinations killed ten people in North Carolina. See Lanzarotta and Ramos, “Mistrust in Medicine” (n. 22); and Andrea Rusnock, “Humanitarian Goals, Financial Constraints, and Residual Questions of America’s First Vaccine Institute,” *Amer. J. Pub. Health* 108, no.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

No such serenity existed in Indian Country. Several Indigenous nations had been struck by smallpox more than once in the early nineteenth century; others had experienced outbreaks dating back to the seventeenth.²⁶ For reasons as yet poorly understood, *variola* struck with unusual force in nineteenth-century Native American communities, with high rates of morbidity and mortality.²⁷ Various groups developed strategies for avoiding infection. Comanches adapted their trading and raiding networks to minimize risk.²⁸ Others migrated at the first report of an outbreak.²⁹ Though free of smallpox for eight years, Ojibwe people at Sault Ste. Marie were one

6 (2018): 715–17. Of course no one knew how destructive smallpox would later prove during the American Civil War.

²⁶ For the seventeenth century, see, e.g., Paul Kelton, *Epidemics and Enslavement: Biological Catastrophe in the Native Southeast, 1492–1715* (Lincoln: University of Nebraska Press, 2007), 143–58.

²⁷ Indigenous communities occasionally met with aggressive forms of the disease—confluent or flat (hemorrhagic) smallpox—both of which often proved fatal; see Edwin Thompson Denig, “Indian Tribes of the Upper Missouri” [ca. 1854], in *Forty-Sixth Annual Report of the Bureau of American Ethnology, 1928–1929*, ed. J. N. B. Hewitt (Washington, D.C.: Smithsonian, 1930), 399, 428; and E. Wagner Stearn and Allen E. Stearn, *The Effect of Smallpox on the Destiny of the Amerindian* (Boston: Bruce Humphries, 1945), 73. For the severity of smallpox in nineteenth-century Indian Country, see Jones, *Rationalizing Epidemics* (n. 9), 103–10. For clinical classifications of the disease, see A. R. Rao, *Smallpox* (Bombay [Mumbai]: Kothari, 1972), 9–28; and Frank Fenner et al., *Smallpox and Its Eradication* (Geneva: World Health Organization, 1988), 2–68.

²⁸ Pekka Hämäläinen, “The Politics of Grass: European Expansion, Ecological Change, and Indigenous Power in the Southwest Borderlands,” *William & Mary Quart.* 67, no. 2 (2010): 173–208, esp. 187–88, 200.

²⁹ Denig, “Indian Tribes of the Upper Missouri” (n. 27), 595; *Edmonton House Post Journal*, October 14–16, 1870, B.60/a/37, Hudson’s Bay Company Archives, Winnipeg, MB.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

of many communities described by outsiders as “trembl[ing] at the bare name” of the disease.³⁰

For good reason: Ojibwes had endured no fewer than five smallpox outbreaks since 1750.

However afraid of smallpox white Americans may have been, there is scant evidence that Congress or the war department acted on behalf of *their* health. The legislation itself was titled “An act to provide the means of extending the benefits of vaccination, as a preventive of the small pox, to the Indian tribes, and thereby, as far as possible, to save them from the destructive ravages of the disease.”³¹ House debate focused on the size and cost of medical staff required to execute the program and whether current Indian agents or new “special agents” should oversee it.³² Frontier whites are nowhere mentioned. Nor do white Americans appear in the public or private writings related to vaccination by its leading advocate: in the relevant passages of his journal for 1831–32, Isaac McCoy discusses only Indigenous communities.

³⁰ Douglass Houghton to Henry R. Schoolcraft, September 21, 1832, roll 421 (Michigan Superintendency, 1832–35), OIA Letters Received (n. 5). Ojibwes were “firmly of the opinion” that a 1770 outbreak had been deliberately caused by a fur trade manager, spread via articles of trade, “for the purpose of punishing them” (ibid.). For a discussion, see Gregory Evans Dowd, *Groundless: Rumors, Legends, and Hoaxes on the Early American Frontier* (Baltimore: Johns Hopkins University Press, 2015), 232–42.

³¹ *House J.*, 22nd Cong., 1st sess., April 9, 1832; *Senate J.*, 22nd Cong., 1st sess., April 24, 1832. As early as 1822, promoters of the “civilizing” mission to the Indians suggested vaccination and American medical knowledge more generally as key strategies; see Jedidiah Morse, *A Report to the Secretary of War of the United States on Indian Affairs* (New Haven, Conn., 1822), 91–92.

³² “Vaccination of the Indians,” *Gales & Seaton’s Register*, April 4, 1832. The bill’s author proposed a successful amendment to add “the other tribes west of the Arkansas” River where smallpox was spreading, yet it is unclear whether Native people in that region (present-day Oklahoma) ultimately received the vaccine (ibid.). It should be added that the 22nd Congress enjoyed financing to act on internal improvements and humanitarian programs (Daniel Walker Howe, *What Hath God Wrought: The Transformation of America, 1815–1848* [New York: Oxford University Press, 2007], 360–66).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

The motivations of lawmakers and vaccination promoters such as McCoy cannot be reduced to a single factor. Some legislators, especially antiremoval northerners, were compelled by paternalism and by “motives of humanity,” or at least by the perception they were so compelled.³³ Western legislators were no doubt concerned about smallpox disrupting trade and affecting white populations. For his part, the commissioner of Indian affairs seems to have viewed vaccination as part of a broader program to preserve Native health during removal: in his January 1833 status report to the secretary of war, Elbert Herring explained that vaccination was proceeding smoothly and would probably exhaust all funds allocated by Congress; but any funds remaining should be used in “securing the Indians from sickness, and in restoring health when lost.” Indeed, Herring beseeched Congress to amend the legislation to “authorize the application” of leftover funds for the “general purposes” of Native health.³⁴

³³ “Vaccination of the Indians,” *Gales & Seaton’s Register*, April 4, 1832 (“motives of humanity,” “feelings of humanity”). See also Houghton to Schoolcraft, September 21, 1832, OIA Letters Received (n. 5) (“every motive of humanity”). Rubin argues that distinct principles of northerners (humanitarianism and paternalism toward Indians) and westerners (trade and stability on the frontier) joined to outnumber southerners set on expanding slavery and therefore limiting federal control over Indian affairs (“State Preventive Medicine” [n. 2]). Yet Rubin’s claim about the rising costs of removal as the principal motivation for the legislation are not borne out by the facts. Concerns over the cost of removal were not tied to the spread of smallpox specifically and probably not to Native health at all—at least not by May 1832 when the act was passed: Choctaw removal, which occurred in stages between 1831 and 1833, was hamstrung by graft, poor planning, inadequate rations, and severe winter weather (Arthur H. DeRosier, *The Removal of the Choctaw Indians* [Knoxville: University of Tennessee Press, 1970], 158). Hundreds of Choctaws succumbed to cholera on the way west, but the disease struck *after* passage of the vaccination act; vaccine obviously had no effect on *Vibrio cholerae*.

³⁴ Herring to Cass, January 31, 1833, in H.R. Doc. 82, 22nd Cong., 2nd sess. Herring’s “general purposes” of health included “relief of emigrants passing through the process of acclimation, or suffering

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

Perhaps Herring merely hoped to avoid a public relations disaster in which dispossessed people contracted smallpox from western Natives, imperiling removal policy.³⁵ Either way, the United States allocated resources for disease prevention among noncitizens in an era when public health was typically left to state and local authorities or private charities.³⁶ Federal policy, in short, did not preclude attempts, however half-hearted (“as far as possible,” in the language of the legislation), to preserve the health of American Indians. By treating vaccination simply as biopower—part and parcel of ethnic cleansing and serving the interests of the government first—scholars have told a partial story. Quite apart from the motivations of lawmakers were the needs and desires of Indigenous people themselves and the varied social conditions across Indian Country. A more complete story of the campaign requires deeper consideration of the Indigenous communities that lay in the path of smallpox and of the physicians and surgeons dispatched to prevent its spread.

from the fatigue of travelling, and change in their modes of life” (ibid.). Congress had created the office of Commissioner for Indian Affairs (housed in the war department) two months after passing the vaccination act; in addition to orchestrating Indian removal, Herring was tasked with administering the various treaty terms established over the preceding decade.

³⁵ Pearson, “Lewis Cass and the Politics of Disease” (n. 8), 10, 12.

³⁶ In the 1820s the Treasury Department circumscribed health care provisions for merchant seamen, a holdover from British practice (Gautham Rao, “Administering Entitlement: Governance, Public Health Care, and the Early American State,” *Law & Soc. Inquiry* 37, no. 3 [2012]: 627–56, esp. 629, 640–46).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

The Campaign

American citizens, even those working among Native populations, paid no attention. Over the course of eight years observing Indigenous people in the interior lowlands, painter and travel writer George Catlin failed to notice either the effects of the 1831–32 epidemic or the presence of government vaccinators. Catlin’s popular, two-volume opus mentions vaccination just twice; both descriptions seem to draw on other sources. Catlin claimed that Native communities with firsthand experience of smallpox had been receptive to the procedure but that “tribes in their wild state” refused it. Natives of the Missouri River watershed, whom Catlin observed closely in 1832, were, he claimed, “stubbornly” resistant to vaccination.³⁷

Catlin was mistaken. When smallpox broke out in the summer of 1831, a Baptist missionary and architect of Indian removal was stationed at the epicenter. Isaac McCoy noted that “some hundreds” received the vaccine at his agency at the confluence of the Kansas and Missouri rivers, yet by November twenty-four Shawnee and Delaware people had perished.³⁸ For those out of reach of the agency, the situation was even worse. As many as three thousand Pawnees to the northwest reportedly succumbed to the disease. “Humanity shudders” at the

³⁷ George Catlin, *Letters and Notes on the Manners, Customs, and Conditions of the North American Indians*, 2 vols. (1841; New York: Dover, 1973), 2:258, 259. Catlin was not the only popular writer who failed to notice the public health campaign in Indian Country; see John Francis McDermott, ed., *The Western Journals of Washington Irving* (Norman: University of Oklahoma Press, 1944).

³⁸ Isaac McCoy journal, August 23 and November 22, 1831, Isaac McCoy Collection #422 box 18, Kansas Historical Society, Topeka; McCoy to Cass, February 1, 1832, in H.R. Doc. No. 172, 22nd Cong., 1st sess.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

devastation, McCoy wrote. Yet decimation was also a “weighty argument in favor” of bringing these Indians to the treaty table to secure more Native land (a plan McCoy had originally floated to the U.S. government in 1828). Indeed, for McCoy, Indigenous dispossession would reverse the course of “Indian degradation and decline” and prove that the U.S. government was on a “judicious” and “humane” course. A vacant, thirty- or forty-square-mile patch in Oklahoma would suit the Pawnees just fine, McCoy opined.³⁹

Seven weeks later, in Washington, D.C., McCoy reported intelligence of over four thousand fatalities in the Missouri River Valley and issued a warning to the war department about Native communities upriver: “May I entreat your *early* consideration of this subject, and be allowed, most respectfully to suggest the inquiry whether means could not *speedily* be adopted to arrest this destroying plague by vaccination?” McCoy was confident that Native people would “submit to the operation” and believed that Americans could be found to do the work “for no higher reward than the satisfaction derived from the circumstance of having rescued thousands of men and women and children from this awful calamity.”⁴⁰ Gaining an

³⁹ McCoy to Cass, February 1, 1832, in H.R. Doc. No. 172, 22nd Cong., 1st sess. For rhetoric of “degradation,” see Guyatt, *Bind Us Apart* (n. 19), 17–111. Catlin’s erroneous estimate of “ten thousand or more” Pawnee fatalities (*Letters and Notes* [n. 37], 1:24) has been carried forward by other scholars, e.g., Stearn and Stearn, *Effect of Smallpox on the Destiny of the Amerindian* (n. 27), 79; and Isenberg, “Empire of Remedy” (n. 18), 85.

⁴⁰ Isaac McCoy to Lewis Cass, March 23, 1832, H.R. Doc. 190, 22nd Cong., 1st sess. See also Isaac McCoy journal (n. 38), March 28, 1832. Smallpox was also reported among Potawatomes and Odawas. Menominees were apparently protected through vaccination, as discussed below.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

audience with lawmakers in Washington, D.C., McCoy shortly convinced Rep. John Bell of Tennessee to propose legislation in the House.⁴¹

One consequence of the 1831 smallpox outbreak, then, was to convince removal proponents that decimated western Indians would relinquish their lands and make room for eastern deportees. Another consequence was the promotion of a public health campaign to preserve Native health. The fact that these seemingly disparate responses were elicited in one and the same person (McCoy) goes some way to revealing the conflicted, even contradictory, nature of U.S. empire and its relations with Native Americans in this era.

Having managed Indian affairs since the nation's founding, the war department would preside over the campaign with the bulk of the work performed by military surgeons already assigned to Indian agencies in the Midwest and Deep South. Other surgeons were dispatched across the Mississippi River to Native villages and fur trading posts along the frontier (fig. 1). Civilian surgeons were expected to vaccinate one hundred Indians per day, for which they were compensated six dollars (about two hundred ten dollars today). Military and civilian surgeons alike recorded the names, ages, and tribal affiliation of vaccinees. The Indian agent then certified the roll and disbursed payment.⁴²

⁴¹ Both Bell and the bill's cosponsor in the Senate, Felix Grundy (also of Tenn.), had voted for Indian removal in 1830. Some in Congress opposed vaccination out of a genocidal desire to eliminate Indigenous people; e.g., Sen. Alexander Buckner (Mo.) voiced an opinion that "if they [the Indians] were all dead it would be a blessing to our country" (Isaac McCoy journal [n. 38], April 22, 1832).

⁴² Lewis Cass to Indian Agents ("Circular"), May 10, 1832, H.R. Doc. 82; *Senate J.*, 22nd Cong., 1st sess., April 24, 1832. While some physicians may have viewed their work as a research opportunity, the campaign was not conceived or executed as a form of medical experimentation on American Indians.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.



Figure 1. A federal Indian agency on the Missouri River near present-day Omaha. Karl Bodmer (Swiss, 1809–93), *Bellevue Agency, Post of Major Dougherty*, 1833, watercolor on paper, Joslyn Art Museum, Omaha, Nebr., gift of the Enron Art Foundation, 1986.49.371. Photograph © Bruce M. White, 2019.

Vaccine matter was obtained and prepared in various ways. In what was known as arm-to-arm or serial vaccination, fresh lymph (pus) was taken from a recently vaccinated person to infect another, eliciting the body’s immune response to the live virus.⁴³ Using a lancet, vaccinators made an incision on the arm and inserted the vaccine matter into the wound. Fresh vaccine was

Neither have I found evidence of vaccinators perceiving of bodily constitution (or race) as pertinent to immunization in the 1830s.

⁴³ For cowpox and other orthopoxviruses in the development of vaccination, see Glynn and Glynn, *Life and Death of Smallpox* (n. 24), 177–89; and Fenner et al., *Smallpox and Its Eradication* (n. 27), 278. Dating to the fifteenth century or earlier, variolation (inoculation with the smallpox *variola*) had a higher fatality rate and required quarantine of inoculees (Arthur Boylston, “The Origins of Inoculation,” *J. Roy. Soc. Med.* 105, no. 7 [2012]: 309–13).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

preserved on cotton threads, in ivory-tipped lancets, or between glass plates. Vaccinators also preserved vaccine matter in dried scabs kept in vials or small kits. By all accounts, fresh lymph was more successful than preserved vaccine matter in this era. Yet serial vaccination posed a greater risk of spreading other infections, especially syphilis. For this reason, healthy children were utilized worldwide to produce vaccine lymph for serial vaccination, often without the consent of their kin.⁴⁴

Native Americans, for their part, had been seeking out vaccine for years. Whatever lingering concerns they had about settler armies or traders weaponizing *variola* to weaken or destroy their communities, Indigenous people largely viewed this new form of disease mitigation as desirable.⁴⁵ As early as 1806 Cherokees had begun to purchase or request vaccine from local traders, missionaries, and even the federal government. Haudenosaunee (Iroquois) people in Ontario responded with gratitude in 1807 when the English physician Edward Jenner sent a book explaining the technique he had developed.⁴⁶ By the 1820s Cherokee leaders, many of whom had embraced elements of the U.S. “civilization” campaign, had also embraced vaccination.⁴⁷ Moravian missionaries enjoyed particular success among Cherokees. During an 1824 outbreak, Cherokees arrived “daily” at the Moravian mission to collect vaccine to take back to their

⁴⁴ See Glynn and Glynn, *Life and Death of Smallpox* (n. 24), 168–71; and Bennett, *War Against Smallpox* (n. 20).

⁴⁵ Dowd, by contrast, argues that vaccination “alarm[ed]” Native people as a new means for white Americans to weaponize or utilize smallpox “for their own purposes” (*Groundless* [n. 30], 242).

⁴⁶ Glynn and Glynn, *Life and Death of Smallpox* (n. 24), 128.

⁴⁷ Kelton, *Cherokee Medicine, Colonial Germs* (n. 3), 176–77, 197–210.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

families.⁴⁸ Some federal officials had become aware of eastern Natives' desire to protect their communities against smallpox. Perhaps this knowledge swayed pro-Jackson senators from Georgia and Tennessee to vote in favor of the bill.⁴⁹

Beyond vaccine, western Natives—in a pattern that historians have failed to notice—often requested medicine from traders and other newcomers. Fur trader Edwin Denig complained that his post at the confluence of the Missouri and Yellowstone rivers had “often more the appearance of a hospital than a trading establishment” in the 1830s and 1840s with “demands for medicines and attendance . . . great.”⁵⁰ A German naturalist who had never previously set foot in the Missouri River Valley recorded no fewer than three requests for medicine on his expedition of 1833.⁵¹ And on the Ohio-Michigan border Oscar White complained of great difficulty in performing vaccinations, since “at almost every step my progress was arrested by calls for medical advice and assistance.” Indeed, White found Natives at the Maumee subagency “very much diseased with Rheumatism, Ulcers and Syphilis[;] and during the spring, the [w]hooping

⁴⁸ Ibid., 205. Cree people in northeastern Ontario and near Lake Winnipeg also requested vaccine in the 1820s (Paul Hackett, “Averting Disaster: The Hudson’s Bay Company and Smallpox in Western Canada during the Late Eighteenth and Early Nineteenth Centuries,” *Bull. Hist. Med.* 78, no. 3 [2004]: 575–609, esp. 594–95).

⁴⁹ John Forsyth (Ga.), Felix Grundy (Tenn.), and Hugh Lawson White (Tenn.) all voted for vaccination. Forsyth and Grundy voted for Indian removal in 1830; White was seated but did not register a vote.

⁵⁰ Denig, “Indian Tribes of the Upper Missouri” (n. 27), 460.

⁵¹ Maximilian of Wied, *Travels in North America, 1832–1834: A Concise Edition of the Journals of Prince Maximilian of Wied*, ed. Marsha V. Gallagher, trans. William J. Orr, Paul Schach, and Dieter Karch (Norman: University of Oklahoma Press, 2017), 287, 302, 326.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

cough and measles were among them.”⁵² In short, American Indians in the early nineteenth century sought out Euro-American medicine as eagerly as they did other new and useful commodities. Smallpox and other threats to health made these requests only more urgent.⁵³

Many American Indians seeking the prophylaxis did not succeed; and some medical personnel failed to gain permission to vaccinate as they wished. When a physician in Mississippi determined that more materials were needed to vaccinate populous Choctaw and Chickasaw communities, he purchased vaccine matter and lancets by mail at inflated prices from the disgraced former head of the shuttered U.S. Vaccine Institute in Baltimore. For this, the physician (a future member of Congress) earned the rebuke of the war department; a federal agent was dispatched to Mississippi to ensure his compliance with policy.⁵⁴ Similarly, a Missourian and recent graduate of the leading University of Pennsylvania medical school was denied permission to continue vaccinating after two months’ labor along the Missouri River. “I think from the knowledge which I have gained of the Country and habits of those Indians,” Meredith Martin explained to the war department, “I would be able to render far more service on

⁵² Oscar White to George B. Porter, September 30, 1832, roll 421 (Michigan Superintendency, 1832–35), OIA Letters Received (n. 5). White claimed to have thrown away his list of vaccinations “before . . . proceed[ing] far” (ibid.). Dowd identifies the Native people at the Maumee Subagency as Odawas (*Groundless* [n. 30], 232), yet Shawnees, Senecas, Ojibwes, and Wyandots were also present in 1832.

⁵³ Few treaties before 1832 included health provisions, and none included vaccine. In the Miami Treaty of 1826, the government agreed to annual payments (“as long as Congress may think proper”) for the “support of poor infirm persons of the Miami tribe”; relevant infirmities went unnamed (“Treaty with the Miamis, 1826,” in Kappler, *Indian Affairs* [n. 12], 2:279).

⁵⁴ William M. Gwin to Lewis Cass, May 28, 1832, roll 170 (Choctaw Agency, 1832–38), OIA Letters Received (n. 5); John Robb to William M. Gwynn [*sic*], August 15, 1832, roll 9, OIA Letters Sent (n. 10).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

a second visit to them.” Martin had already secured a place on a steamboat scheduled to leave for Fort Union in March 1833. The trip would have enabled him to vaccinate Assinoboines, Crows, Mandans, Hidatsas, Arikaras, and others along the Missouri, and then revisit the “lower Indians” as he “descend[ed] the river” to his base at Fort Kiowa.⁵⁵ Despite the river’s reputation as a highway of infection, the commissioner of Indian affairs did not authorize Martin’s proposal, a decision that Pearson and others claim was a purposeful withholding of lifesaving prophylaxis.⁵⁶

⁵⁵ M[eredith] Martin to Lewis Cass, November 27, 1832, roll 434 (Miscellaneous, 1831–32), OIA Letters Received (n. 5).

⁵⁶ The commissioner did not elaborate on his decision; see Elbert Herring to M[eredith] Martin, January 5, 1833, roll 9, OIA Letters Sent (n. 10). The question of how far to extend the program had been debated earlier in Congress. Watching from the sidelines, Isaac McCoy lamented that Congress had “so whittled down” the legislation that “thousands and tens of thousands” of Native people up the Missouri River would surely perish; yet McCoy could “find none here [in Congress] who appear to know or care” (Isaac McCoy journal [n. 38], August 6, 1832). McCoy had spent several days lobbying senators, wrote an amendment to the legislation, and gained assurances from the secretary of war that upriver peoples would be reached; see Isaac McCoy to Lewis Cass, April 20, 1832, roll 750 (St. Louis Superintendency, 1824–51), OIA Letters Received (n. 5). Yet when two physicians arrived at his agency in August, McCoy learned that the secretary of war had ultimately decided against vaccinating beyond Fort Pierre, despite the willingness of medical personnel to perform the work; Meredith Martin and David H. Davis had separately offered their services to the government. For divergent views on how far up the Missouri the war department had originally intended to vaccinate, see Pearson, “Lewis Cass and the Politics of Disease” (n. 8), 12, 18–23; Jones, *Rationalizing Epidemics* (n. 9), 114–15; Elizabeth A. Fenn, *Encounters at the Heart of the World: A History of the Mandan People* (New York: Hill & Wang, 2014), 324–25; Isenberg, “Empire of Remedy” (n. 18), 90–92. For the Missouri River as a “disease corridor,” see Pekka Hämäläinen, *Lakota America: A New History of Indigenous Power* (New Haven, Conn.: Yale University Press, 2019), 120.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

Gathering people for vaccination could prove challenging. Vaccinators timed their visits according to Indigenous subsistence patterns, typically in consultation with federal Indian agents. If a community was out on the autumn hunt, surgeons would return when people were expected to be back in their villages.⁵⁷ In one case, hungry Kaw people delayed their hunt, waiting for a surgeon to arrive. That surgeon was five or six days late reaching their villages on the Kansas River, and most had left for the hunt.⁵⁸ For eastern Natives slated for removal, the war department recommended vaccination as near to departure as possible, reasoning that the maximum number of people would be present.⁵⁹ Perceiving that their employer viewed immunization as a priority, a number of federal agents in the East wrote to the war department to inquire whether Indians at their agency would be vaccinated and how it should be coordinated.⁶⁰

In the early stages of the campaign the war department requested advice from doctors and Indian agents about effectiveness and efficiency. The goal was to save money, but not only that. A typical letter from the secretary of war announcing the campaign to Indian agents and vaccinators included a copy of the legislation and the following comments: “You will please to communicate . . . any suggestions that may occur to you upon this subject. Have the Indians

⁵⁷ E.g., Meredith Martin vaccination report, November 28, 1832, roll 750 (St. Louis Superintendency, 1824–51), OIA Letters Received (n. 5); Samuel Crow vaccination report, September 29, 1832, roll 434 (Miscellaneous, 1831–32), OIA Letters Received (n. 5). See also Lewis Cass to R[ichard] W. Cummins, May 28, 1832, roll 8, OIA Letters Sent (n. 10).

⁵⁸ William E. Unrau, *The Kansa Indians: A History of the Wind People, 1673–1873* (Norman: University of Oklahoma Press, 1986), 151.

⁵⁹ John Robb to James B. Gardiner, July 31, 1832, roll 9, OIA Letters Sent (n. 10).

⁶⁰ E.g., Benjamin Reynolds to Elbert Herring, July 30, 1832, roll 136 (Chickasaw Agency, 1830–35), OIA Letters Received (n. 5).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

confidence in the [vaccination] process and will they submit to it? Can you state any change in the mode of effecting this object that would be useful? I shall be glad to receive from time to time the result of your experience and observation and an account of the progress which is made in this business.”⁶¹ Military and civilian medical personnel responded, sometimes with harsh criticism of government planning. The most common complaint had to do with the timing of their arrival relative to Indian subsistence and trade patterns. A number of vaccinators were forced to pursue Native bands far from their expected location.

Federal agents who were skeptical about Native people’s willingness to be vaccinated nonetheless offered recommendations to the Office of Indian Affairs. In rural northeastern Mississippi, the agent explained that “common” Chickasaws were unlikely to trust government physicians; and without a town or village to gather people for vaccination, the prospects of success were lower still. Yet if lancets and vaccine matter were to be “placed in the hands of Intelligent half Breeds and others in different neighborhood[s] through[out] the nation,” Benjamin Reynolds explained, the “benevolent designs” of Congress could be enacted. Indeed, “many” of the Chickasaws whom Reynolds deemed “most Intelligent” had already been vaccinated, along with their kin, and could thus “explain its benefits” to others. Reynolds thus requested a “small portion” of vaccine matter and “thirty[-]six good lancets” for the Chickasaws.⁶²

The government asked vaccinators to document Indigenous health concerns and treatments. Native practitioners near present-day Omaha had developed a smallpox treatment that involved shoving a twisted length of dried buffalo meat down the patient’s throat to break

⁶¹ Cass to Cummins, May 28, 1832, roll 8, OIA Letters Sent (n. 10).

⁶² Benjamin Reynolds to Elbert Herring, December 9, 1832, roll 136, OIA Letters Received (n. 5).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

apart the pustules that commonly erupted there. The practice reportedly reduced mortality from the disease. Other people dug special trenches for persons infected with smallpox. Patients would bathe in the trench for several hours as a therapy.⁶³

Reception and Dissemination

More than fifteen thousand Indigenous people living west of the Mississippi River got vaccinated in the 1830s: Shawnees, Delawares, Ojibwes, Lakotas and Dakotas (Sioux), Potawatomies, Odawas, Pawnees, Kaws, Otoes, Iowas, Kickapoos, Omahas and Poncas, Peorias and Kaskaskias, Weas and Piankeshaws, and Osages, the last of whom had already ceded lands in Missouri and Arkansas and were living on a wide strip of what is today southern Kansas (fig. 2).⁶⁴ Given that many of these groups were semisedentary, subsisting according to a seasonal round, their populations were small by design. While some nations approached ten thousand (Osages, Pawnees, Dakotas, Lakotas), most numbered a few thousand each, with close-kin

⁶³ David H. Davis vaccination report, October 21, 1832, roll 750 (St. Louis Superintendency, 1824–51), OIA Letters Received (n. 5). Others questioned the efficacy of the buffalo stick treatment; see John Dougherty to Sylvanus Fansher, January 15, 1832, printed in (Boston) *Columbian Centinel*, April 25, 1832.

⁶⁴ I have been unable to find data on either Quapaws or Wichitas. Missouri people had apparently joined Otoes by this time; see Maximilian of Wied, *Travels in North America* (n. 51), 103. It is unclear whether Caddos at the Red River Agency (present-day Shreveport, La.) got vaccinated before moving to Texas in 1834; see J[ehiel] Brooks to Elbert Herring, April 26 and July 21, 1832, roll 31 (Caddo Agency, 1824–42), OIA Letters Received (n. 5).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

groups spending the better part of their lives in a single band.⁶⁵ Assuming vaccination was successful more often than not, fifteen thousand vaccinations constitute a substantial public health intervention for populations of this size. It is important to note that the vast majority of these people lived beyond the political boundaries of the United States, no matter its claims to Indigenous homelands as federal “territories.”

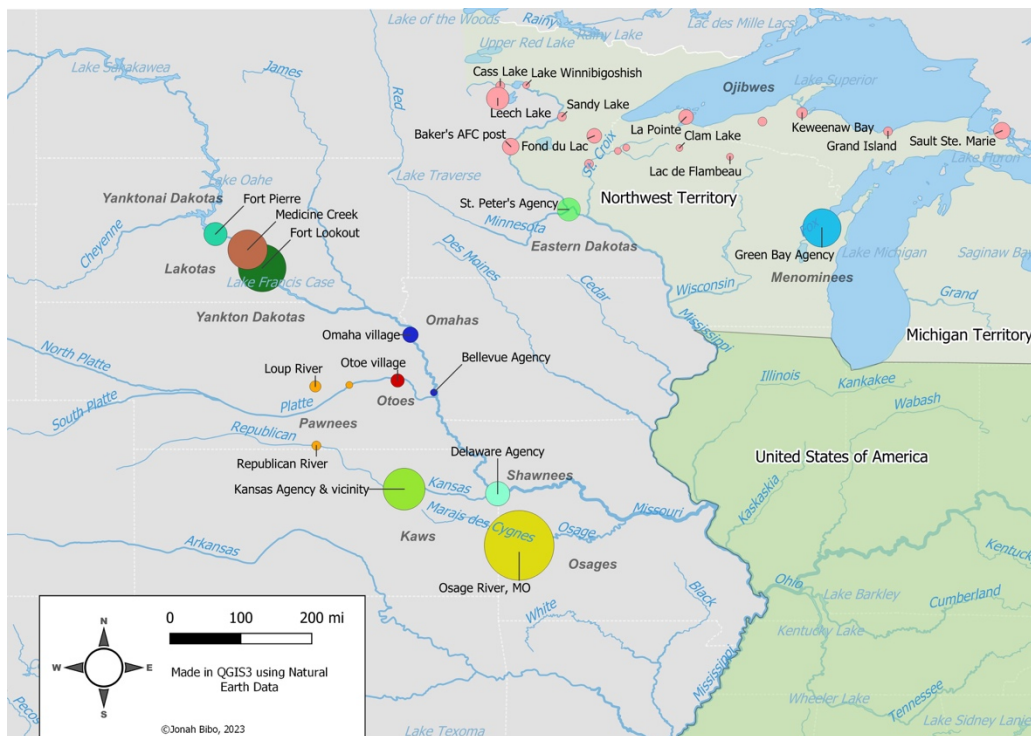


Figure 2. Selected vaccinations, September 1831 to October 1834. Note the population clusters west of the Mississippi River. Circle size corresponds to number of people vaccinated: Otoe village, approximately 100; Osage River, approximately 2,200.

⁶⁵ Total Sioux population (Dakotas and Lakotas) reached or exceeded 20,000; Osage and Pawnee populations each approached 10,000; see Kingsley M. Bray, “Teton Sioux Population History, 1655–1881,” *Nebraska Hist.* 75, no. 2 (1994): 165–88, esp. 173; White, *Roots of Dependency* (n. 12), 155–56.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

Given past relations with the United States, it is hardly surprising that some Indigenous people declined the vaccine. Yet few, if any, communities as a whole rejected vaccination. While some Eastern Dakotas (Isanti/Santee Sioux) at Fort Kiowa (present-day South Dakota) at first declined, 330 others who elected for vaccination at St. Peter's Agency (present-day Minneapolis) were described as having "great confidence" in the procedure.⁶⁶ Along the Kansas River, Missouri-based surgeon Samuel Crow faced "much opposition" to vaccination among Delawares (Lenapes) and Shawnees, but most of the blame lay (as he believed) on his arrival coinciding with annuity payments and the autumn hunt—matters of high priority for local people.⁶⁷ Opposition or not, 257 Shawnees and 247 Delawares elected (or had a guardian elect on their behalf) to be vaccinated by Crow that month. At Bellevue Agency the federal agent reported that local Omaha, Otoe, and Sioux people had "the fullest confidence in vaccination," asserting that "every scab should be collected to vaccinate their Children as fast as they came into the world."⁶⁸ Vaccination logs bear this concern out: of the 145 Omaha people vaccinated in 1832, 85 percent (123) were children under the age of fifteen (fig. 3).⁶⁹

⁶⁶ Law[rence] Taliaferro to Lewis Cass, June 18, 1832, roll 757 (St. Peter's Agency, 1824–36), OIA Letters Received (n. 5). For similar attitudes among western First Nations people in the 1830s, see Hackett, "Averting Disaster" (n. 48), 606.

⁶⁷ Samuel Crow vaccination report, October 22, 1832, OIA Letters Received (n. 5).

⁶⁸ John Dougherty to Lewis Cass, December 6, 1832, roll 750 (St. Louis Superintendency, 1824–51), OIA Letters Received (n. 5).

⁶⁹ D. H. Davis vaccination report, October 21, 1832, OIA Letters Received (n. 5); M. Martin vaccination report, November 28, 1832, OIA Letters Received (n. 5).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.



Figure 3. Karl Bodmer (Swiss, 1809–93), *Omaha Boy*, 1833, watercolor and graphite on paper, Joslyn Art Museum, Omaha, Nebr., gift of the Enron Art Foundation, 1986.49.372. Photograph © Bruce M. White, 2019.

There is little evidence that western Indians were averse to the instrument that delivered prophylaxis. Though few had encountered the various lancets employed by American surgeons, some Indigenous groups practiced therapeutic bleeding with lancets of their own design (figs. 4–5).⁷⁰ Ojibwe people west of Lake Superior were described by a visiting surgeon in 1832 as

⁷⁰ D. H. Davis vaccination report, October 21, 1832, OIA Letters Received (n. 5); Alice C. Fletcher and Francis La Flesche, *The Omaha Tribe*, 2 vols. (Lincoln: University of Nebraska Press, 1972), 2:582; Denig, “Indian Tribes of the Upper Missouri” (n. 27), 426–27.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

“extremely fond” of therapeutic bleeding.⁷¹ A minor surgical procedure was probably less of a hurdle than the stranger sent by the U.S. government to perform it and the prospect of being infected by a disease related to smallpox. In this sense, vaccine wariness among American Indians was perhaps little different from that of circumspect people worldwide.

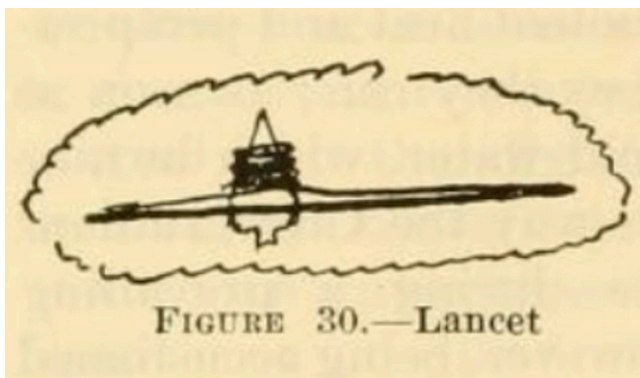


Figure 4. Plains Indian lancet illustrated by fur trader Edwin Thompson Denig, “Indian Tribes of the Upper Missouri” (ca. 1854), in *Forty-Sixth Annual Report of the Bureau of American Ethnology, 1928–1929*, ed. J. N. B. Hewitt (Washington, D.C.: Smithsonian Institution, 1930), 426.

⁷¹ Journal of Douglass Houghton, June 28, 1832, in Henry Rowe Schoolcraft, *Schoolcraft’s Expedition to Lake Itasca*, ed. Philip P. Mason (East Lansing: Michigan State University Press, 1993), 244–86, quotation on 252.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

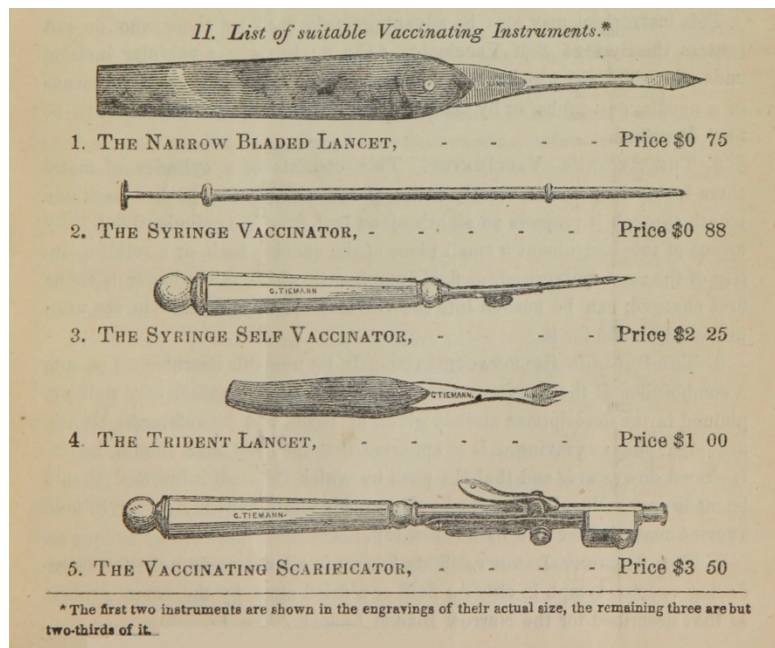


Figure 5. Early nineteenth-century vaccinating instruments. Eastern Dispensary of the City of New-York, *Information upon the Subject of the Prevention of Small-pox, by Vaccination* (New York, 1859), 5.

Some Indigenous leaders encouraged vaccination. An effective strategy was to go first. Fifty-five-year-old Lalloway (“Captain Perry”) was the first of 257 Shawnees to be vaccinated in late September near present-day Kansas City.⁷² Lalloway’s forty-five-year-old wife, recorded only as “Mrs. Perry,” and their six children followed. Other leaders opted to wait and see. On the last of four days vaccinating Wea people, Dr. Samuel Crow received fifty-year-old chief Yellow Beaver as the first vaccinee of the day, followed immediately by Kah-la-na-hon-qua, age forty,

⁷² S. Crow vaccination report, September 24, 1832, OIA Letters Received (n. 5). Two Shawnee leaders went by the name John Perry or Captain Perry at this time: the Mekoche leader (and wolf clan *hokima*) Lalloway and the Pekowi leader Pemthala (Sami Lakomäki, *Gathering Together: The Shawnee People through Diaspora and Nationhood, 1600–1870* [New Haven, Conn.: Yale University Press, 2014], 139, 194–95, 278n55).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

and nine children ranging in age from two to thirteen.⁷³ Like Yellow Beaver, the prominent Kaw chief White Plume (along with his daughter, son-in-law, and eight grandchildren) chose to be vaccinated on Crow's final day in their village.⁷⁴

Even when warned against it by trading partners, Native people elected to be immunized. Kaw people, for example, were "extremely anxious" to be vaccinated despite the opposition (as they told the surgeon) of a local fur trade magnate. Over the course of nine days in Kaw villages along the Kansas River, Samuel Crow vaccinated 835 people out of an estimated total population of 1,200. Given Crow's diligence in revaccinating those in whom the vaccine failed to "take"—that is, to elicit the body's requisite immune response—the Kaw nation may have developed sufficient immunity to prevent new outbreaks for a time.⁷⁵

Hesitant people changed their minds at a moment's notice. A group of Eastern Dakotas refused the vaccine after surgeon Meredith Martin demonstrated its safety on the children of his

⁷³ S. Crow vaccination report, September 17, 1832, OIA Letters Received (n. 5). Yellow Beaver was signatory to the 1820 Wea treaty as "Samaquah, Yellow Beaver, his x mark" (Kappler, *Indian Affairs* [n. 12], 2:190).

⁷⁴ S. Crow vaccination report, October 11, 1832, OIA Letters Received (n. 5). For White Plume's family, see William E. Unrau, *Mixed-Bloods and Tribal Dissolution: Charles Curtis and the Quest for Indian Identity* (Lawrence: University Press of Kansas, 1989), 30–32, 206; and Kansas Historical Society, "Granddaughters of White Plume" (2004–21), <https://kshs.org/kansapedia/granddaughters-of-white-plume/12069>.

⁷⁵ For Frederick Chouteau's alleged opposition to Kaw vaccinations, see William E. Unrau, "Fur Trade and Indian Office Obstruction to Smallpox Vaccination in the St. Louis Superintendency, 1831–1834," *Plains Anthropologist* 34, no. 124 part 2: memoir 23 (1989): 33–39. Smallpox had apparently struck the Kaws in 1758, 1827, and 1831; later Kaw vaccinations in 1838 were reportedly "ineffective" (Unrau, *Kansa Indians* (n. 58), 41–42, 149–51).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

interpreter. A week later, however, some nine hundred of their Lakota cousins at Medicine Creek on the Big Bend of the Missouri River assembled for vaccination. Earlier, dozens of Lakotas near Fort Kiowa had also gotten it. On October 12, some two thousand Western Dakotas (Yankton Sioux) met Martin at Fort Kiowa. While some refused the vaccine, those who accepted “appeared thankful for the opportunity of avoiding the fate of many of their neighbors”—a reference to Pawnee mortality in the 1831 epidemic.⁷⁶ Over the next five days more than a thousand children, women, and men, including a number of leaders, lined up. Little Dish (“Wah-ha-ginga”), vaccinated September 13, had been principal chief of the Yankton Sioux since 1806; the Stone with Horns (“To ki e ton,” “To-qui-in-too”), vaccinated the same day, was an ascendant Yankton whom Catlin described as the “principal and most eloquent *orator* of the nation” (fig. 6).⁷⁷ A few months later, German naturalist Maximilian of Wied-Neuwied learned

⁷⁶ M. Martin vaccination report, November 28, 1832, OIA Letters Received (n. 5). Nearly 300 Western Dakota and Lakota people (“Yanctons[,] Tetons[,] & Siones”) had gotten vaccinated earlier at Fort Kiowa in September 1832 (ibid.).

⁷⁷ Catlin, *Letters and Notes* (n. 37), 1:222. (Catlin’s portrait of the Yankton leader appears as plate 93 on the following page.) The Stone with Horns was also known to Americans as the Little Soldier (Maximilian, Prince of Wied, *Travels in the Interior of North America* [London, 1843], 153–54, 456). Both the Stone with Horns and Little Dish had been signatories to the 1825 Treaty of Fort Lookout (Kappler, *Indian Affairs* [n. 12], 2:229). The Stone with Horns was also signatory in 1830 to the fourth Treaty of Prairie du Chien (Ratified Indian Treaty 159: Sauk and Fox, Sioux . . . July 15, 1830, Record Group 11 [General Records of the United States Government, 1778–2006], National Archives, Washington, D.C.).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

that some local people expressed “no confidence” in vaccination, but these same skeptics “remarked [that] if they became ill, then they would be willing to undergo the operation.”⁷⁸



Figure 6. Yankton Sioux leader the Stone with Horns (or Horned Rock), also known as the Little Soldier; his Dakota name could not be determined. Karl Bodmer (Swiss, 1809–93), *Tukán-Hätón, a Yankton Sioux Chief*, 1833, water and graphite on paper, Joslyn Art Museum, Omaha, Nebr., gift of the Enron Art Foundation, 1986.49.259. Photograph © Bruce M. White, 2019.

Hundreds of mixed-descent and bicultural families—from eastern Alabama to Kansas and Chicago—also got vaccinated. British colonists James Onothe Rogers and William Jackson Fish had both been captured and adopted by Shawnees during the Revolutionary War. Several decades and relocations later, at an unnamed Shawnee village in Kansas, the seventy-year-old

⁷⁸ Maximilian of Wied, *Travels in North America* (n. 51), 167. “Many” Omahas and Otoes revealed facial scarring characteristic of smallpox (ibid., 157).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

Fish got the vaccine along with five sons and two daughters-in-law. One of these sons, Paschal Fish, is remembered today by a statue (with his daughter Eudora) in the town of Eudora, Kansas. Eudora's mother appears on the vaccination log as "Mrs. P. Fish," age twenty. James Onothe Rogers does not appear on the log, but other Shawnee family members do, including Henry Rogers, age twenty-three, and his two-year-old daughter Nancy Rogers. Accompanied by members of the Jackson/Fish family, the Shawnee headman known as Captain Blackfeather got vaccinated on September 26, surgeon Samuel Crow's final day among the Shawnees.⁷⁹

Bicultural Kaw people also elected to be vaccinated by Crow. The Kaw chief White Plume's two daughters had both married local traders—Wyhesee to French trader Louis Gonville, Hunt Jimmy to French-Osage trader Joseph James (known as Joe Jim). Joe Jim, who also worked as an interpreter, appears on the log as "James James" (*sic*), age forty-two; his son, Joe Jim, Jr.—the uncle of future U.S. vice president Charles Curtis—appears on the log as "Joseph James," age ten. Wyhesee appears as "Wyheesee Gunville," age twenty-eight. Wyhesee's father, the patriarch and chief White Plume, was the first Kaw person to get vaccinated that same day.⁸⁰

Having been passed over in 1832, bicultural families at the polyglot village of Chicago wrote to the secretary of war requesting vaccine and a physician. The governor of Michigan Territory forwarded their petition to Commissioner of Indian Affairs Elbert Herring, who

⁷⁹ S. Crow vaccination report, September 24–26, 1832, OIA Letters Received (n. 5). For the Rogers and Jackson families, see Lakomäki, *Gathering Together* (n. 72), 194.

⁸⁰ S. Crow vaccination report, October 11, 1832, OIA Letters Received (n. 5). White Plume appears on the log as "Num-per-war-uh," age 50.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

promptly responded that his office would be happy to provide the necessary materials and a surgeon to vaccinate the nearly six thousand Anishinaabe people near Fort Dearborn. Signatories to the petition included a number of Chicago's founders (some of them married to Native women), as well as the Métis chief of the united Potawatomes, Odawas, and Ojibwes, Alexander Robinson.⁸¹ The federal agent at Chicago sent his own request to Herring, opining that the "whole of the Indians could be vaccinated" at treaty proceedings in September, when annuities were also due to be paid.⁸² Herring again responded in the affirmative, requesting a tally of Indians by tribal nation at the agency. It is unclear whether Anishinaabe people received vaccine at the 1833 Treaty of Chicago, as the agent's list only reached Washington in November.⁸³

<1ls>

Government agents encouraged Native people to vaccinate themselves. Most medical personnel demonstrated the arm-to-arm method championed by Jenner. Among Sioux people, Martin went a step further by showing them the "mode of preserving the [vaccine] matter" and "furnish[ing] them with [v]ials."⁸⁴ Though taking "much pains" with Lakotas "to show them the manner of performing the operation, and the necessity of their inducing those I did not vaccinate to submit to the operation," Martin was not optimistic that they would act on it: "I gave the principle [*sic*]

⁸¹ Chicago petitioners to the Secretary of War, May 5, 1833, roll 132 (Chicago Agency, 1824–34), OIA Letters Received (n. 5).

⁸² Th[omas] J. V. Owen to Elbert Herring, May 8, 1833, roll 132, OIA Letters Received (n. 5).

⁸³ See C. C. Trowbridge to Elbert Herring, November 23, 1833, roll 132, OIA Letters Received (n. 5). This exchange demonstrates that Herring supported vaccination at least through mid-1833; cf. Pearson, "Lewis Cass and the Politics of Vaccination" (n. 8), 19.

⁸⁴ M. Martin vaccination report, November 28, 1832, OIA Letters Received (n. 5).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

Chief a Lancet for this purpose, but I am of the opinion he will not attempt to vaccinate any of his band as they attribute something supernatural to the process.”⁸⁵ It is unlikely that Martin understood how vaccination fit into Lakota cosmology, but he was neither exceptional nor acting of his own accord by encouraging them to vaccinate themselves. “Let them be shown how the process is conducted,” Secretary of War Lewis Cass instructed federal Indian agents, “and if possible teach them to operate upon one another.”⁸⁶

By urging people to vaccinate themselves, the war department actually followed the lead of medical personnel and federal agents in the interior. Six months before the vaccination act reached Congress, a physician at Green Bay vaccinated hundreds of Menominees and emigrant “New York” Indians (Stockbridge-Munsees, Oneidas, and Brothertowns) along the Fox River in Wisconsin. Addison Philleo also left lancets and vaccine matter at a number of Menominee villages, “with directions how to use them and explaining the nature & effect of the disease.” Menominees, according to Philleo, were eager to get vaccinated. The federal agent who hired Philleo was a champion of the smallpox prophylaxis. Col. Samuel C. Stambaugh, who performed vaccinations himself, happily reported that Odawas near Milwaukee were “successfully applying” the vaccine and instruments he had sent via “an old trader & some of their chiefs”; the disease was “giving way” to the prophylaxis.⁸⁷ Similarly, when smallpox broke out in eastern

⁸⁵ Ibid.

⁸⁶ Lewis Cass to John Dougherty, May 9, 1832, roll 8, OIA Letters Sent (n. 10).

⁸⁷ S[amuel] C. Stambaugh to Lewis Cass, March 16, 1832, roll 315 (Green Bay Agency, 1824–32), OIA Letters Received (n. 5). Stambaugh believed his efforts had prevented smallpox from spreading to the neighboring Ho-Chunks (ibid.); cf. Isaac McCoy to Lewis Cass, March 27, 1832, H.R. Doc. 190, 22nd Cong., 1st sess.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

Kansas in September 1831, a federal agent at Fort Leavenworth wrote to a leading physician in Connecticut for vaccine matter. Having received the vaccine in December, John Dougherty proceeded to distribute it to “several tribes” in the area and to an American Fur Company agent two hundred miles to the north “with a request that he would disseminate it among the various tribes within his reach.”⁸⁸

Missouri River Valley people proved particularly receptive. More than 3,500 people elected to be vaccinated in autumn 1832, including Western Dakotas, Lakotas, Otoes, Omahas, Poncas, and hundreds of refugees from the East (fig. 7). In his report to the government, Meredith Martin estimated that he immunized “about one half” of all Native people he encountered. As for the other half: some had “learned that their neighbors had caught Small-pox” from white traders in the region, “and they expressed fear that I wished to give them the same disease.” Such concerns were not unwarranted, as recent scholarship reveals.⁸⁹ Repeating his request to Cass from the previous day’s letter, Martin indicated his willingness to go back up the Missouri: “I presume when they see that no evil arises from vaccination their prejudices will be removed[;] and should the Department wish me to return, I think from the knowledge which I have gained of their habits I would be able to render much greater service than I have done in this expedition.” There were, Martin reminded the Indian Office, still “a great number” of

⁸⁸ John Dougherty to Sylvanus Fansher, January 15, 1832, printed in (Boston) *Columbian Centinel*, April 25, 1832.

⁸⁹ Lutz, “Smallpox, Bioterrorism and Colonialism in Northwest America” (n. 3). For a rumor of American traders deliberately spreading smallpox to southern Plains Indians as a reprisal for violence and theft, see McCoy, *History of Baptist Indian Missions* (n. 14), 441–42; Pawnees reported that the disease had been contracted by “some of their people on an excursion to the south” (ibid., 442).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

unvaccinated people within the “limits which the Secretary of War authorised Maj. Dougherty to send a Surgeon.”⁹⁰ Given these efforts by Martin, it is puzzling to read one scholar’s assessment of his having “failed utterly in carrying out his [medical] duties.”⁹¹

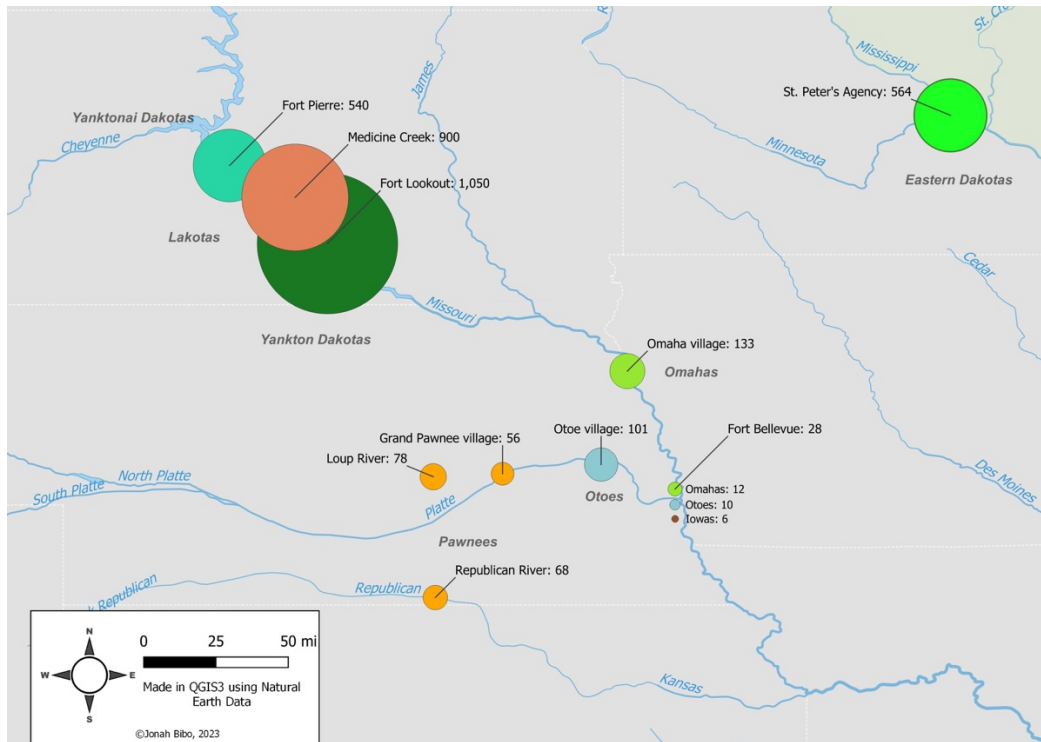


Figure 7. Selected vaccinations in the Upper Missouri River valley and Central Plains, 1832.

Martin’s nearly one thousand Lakota vaccinations amount to more than 12 percent of the total Lakota population in 1832.⁹² An eyewitness to the Plains epidemic of 1837–38, having met

⁹⁰ M. Martin vaccination report, November 28, 1832, OIA Letters Received (n. 5).

⁹¹ James A. Hanson, foreword to *Fort Tecumseh and Fort Pierre Chouteau: Journal and Letter Books, 1830–1850*, ed. Michael M. Casler and W. Raymond Wood (Pierre: South Dakota Historical Society Press, 2017), vii–x, quotation on viii.

⁹² For a careful estimate of Lakota population ca. 1833, see Bray, “Teton Sioux Population History” (n. 65), 171.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

with two Arikara men who had lived among Lakotas the past year on the Cannonball River, reported plainly that “the disease has not broke out among them.”⁹³ Even higher percentages of Western Dakotas chose to be vaccinated in the 1830s. Whether vaccination played a role in Sioux people weathering the epidemic of 1837–38 better than their unvaccinated (or less vaccinated) neighbors is a question that requires further research.⁹⁴ Dakota and Lakota losses were certainly much lower as a percentage of the population than the unvaccinated Blackfeet, who lost upward of two-thirds of their people, and the Mandans, who lost nine in ten.⁹⁵

From the U.S. government’s perspective, the Sioux were inconstant allies at best.⁹⁶ Lakotas and their Western Dakota kin had proven a particular challenge to American commerce and exploration ever since Lewis and Clark arrived in the region.⁹⁷ Surgeons vaccinated them

⁹³ Francis A. Chardon, *Chardon’s Journal at Fort Clark, 1834–1839*, ed. Annie Heloise Abel (Pierre: South Dakota Department of History, 1932), 136. In September 1837 Chardon reported that the Arikara men had been “with the Sioux (Saons)” on the Cannonball River “since last summer” (ibid.). See also Jacob Halsey’s November 2 report from Fort Pierre, in ibid., 394–96. For the Saone band of Lakotas, see Hämäläinen, *Lakota America* (n. 56), 101–2, 121. The epidemic appears in at least four Lakota pictorial histories (Candace S. Green and Russell Thornton, eds., *The Year the Stars Fell: Lakota Winter Counts at the Smithsonian* [Washington, D.C.: Smithsonian, 2007], 203).

⁹⁴ It seems this possibility was first suggested by Richard White, “The Winning of the West: The Expansion of the Western Sioux in the Eighteenth and Nineteenth Centuries,” *J. Amer. Hist.* 65, no. 2 (1978): 319–43, esp. 329. See also Michael K. Trimble, “Chronology of Epidemics among Plains Village Horticulturalists: 1738–1838,” *Southwestern Lore* 54 (1988): 4–31.

⁹⁵ Clyde Dollar, “The High Plains Smallpox Epidemic of 1837–38,” *Western Hist. Quart.* 8, no. 1 (1977): 15–38, esp. 24; Fenn, *Encounters at the Heart of the World* (n. 56), 323–25.

⁹⁶ See, e.g., Joshua Pilcher’s comments about Western Dakotas in Crawford, “Report of the Commissioner of Indian Affairs” (n. 19), 63–68, esp. 64.

⁹⁷ Hämäläinen, *Lakota America* (n. 56), 131–63, esp. 150–52.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

nevertheless. More than that: vaccinators returned to the Sioux. In the wake of a smallpox outbreak that spread up the Missouri in 1837, medical personnel once again deployed to the region, timing their arrival with annuity payments. Among Yankton Dakotas at Fort Kiowa, one physician found himself too busy to keep a log, with a “mass of men, women and children” crowding around him awaiting vaccine. Joseph R. DePrefontaine ultimately spent two summers immunizing Western and Eastern Dakotas, Lakotas, Shawnees, Delawares, and others in the Missouri, Niobrara, and Platte river valleys, tallying more than five thousand vaccinations. In addition to the vaccine matter supplied by the government, which he considered to be of low quality, DePrefontaine exhausted a “considerable quantity procured” by himself.⁹⁸ According to the federal Indian agent at St. Louis, nearly all the Indigenous peoples in the region were “confiden[t]” in the “efficacy” of vaccine and willing to receive it, with “many” performing the operation “themselves.”⁹⁹

If anyone in the federal government noticed that the smallpox prophylaxis had been extended to their rising adversaries, the Lakotas and Dakotas, that knowledge had long since been forgotten when the Sioux Wars broke out in 1854. As it happened, Lakota people and their cousins—collectively, the seven Sioux *oyáte*—got vaccinated at almost twice the rate of the next most vaccinated nation (Muscogee Creeks, in the East) and at more than four times the rate of other western Indians in the 1830s. In this narrow sense, vaccination could be said to have assisted a rising Indigenous adversary against the United States’ imperial reach over the heart of

⁹⁸ Jos[eph] R. DePrefontaine to Joshua Pilcher, July 9, 1838, roll 884 (Upper Missouri Agency, 1836–51), OIA Letters Received (n. 5).

⁹⁹ Joshua Pilcher to William Clark, July 3, 1838, roll 884, OIA Letters Received (n. 5).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

the continent. To be sure, Sioux population growth in the first half of the nineteenth was multicausal: continued migration of Sioux groups from the east, successful raiding campaigns, and rising birth rates all played a role. Increased immunity to smallpox in the 1830s needs to be added to this complicated mix.¹⁰⁰

Outcomes and Ambiguity

The most detailed account of the vaccination campaign was left by an assiduous twenty-two-year-old physician and naturalist accompanying Henry Schoolcraft's expedition to the sources of the Mississippi River. The Rensselaer-trained Douglas Houghton was perhaps the most effective vaccinator in Indian Country. In a single summer, he vaccinated more than two thousand Ojibwes across the vast, watery Northwest and Michigan Territories.¹⁰¹ Like Meredith Martin and Samuel Crow, Houghton tallied vaccinations and confirmed successful vaccine "takes." By following up with patients a week or more later, Houghton learned that the arm-to-arm method was far more successful than vaccine crusts (scabs) provided by the government. One in three vaccinations performed with crusts failed to take, according to Houghton, while the failure rate of arm-to-arm was less than one in twenty. Houghton claimed to have revaccinated all patients in whom a proper immune response did not ensue. He either "watched the progress" of the immune

¹⁰⁰ A federal agent estimated 1,200 Dakota and Lakota fatalities but observed that "most of the Sioux escaped" the 1837–38 epidemic "altogether" (Pilcher to Clark, September 12, 1838, roll 884, OIA Letters Received [n. 5]). A recent, comprehensive study of Sioux history makes note of vaccination but not its effects on the Sioux *oyáte*; see Hämäläinen, *Lakota America* (n. 56), 160, 162, 175.

¹⁰¹ Pearson dismisses Houghton's work as "secondary" to Schoolcraft's purpose of mapping the region ("Lewis Cass and the Politics of Disease" [n. 8], 17–18).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

response or examined the scars of some seven hundred vaccinees.¹⁰² In fact, *most* vaccinators seem to have followed this method in Indian Country, revaccinating to ensure successful takes.¹⁰³

Houghton also kept careful figures on the age and sex of vaccinees. Roughly equal numbers of male and female Ojibwes were immunized. More than 40 percent were children under the age of ten. Roughly 60 percent were younger than twenty. In a letter to his brother, Houghton confessed that he found the work “irksome” when crowds were large. On his first day in Fond du Lac (present-day Duluth, Minnesota), Houghton vaccinated 240 Ojibwes in one sitting. He was astonished to learn that only a few had “never heard” of the technique. Rather, Ojibwes knew the ravages of smallpox, and they were resolved on the merits of vaccination. People crowded around Houghton when he commenced operating, “arms ready, and anxiously wait[ing] their turn.”¹⁰⁴

Houghton was more optimistic than Martin that people would take up vaccination and perform the procedure as needed. Ojibwe leaders were urged to “re-vaccinate all those” in whom

¹⁰² Houghton to Schoolcraft, September 21, 1832, OIA Letters Received (n. 5). The letter was reproduced as an appendix in Henry R. Schoolcraft, *Summary Narrative of an Exploratory Expedition to the Sources of the Mississippi River, in 1820* (Philadelphia, 1855), 574–81. Houghton’s list of Ojibwe vaccinees has not survived.

¹⁰³ Revaccination was performed by Douglass Houghton (Ojibwes), Samuel Crow (Kaws and others), Meredith Martin (Dakotas and others), J. R. Conway (Osages), W. L. Wharton (Muscogee Creeks), Abiel Hovey Lord (Ohio Shawnees and Senecas), and Oscar White (Native people along the Ohio-Michigan border).

¹⁰⁴ Douglass Houghton to Richard Houghton, June 24, 1832, in *Schoolcraft’s Expedition to Lake Itasca* (n. 71), 297–98, quotation on 298.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

the vaccine failed to take and given instructions regarding the “time and manner.”¹⁰⁵ Among these leaders was the Leech Lake chief Eshkibagikoonzhe, known to the Americans as Flat Mouth.¹⁰⁶ Houghton concluded that it was “more than probable that, where the bands remained together a sufficient length of time,” revaccination would be performed.¹⁰⁷ If any Ojibwes refused prophylaxis in 1832, Houghton did not record it. Instead, Houghton observed, they were astonished that such a small operation could control the monstrous disease.¹⁰⁸

But what kind of protection did vaccinations provide? While many nineteenth-century physicians believed that proper vaccination granted lifelong immunity—as its predecessor, variolation, had done—this was not the case.¹⁰⁹ The relative strength of immunity granted by nineteenth-century vaccine as well as its duration are poorly understood. Unlike the Native communities discussed here, many Indigenous people would have received only a single dose of vaccine. (Even through the twentieth century, vaccination was recommended every three to five

¹⁰⁵ Houghton to Schoolcraft, September 21, 1832, OIA Letters Received (n. 5).

¹⁰⁶ Houghton journal, July 19, 1832, in *Schoolcraft's Expedition to Lake Itasca* (n. 71), 263. For Eshkibagikoonzhe, see Michael Witgen, *An Infinity of Nations: How the Native New World Shaped Early North America* (Philadelphia: University of Pennsylvania Press, 2012), 1–7, 12.

¹⁰⁷ Houghton to Schoolcraft, September 21, 1832, OIA Letters Received (n. 5).

¹⁰⁸ For similar responses to the new prophylaxis, see Catlin, *Letters and Notes* (n. 37), 2:258–59; Bennett, *War Against Smallpox* (n. 20), 80, 313, 370. Food insecurity may have played a role in Ojibwes' receptiveness to Houghton; a recent rice crop failure made food “their first, their second, and their third request” (Henry Rowe Schoolcraft to Elbert Herring, September 21, 1831, in *Schoolcraft's Expedition to Lake Itasca* [n. 71], 114–29, quotation on 118).

¹⁰⁹ Glynn and Glynn, *Life and Death of Smallpox* (n. 24), 133; Bennett, *War Against Smallpox* (n. 20), 367–68.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

years for military and aid workers who ran the risk of exposure.)¹¹⁰ Also, as we have seen, vaccine did not always take. While most medical personnel revaccinated, as they were instructed to do, probably others did not. On the other hand, the forty to fifty thousand vaccinations tallied by Pearson do not include Indigenous people vaccinated by their kin. Houghton and other observers hint that some communities added vaccination to their medical arsenal. In that case, Pearson's figures would be an undercount.

It is safe to assume that many Native Americans would have enjoyed robust if temporary immunity from successful vaccination, say, five to seven years. Many more would have achieved longer-lasting resistance short of immunity—for example, by developing a mild case in a later infection. As for broader community resistance to new outbreaks, a number of candidates appear in vaccinators' records: in addition to the Dakota and Kaw bands, Menominees and some Ojibwe communities probably achieved the critical threshold to prevent an epidemic for a time. In July 1832 Houghton vaccinated almost half the children, women, and men at the largest Ojibwe community, Leech Lake.¹¹¹ A smaller Ojibwe band encamped along the St. Croix River got vaccinated in full (sixty-three people) with the approval of their leader Bizhiki (fig. 8).¹¹² After completing his work, Houghton speculated that Ojibwe immunity might be sufficient to prevent

¹¹⁰ Rao, *Smallpox* (n. 27), 130–47. See also Centers for Disease Control and Prevention, “Vaccine Basics,” www.cdc.gov/smallpox/vaccine-basics/index.html.

¹¹¹ Houghton journal, July 17, 1832, in *Schoolcraft's Expedition to Lake Itasca* (n. 71), 259–60.

¹¹² Houghton journal, July 30, 1832, in *Schoolcraft's Expedition to Lake Itasca* (n. 71), 273. Bizhiki was later a signatory, as “Pe-zhe-ke, or The Buffalo,” to the 1837 Treaty of St. Peters, along with two other Ojibwe leaders from other regions going by the name Buffalo (Ratified Indian Treaty 223: Chippewa—St. Peters, Wisconsin Territory, July 29, 1837, Record Group 11, National Archives, Washington, D.C.).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

their introducing smallpox “to the bands beyond”—that is, to Native people west and north of Ojibwe country.¹¹³ Menominees were probably better protected than anyone. Col. Samuel Stambaugh predicted that by May 1832 “all the Indians” attached to his agency at Green Bay would be “placed without danger” thanks to the “blessing” of vaccine.¹¹⁴



Figure 8. Bizhiki (Buffalo), leader of the St. Croix band of Ojibwes. H.D., *Pee-che-kir, a Chippewa Chief*, 1843, after a lost original by Charles Bird King, ca. 1824, National Portrait Gallery, Smithsonian Institution, gift of Betty A. and Lloyd G. Schermer.

¹¹³ Houghton to Schoolcraft, September 21, 1832, in *Schoolcraft's Expedition to Lake Itasca* (n. 71), 303: “By a comparison of the number of Indians vaccinated upon the borders of Lake Superior, with the actual population, it will be seen that the proportion who have passed through the vaccine disease [i.e., a proper take] is so great as to secure them against any general prevalence of the small-pox.”

¹¹⁴ Stambaugh to Cass, March 16, 1832, OIA Letters Received (n. 5).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

Remarkably, Ojibwe people expressed concern about establishing what we would now call herd immunity. According to Houghton, Ojibwes “manifest[ed] great anxiety that, for the safety of the whole, each one of [the] band should undergo the operation.”¹¹⁵ Houghton’s statement suggests that Ojibwes may well have taken up the challenge of vaccinating themselves. Either way, the “great anxiety” about community health witnessed by Houghton proves that Ojibwes did not conceive of the Americans’ preventive medicine as culturally proscribed; rather, they had seen or heard enough of the procedure’s effectiveness to try it themselves. Three and a half years later, at treaty negotiations that ceded a large portion of Michigan to the United States, the Odawa and Ojibwe nations secured three hundred dollars annually for “vaccine matter, medicines, and the services of Physicians.”¹¹⁶ One year later, in 1837, a separate confederation of Ojibwe bands in eastern Michigan also gained the government’s guarantee of vaccine and access to physicians.¹¹⁷ Native American interest in the smallpox prophylaxis was no fleeting concern.

But how many were protected from smallpox? If we employ a conservative estimate of 45,000 vaccinations between 1831 and 1837, and generously assume that three-quarters of these (including revaccinations) were successful takes, this would mean more than 33,000 people enjoyed some protection against the Plains epidemic of 1837–38—not an insignificant number for small and dispersed communities. Tens of thousands perished in the epidemic, from present-

¹¹⁵ Houghton to Schoolcraft, September 21, 1832, in *Schoolcraft’s Expedition to Lake Itasca* (n. 71), 299.

¹¹⁶ Ratified Indian Treaty 201: Ottawa and Chippewa—Washington, D.C., March 28, 1836, Record Group 11, National Archives, Washington, D.C.

¹¹⁷ “Treaty with the Chippewa, 1837,” in Kappler, *Indian Affairs* [n. 12], 2:482–86, esp. 483.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

day central South Dakota to eastern Alberta, possibly further, including more than 30,000 in the Missouri River watershed alone.¹¹⁸ Thousands more on the Plains may well have died barring vaccination. As many as 400 Yanktonai (Western Dakota) people reportedly perished in the epidemic; no doubt greater numbers would have fallen prey had more than 250 Yanktonais of various ages not elected to be immunized in October 1832.¹¹⁹ For some Native nations in the path of smallpox, resistance to the disease was key to survival. For others, such as the Pawnees, a few hundred vaccinations in 1832 could not prevent high mortality five years later.¹²⁰

Beyond the uncertainty about immunity and resistance is the question of people who could not harbor vaccine safely or effectively. This includes not only those we would classify

¹¹⁸ Joshua Pilcher to William Clark, September 12, 1838, roll 884, OIA Letters Received (n. 5). Pilcher judged mortality east of the Rockies to be double the enumerated figure of 17,200. For a firsthand account of the epidemic, see *Chardon's Journal at Fort Clark* (n. 93), 121–81. For the spread, see Dollar, “High Plains Smallpox Epidemic.” Further research may reveal whether an 1839 outbreak among Eastern Dakotas stemmed from the Plains epidemic of 1837–38; “few” Wahpekute people residing between the Minnesota and Des Moines rivers took advantage of vaccine at Fort Snelling (Minneapolis); see Lawrence Taliaferro journal (May 29 to June 8, 1839), and L. Taliaferro to Robert Lucas (June 3, 1839), letterbook, vol. 5, both in L. Taliaferro Papers, Minnesota Historical Society. A distinct epidemic, first reported at Sitka in 1835, afflicted Indigenous people in the Pacific Northwest and California through 1837 (Robert Boyd, *The Coming of the Spirit of Pestilence: Introduced Infectious Diseases and Population Decline among Northwest Coast Indians, 1774–1874* [Seattle: University of Washington Press; Vancouver: University of British Columbia Press, 1999], 117–36, esp. 131n18).

¹¹⁹ Russell Thornton, *American Indian Holocaust and Survival: A Population History since 1492* (Norman: University of Oklahoma Press, 1987), 95; M. Martin vaccination report, November 28, 1832, OIA Letters Received (n. 5).

¹²⁰ The epidemic was particularly costly for Pawnee children (White, *Roots of Dependency* [n. 12], 155).

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

today as immune-compromised but also pregnant women and infants.¹²¹ A plurality of vaccinated women—three-quarters or more—were of childbearing age. Medical personnel recorded age, with the youngest at six months and the oldest estimated at one hundred, but usually not sex, much less pregnancy. Nor did vaccinators record health conditions that would have made the procedure risky. Were people screened for such conditions? Did Native communities shelter community members in the path of the surgeon’s lancet? Beyond these immediate health factors, what can be said about Native leaders’ role in the campaign? Did people follow chiefs’ orders or, as might be expected in nonhierarchical tribal societies, decide for themselves about the vaccine? Further research will be required to answer these questions.

Conclusion

Reflecting on their 1832 dispossession from the Ohio Valley, Shawnee people recalled feeling “as if we were tearing ourselves from ourselves, & every thing which the Great Spirit had given us to make us happy.”¹²² The expulsion of Indigenous people from their eastern homelands broke timeless bonds between people and the land and other-than-human beings that nourished and protected them. For the sake of still more territory, the U.S. government destroyed communities, causing untold misery and thousands of deaths. An estimated 80,000 people were deported to a region that guaranteed neither security nor the means of subsistence, much less the consolation

¹²¹ For pregnancy and vaccination, see Rao, *Smallpox* (n. 27), 17–20, 39–40, 120–29; and Fenner et al., *Smallpox and Its Eradication* (n. 27), 54–55, 308. Vaccinators did not consider pregnancy as a contraindication (Sylvanus Fansher, “Rules to be Attended to during Vaccination” [Boston, 1817]).

¹²² Lakomäki, *Gathering Together* (n. 72), 195.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

of kin. Like the vast majority of displaced Natives, Shawnees lacked even basic health protections. Some Native nations, such as the Muscogee Creeks, suffered worse still after settling in Indian territory.¹²³ Vaccination was no protection against U.S. empire.

Yet Native people survived. And several Indian nations, especially west of the Mississippi, added a new tool to their survival kit. For societies like western Sioux *oyáte*, already blessed with access to rich landscapes and wealthy allies, smallpox prophylaxis offered a measure of community health protection as their numbers and power grew. For smaller, less powerful Plains nations, such as the Kaws, the preventive technique may have enabled them to sustain plunder by Native adversaries and the onslaught of white settlement. Other people, such as Ojibwes and Odawas in the Upper Midwest, having seen the benefits of vaccination in 1832, negotiated vaccine and other health provisions into later treaties. Even the Shawnees and Senecas with whom this article began ultimately received the vaccinations they had demanded, though in this case the vaccine matter collected by a local physician apparently proved inert. More dire health outcomes lay ahead, as several Seneca deportees contracted measles during a nightmarish six-month deportation to Indian Territory.¹²⁴

Viewed from Washington, D.C., the vaccination campaign might be seen as a contradiction to the genocidal project of Indian removal—but perhaps no more contradictory than an “empire of liberty” built upon slavery and Indigenous dispossession. In the wake of the Plains epidemic of 1837–38, the leading proponent of vaccination and an architect of Indian

¹²³ Christopher D. Haveman, *Rivers of Sand: Creek Indian Emigration, Relocation, and Ethnic Cleansing in the American South* (Lincoln: University of Nebraska Press, 2016), 270–72.

¹²⁴ Henry C. Brish to William Clark, July 16, 1832, in *Correspondence on the Subject* (n. 1), 5:118–20.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

removal wrote that the campaign had been “too feeble and unsystematic” and government funding too meager to do what was required “in any one place”; smallpox once again took its toll.¹²⁵ Isaac McCoy was correct: the federal government could have done more to make vaccine available to a greater number of people over a broader region. Yet this essay reveals that Native Americans played a critical role in preserving their own health by seeking out and accepting vaccination when available. And while vaccination in Indian Country after 1841 was ad hoc, the lack of a federal program did not prevent Native communities from requesting and receiving vaccine from the government.¹²⁶

In the short term, smallpox prophylaxis preserved the health of many thousands of Native people—children, women, and men—and prevented morbidity and mortality when the worst epidemic of the nineteenth century struck interior North America—the homelands of dozens of Indigenous societies, and a new home to hundreds more refugee communities. The diversity of perspectives on vaccination reflects these many discrete societies struggling to protect their health while fighting to maintain their sovereignty.

*

SETH ARCHER is a cultural and environmental historian of North America. Associate professor of history at Utah State University, he was earlier the Mellon Research Fellow in American History at the University of Cambridge. His book *Sharks upon the Land: Colonialism, Indigenous Health, and Culture in Hawai‘i, 1778–1855* (Cambridge University Press, 2018) won the President’s Book Award from the Social Science History Association. His new research concerns gender and captivity in the nineteenth-century Colorado River Basin.

¹²⁵ McCoy, *History of Baptist Indian Missions* (n. 14), 554 (“too feeble”), 443 (“in any one place”).

¹²⁶ Pearson, “Lewis Cass and the Politics of Disease” (n. 8), 26–28.

This is a preprint of an accepted article scheduled to appear in the *Bulletin of the History of Medicine*, vol. 97, no. 2 (Summer 2023). It has been copyedited but not paginated. Further edits are possible. Please check back for final article publication details.

ACKNOWLEDGMENTS: Research for this article was generously supported by the Phillips Fund for Native American Research at the American Philosophical Society and by the College of Humanities and Social Sciences at Utah State University. The author would like to thank Josh Garrett-Davis and three anonymous reviewers for their careful reading and incisive comments. Thanks also to Willy Bauer, Jonah Bibo, Gabe Bruguier, Jim Downs, Mariola Espinosa, Rana Hogarth, Kelly Kennington, Christopher D. E. Willoughby, Urmi Engineer Willoughby, the editors of the *Bulletin of the History of Medicine*, and audiences at the American Association for the History of Medicine, American Society for Environmental History, Front Range Early American Consortium, Yale Early American Historians working group, and Utah State University History Department works in progress group.