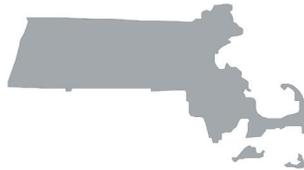




**18<sup>th</sup> Century Medicine Case**

# John Denison Hartshorn: A Colonial Apprentice in “Physick” and Surgery (Boston)

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**Abstract:** *In the eighteenth century, as now, finding adequate, affordable medical care occupied the minds of many colonists. Most medical scholarship focuses on the practice of medicine, providing few details of a crucial time in a physician’s career — his training. This article provides an analysis of the journal of John Denison Hartshorn, a colonial medical apprentice in Massachusetts. It compares Hartshorn’s experiences with that of other Massachusetts’ medical apprentices. From Hartshorn’s diary, we can determine the common features of medical training, the types of patients who were treated by novices, and the treatments they received. Dr. Thompson is an assistant professor of U.S. history who is working on a book on medicine in early America.*

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Like many young men in colonial America who wished to become physicians, John Denison Hartshorn trained by apprenticeship. He signed a contract in April 1752 to receive his surgical and medical training under a prominent Boston surgeon, Dr. Silvester Gardiner. Historian Eric Christianson’s work establishes the importance of medical apprenticeship in eighteenth-century Massachusetts. His data shows that the growth

rate in the number of physicians outstripped the general population growth and yet, “Europe provided less than 10 percent of all the colonial Massachusetts practitioners.”<sup>1</sup> Of those who received formal instruction, it was most likely in the form of apprenticeship. Despite the centrality of apprenticeship to medical education, most scholarship on eighteenth-century colonial medicine focuses on the practices of prominent physicians of the period, ignoring a key aspect of their career — their training.<sup>2</sup>

This article critically analyzes Hartshorn’s diary to explore the life of an eighteenth-century urban apprentice, comparing his experiences with William Jepson, a fellow apprentice under Gardiner; Peter Oliver, Jr., who apprenticed under Dr. Stockbridge in Scituate; and Elihu Ashley, who apprenticed under Dr. Thomas Williams in Deerfield. An analysis of Hartshorn’s journal reveals many important features of colonial apprenticeship, the variety of non-medical duties performed: the medical training that unfolded in phases; the types of patients on whom that training was implemented; the exposure to dissections and surgical cases; and the impact of war.

### **THE APPRENTICE: JOHN DENISON HARTSHORN**

Hartshorn never disclosed how he became an apprentice to Dr. Gardiner, a prominent Bostonian surgeon. Born in Rhode Island, Gardiner’s uncle financed an eight-year study overseas in France and England. There Gardiner studied under some of the best-known surgeons in Paris and London, including William Cheselden — who taught him to perform a lithotomy (removal of stones from organs, especially the kidneys) with the most “humane and successful” procedure, the lateral technique.<sup>3</sup> In 1734, Gardiner became a practicing physician in Boston and in 1736, along with William Douglass, founded the Medical Society of Boston. Gardiner earned a reputation as one of the best-trained and competent surgeons in the colonies. Until his 1776 exile for his Tory sympathies, “he was among one of the two or three most important physicians in Massachusetts.”<sup>4</sup> Gardiner’s prominence cannot be doubted: he served as attending physician to the governor of Massachusetts and received personal visits from him.<sup>5</sup>

Hartshorn’s father, Ebenezer, practiced medicine in Concord.<sup>6</sup> Since it was not unusual for physicians to train their sons in medicine, why did Hartshorn not study under his father? Perhaps he did receive some training from his father, but Gardiner’s reputation increased the chance of establishing a successful practice. Gardiner knew Hartshorn’s father and grandfather; “He [Gardiner] told me ... that my grandf [ather]

and father were good men & heard my mother was a good character,” Hartshorn wrote. Perhaps Hartshorn was able to obtain such a prestigious apprenticeship through this acquaintance.<sup>7</sup>

Regardless of why Hartshorn became Gardiner’s apprentice, the two entered into a contract in 1752 as noted in the young man’s diary.<sup>8</sup> The contract’s length of five years represented an unusual arrangement: in England, apothecaries and surgeons were required to serve apprenticeships of up to seven years; in Massachusetts, however, the average apprentice served a little over a year and the longest recorded was five years.<sup>9</sup> Although the original contract between Hartshorn and Gardiner does not appear to have survived, other contracts between mentor and medical apprentice do exist, offering insight into the language of apprenticeship agreements. For example, in 1760 a contract between John McElroy and Dr. William Clark read:

This Indenture Witnessst that John McElRoy of Boston in the Court of Suffolk and Province of Massachusetts Bay hath with the consent of his Mother Elizabeth McElRoy bound himself apprentice to Wm Clarke of said Boston Physician for & during the term of one year to serve the said Wm Clarke faithfully & honestly during the said time in any business he may employ him about suitable for a boy of his Age & Capacity. And the said Wm Clarke hereby agreeth to find the said John in Victuals Drink & Lodging & to pay him for his said Service Five Pounds six Shillings weight ounce the whole payment to be completed within the said Term of one Year. In Witness whereof the said Parties have here unto interchangeably set their hands & Seals — this the first Day of January 1760.

Signed & Sealed & delivered in the presence of us. Wm. Clarke<sup>10</sup>

We do not know the extent to which the agreement between Hartshorn and Gardiner resembled this one. Like McElroy, Hartshorn began his apprenticeship in youth, and was provided room and board in his mentor’s home. Other apprentices lived with their mentors as well: Peter Oliver began an apprenticeship in August 1761, living with his mentor, Dr. Stockbridge; and Elihu Ashley boarded with his mentor, Thomas Williams, in 1773, even though his father lived down the road.<sup>11</sup>

I came to live at D. Gardiners  
 Eat nothing in 24 hours. The first  
 meal was Hearty pudding & Milk &c.  
 Began to Study anatomy Read Nester,  
 Cheselden, Keil, Winslow, Drake, Marro's  
 osteology &c.  
 Made Writings with D. Gardiner to  
 stay with him 3 years, he was to teach  
 me Every thing he knew in Physick  
 Surgery, & the business of an Ap. thesary  
 Wled a man, dress'd a sore Leg, & studied the  
 books. Went to Concord  
 Saw a Broken leg set by W<sup>m</sup> Welch  
 Began to Study Surgery, Read Le dours  
 Nester, Sharpe, Schrub, Garengeot &  
 from April to this Instant saw  
 Eyes Couch'd, Justice Welles had Two  
 Extracted from him. Refused in an  
 operation a Leg of a Negro Woman belong  
 ing to Mr. Taylor. Wled Mr. Maccoy's negro  
 boy Drew a Tooth for a woman  
 D. Gardiner went to Windsor & cut a man  
 for the Stone  
 Was call'd to Fort Hill to dress Darby King  
 who was Stab'd w<sup>th</sup> a Long Knife  
 by W<sup>m</sup> Welch. The Intestines were two feet  
 out of the wound, cut almost asunder  
 two places. after performing the op  
 eration reduc'd em first on larging the  
 wound orifice - The man died in 24 hours  
 receiving the wound - was carry'd to the  
 house & dissected

### Journal Entry

Hartshorn's journal begins with the following entry: "I came to live at D. Gardiners. Eat nothing in 24 hours. The first meal was hearty pudding and milk. Began to study anatomy." (1753)

Source: John Denison Hartshorn Journal (B MS b118.1) Harvard Medical Library in the Francis A. Countway Library of Medicine, Boston, MA.

In most ways, the terms of Hartshorn's apprenticeship mirrored those of other New England apprentices except with regards to fees and length of service. On the topic of fees, Hartshorn's journal and McElroy's contract contradict recent scholarship. One historian states that “the normal price paid by an American student was \$100 per year, which was a considerable sum for a colonial family.”<sup>12</sup> Yet, Clarke clearly stated that he was to pay his young apprentice “Five Pounds six Shilling weight ounce” for “said Services.” Hartshorn did not comment on any fees paid to him by Gardiner, but made a note in 1755 when “D.G. paid John Frizell [a fellow apprentice] his Wages in full.” On the other hand, in 1736, Boston physician Zabdiel Boylson entered into an agreement with Joseph Lemmon to teach and instruct his son in “physick” and surgery, providing food and lodging for two years in exchange for two hundred pounds. In the eighteenth century, the term “physick” referred to medicinal drugs or medical treatments.

Whether a mentor paid wages to an apprentice or was paid to accept an apprentice may have hinged on the nature of work the apprentice would undertake. Gardiner's apprentices conducted business — non-medical and medical — on his behalf, while Joseph Lemmon Jr. may simply have been instructed. Another aspect of Hartshorn's apprenticeship sets it apart from these others; their contracts were much shorter. Hartshorn's contract for five years may be explained by the fact that Gardiner had been trained in Europe where a term of five years was not unusual or by the fact that Hartshorn was studying more complicated surgical techniques such as lithotomy (removal of organ stones).<sup>13</sup>

As a common feature of apprenticeship, boarding with mentors posed several challenges. For Hartshorn, living in the Gardiner household entailed forging a relationship with his mentor, any other apprentices in residence, and his mentor's family and household staff. Hartshorn's diary shows that when he arrived at age sixteen the Gardiner household consisted of; Dr. Gardiner, his wife, Anne; their sons, William and James (son John was studying medicine in Europe); their daughters Abigail (“Nabby”), Hannah, Rebecca, and Anne (although Hartshorn seldom mentions them); and Gardiner's younger brother, Joseph, a physician who visited occasionally.<sup>14</sup> Apprentices William Jepson (who left the house before 1756), John Frizell (who may have left the house on November 22, 1755), John Roberts (who began residing in the house on December 9, 1755), and John Hartshorn, as well as Betty Young, the only servant mentioned in the diary, comprised the rest of the household over the years of Hartshorn's apprenticeship. Several entries attest to less than amicable relations between Hartshorn and others in the household.

December 14, 1753 Had great scold from G[ardiner] about shavings of hartshorn for Mr. Gunter which he said were not charg'd. At last I found 'em charg'd in mem. Book. Also, another for writing an order to Mr. Apthorp on the best paper, said also that he should loose by keeping me at that rate.<sup>15</sup>

December 21, 1753 Ed. for dinner nothing, for supper, pudding & milk. Mrs. Gardiner did hardly speak to me for a week.

By the end of the first year, Hartshorn clearly complained of the difficulties of living under the same roof as his teacher.

As a novice he understandably made mistakes, but felt harshly rebuked for them by Gardiner. As his expertise increased, his relationship with Dr. Gardiner improved. The same cannot be said of Anne Gardiner, however.

December 27, 1753 Mrs. G[ardiner] continued very envious try'd all she could to sett Dr. G. against me & I accidently broke a square of glass for which I had a hearty scold.

Hartshorn never explained the exact nature of the tension between himself and Mrs. Gardiner in his journal; however, the tension often resulted in Hartshorn receiving no supper. Anne Gardiner's animosity towards Hartshorn did not appear to extend to the other apprentices.

January 14, 1754 Had a very bad night, rumblings & griping of the intestines. Eat no breakfast. Mrs. G. strove all she cou'd to set Dr. G. against me & made very much of Jepson & try'd to make people believe nothing ail'd me. . . Betty Young told me that Mrs. G. said it wasn't right that Jepson should dine with the other fellows also that Something was done wrong in the shop & Mr. G said It couldn't have been Jepson for *He* [Hartshorn's emphasis] wou'd do nothing to displease him or her.

In this passage, Hartshorn reveals his anxiety that Mrs. Gardiner actively campaigned against him.

Although Hartshorn's relations with most members of the household fluctuated, the dislike between Hartshorn and Mrs. Gardiner remained constant. In his first year, Hartshorn documented Anne Gardiner's

treatment of him when he wrote on May 27, 1754, “Mrs. G. said ‘if I stay’d there this 7 years I shou’d always be treated as a negro.” Although it is unclear why Anne thought Hartshorn’s stay was for seven rather than five years, Hartshorn made clear his perception of the nature of their relationship. Three years into his apprenticeship, the tension between Hartshorn and Anne Gardiner began to take a toll; as early as 1754, John frequently considered leaving the apprenticeship, writing in 1755 that he was of “many minds whether to stay or go away.”<sup>16</sup> To leave the apprenticeship of such a prominent physician as Dr. Gardiner would have damaged his career. While the degree of Hartshorn’s seriousness remains in doubt, his unhappiness manifested itself in the pages of his journal. As Hartshorn’s workload increased with his newfound medical experience, living in constant battle with the lady of the household must have added stress.

## THE APPRENTICESHIP

August, 1752- I came to live at Dr. G’s. Eat nothing in 24 hours. The first meal was hasty pudding & milk, etc. Began to study anatomy. Read Heister, Cheselden, Keil, Winslow, Drake, Muro’s osteology, etc.

From the first entry in his journal in 1752 to his last in 1756, Hartshorn frequently recorded the medical books he was reading. All of the texts were imported from Europe. As Fielding Garrison writes, “there was no American medical literature to speak of until long after the American Revolution.”<sup>17</sup> Most of the medical titles on Hartshorn’s reading list reflected Gardiner’s education. For example, Hartshorn’s curriculum included the works of Gardiner’s mentors, Henri François LeDran and William Cheselden.<sup>18</sup> Historian Helen Brock states that trade with Europe meant that “even medical apprentices were using the most recent medical texts, or at least Silvester Gardiner’s were.”<sup>19</sup>

Hartshorn’s diary indicates that he read some eighty books — not just classics such as *Hippocrates Upon Air, Water, and Situation; Upon Epidemic Diseases; and Upon Prognosticks* but also recently published books featuring the contemporary medical theories such as George Cheyne’s *The Natural Method of Curing the Diseases of the Body, and the Disorders of the Mind*.<sup>20</sup> Hartshorn’s reading list was comprised of non-medical books such as cleric James Foster’s *An Account of the Behavior of the Late Earl of Kilmarnock* and satirist Thomas Brown’s *Letters*

Boston, Jan. 9. 1756  
 Elisha Burden continued weak, but no worse.  
 Benj. Kemp's Diarrhea returned, I order'd C.C.C. drink.  
 Thomas Hart's Diarrhea continued, I order'd an Oyl. Bolus, & Olinas.  
 Aaron Allinomey pulse regular, no Crisis form'd yet, loose in Body  
 tongue clean, &  
 Isaac Lawrence's Leg as yesterday  
 Israel Thomas's Vomit operated well up & down, he sweat largely  
 Last night, which I believe proved critical in his case.  
 On the 11th, for which I order'd tart. & water, his pulse  
 was  
 John Clarke gone home the best on the recovery  
 Jonathan Gilbert of Beverly aged 22 liv'd at Mrs. Small's place, was taken with  
 a pain in his head, high Pulse but soft, dry, no good Appetite  
 relaxed Solids, I bled him 2ij. gave him Oyl. of Turp. & Sweet Oil  
 to help his Appetite & wind up his Solids. pulled at the Nose  
 often a sign of relaxed Solids

### Journal Entry

Patient notes begin: "Elisha Burden continued weak, but no worse. Benjamin Kemp diarrhea returned I ordered C.C.C. drink."

John Denison Hartshorn Patient Reports (B MS c50.4) Harvard Medical Library in the Francis A. Countway Library of Medicine, Boston, MA.

*from the Dead to the Living*.<sup>21</sup> One pamphlet Hartshorn read, “A Short Comparative View of the Practice of Surgery in the French Hospitals with Some Remarks on the Study of Anatomy and Midwifery,” outlined the advantages medical students training in London had over those training in Paris; a pamphlet in which the Franco-phobic Gardiner must have approved.

Gardiner, by providing the texts, influenced what apprentices read. One historian credits Gardiner as the founder of a movement in the 1760s to improve medical education with a “step-by-step study of medicine, usually beginning with anatomy and ending with physic” and a greater emphasis on reading “both basic and recent medical literature, and the employment of at least an occasional lecture.”<sup>22</sup> Hartshorn’s journal suggests that the step-by-step study of medicine arose from Gardiner’s apprentices; “March 31, 1755 Wrote, a plan for Jepson & myself to walk by in our studies.”

In his own almanac diary, Jepson noted a day later: “In order to the establishing [of] a Better Method toward attaining Perfection in Our Studies and seeing the many disadvantages attending a separate way of Study, We have thought necessary to establish the following plan.”<sup>23</sup> Jepson specified that they would begin with the study of anatomy until all of their questions were answered. Then, they agreed to proceed to surgery, followed by midwifery and physics. Hartshorn’s reading appeared initially to follow this plan. He strayed from this study plan frequently at the end of 1755, perhaps because of the deterioration of his relationship with Jepson.

While different medical theories influenced the authors of these European medical texts, a common medical tradition prevailed in the texts Hartshorn and Jepson read. In the mid-eighteenth century, Galenic medicine dominated European medical thought. According to Galenic medicine, imbalances of one or more of the four humors — blood, phlegm, black bile, and yellow bile — constituted the primary cause of disease. Another influence on medical theory, dating from the sixteenth century, involved the Hippocratic doctrines. Paracelsus (1493-1541) theorized that diseases were entities produced due to distinct circumstances. He advocated mineral and chemical treatments — remedies that included sulphur, mercury, lead, copper, sulfate, and potassium sulfate. Thomas Sydenham (1624-1689) popularized Paracelsus’ remedies in the seventeenth century.<sup>24</sup> The most immediate difference between herbal and chemical remedies involved onset and degree of action — purging by herbs might take several days and result in a single vomit, while purging by chemicals resulted in immediate and repeated vomiting.

Gardiner dispensed both herbal and chemical remedies as shown by Hartshorn's reading list and a *Boston Gazette* notice from June 14, 1744: "To be Sold by Mr. Silvester Gardiner, at the Sign of the Unicorn and Mortar in Marlborough Street, All Sorts of Drugs and Medicines, both Chymical and Galenical."<sup>25</sup> Hartshorne kept a recipe book filled with Gardiner's herbal and chemical recipes.<sup>26</sup> Understanding the techniques used to balance the humors constituted an essential aspect of Hartshorn's curriculum.

Hartshorn undertook an array of duties during his apprenticeship. Initially, reading, writing, and accounting made up a majority of his responsibilities, while his hands-on medical training developed in phases. An initial six-month reading period coincided with his first medical duties in the apothecary in November 1753.<sup>27</sup> From 1753 to 1754, his chores were restricted to putting up medicine in the apothecary, keeping accounts, and serving as unofficial secretary for Gardiner's investment in the Plymouth Proprietors.

Hartshorn often acted as a debt collector as well. "Dunning" or bill-collecting sometimes served as Hartshorn's first contact with patients or apothecary customers. Nor was his debt collecting restricted to local accounts; on March 14, 1755, Hartshorn "Went for to Secure D.G.'s debt of Edm'd Quincy" and "Went to Mr. Auchmuty's and go[t] a Writ of Attachment." He had to file the writ of attachment for property that merchant Edmund Quincy owned at the actual location of the land. This required several days of travel on horseback. On several occasions, Gardiner required Hartshorn, and presumably his other apprentices, to assist him in protecting his financial interests.

The diary of Elihu Ashley of Deerfield, Massachusetts, demonstrates that the use of medical apprentices for household and non-medical business was not uncommon. Ashley collected debts for his mentor, Dr. Thomas Williams, and his studies were often interrupted for household chores: "At my Books this forenoon. In the afternoon Miss [Esther] Williams [his mentor's wife] desired that I would help lay out the Garden. Accordingly Murray [a fellow apprentice] and I went into the Garden and worked there till Sunset."<sup>28</sup> Apprentices conducted labor on behalf of their mentors and for their households.

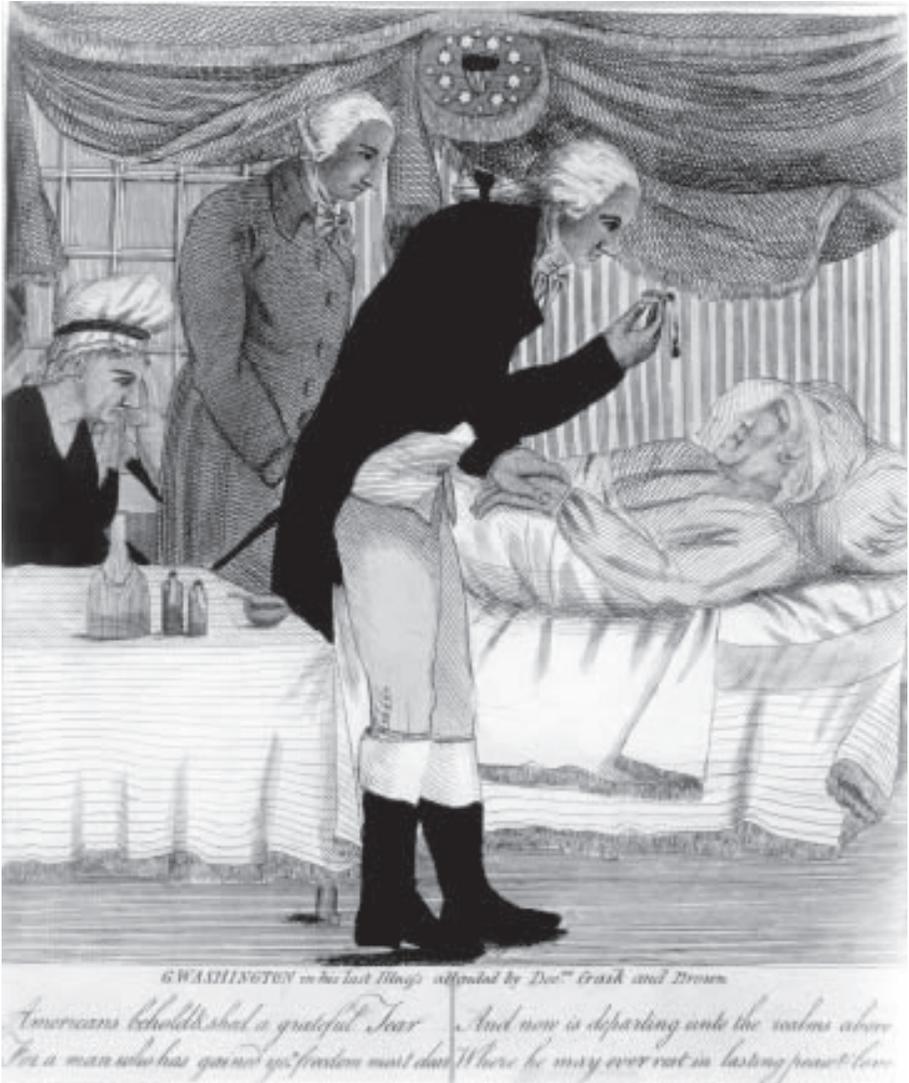
## **SOCIAL STATUS AND MEDICAL CARE**

Hartshorn's journal indicates that many of his non-medical duties continued throughout his apprenticeship. By 1754 (roughly Hartshorn's

second year), however, he began treating patients with minor ailments with Gardiner's medicines and performing dentistry. His patients occupied social positions considered marginal—the poor, immigrants, and “Negroes.”<sup>29</sup> Nor was Hartshorn alone; as an apprentice, Jepson trained on the bodies of lower status people as well. On April 11, 1753, Jepson “bled Mr. McCoys’ Negro woman,” and, on May 21, he “removed the leg of Tings’ negro woman.”<sup>30</sup> Hartshorn often treated these patients without Gardiner's assistance, but in a few cases he requested Gardiner's aid. For example, Hartshorn went to a factory to see a sick woman who he found to be eight months pregnant and seriously ill. In this case, Hartshorn consulted Gardiner about treatment.<sup>31</sup> Hartshorn conducted a medical reconnaissance — if a patient needed something more involved than the administering of the herbal or chemical medicines in Gardiner's arsenal of recipes or if they did not respond to his ministrations, he consulted with Gardiner who either made recommendations or visited the patient.

Patients of higher social status were not subjected to the novice hands of an apprentice. When Captain MacCoy's wife became ill in October of 1754, Gardiner, too, was ill. Rather than send Hartshorn alone, Dr. Bulfinch accompanied Hartshorn. A few patients, such as Mary Hallowell Sloper, refused to be treated by an apprentice; Hartshorn “went to See Sam'l Sloper's Wife, she had a peripnewney [sic], but wouldn't be bled till D.G. went.”<sup>32</sup> Perhaps Mary believed her status to be worthy of Dr. Gardiner's time.<sup>33</sup> Not until 1756 did Hartshorn take sole responsibility for treating patients within higher status households, such as one of Gardiner's most prominent patients, Governor William Shirley. Even then, he only treated servants.<sup>34</sup>

Gardiner entrusted Hartshorn with many middle-of-the-night emergency calls. Gardiner's apprentice documented many sleepless nights. On two occasions, Hartshorn lamented that he was “Called up last night at one o'clock to one Kelton at Oliver's Dock,” and “was called up & went to See Mr. Hallowell's Dutch maid last night.”<sup>35</sup> Yet, in the case of Thomas Green's son, Hartshorn “was called up at 12 o'clock at night to go with D.G. to Thos. Green's Son who had a Quincy [throat abscess] order'd him a Vomit [purgative] & Oxy[m]el.”<sup>36</sup> Of the men listed in records by the name of Thomas Green residing in Boston during the 1750s, two seem likely to have been the patient's father: one held a town office and was listed as a brazier, pewterer, and gentlemen; while the other was listed as a merchant. Both held substantial property. Either Thomas Green would have commanded more than the services of an apprentice,



### George Washington in His Last Illness

Etching by an unknown artist, c. 1800  
National Portrait Gallery, Smithsonian Institution

See note on next page.

even in the middle of the night. Thus, in this case Hartshorn accompanied Dr. Gardiner.<sup>37</sup>

By Hartshorn’s third year, 1755, his medical duties expanded further. On December 19, 1755, he wrote, “I opened the abscess which was Scituated just below the great Trocanter of the Right Femur of the Soldier mentioned yester[day], I introduced my Lancet deep and mad[e] a Large incision from hence proceeded a large Quantity of then Purulent matter.” Mostly, he performed minor procedures rather than major surgeries. Hartshorn practiced his surgical skills on soldiers, not on Reverend Mather Byles’ daughter.

July 26, 1755- Ed. Hasty pudding & milk, Boyled Cusk, no Sup’r. M.G. Eadem. Went up to Mr. Bysle’s his daugh. of 4 years old had a needle in her knee, which he had endeavoured to Extract by a magnet, but as it needed Incision I deferred it, Cloudy Day, tho’ fine Evening.

The next day “D.G. made an Incision w’h his knife and Extracted the needle w’h a pair Plyers.” As the minister of Hollis Street Church and the owner of five lots of land, Byles position in society would have exceeded that of an anonymous soldier and required the care of a physician of Gardiner’s medical stature.<sup>38</sup>

By his fourth year, 1756, Hartshorn began to execute increasingly more difficult surgical procedures.

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**About *George Washington in His Last Illness*:** On December 13, 1799, George Washington contracted an infection that resulted in a sore throat, fever, difficulty breathing, and possibly pneumonia. Modern doctors believe Washington died largely because of his medical treatment, which included calomel and bloodletting, resulting in a combination of shock from the loss of at least a quart of blood, as well as asphyxia and dehydration. “Blisters” (beetles used to raise blisters) were applied to his legs and a “bran” (a poultice of bran and honey) to his throat. At one point, he almost choked to death leaning his head back to swallow medicine. After 21 hours of illness, Washington died in his bed at the age of 67.

See Vibul V. Vadakan. “A Physician Looks At The Death of Washington,” *Early America Review* (Winter/Spring 2005).

April 14, 1756 I performed an Interrupted Suture on a Transverse Incision of the Carpus of one of Haskin's the Cooper's Boys, first w'h a sponge & warm water I cleansed the wound then approximated the Lips of the wound made the Suture apply'd Lint & Fryar's Bals. On narrow compress on each Side as a retentive & a proper bandage, then w'h a fillet I retained his hand lest by flection he shou'd disunite the wound.

Functioning with greater autonomy and skill, Hartshorn cleansed and sutured a wound on the hand of a boy, properly bandaging the hand in a flexed position so that the wound would not inadvertently reopen. Throughout Hartshorn's diary, he described an apprenticeship that included various duties, with his medical responsibilities becoming more frequent and complex. His writings also show an early tradition of putting Africans, the poor, immigrants, and other lower-class people at risk for the sake of medical training.

Medical training on marginal groups comprises what scholars W. Michael Byrd and Linda A. Clayton describe as an early tradition in an American "health subsystem." Byrd and Clayton argue:

Most of America's trained medical professional leaders were preoccupied with upward class mobility and the consolidation of professional prestige and status [during the mid eighteenth century to the early nineteenth century]. The ideal patients these men desired in their practices were white, well-to-do, and middle to upper class.<sup>39</sup>

Certainly, Silvester Gardiner fits this profile. According to Byrd and Clayton, this elitist attitude coupled with the slave masters' "stingy use of regular physicians" for enslaved persons encouraged "the growth of the slave health subsystem." The health subsystem that emerged meant that slave patients were treated medically by "black slave healers, conjure men, slave nurses, and midwives."<sup>40</sup> Their list needs to be expanded to include inexperienced medical apprentices, as Hartshorn's lengthy diary demonstrates. Furthermore, the health subsystem was not limited to slaves. Both Hartshorn's and Jepson's journals show that medical apprentices, at least in urban New England, operated as part of a health subsystem among free blacks, criminals, immigrants, and the impoverished as well.

As an apprentice of Dr. Gardiner, Hartshorn's medical training included the opportunity to observe dissections, amputations, and stone-operations.

Dissections provided the most practical education in anatomy, yet many would-be physicians had to learn through texts alone because “bodies for dissection were very difficult to secure.”<sup>41</sup> Hartshorn, on the other hand, witnessed quite a few dissections:

November 29, 1753- Was called to Fort Hill to dress Darby boy and who was stabbed with a long knife by Wm. Welsh. The intestines were two feet out of the wound, cut almost asunder in two places. After performing the Glover’s suture, reduced ‘em first enlarging the external orifice. The man died 24 hours, after receiving the wound. Was carried to the Almshouse and there dissected.

“Carried to the Almshouse and there dissected,” the Darby boy’s remains represent the use of impoverished bodies for medical education; the corpse of Darby’s murderer provided another source of bodies available for dissection: criminals. On April 10, 1754, William Welsh was hanged for stabbing the Darby boy.

March 9, 1754- . . . Saw Dr. Cotton Tufts. Dr. Downs who said he intended to get the Body of Wm Welch after he was hang’d for Dissection. Dr. Pecker also said he wou’d assist in dissecting him.

Although the General Court of Massachusetts did not legalize the dissection of unclaimed bodies until 1834, Hartshorn’s entries reveal opportunities for apprentices to participate in anatomical dissections eighty years earlier.<sup>42</sup>

The Boston medical community attempted to provide the practical study of the human anatomy through anatomical lectures using cadavers in 1765, 1768, and 1774. In one instance a mob interrupted the lecture in protest. Scholar Philip Cash concludes that “because of this [incident], it seems highly likely that anatomical study in Boston during this period was advanced by the occasional theft of a corpse.”<sup>43</sup> Although dissection was a matter of controversy during the eighteenth century, Hartshorn documented at least three cases of dissection after the death of criminals or people of lower status, providing another example of an early tradition of using the bodies of those on the margins of society for medical training.

## SURGICAL TRAINING

Observation of surgeries further enhanced Hartshorn's medical education. Colonial surgeons such as Gardiner conducted surgeries in patients' homes without anesthetics and antibiotics. The only painkillers available were "opium, alcohol, Indian hemp, water hemlock in small doses, bilateral carotid pressure, and tourniquets applied so tightly as to numb the nerves."<sup>44</sup> Lithotomies could be completed in a minute or so, but amputations must have seemed hellishly long.

One amputation Hartshorn witnessed occurred after several months of his ministrations. Hartshorn first visited Mr. Tucker's wife on January 31, 1755, to treat a large ulcer on her leg. He applied a "dossill of Lint armed with Lin. Areci & a pledget of Digest over it." In other words, he applied an olive oil-based ointment containing, among other things, an extract of *areca catechu* (wood of the betel nut tree) that acted as an astringent.<sup>45</sup> Worms soon infested her wound, and Hartshorn applied "Bailey's worm powder."<sup>46</sup>

Despite Hartshorn's daily dressings, Tucker's wife's wound became "fowl." At one point, he had to lancet the wound to drain the pus. By May 6, he recorded that "a Large Cavity appeared between her Os Calii & the head of the Tibia." He injected the wound with "Tinct. myrrh & aloe to deterge it, fomented it, etc." This injection consisted of an alcohol-based solution mixed with myrrh to act as an antiseptic and aloe to act as cathartic.<sup>47</sup> Hartshorn prescribed a drink made with two and half ounces of sassafras, one ounce of senna, turpeth, hermodactyl and polypod (root) of oak, a half an ounce each of cinnamon and liquorice, and one and half ounces of "Antim.[antinomy - possibly added as an emetic ingredient] Grosly pulverized & tied in Rag." The rag was to be boiled for twenty-four hours in five quarts of water or until it was reduced to three quarts of liquid.<sup>48</sup> Hartshorn prescribed an alchemical drink that would remove fluids from the patient to relieve the swelling of the leg.

Despite Hartshorn's efforts, Mrs. Tucker's wound grew worse. Hartshorn apprised Gardiner of the situation and after reviewing the leg, Gardiner pronounced an amputation necessary. Convincing the patient to undergo amputation fell to the apprentice. Hartshorn carefully documented the procedure:

May 29, 1755 Dr. Gardiner, Doctr. Thos. Williams, Doct. Pecker, Jepson & myself went and amputated Tucker's wife's Leg after much persuasion & many arguments. We sat her in

a chair & put a Large Bowl of Sand under her, apply'd the Tourniquet with a Compress or two upon the arteries, I handed the instruments, Dr. Williams held the tourniquets, after binding a Tape round the Leg about 5 inches below the patella for a Guide to the Knife. D.G. began the Incision & divided quited thro the membrana adipose then Pecker drawing the Skin tought [taut] next the muscles were divided, then the Catlin to divide the interosseous muscles, then w'h the Saw the Leg separated, five vessels were taken up [this is followed by a description of the bandages] . . . Brought the Leg home & Pecker dissected it.

No opium was administered. A tourniquet to numb the nerves comprised the only effort to manage the pain. Not surprisingly, the operation occurred only after "much persuasion & many arguments."<sup>49</sup> Infection, especially given the lack of antibiotics, remained a threat. Hartshorn regularly dressed her stump after the operation with an "anodyne of Batm. Drops," a medicine to relieve the pain (anodyne) mixed with balsam drops to promote discharge.<sup>50</sup> He attended to her dressing every day for many weeks, and Mrs. Tucker survived the ordeal.

As an apprentice studying under Gardiner, Hartshorn gained experience with other surgeries, especially an operation for which Dr. Gardiner was well known — the lithotomy, using English physician William Cheselden's lateral technique. Hartshorn documented a lithotomy performed on twelve-year-old Samuel Brown on October 15, 1754. Interestingly, Hartshorn penned a formal record of Brown's lithotomy as well as an informal record in his diary. The formal record of the operation states:

Tuesday 15<sup>th</sup> October 1754- About 10 o'clock in the morning Lithotomy was performed on Samuel Brown, Son to Mr. Wm. Brown of Salem, aged 12 years - Two Stones very rough were Extracted the Largest weighing six drams, the other three drams- The following Gentlemen were present Viz: Doct. Silvester Gardiner (Operator), Doc. Wm. Clarke (Assist.), Dr. Thomas Bulfinch, Sr., Dr. Simon Tufts, Dr. Joshua Gee (Spectators), Dr. Elisha Putnam of Salem (Moderator), Dr. James Pecker, Dr. Joseph Gardiner, Dr. Wm. Jepson, John Den. Hartshorn (Assistants).

The above operation was performed at Mrs. Kennedy's at New Boston.<sup>51</sup> The operation occurred in a private home. The only "hospitals" that existed before 1800 were the alms-houses, poorhouses, and temporary facilities that emerged during epidemics or wars.<sup>52</sup> After sharing post-operative care of the Brown boy with Jepson for several days, Hartshorn recorded:

October 19, 1754 Jepson watched with young Brown Last night. Went on foot to dress him in the morning. Jepson & Dr. G. rode, found him So bad that We didn't dress him. Expecting his Death before Evening.

The Brown boy died at one o'clock in the afternoon. Lithotomies represented the out-of-the-ordinary; most of Hartshorn's medical training involved common ailments such as constipation, asthma, and rheumatism. As an urban surgical apprentice under a prestigious doctor, however, Hartshorn had opportunities to witness amputations, dissections, and unique surgeries such as lithotomies.

Rural apprentices were not afforded frequent opportunities to witness dissections and major surgeries. As an apprentice in rural western Massachusetts, Ashley was not privy to the types of surgical procedures that apprentices under Dr. Gardiners were. Yet, Ashley did benefit from Gardiner's expertise indirectly. Jepson, Gardiner's former apprentice, began a practice in Hartford and was sought out by Deerfield residents.

April 10, 1775- Some Time in the Evening Edmd Bigelow came here who desired I would go into Hatfield and get Dr. [William] Jepson (who was to be there on the Morrow to perform the Operation of Lithotomy on one [Joshua] Smith) and get him to come out and see his Mamma.

Three days after attending the funeral of Joshua Smith, Ashley "had the Pleasure of Drinking a Bowl of Grog" with Jepson and was told by Jepson that Smith "died with an Impostumation of the Lungs, which Evidently appeared upon Opening him, and not from the Operation."<sup>53</sup> Although Ashley did not apprentice under a prominent urban surgeon, he observed specialized surgeries through a medical network that offered patients for medical display.<sup>54</sup>

## THE IMPACT OF THE SEVEN YEARS WAR (1754-1763)

During Hartshorn’s apprenticeship, the Seven Years’ War began.<sup>55</sup> Hartshorn discussed the events, rumors, and public reactions to war news in his diary. The occurrence of war both provided opportunities for and challenges to medical training. Jepson found an opportunity to receive intense surgical training through enlistment, while Hartshorn became overwhelmed by soldiers needing medical care.

August 2, 1755 . . . had news that General Braddock & chief of his officers were killed and his army defeated by the French & Indians at Ohio . . . A universal melancholy to be seen in Everyone’s face . . . heard Jepson was going into the army . . . Everyone full of news.

Hartshorn never revealed the reasons for Jepson’s enlistment, yet there are several reasons why he might have done so. The ambitious pursuit of four expeditions simultaneously resulted in a competition for men, arms, shelter, clothing, and supplies, causing expenses — including military pay — to rise. Jepson likely enlisted for the pay. Also, Jepson may have enlisted because “the experience was often educational for men of lesser experience when teamed with older, better prepared surgeons,” especially if they became assistant surgeons to British surgeons.<sup>56</sup> Perhaps Jepson wanted to increase his prestige and surgical experience.

Whatever the reason for Jepson’s decision to join the army as a surgeon, the outbreak of war affected Hartshorn dramatically. His schedule became hectic.

September 17, 1755 We were busy providing things for Jepson to go, he is Surgeon to Col. Gridley’s Regim’t, he has on[e] of the chests [of medical supplies and equipment] which we put up and Dr. Thomas of Plymouth the other [chest] who goes Surgeon to Col. Thatcher’s Regiment.

The war did not serve as just a topic of conversation in Hartshorn’s life. In the beginning, Hartshorn gathered medicines for troops and packed medical chests for the regiments — all of which increased Gardiner’s business. As the war continued, Hartshorn’s workload increased dramatically, and he no longer had the time to read his texts. The new workload included the treatment of sick and wounded soldiers.

January 23, 1756 We had the Care of Some Invalid Soldiers that came from Chignecto. I went down with Rogers Coach and Brought 3 to Mrs. Hooker's, 2 to Cavenaugh's, 2 to Cooks & one to Mrs. Delote's. One Eben Styles had the worst Symptoms.

Hartshorn made a separate chart to record the ages, hometowns, symptoms, and remedies prescribed for each of these soldiers. In the margin, he wrote that Eben Styles died the same night that the soldiers arrived.<sup>57</sup>

Gardiner "put up a hospital during the French war for sick and wounded sailors," according to S. A. Green.<sup>58</sup> War often facilitated the establishment of temporary "hospitals" to house wounded and sick soldiers, especially as the war progressed and the number of soldiers needing care rose. "April 30, 1756, "prodigiously hurried with my Sick soldiers . . . A great number in Town Sick besides the soldiers."

Hartshorn treated these patients alone: "D.G. sometimes goes w'h me to see Some of the Worst, otherwise I have the whole to myself." Overloaded with patients, Hartshorn bemoaned his inability to "write their cases." By May 9, he "visited about ninety patients in Town & the Soldiers, so many that I can't (to my sorrow) write Each one's case." His need to document each patient's condition suggests the importance of documenting patient case histories was not a practice founded by modern medicine. Hartshorn understood the body within physiological and anatomical categories, as do modern physicians. Unlike modern physicians, however, Hartshorn listened to the soldiers' stories of their illnesses and placed them within a rubric of types of imbalances in the humors as opposed to the organ systems that modern physicians use. Documentation of patients' symptoms into categories of humoral imbalances helped him to gain a sense of control over an epidemic.<sup>59</sup>

Hartshorn died in May 1756 before completing his apprenticeship. His last entries record the beginnings of his illness; presumably he became a victim of soldiers' illnesses. Had John Hartshorn not died, perhaps he would have enjoyed a successful career as a surgeon. After all, two of Gardiner's former apprentices, James Lloyd and William Jepson, enjoyed successful practices in medicine. Nevertheless, Hartshorn's experiences reveal several key aspects of eighteenth-century medical training. First, Hartshorn documented the central role Gardiner's wife played in the operation of a medical practice. Second, Hartshorn's papers demonstrate

that features of modern medical practice such as taking case histories did not emerge with the advent of clinics and hospitals but had earlier antecedents. Finally, a comparison of Hartshorn's apprenticeship with that of rural apprentices such as Ashley accentuates the differences between urban and rural medical training. Hartshorn's training highlights the disparity in the quality of care between lower-class and middle-class patients in urban areas; the poor and immigrant patients may have had access to the knowledge of prominent physicians such as Gardiner, but actual medical treatment was administered by the novice medical apprentices as part of their training.



## Notes

<sup>1</sup> The number of doctors grew by 32.4% every 10 years while the population grew by 24.3%. Eric H. Christianson, "The Medical Practitioners of Massachusetts, 1630-1800: Patterns of Change and Continuity," *Medicine in Colonial Massachusetts, 1620-1820* (Boston: Colonial Society of Massachusetts, 1980), 54-57.

<sup>2</sup> In a more recent study, only two pages are devoted to apprenticeship, and the author solely focuses on the apprenticeship contract. Thomas Bonner, *Becoming a Physician: Medical Education in Britain, France, Germany, and the United States, 1750-1945* (New York: Oxford University Press, 1995), pp. 44-46.

<sup>3</sup> Eric Christianson, "The Colonial Surgeon's Rise to Prominence: Dr. Silvester Gardiner (1707-1786) and the Practice of Lithotomy in New England," *New England Historical and Genealogical Register*, 136 (1982), 106.

<sup>4</sup> Christianson, "Colonial Surgeon," 106, 113 and T.A. Milford. *The Gardiners of Massachusetts: Provincial Ambition and the British-American Career* (Durham: University of New Hampshire Press, 2005), 19.

<sup>5</sup> John Denison Hartshorn, Journal 1752-1756, December 26, 1753. (Hereafter referred to as Hartshorn Journal.) Located at the Boston Medical Library (hereafter referred to as BML) in the Francis A. Countway Library of Medicine, Harvard Medical School. In fact, Gardiner had a special bitters recipe for the governor. See Silvester Gardiner's recipe book, John Denison Hartshorn papers, 1754-1756, BML.

<sup>6</sup> Eric H. Christianson, "Medicine in New England," *Medicine in the New World: New Spain, New France, New England*, Ronald L. Numbers, ed. (Knoxville: University of Tennessee, 1987), 57 and Concord Town Records, Notebook VIII, 3, part III.

<sup>7</sup> Hartshorn Journal, February 17, 1753, BML.

<sup>8</sup> William Jepson documented that Hartshorn began serving his apprenticeship

on March 6, 1753. Diary of William Jepson, Photostat, Massachusetts Historical Society. (Hereafter referred to as MHS)

<sup>9</sup> Christianson, "Medicine in New England," 122. The length of apprenticeships appears to vary from region to region and is time sensitive. For example, Peter Oliver served an apprenticeship of three years with Dr. Stockbridge in Boston from August 1761 to March 1764 and with Dr. Gelston from March 1764 to August 1764. Diary of Peter Oliver on microfilm, MHS, Boston. As Bonner notes, "American apprenticeships shrunk to three years by late eighteenth century." Bonner, *Becoming a Physician*, 46. William Norwood concluded, "The medical apprenticeship in America was rarely more than three years." William F. Norwood, "Medical Education in the United States before 1900," *History of Medical Education: An International Symposium*, C. D. O'Malley, ed. (Berkeley, 1970), 474.

<sup>10</sup> Photograph of original document not transcribed by Christianson in his essay, "Medicine in New England," 123. He states that it is part of the collection of Dolbear Ms. Folio, 1760-1766, MHS.

<sup>11</sup> Diary of Peter Oliver on microfilm, MHS. Amelia F. Miller and A. R. Riggs, eds., *Romance, Remedies, and Revolution: The Journal of Dr. Elihu of Deerfield, Massachusetts, 1773-1775* (Amherst: University of Massachusetts Press, 2007), 6.

<sup>12</sup> Bonner, *Becoming a Physician*, 46. Bonner cites William Rothstein's work as his source for the amount of the fee paid to the mentor. Rothstein, however, was discussing nineteenth-century apprenticeships: "Most early nineteenth-century medical students obtained their education by apprenticing themselves to a physician, called a preceptor, for a period of time . . . The standard apprenticeship program was three years, at a fee to the preceptor of \$100 per year modified according to the preceptor's reputation. The preceptor furnished all the books and equipment required and provided the apprentice with a certificate when the term of instruction was completed." See William G. Rothstein. *American Physicians in the Nineteenth Century: From Sects to Science* (Baltimore: The Johns Hopkins University Press, 1972), 85.

<sup>13</sup> Hartshorn Journal, November 22, 1755. A picture of the agreement between Lemmon, Sr. and Boylston can be seen in Christianson, "Medicine in New England," 52, illustration 3. McElroy was contracted for one year, Oliver for two years, Ashley for two years, and Lemmon for two years.

<sup>14</sup> T. A. Milford. *The Gardiners of Massachusetts*, 36.

<sup>15</sup> Note that the use of the word "hartshorn" in this particular journal entry is not a reference to John's family name but to an ingredient (a monobasic and dibasic Calcium phosphate) used in the treatment of rickets. See J. Worth Estes, "Therapeutic Practice in Colonial New England," *Medicine in Colonial Massachusetts* (Boston: Society of Colonial Massachusetts, 1980), 372.

<sup>16</sup> Hartshorn Journal, May 10, 17, 19, and 23, 1754 and March 7, 1755.

<sup>17</sup> Fielding H. Garrison, *An Introduction to the History of Medicine* (Philadelphia:

W. B. Saunders Co., 1914), 306.

<sup>18</sup> Hartshorn, Journal, July 5, 1752, and August 1752.

<sup>19</sup> Helen Brock, “The Influence of Europe on Colonial Massachusetts Medicine,” *Medicine in Colonial Massachusetts, 1620-1820* (Boston: Colonial Society of Massachusetts, 1980), 106.

<sup>20</sup> George Cheyne (1671-1743) studied medicine in Edinburgh, Scotland and practiced in Bath, England. In his book, Cheyne made arguments for vegetarianism. See Anita Guerrini. *Obesity and Depression in the Enlightenment: The Life and Times of George Cheyne* (Norman: University of Oklahoma Press, 2000), 156, 167-68, 174-77, 184-85.

<sup>21</sup> James Foster’s (1696-1753) book describes the actions of William Boyd Kilmarnock, fourth Earl of Kilmarnock, who supported the Jacobite Rebellion of 1745 to help Charles Edward Stuart (Bonnie Prince Charles) to the thrones of England and Ireland. See Fitzroy McClean. *Bonnie Prince Charlie* (New York: Atheneum, 1989). Thomas Brown based his satire on Bernard le Bovier de Fontenelle’s very popular *Dialogues des Mortis* (1683), mimicking Fontenelle’s format but with English characters and events.

<sup>22</sup> Philip Cash, “The Professionalization of Boston Medicine, 1760-1803,” *Medicine in Colonial Massachusetts* (Boston: Society of Colonial Massachusetts, 1980), 76.

<sup>23</sup> A Method of Study, John Denison Hartshorn papers, 1754-1756, BML.

<sup>24</sup> See Brock, “Influence of Europe,” 101; William Wigglesworth, “Surgery in Massachusetts, 1620-1800,” *Medicine in Colonial Massachusetts* (Boston: Colonial Society of Massachusetts, 1980), 216; and Christianson, “Medicine in New England,” 110-111.

<sup>25</sup> *Boston Gazette*, June 14, 1744.

<sup>26</sup> Gardiner’s recipe book, John Denison Hartshorn papers, 1754-1756, BML.

<sup>27</sup> Hartshorn’s diary begins with two entries in 1752 but does not start full-fledged until November 1753.

<sup>28</sup> Miller and Riggs, *Romance, Remedies*, 46.

<sup>29</sup> For example, Hartshorn treated “Mr. Inman’s man, James” on June 15, 1754, “Mr. Iver’s Negro’s arm” on August 18, 1754, “a Dutch child who had an ardent fever” on August 25, 1755,” and “a Mulatto man belonging to Edward King” on March 16, 1755. Hartshorn Journal.

<sup>30</sup> Given that Jepson was referred to as a “Doctor” in a document dated October 15, 1754, and presuming he too served a five-year apprenticeship, it may be concluded that this was his fourth year as an apprentice. This would parallel Hartshorn’s career during which he was also performing surgeries in his fourth year. Diary of William Jepson, Photostat, MHS.

<sup>31</sup> Hartshorn Journal, November 27, 1754.

<sup>32</sup> Hartshorn Journal, January 17, 1755. Peripneumony referred to a patient with a hard, full pulse, wet coughs that produced phlegm sometimes with blood.

<sup>33</sup> The occupation of Samuel Sloper was not listed in the Thwing Index. His

marriage to Mary Hallowell and their attendance of New South Church in Boston were recorded. The New South Church congregation was a mix of mariners, coopers, rope makers, and such famous men as Samuel Adams and Benjamin Franklin. Annie Haven Thwing, *Inhabitants and Estates of the Town of Boston, 1630-1800 and the Crooked and Narrow Streets of Boston, 1630-1822*. CD-ROM (Boston: New England Historical Genealogical and Massachusetts Historical Society, 2001) (Hereafter Thwing, *Inhabitants*).

<sup>34</sup> Hartshorn wrote, “Drest governor’s coachman’s child’s hand.” Hartshorn Journal, January 19, 1756.

<sup>35</sup> Hartshorn Journal, November 19, 1754; August 22, 1755. For other examples of night calls, see entries for January 19, 1755; October 8, 1755; and April 11, 1756.

<sup>36</sup> Hartshorn Journal, April 11, 1756. In this case, a “vomit” or purgative was prepared with oxymel, a drink of vinegar and honey to act as an expectorant. J. Worth Estes, *Dictionary of Protopharmacology: Therapeutic Practices, 1700-1850* (Canton, MA: Science History Publications, 1990), 145.

<sup>37</sup> Seven men named Thomas Green or Greene exist in Boston records. Only two had at least one son under the age of 20 in 1756 and thus, still a dependent. Otherwise, one could assume that Hartshorn would have addressed an adult by their own name. Hartshorn Journal, April 11, 1756.

<sup>38</sup> Two Mather Byles are listed in the Boston records, but the minister of the Hollis Street Church had a four-year-old daughter in 1755. Thwing, *Inhabitants*. Hartshorn noted that Byles “shewed many of his Curiosities to me, Glass’s microscope, etc.” Hartshorn Journal, July 29, 1755.

<sup>39</sup> W. Michael Byrd and Linda A. Clayton, *An American Health Dilemma: A Medical History of African-Americans and the Problem of Race: Beginnings to 1900*, vol 1 (New York, Routledge Press, 2000), 232.

<sup>40</sup> Byrd and Clayton, *Health Dilemma*, 231-232.

<sup>41</sup> Norwood, “Medical Education,” 466.

<sup>42</sup> William Wigglesworth, “Surgery in Massachusetts, 1620-1800,” *Medicine in Colonial Massachusetts* (Boston: Colonial Society of Massachusetts, 1980), 218.

<sup>43</sup> Philip Cash, “The Professionalization of Boston Medicine, 1760-1803,” *Medicine in Colonial Massachusetts* (Boston: Colonial Society of Massachusetts, 1980), 77.

<sup>44</sup> Wigglesworth, “Surgery in Massachusetts,” 224.

<sup>45</sup> Estes, *Dictionary*, 42.

<sup>46</sup> Hartshorn Journal, February 7, 1755.

<sup>47</sup> Estes, *Dictionary*, 6, 134.

<sup>48</sup> Hartshorn Journal, May 6, 1755. The sassafras and senna acted, most likely in this case, as cathartics. Turpeth, a mercuric subsulfate, induced vomiting. Hermodactylus, a cathartic, and polypod of oak, an astringent, were also used. Cinnamon and liquorice were added to the drinks presumably to make them tastier. Antim. stands for antimony, a mineral used as an emetic, cathartic, or diaphoretic.

Estes, *Dictionary*, pp. 173, 176, 197, 95, 140, 49, and 14.

<sup>49</sup> A dentist, W. T. G. Morgan, introduced anesthesia at Massachusetts General in 1846. Richard Harrison Shyrock, *Medicine and Society in America, 1660-1860* (New York: New York University Press, 1960), 133.

<sup>50</sup> Estes, *Dictionary*, 11.

<sup>51</sup> Lithotomy Case, John Denison Hartshorn papers, 1754-1756, BML.

<sup>52</sup> Christianson, “Medicine in New England,” 137.

<sup>53</sup> Jepson practiced in Hartford, Connecticut but was going to Hatfield, Massachusetts, to perform a stone operation. Miller and Riggs, *Romance, Remedies*, 193, 222.

<sup>54</sup> Ashley’s mentor, Thomas Williams, bought drugs from Gardiner. Jepson became Gardiner’s co-partner in an apothecary business in Hartford. The medical networking most likely emerged from these connections and is in contrast to what Steven Stowe describes in the rural South in the nineteenth century. Ashley operates within a rural community but was not as insulated as the southern physicians Stowe describes. Steven M. Stowe, *Doctoring the South: Southern Physicians and Everyday Medicine in the Mid-Nineteenth Century* (Chapel Hill: The University of North Carolina Press, 2004), 3, 85-91.

<sup>55</sup> Scholar Fred Anderson divides the war into four phases; the first two span the period of Hartshorn’s diary. The first phase began in 1754 when the French influence in the “trans-Allegheny West” incited military action by the Massachusetts and Virginia British provinces. Massachusetts’s governor, William Shirley, petitioned the General Court to respond to rumors of French infiltration into Nova Scotia frontiers and Pennsylvania backcountry by commissioning an expedition up the Kennebec River. Anderson speculates that Shirley had political motivations for instigating military operations. Shirley understood that Massachusetts would be granted increased credit and hard cash as well as given supply contracts by the British to support any war effort against the French. These inducements conferred great political clout upon Shirley. Fred Anderson, *A People’s Army: Massachusetts Soldiers and Society in the Seven Years’ War* (Chapel Hill: University of North Carolina Press, 1984), 6-9.

<sup>56</sup> Fred Anderson, *Crucible of War: The Seven Years’ War and the Fate of Empire in British North America, 1754-1766* (New York: Alfred A. Knopf, 2001), 88 and Norwood, “Medical Education,” 470.

<sup>57</sup> Patient Cases, John Denison Hartshorn Papers, 1754-1756, BML.

<sup>58</sup> Samuel Abbott Green, *Centennial Address delivered in the Sanders Theatre, at Harvard University, Cambridge, June 7, 1881, before the Massachusetts Medical Society* (Boston: Groton, 1881).

<sup>59</sup> Hartshorn Journal, May 8, 1756. Rita Charon “To Build a Case: Medical Histories as Traditions in Conflict” in *Medicine and Literature*, vol. 11 (Spring 1992), 116-118.