

# Surgeons Reconsidered: Military Medical Men of the American Revolution

TABITHA MARSHALL

**Abstract.** This paper assesses the reputation of British military medical staff in the 18th century, focusing on the character and professionalism of regimental surgeons and mates who served at the time of the American Revolutionary War (1775-1783). Examining the careers and contributions of men such as Thomas Dickson Reide, Robert Jackson, and Robert Hamilton reveals that—in contrast to charges of ineptitude, laziness and dishonesty among military surgeons—the British army could count on a cadre of military medical men who were devoted both to their patients and to the advancement of their profession.

**Keywords.** military medicine, 18th century, British army, professionalism

**Résumé.** Cette étude évalue la réputation du personnel médical militaire britannique au dix-huitième siècle, en se concentrant sur les traits de caractère et le professionnalisme des chirurgiens régimentaires et de leurs seconds lors de la guerre d'indépendance des États-Unis (1775-1783). L'examen des carrières et des contributions d'hommes tels que Thomas Dickson Reide, Robert Jackson et Robert Hamilton révèle que – en contraste avec les accusations d'incompétence, de paresse et de malhonnêteté au sein de l'équipe chirurgienne – l'armée britannique avait recours à un corps de médecins militaire dévoués à leurs patients et à l'amélioration de leur profession.

**Mots-clés.** Médecine militaire, dix-huitième siècle, armée britannique, professionnalisme

---

This paper will re-assess the reputation of British military medical staff in the 18th century, focusing on the character and professionalism of regi-

---

Tabitha Marshall, Population Health Research Institute, McMaster University.

mental surgeons and mates who served at the time of the American Revolutionary War (1775-1783). An important component will be a discussion of surgeon's mate Thomas Dickson Reide, whose treatise *A View of the Diseases of the Army* (1793),<sup>1</sup> has received relatively little attention from historians of military medicine, including those whose focus is on the British military in the 18th century. Reide's treatise, like the more well-known works by Robert Hamilton and Robert Jackson, calls into question the assumption that regimental medical staff lacked both dedication and adequate medical training.

Eighteenth-century military and naval physicians such as John Pringle, Donald Munro, and Gilbert Blane achieved fame in both contemporary society and among historians of health and medicine. In contrast, military surgeons and surgeon mates, particularly those in the regimental system, have been criticized by many contemporaries and historians, portrayed as underqualified and of questionable character and value.<sup>2</sup> Moreover, some surgeons were accused of embezzling money meant for medicines, while others were charged with laziness and dereliction of duty. However, evidence for the British army in the period of the American Revolutionary War suggests that there were dedicated and qualified medical staff even at the regimental level. James McCauseland, surgeon of the 8th regiment, is one such example: faced with high rates of sickness and inadequate medical supplies at Fort Niagara in 1779, he employed folk remedies in his efforts to treat the sick of the garrison. Frustrated by delays of medical supplies from Quebec, he finally ordered them direct from Europe, paying for them out of his own pocket. Several of the regimental surgeons and mates were also active in the medical debates of their day, particularly as they concerned military medicine. In 1794, Robert Hamilton, who served as a surgeon's mate with the 10th Regiment of Foot from 1780-85, published *Duties of a Regimental Surgeon Considered*. The prolific, and controversial, Robert Jackson, who published works on fevers and the army medical department, including his *Remarks on the Constitution of the Medical Department* (1803), was a surgeon's mate in America during the Revolutionary War. Similarly, a relatively unknown surgeon's mate of the 29th Regiment, Thomas Dickson Reide, penned *A View of the Diseases of the Army* in 1793. Reide served with the 29th regiment in Canada during the Revolution, and later as surgeon with the 60th regiment. In his treatise on military diseases, he published a journal of his tenure in North America, accompanied by medical returns, detailed descriptions of diseases, the methods of treating them, and formulae for commonly used remedies. His emphasis on medical record-keeping and observation, and his references to well-known medical minds such as Sydenham, Boerhaave, Hunter, and Pringle, suggest that regimental practitioners were better educated than has often been assumed.

## BACKGROUND: THE ARMY MEDICAL SYSTEM IN NORTH AMERICA

Prior to discussing the reputation and reality of regimental medical staff, a brief description of the army's medical system during the American Revolution is necessary. The British army's medical system in North America relied primarily on care at the regimental level by the surgeon and/or surgeon's mate. The army did set up general hospitals in America (e.g., in places such as Boston, New York, and Philadelphia) although a preference for regimental hospitals was expressed by many in the military and medical service. Indeed, by this time, the term "general hospital" often referred to staff rather than a physical building *per se*.<sup>3</sup> The general hospital in North America was governed by "Instructions for the Direction of the Hospital" sent in September 1775 by the secretary-at-war. These were based on regulations used in North America during the Seven Years War.<sup>4</sup> Said directions outlined the responsibilities of the General Hospital staff, and in doing so provided a picture of the ideal hospital and hospital team. The Principal Officers of the Hospital were the physicians and the chief surgeon; other staff members included apothecaries, hospital mates and possibly a matron. In general, the personnel of the general hospital were deemed to be of higher quality than regimental practitioners, and were paid accordingly.

However, contemporaries charged that general hospitals were ill-managed, crowded, and generally unhealthy. Indeed, government and military medical staff at all levels expressed concern about these hospitals, and their preference for a reliance on regimental hospitals and medical care. Robert Jackson, who served as surgeon's mate with the 71st Regiment of Foot during the war, lamented that, "it is unfortunate that the mode, too frequently pursued, of collecting sick soldiers into general hospitals, so multiplies the causes of disease, as defeats the purpose."<sup>5</sup> The reason, he contended, was that the air became contaminated when sick men were crowded together in cramped quarters; he therefore argued that the proper object when providing hospital accommodation should be the "provision of space." Jackson claimed history as his proof in this matter:

It is proved in innumerable instances, that sick men recover health sooner and better, in sheds, in huts, and barns, exposed occasionally to wind, and sometimes to rain, than in the most superb hospitals in Europe. Pure air, in this respect, is alone superior to all forms of care, and to all other remedies, without such aid. Where a number and variety of human beings are accumulated under the same roof, the air cannot long remain pure. It may not be positively impregnated with contagion; but it is not salutary.<sup>6</sup>

In this matter Jackson echoed concerns voiced in the mid-18th century by such prominent medical men as Sir John Pringle. Pringle attributed

several diseases to the "foul air in some of the wards of the hospital crowded with sick." For example, he maintained that the flux (dysentery) was "particularly bad" in crowded hospitals.<sup>7</sup> To prevent the onset of such diseases, Jackson therefore recommended that the sick be housed in separate, detached quarters, arranged by nature and stage of disease.<sup>8</sup> Thus, like Pringle and Richard Brocklesby, author of *Observations of Military Hospitals*,<sup>9</sup> Jackson asserted that the smaller (regimental) hospitals were greatly preferable to general hospitals: "It will uniformly be found to hold true, in referring to histories of health among soldiers, that mortality in general hospitals, compared with mortality in regimental hospitals, bears a high proportion in similar diseases, notwithstanding the apparent superior accommodation of the general establishments, and the supposed superior medical skill of the persons employed in these establishments."<sup>10</sup>

There are not adequate records for the American Revolution, however, to test Jackson's assertion. Certainly he was not alone, as many of his colleagues voiced similar concerns. Robert Hamilton, who also served as a regimental surgeon's mate during the war, suggested that sick soldiers would be better off in tents than in hospitals, whether regimental or general. If the weather was "at all moderate," he advised regimental surgeons to erect tents for the accommodation of at least part of the sick, as "they can be more easily kept clean, and a free circulation of air obtained, [which was] a thing of the highest consequence" in the treatment and prevention of infectious disease.<sup>11</sup>

Government officials too touted the healthier atmosphere of the regimental compared to the general hospitals. Robert Adair, Inspector General of the Regimental Infirmaries during the war, wrote that regimental hospitals "are now found by experience to be much better adapted to receive the Sick" than general ones. Echoing the sentiments of Hamilton and Jackson, he emphasized the dispersal of the sick as a "matter of the greatest consequence." Adair also favoured the closer military supervision of patients that was possible in regimental hospitals. As patients could be monitored by their respective regimental officers, "the Sick are more regular in conduct, fewer die in propo[r]tion, [and] Malingerers are seldom found."<sup>12</sup>

However, the government was also motivated by fiscal concerns in its preference for regimental hospitals. One of the first reasons Adair provides is an economic one; in addition to their being more conducive to recovery, regimental hospitals "are not nearly so expensive to Government." In the same letter Adair instructed Mr. Marshall, Surgeon of the Halifax hospital, that no general hospital would be established there, it being "unnecessary" as well as "extremely expensive." Instead, the regimental hospitals were to be put "upon a liberal footing"; regimental surgeons were to apply to Marshall if they needed additional medicines.

The general hospital staff was to be considered as a "*Corps de reserve*," which would assist where necessary. Only in case of an attack on Halifax would a general hospital be formed.<sup>13</sup>

Certainly the government and senior medical officers attempted to reduce the number of general hospitals, particularly towards the close of the war. William Barr, the Hospital Purveyor in Canada, recommended in April 1781 that the general hospitals at St. John's and Montreal be closed: "Upon the whole, the General Hospitals at St. John's & Montreal are attended with some expence, and render the Hospital at Three Rivers, (where there are much better accommodations,) of less general use."<sup>14</sup> Towards the end of the war the government also decided to close the garrison hospital in Quebec City. Said hospital was established in 1776 during the siege of Quebec for sick and wounded soldiers, sailors and "Rebels."<sup>15</sup> However, as a general hospital had been established in Canada since that time, Lord George Germain could not see "any public utility" in continuing the garrison hospital.<sup>16</sup> Similarly, in early 1782 the commanding officer at St Augustine, Florida recommended that the general hospital there be closed, as the illnesses treated in the hospital "might as well have been cured in the Regimental Infirmaries." In its place he suggested adopting "the Plan which has been found to answer so well in other Parts" where the sick were attended by regimental surgeons with the assistance of hospital mates.<sup>17</sup>

As these calls to abolish general hospitals occurred near the close of the war, they were likely motivated at least in part by a diminished demand for medical care within the army. However, general orders reveal that senior officers promoted the use of regimental over general hospitals from the beginning of the conflict. In 1775, general orders warned officers and regimental surgeons that soldiers should not be sent to the General Hospital for "trifling complaints," but instead should be "taken care of as usual by their own Surgeons."<sup>18</sup> Regulations were also enacted to ensure that proper procedure was followed in sending soldiers to the General Hospital. Prior notice had to be sent to the hospital the day before the soldier was due to arrive, and the regimental surgeon or mate was required to attend in order to give an account of the patient's condition and their treatment prior to admission.<sup>19</sup> Regimental surgeons were instructed in 1776 that no soldiers would be admitted to the general hospital in Boston without "Tickets," which must be signed by a company officer and by the regimental surgeon or mate.<sup>20</sup> Similar orders were issued regarding the hospital in Rhode Island.<sup>21</sup> These procedures were likely aimed both at improving the quality of care within the hospital, and at preventing regimental surgeons from sending all but the most serious cases to the General Hospital. Whether for reasons of contagion, care or cost, the medical establishment, army and the government seem to have preferred treating sick soldiers in regimental

rather than in general hospitals. The importance to this discussion is clear: as regimental medical staff were such a crucial part of the medical system, their qualifications and level of professionalism would conceivably have had a significant effect on the overall health of the army.

#### REGIMENTAL MEDICAL STAFF

While the physicians and surgeons of the General Hospitals were generally considered to be of adequate, if not superior, quality,<sup>22</sup> the regimental medical staff has been criticized by both contemporary and modern observers. For example, in *A History of the Army Medical Department*, Sir Neil Cantlie maintained that, in general, "only candidates of poor quality" applied for military service in this period; in times of war, he suggested, surgeon's mates were appointed "without ever having been to medical school or heard a single lecture." This analysis was largely based on criticisms made by 18th-century critics such as the aforementioned Robert Hamilton.<sup>23</sup> Similarly, Paul Kopperman stated in 1979 that, "By all accounts, the scandal of the army medical services was the quality of the regimental personnel." Although he recognized "some excellent medical men" among staff, "most regimental medical officers neither began well, nor improved."<sup>24</sup> In her social history of the British soldier, Sylvia Frey suggested that, apart from administrative problems, the "most critical weakness in the medical service was in the practitioners themselves, who in many cases did not know enough to take care of people and in some cases did not care to do so."<sup>25</sup> More recently, Matthew Kaufman maintains that in the 18th century, British medical staff had only "minimal qualifications," and that standards declined even further in times of war, with some candidates "having only served apprenticeships of a few months' duration."<sup>26</sup> Regimental surgeons and surgeons' mates occupied a lowly status in the military hierarchy,<sup>27</sup> and Frey suggests that this low status, combined with poor pay, made many regimental surgeons and mates "indifferent to their suffering patients."<sup>28</sup> Hospital mates have also been cast as underqualified and of dubious merit, while nurses have received scant attention from historians of this war and of this time period in general. In recent years this view has begun to change; Paul Kopperman's 2007 essay on the British army in the period 1755-83, includes a more positive analysis of regimental practitioners, while Ackroyd et al., in *Advancing with the Army* (2006) reveal the professionalism of army surgeons in the late 18th and early 19th centuries.<sup>29</sup> Yet, the stereotypical view of the British army surgeon as barbaric and/or generally incompetent still remains in general and popular histories. For example, a recent history of the American War of Independence describes British medical personnel of the period as "poorly trained," while the medical infrastructure of both armies was "woefully inadequate."<sup>30</sup>

The charges against regimental surgeons are serious and seem to have some merit. One of the key reasons which Robert Hamilton gave for publishing *The Duties of a Regimental Surgeon Considered* in 1787 was his "ardent wish, that the regimental surgeon may become more respectable, and to attempt a reformation in several parts, where, perhaps, the military medical name has...been too justly exposed to censure."<sup>31</sup> While he emphasized the dedication and professionalism of many regimental surgeons, he charged that the system of interest and patronage allowed largely unqualified men to take up this important post.<sup>32</sup> Hamilton's choice of topics suggests the nature of contemporary criticism. Chapter IV, for example, is titled "Surgeons cautioned from spending too much Time in Amusements with the Officers, lest they thereby neglect their Duty; and of the Impropriety of granting them double Commissions." Chapter V speaks "Of Intoxication—of its greater Criminality in the Surgeon, than Others in the Corps," and provides examples where drunken surgeons administered wrong dosages, endangering their patients' lives. As Hamilton believed that many regimental practitioners "remain totally ignorant of what is passing in the medical world," he recommended a long list of standard medical texts for their study.<sup>33</sup> Although all surgeons should know the "value of good instruments ... it has been found necessary to spur several on to their duty in this respect."<sup>34</sup>

Hamilton was not alone in his criticisms. Robert Adair, Inspector General of the Regimental Infirmaries, recommended to the secretary-at-war that medicines should not be allocated to regimental surgeons according to their demands. Instead, both quantity and quality should be decided by the General Hospital physicians "who are supposed to understand the internal Diseases of the Soldier better than a Regimental Surgeon."<sup>35</sup> Even the *surgical* abilities of the regimental surgeon were suspected. The commander-in-chief ordered in September 1775 that "No Amputation or other Intricate Operation, [was] to be Undertaken by any of the Surjeons without Consultation first hand, With the Surjeon's & Physicians of the General Hospital." Moreover, any such operation should be monitored by the General Hospital physicians; this order was to be observed by the surgeons of the General Hospital as well as the regimental surgeons.<sup>36</sup>

Regimental surgeons were also accused of misconduct and embezzlement of regimental funds. William Barr, purveyor to the hospital in Canada, wrote to General Haldimand in 1780 regarding the "very unwarrantable conduct adopted by almost all the Surgeons of Regiments in this Country."<sup>37</sup> He claimed that while the surgeons received Medicine Money for the full establishments of their regiments, they depended on the General Hospital for *all* of their medicines, thus pocketing over £130 a year for their own use. In 1776, the secretary-at-war

had ordered that regimental surgeons be supplied with medicines from the general hospital, as the additional expenses involved in North American service would make it very difficult, if not impossible, for the regimental surgeons to purchase the necessary medicines otherwise.<sup>38</sup> However, Barr complained that regimental surgeons abused this policy. He warned that if the practice was allowed to continue, he would not be surprised if surgeons at the General Hospital petitioned to become regimental surgeons, as the latter post was, in his opinion, "much more profitable."<sup>39</sup> Similar charges were made, whether directly or implicitly, regarding regimental surgeons in the army serving in the Thirteen Colonies. Robert Hamilton, who served as a regimental surgeon in this period, accepted that surgeons often pocketed excess medicine money for their own use. However, he claimed that in general, the medicine money from soldiers' stoppages often exceeded what was necessary to fill the regimental medicine chest; the excess was thus considered by many regimental surgeons as a perquisite. Hamilton suggested that this problem was primarily due to their meagre salary: "Since they are placed in a station so expensive, and on a stipend so contracted, so greatly inadequate to their necessary expences, to save for their own use what can be conveniently spared from the medicine money, is not culpable in them; it is only wrong when these bounds are exceeded."<sup>40</sup> However, his defence of this practice is weakened by his acknowledgment that it was not unknown that "only some of the cheapest and coarsest articles of the material medica are kept in the [regimental] medicine chest."<sup>41</sup> In general, Hamilton allowed that many criticisms of his fellow regimental surgeons had some basis in fact: "It is an old remark, and, I fear, not the less true for its antiquity, that more men perish in the regimental practice from want of proper medical care, than by the sword; or, in the words of an ingenious author, 'More die there by lancet, than the lance.'"<sup>42</sup> These problems would not be solved, he contended, until regimental practitioners were "place on a more honourable footing," given higher rank and a pay increase. Until this occurred, regimental medical service would attract few who "deserved the name of medical practitioners."<sup>43</sup>

These criticisms, particularly by knowledgeable contemporaries such as Barr and Hamilton, must be seriously considered. However, the context in which both these men wrote suggests the influence of other factors, and consequently, the re-evaluation of such charges. In the first place, it is likely that Barr was motivated at least in part by complaints from his superiors regarding heavy expenditure by the hospitals, particularly in the use of medicines. The heavy use, and therefore cost, of medicines prompted calls by senior medical and government officials for changes to the system. As the "Consumption of Medicines" among the troops exceeded "all reasonable bounds" the secretary-at-war was "naturally led to enquire into the causes of it, and whether there were no

means of guarding against so heavy and increasing an Expence, without danger of inconvenience to the Service."<sup>44</sup> Both Robert Adair, Inspector General of the Regimental Infirmaries, and Dr. Nooth suggested that "the evil may in a great measure be ascribed to the indulgence" granted to the regimental surgeons which allowed them to receive all their medicines gratis from the hospital stores, "the consequence of which must too probably be a want of moderation in their demands of Medicines & a want of care and Oeconomy in the Expenditure of what they receive." The secretary-at-war therefore ordered in 1781 that in the future half of the stoppages deducted from the soldiers' pay would be applied to the purchase of medicines. Each regimental surgeon would be required to submit a list of medicines to be paid for by the stoppages; should any surgeon neglect to send this list, orders would be given to stop half of his "Medicine Money," directing it to the Apothecary General instead. As the medicines thus acquired may "frequently be insufficient for the Regiment," whatever medicines were wanting would be supplied from the General Hospital stores. However, the secretary-at-war directed that any such demands from regimental surgeons had to be regulated by senior hospital staff.<sup>45</sup> Staff of the Hospital in Canada credited this regulation with significant reductions in expenditures at the General Hospitals.<sup>46</sup> However, it is unclear whether regimental surgeons had really been taking advantage of the system, or whether the burden had simply been shifted onto their shoulders after 1781.

Hamilton's criticism of his peers should also be evaluated in context. When Hamilton penned his *Duties of a Regimental Surgeon* in 1787, recruits to the medical service were few and deemed poorly qualified, likely due to the poor pay offered by the army.<sup>47</sup> Prospects for surgeons and mates were certainly better during time of war, and it is possible that a higher quality of men were attracted to military medical service during the American Revolution than in the 1780s and 1790s. Professional prejudices and rivalry between physicians and surgeons in Britain itself also likely influenced these criticisms of regimental surgeons. While these factors do not negate the criticisms above, they do suggest that regimental medical staff should not be seen as a uniformly "scandalous" group.

In fact, the British army benefited from the dedication and skill of qualified men who took their regimental responsibilities very seriously indeed. Although Robert Hamilton exposed several failings among his brethren, he was also quick to point out the profession's paragons. In the Preface to *The Duties of a Regimental Surgeon Considered*, he claims that "several eminent men have been and are in the service in the station of regimental surgeon."<sup>48</sup> Moreover, prior to their military service, these university-educated men "arrived at the highest rank in the science of medicine, which the schools can confer."<sup>49</sup> It is difficult to determine the

educational background of the average army surgeon prior to the French wars of the late 18th and early 19th century. Following the battle of Waterloo in 1815, Sir James McGrigor, then head of the Army Medical Service, required British army surgeons to complete questionnaires describing their medical education in some detail, records which have been analyzed by Ackroyd et al. in *Advancing with the Army* (2006).<sup>50</sup> However, information about army surgeons who served in earlier wars is relatively scarce. Yet there is evidence to suggest that regimental surgeons in the second half of the 18th century had at least adequate qualifications in contemporary terms. In the second half of the 18th century, it became a requirement that surgeons and surgeons' mates had to pass an army surgical exam, administered by the London Corporation of Surgeons. As Ackroyd et al. point out, few British medical practitioners in the 18th century had any formal qualifications; thus, this examination set army surgeons apart from the majority. At the time, most British doctors were not university graduates; the majority had done an apprenticeship with an apothecary or surgeon before setting up as a general practitioner in their own area. As the century progressed, medical training became dominated by the faculty at Scottish universities, and by the London hospitals, and an increasing number of practitioners would have spent some time in these institutions, a greater number of them earning degrees.<sup>51</sup> However, at the time of the American Revolution, a university degree was not the norm among medical practitioners. Nor was it necessary to hold a medical degree as an army surgeon, even in the early 19th century. However, the fact that army surgeons and mates were formally examined did indeed set them apart from many of their peers in the civilian world.

Moreover, a number of regimental surgeons and mates who served during the American war, did obtain a medical degree, whether before or after the conflict. One such man was Robert Jackson, who served with the 71st Regiment of Foot in North America from 1778 to 1782. Jackson hailed from Lanarkshire in Scotland, the son of a small farmer. He was educated at schools in Wandon and Crawford, and undertook a three-year apprenticeship under the surgeon Mr. William Baillie. In 1768, Jackson began his studies at Edinburgh University, where he spent three winters; in the intervening summers he performed medical duties aboard a Greenland whaler in order to earn money for his university studies. However, according to a memoir of his service published in 1845, financial difficulties cut short his university studies, and he did not complete his degree at Edinburgh. From 1774 to 1778 he served as a medical assistant to a Dr. King at Savanna-la-mar in Jamaica, during which time he also had medical charge of a detachment of the 60th Regiment of Foot. However, according to Jackson, he soon found his opportunities there too "narrow"; and, as "his desire of professional

knowledge was great," he travelled to New York in 1778 to join the British army, "in expectation of finding better opportunities" for study and advancement.<sup>52</sup> He quickly became surgeon's mate of the 71st Regiment of Foot, with which he served until 1782. In 1784 Jackson travelled to Paris, where he studied medicine, eventually earning his medical degree in Leyden in 1785; following this he returned to England, and established himself as a private physician at Stockton-upon-Tees. Jackson rejoined the army during the French wars, and, despite regular confrontation with the Army Medical Board, would hold prestigious posts including physician to the army, inspector of hospitals, and head of the army depot hospital at Chatham. During his long career, Jackson also published a number of influential works, including *A Treatise on the fevers of Jamaica with observations on the intermittent fever of America* (1791), much of which was based on his service during the War of Independence.<sup>53</sup>

Like Jackson, Robert Hamilton was appointed as a surgeon's mate in this period. Hamilton earned his medical degree at Edinburgh prior to taking up his post as mate to the 10th Regiment of Foot, a position he held from 1780 to 1785. He would briefly rejoin the army as physician to the forces in the West Indies in 1795, but shortly resigned owing to failing eyesight and a rheumatic complaint.<sup>54</sup> As is evident in his *Duties of a Regimental Surgeon Considered*, Hamilton exhibited a markedly professional attitude to the position of regimental surgeon and surgeon's mate. The stated primary purpose of his work on this topic was to "inculcat[e] humanity towards a class of men [soldiers], whose situation, at best, is but uncomfortable, and yet to whom the community are under obligations."<sup>55</sup> Throughout his work, he stressed the responsibilities of the surgeon. He wrote that, "To regulate health, and to attempt the removal of disease is, surely, a matter of the highest moment to society."<sup>56</sup> The regimental surgeon should therefore:

Reflect on the nature of his charge, its great importance, and how culpable he must appear, both before God and man, in the neglect of any part of his duty. The lives of upwards of seven hundred men are...put into his hand...and for the care he takes of them when sick, he is answerable to his Country, his King, and his conscience.<sup>57</sup>

Hamilton stressed that the surgeon must show "tenderness to the sick soldiery,"<sup>58</sup> and that he should "never...trifle with health for the sake of saving a shilling [for] to do so is unjustifiable."<sup>59</sup> His concern did not lie with the soldiers alone, however. At various points in his work Hamilton argues that, even though the regimental surgeon was not duty-bound to look after the soldiers' wives and children, common humanity and utility should compel him to attend to their needs as well:

Soldiers wives should be looked on as the useful poor of the regiment, and ought to be considered in this society as other poor are in other societies. They should be assisted, and their usefulness promoted; for they are equally allied to the army, as other poor are to their respective societies, and therefore ought equally to be taken care of. They bring up many useful soldiers for his Majesty's service, which is still a farther reason not to allow them to be neglected. If the surgeon gives them his assistance in their sickness, it is as much as can be expected on his part...I can by no means consider them as the least useful part of the army; and surely our care of them ought to be in proportion.

Hamilton also suggested that a system of voluntary contribution should be adopted to support the wives who needed further charity.<sup>60</sup>

Hamilton's humane concern for soldiers and their families was not the only sign of his professionalism, however. He also adapted surgical instruments and medical supplies for use in regimental service. One of these was his version of an inhaler, which he recommended using in cases of *Cynanche tonsillaris*, an inflammation of the throat to which he suggests soldiers were prone. As the standard inhaler was expensive, and liable to need repairs which were impracticable in the field, he devised a "convenient substitute" made of tin, which was "not only cheap, but strong, and can be conveniently carried in the medicine chest." The inhaler was in the form of a "retort funnel," with a wide mouth which would cover the opening of a "common tea-kettle." It was about a yard long, the narrow end bent to make it easier to hold in the mouth. The patient would inhale the "steams of warm water, either alone, or impregnated with the effluvia of herbs, i.e., medicated as the prescriber judges best." He further recommended that three or four of these should be included in the medicine chest, particularly as they were so inexpensive at just over a shilling apiece.<sup>61</sup>

Hamilton also promoted medical experiments as a way of improving patient care. The soldier was a perfect object for these purposes, as he was "entirely at [the surgeon's] disposal, as soon as his name is entered in the sick list." The regimental surgeon could therefore test the trials made by other medical professionals, or institute new ones, "such as may seem to him to promise instruction, and be advantageous to practice."<sup>62</sup> The surgeon, thus, was to be an enlightened professional of scientific bent. Lest this should be taken as permission to experiment freely on sick soldiers, Hamilton warned that "no trial, dangerous to the patient's life, is ever to be risked: this would not only be wantonness, but wickedness; nay criminal, if done knowingly."<sup>63</sup> Hamilton's dedication to improving the medical care of soldiers illustrates his professionalism and suggests that military service, even in the regiments, attracted at least some medical professionals of high quality.

Hamilton and Jackson published treatises on medical practice, and are therefore prime examples of well-qualified and well-intentioned regi-

mental practitioners. How indicative are they, though, of the general quality of regimental medical staff in the British army? Even those unpublished and therefore relatively unknown surgeons and mates could and did demonstrate dedication and competence. Faced with high morbidity at Fort Niagara and delays of medical supplies and medicines from Quebec, James McCauseland, surgeon to the 8th Regiment, finally ordered them direct from Europe, paying for them out of his own pocket.<sup>64</sup> Similarly, in the southern theatre Surgeon Hill took pains to ensure that his patients were well cared for. He reported to General Cornwallis, who commanded the army during that campaign, that he had successfully embarked 78 wounded men in the following manner: "the Boats were well covered with Tents, and plenty of good Straw for them to lay on ... The Men are very comfortably placed, not crowded, [and] they have two Hospital Mates to attend them...I hope they will have a pleasant and expeditious passage."<sup>65</sup> A Major England confirmed Hill's report, informing his superior that "in short they [the wounded] seem very happy and much pleased" with their care.<sup>66</sup> Unfortunately, few such examples were recorded; conversely, if complaints about specific surgeons exist, they are well hidden in records pertaining to the American Revolution. It is thus difficult to determine with any accuracy the general quality of regimental surgeons. Although the frequency and nature of contemporary criticism suggests that some regimental surgeons fell short of the ideal, dedicated professionals such as McCauseland and Hill also served in the British army during the war.

Hospital mates and regimental surgeon's mates have generally come under even more criticism than regimental surgeons. When the pay of hospital mates was increased in 1781, the augmentation came with a proviso. London had been informed that there were "many serving in North America who are not deserving of such an Increase of Pay"; thus, the secretary-at-war instructed General Clinton, the commander-in-chief, that hospital mates should be examined by the physicians and surgeons of the hospital, and dismissed if found wanting. Furthermore, in the future the army was not to employ any mate who had not passed a formal examination.<sup>67</sup> Despite this concern regarding the *general* quality of mates, it is difficult to find complaints against *specific* mates. Hospital mates in Canada complained about one of their compatriots, a certain Mr. Prendergast, who "remained at his ease in Three Rivers for upwards of two Years" while they were "subject to various duties attended with Expence, & fatigue." In response, Pennell Cole, Surgeon to the Hospitals in Canada, ordered Mr. Prendergast to repair to Montreal, but the mate refused to comply.<sup>68</sup> Prendergast also failed to impress when sent to Oswego. Major John Ross reported that "Mr Prendercrasts behaviour under my Command was such as gave me infinite trouble, [and] he Seem'd so much disapointed [sic] at being oblig'd to come to

Oswego." In short, he noted that "the Service was very little indebted to him for his attendance and it was with much difficulty that I could move him to do his Duty."<sup>69</sup> Despite Mr. Prendergast's obvious defects, his is an isolated instance of specific criticism within the extant documentation.

In contrast, military records contain more references to *diligent* mates, whether in hospital or regimental service. For example, one of the mates at Quebec's Garrison Hospital was praised for his diligence.<sup>70</sup> William Barr, purveyor to the hospital in Canada, recommended that the surgeon's mate of the 31st Regiment of Foot be promoted to hospital mate. He wrote to Haldimand that Mr. Charles Williamson was "perfectly well qualified for the appointment"; Williamson had been a surgeon's mate for six years, and had "done the duty with so much credit and reputation, that the Surgeon of the Regiment lately observed to me, that he would be unwilling to part with him on any other occasion than that of his promotion."<sup>71</sup> Other mates were also promoted to the rank of surgeon. Henry Stiles, surgeon's mate to the 34th Regiment, was well-supported in his memorial to succeed as surgeon of his regiment. Stiles had served in the former capacity for six years, during which time he impressed both his regiment and his medical superiors. Barry St Leger, who commanded in that region, wrote in support of Stile's petition as follows: "I beg leave to add from myself, and by desire of the whole Corps, that no person whatsoever can be more acceptable to us than Mr Stile as a surgeon. It is but common justice to him that we bear the strongest testimony of his industry in his business and extreme tenderness to his Patientes, and that his abilities have been well vouchd to us by Doctor Kennedy and Mr. Blake," the latter who served as surgeon to the 34th regiment until he was promoted.<sup>72</sup> Similarly, William Menzies and Andrew Graves, hospital mates who served at the upper posts, were promoted to the surgeoncies of the 84th and 53rd regiments, respectively.<sup>73</sup>

Robert Hamilton claimed, however, that it was in fact quite rare for mates to be promoted. He suggested that even university educated surgeons and physicians could not expect positions commensurate with their education: Hamilton noted that "several young men, of good education, have entered as Mates, in the late war especially... through the laudable desire of falling into immediate practice, and obtaining speedy experience."<sup>74</sup> However, they soon found that they had little autonomy or chance of promotion in the hierarchical military system. In addition, mates were not entitled to receive half-pay upon the conclusion of hostilities because they were not commissioned officers; their employment and source of income was therefore in danger in times of peace. To illustrate these problems, Hamilton mentions several mates "of promising abilities" who were university educated physicians and surgeons. Of these, two surgeons had been fortunate enough to be appointed regi-

mental surgeons. Of four physicians from the "first Medical School in Europe" only one had an appointment as surgeon. The others were still serving as mates in 1783.<sup>75</sup> Hamilton suggested that these realities discouraged qualified mates and surgeons from enlisting or remaining in the service, and diminished mates' enthusiasm for their duties. Yet, despite this situation, the examples above reveal that war could, and did, draw in well-educated people, like Jackson and Hamilton himself, who wanted immediate experience. Although they were not all necessarily interested in a long-term career in military service, their presence supports the contention that the British army could count on a number of dedicated, qualified surgeon's mates, as well as physicians and surgeons, among its medical staff during times of war.

THOMAS DICKSON REIDE, SURGEON'S MATE TO THE 29TH REGIMENT OF FOOT

Another excellent example of the above is the relatively unknown military surgeon, Thomas Dickson Reide. Like Jackson and Hamilton, Reide served in the British army during the time American Revolutionary War. While he was later promoted to the rank of regimental surgeon, during the conflict he occupied the post of surgeon's mate to the 29th Regiment of Foot. Little is known of Reide's life and career outside the period covered by his 1793 treatise, *A View of the Diseases of the Army*, which concerned his experience as a military surgeon and surgeon's mate from 1776 until the date of publication. According to the treatise, Reide was a pupil of Dr. John Millar, author of such works as *Observations on the management of diseases in the Army and Navy* (1783) and *Observations on the Practice in the Medical Department of the Westminster General Dispensary* (1777).<sup>76</sup>

Millar's influence is clearly evident in Reide's emphasis on record-keeping and observation. According to Chalmers and Tröhler, Millar was a keen proponent of "arithmetic observation." As such, he was part of a wider movement in 18th-century British medical circles which promoted empirical assessment and formal experimentation in an effort to improve medical practice.<sup>77</sup> As Millar's pupil, Reide made up the medical returns for the Westminster General Dispensary. The impact of this training on his approach to medical practice is clear. Chapter XXI of his treatise is devoted to discussing the merits of proper record-keeping. Reide begins this discussion by quoting a passage from his mentor's work on diseases in the army and navy. According to Millar (and Reide), returns "are so necessary to a physician, that, however attentive in other respects, he cannot, without their assistance, judge accurately of the effect of the medicines he prescribes, nor of the method of cure he adopts."<sup>78</sup> Indeed, Reide castigated those of the old order: "Physicians

have fruitlessly endeavoured to find arguments or proofs to hide the fatality of their practice, but in vain."<sup>79</sup> Only with proper records could physicians and surgeons hope to improve medical practice. Furthermore, such records must include "every single case, without reserve or selection." According to Reide, "Such returns constituted a body of evidence, from which a jury might decide, without being betrayed into an improper verdict, with respect to the propriety of the various divisions of diseases, and of the successful or unsuccessful management of them."<sup>80</sup>

Accordingly, Reide kept detailed medical records during his service with the British army. These included monthly and annual returns which contain information regarding the number of patients treated and the nature of their medical complaints, as well as the number of soldiers who died and of what causes.<sup>81</sup> The utility of these records to the (military) medical historian are clear, as such detailed information regarding health and disease in this period is rare. While most commentators, including physicians, gave in the surviving evidence quite vague descriptions of the illnesses which beset their troops, Reide's treatise provides valuable insight into the diseases encountered by British troops during the war. Moreover, Reide's emphasis on consistent, objective record-keeping places him within a wider movement in the medical community that promoted a more objective approach to medicine, a "rational empiricism."<sup>82</sup>

The concomitant emphasis on observation over theory is also evident in Reide's descriptions of treatment. In several cases Reide notes that experience and observation played a crucial role in changes to his method of treating various medical complaints. For example, in his early practice he originally used a cathartic powder as part of his treatment of dysentery. However, he records that "I never found that this purge answered the character given of it by Sir John Pringle" and therefore ceased its use.<sup>83</sup> Similarly, Reide began his military medical service treating inflammatory fevers by copious bleeding.<sup>84</sup> However, the "success was not as I could have wished, as will appear from the tables of diseases" appended to his work; he therefore altered his method a few years before leaving America, removing only a few ounces of blood during treatment, a change which was met with greater success.<sup>85</sup>

Finally, Reide's reference to contemporary medical figures and theories demonstrates an interest in, and awareness of, developments in the field. His treatise is peppered with references to Sydenham and Boerhaave, as well as his teacher John Millar, James Lind, John Pringle, Gilbert Blane, Robert Robertson, and John Hunter among others. For example, Reide referenced Lind's *Essay on the Diseases Incident to Europeans in Hot Climates* (1768) as part of a discussion regarding fevers and fluxes.<sup>86</sup> Like his emphasis on evidence and observation, this illustrates his professional approach to the practice of (military) medicine. Impor-

tantly, his knowledge of and involvement in contemporary medical debate lends further support to the re-evaluation of regimental practitioners in the 18th century.

#### CONCLUSIONS

Regimental surgeons and mates such as Reide, Jackson, Hamilton, and McCauseland suggest that the negative reputation of 18th-century regimental staff has been overstated. Indeed, these men, like a number of their colleagues, took their duties and profession very seriously. This is evident in their knowledge of, and contribution to, the medical literature of the day. In addition, their devotion to the advancement of medicine and the health of their patients is clearly illustrated in records of their service during the American Revolution. What explains, then, the stereotypical image of 18th-century military surgeons as "bores and sawbones," to borrow a phrase from Ackroyd et al.<sup>87</sup> To a significant extent, contemporaries and historians have been influenced by the criticisms made by men like Hamilton, Jackson, and John Bell, an Edinburgh surgeon who suggested that only those "in despair" would join the army medical service.<sup>88</sup> However, it is possible that their criticism was exaggerated for effect, in efforts to gain support for initiatives such as the creation of an army medical school. Such certainly seems to have been the case in the early 19th century, according to the study of army surgeons in the French wars undertaken by Ackroyd et al. Said team's findings reveal that these practitioners were in fact "remarkably well educated," and many published works on medicine, natural history, geography, and even literature.<sup>89</sup> Recent work by Paul Kopperman similarly indicates that regimental surgeons and mates in the period 1755 to 1783 had some sort of medical training prior to entering military service, whether in the form of an apprenticeship, university education, or experience in civilian practice.<sup>90</sup> It thus seems that the stereotypical image of the incompetent and lazy military surgeon was not necessarily the norm. Of what import was this to the health of the average British soldier, and the army in general? Unfortunately, the sources are not available to make a clear correlation between health and the quality of medical staff. However, my research on the health of British soldiers during the American Revolutionary War reveals that the British army was relatively healthy compared to their American counterparts.<sup>91</sup> The role regimental medical staff played in this is not clear, although they were instrumental in important policies regarding sanitation, hygiene, and smallpox inoculation; certainly the above discussion suggests that they may have been of greater benefit to the army than has been commonly supposed.

## ACKNOWLEDGMENTS

The financial support of McMaster University, Associated Medical Services Inc. and the David Library of the American Revolution is gratefully acknowledged.

## NOTES

- 1 Thomas Dickson Reide, *A View of the Diseases of the Army in Great Britain, America, and On Board of King's Ships and Transports, from the Beginning of the Late War to the Present Time, Together With Monthly and Annual Returns of the Sick, and Some Account of the Method in Which They Were Treated in the Twenty-Ninth Regiment, and the Third Battalion of the Sixtieth Regiment* (London, 1793).
- 2 Paul E. Kopperman, "Medical Services in the British Army, 1742-1783," *Journal of the History of Medicine*, October 1979, 34, 4: 428-55, 454; Oscar Reiss, *Medicine and the American Revolution* (Jefferson, N.C.: McFarland & Company, 1998), p. 42.
- 3 By the 1740s the British general hospital had come to mean a staff rather than facility; Kopperman, "Medical Services in the British Army, 1742-1783," p. 429.
- 4 The National Archives (TNA), PRO, 30/55: 195. Barrington to Gage, "or Commander-in-chief America," 26 September 1775 (copy).
- 5 Robert Jackson, *Remarks on the Constitution of the Medical Department of the British Army: with a detail of hospital management, and an appendix, attempting to explain the action of causes in producing fever, and the operation of remedies in effecting cure* (London, 1803), p. 339.
- 6 Jackson, *Remarks on the Constitution of the Medical Department*, p. 339-40.
- 7 John Pringle, *Observations on the Diseases of the Army* (Philadelphia, 1810), p. 14, 20. This work was first published in London in 1752.
- 8 Jackson, *Remarks*, p. 339-40.
- 9 Oscar Reiss, *Medicine and the American Revolution—How Diseases and Their Treatments Affected the Colonial Army* (Jefferson, N.C.: McFarland & Company, 1998), p. 19.
- 10 Jackson, *Remarks*, p. 342.
- 11 Robert Hamilton, *The duties of a regimental surgeon considered: with observations on his general qualifications; and hints relative to a more respectable practice* (London, 1787), II: p. 195.
- 12 TNA, WO, 1/683, 164, Heads of the Instructions given by Mr. Adair to Mr. Marshall, Surgeon to the Hospital at Halifax, Nova Scotia, enclosed in letter from Barrington to Maclean, 5 November 1778.
- 13 TNA, WO, 1/683, 164, Heads of the Instructions given by Mr. Adair to Mr. Marshall, Surgeon to the Hospital at Halifax, Nova Scotia, enclosed in letter from Barrington to Maclean, 5 November 1778.
- 14 British Library (BL), Add MSS 21857: 128, A Return of the Mates of the General Hospital, pointing out the Service on which they are severally employed, with Remarks, 12 April 1781.
- 15 TNA, CO 5/173: 5, Adair to Jenkinson, 8 January 1781 (copy).
- 16 TNA, CO 5/261: 148, Germain to Secretary-at-War, 24 January 1781.
- 17 TNA, 30/11/78: 18, Letter to Jenkinson, 24 January 1782.
- 18 TNA, WO, 36/1, General Orders, 4 June 1775.
- 19 TNA, WO, 36/1, General Orders, 27 July 1775, NA, WO 36/1.
- 20 TNA, WO, 36/1, General Orders, 29 February 1776.
- 21 TNA, WO, 36/1, Rhode Island Orders, 13 February 1777.
- 22 For example: Dr. J. Mervin Nooth, Superintendent General of the hospital, wrote in praise of D. Paine, Apothecary to the General Hospital: "no one can have an higher

- opinion than myself of Dr Paine's Medical Abilities, & of his Assiduity & Attention in the care of the Sick," TNA, WO 1/683:310, Nooth to Riedesel, 10 November 1780 (copy); Doctor Hugh Kennedy, Physician to the hospital in Canada, attended soldiers in the Garrison Hospital, which was not part of his duties; he explained to General Haldimand that he felt "equally bound by humanity as by duty, always considering sick soldiers, whether in the General or in the Garrison Hospital, or in the more active scene of a Camp, equally subjects of a Military Physician or Surgeon"; furthermore, he believe that "sick soldiers had a right to expect" such treatment. BL, Add MSS 21857:224, Kennedy to Haldimand.
- 23 Sir Neil Cantlie, *A History of the Army Medical Department*, Vol. I. (Edinburgh: Churchill Livingstone, 1974), p. 172-73.
  - 24 Kopperman, "Medical Services in the British Army, 1742-1783," p. 443.
  - 25 Sylvia Frey, *The British Soldier in America: A Social History of Military Life in the Revolutionary Period* (Austin: University of Texas Press, 1981), p. 48.
  - 26 Matthew H. Kaufman, *Surgeons at War—Medical Arrangements for the Treatment of the Sick and Wounded in the British Army during the Late Eighteenth and Nineteenth Centuries* (London: Greenwood Press, 2001), p. viii.
  - 27 Kaufman, *Surgeons at War*, p. 5.
  - 28 Frey, p. 49.
  - 29 Paul E. Kopperman, "The British Army in North America and the West Indies, 1755-83: A Medical Perspective" in Geoffrey L. Hudson, ed., *British Military and Naval Medicine, 1600-1830* (Amsterdam: Rodopi, 2007); Marcus Ackroyd et al., *Advancing with the Army: Medicine, the Professions and Social Mobility in the British Isles, 1790-1850* (Oxford: Oxford University Press, 2006).
  - 30 Michael Stephenson, *Patriot Battles: How the War of Independence Was Fought* (New York: Harper Collins Publishers, 2007), p. 168-69.
  - 31 Hamilton, I: p. i.
  - 32 Hamilton, I: p. ii, II: p. 215.
  - 33 Hamilton, II: p. 167.
  - 34 Hamilton, I: p. 249.
  - 35 TNA, WO, 4/275: 64, Adair to Secretary at War, 11 September 1781 (copy).
  - 36 TNA, WO, 36/1, General Orders, 1 September 1775; also in David Library of the American Revolution (DLAR) Film 42 Reel 1 No 21.
  - 37 BL, Add MSS 21857:103, Barr to Haldimand, 8 September 1780.
  - 38 TNA, PRO, 30/55: 210, Barrington to Howe, 12 June 1776.
  - 39 BL, Add MSS 21857:103, Barr to Haldimand, 8 September 1780.
  - 40 Hamilton, I: p. 181-83.
  - 41 Hamilton, I: p. 181-83.
  - 42 Hamilton, I: p. 1.
  - 43 Hamilton, I: p. 150.
  - 44 DLAR Film 42 Reel 14 No. 146, Jenkinson [to commander-in-chief], 6 February 1781, in Orders, 16 August 1781, Orderly Book of British Headquarters.
  - 45 DLAR Film 42 Reel 14 No. 146, Jenkinson [to commander-in-chief], 6 February 1781, in Orders, 16 August 1781, Orderly Book of British Headquarters.
  - 46 The change seems to have been made earlier in Canada—TNA, CO, 5/173: 3, Barr to Adair, 20 October 1780; in An Account of the Expenditures of the medicines received by the General Hospital from England, 1776-1781, the authors refer to the 1781 regulation, BL, Add MSS 21857:225.
  - 47 Kaufman, *Surgeons at War*, p. 7.
  - 48 He identifies Professor Home of Edinburgh, Dr. Steedman, and Dr. Warburton in this capacity.
  - 49 Hamilton, I: p. ii.

- 50 Ackroyd et al., *Advancing with the Army*, p. 17.
- 51 Ackroyd et al., p. 8, 9, 23.
- 52 Robert Jackson, *A sketch of the history and cure of febrile diseases, more particularly as they appear in the West Indies among soldiers of the British army* (1817), p. v.
- 53 Biographical information drawn from Jackson's *A View of the Formation Discipline and Economy of Armies*, 3rd ed. With a *Memoir of his Life and Services, Drawn up from his own papers, and the communications of his Survivors* (London, 1845). Jackson's other works include *An outline of the history and cure of fever, epidemic and contagious; more especially of jails, ships, and hospital: The concentrated endemic, vulgarly the yellow fever of the West Indies* (1798); and *Remarks on the epidemic yellow fever, which has appeared at intervals, on the south coast of Spain, since the year 1800* (1821).
- 54 Charles Creighton, "Hamilton, Robert (1749-1830)," rev. Paul Kopperman, *Oxford Dictionary of National Biography* (Oxford University Press, 2004), online ed., January 2008, <http://www.oxforddnb.com/view/article/12122>. Accessed 27 August 2008.
- 55 Hamilton, I: p. i.
- 56 Hamilton, I: p. iv.
- 57 Hamilton, I: p. 94-95.
- 58 Hamilton, I: p. 104.
- 59 Hamilton, I: p. 188.
- 60 Hamilton, I: p. 381.
- 61 Hamilton, I: p. 261.
- 62 Hamilton, II: p. 88.
- 63 Hamilton, II: p. 102.
- 64 H. A. Vernon, "Medical Crisis At Fort Niagara, 1779-80," *Niagara Frontier* 24 (1977): 92-93.
- 65 TNA, PRO, 30/11/64: 93, Hill to Cornwallis, 21 September 1780.
- 66 TNA, PRO, 30/11/64: 98, England to Cornwallis, 22 September 1780.
- 67 TNA, WO 4/275: 61, Jenkinson to Clinton, 1 October 1781.
- 68 BL, Add MSS 21857:59, Cole to Haldimand, 3 June 1779.
- 69 TNA, WO, 28/8, Ross to Lernoult, 1 August 1783.
- 70 A Mr. Paterson was noted for his care of the sick of the German regiment there; TNA, WO 28/6, Mabane to le Maistre, 28 September 1778.
- 71 BL, Add MSS 21857:164, Barr to Haldimand, 12 October 1781.
- 72 TNA, WO 28/2, Stile to Haldimand, 20 October 1779; TNA, WO 28/2, St Leger to le Maistre, 30 November 1779.
- 73 TNA, WO, 28/6, Lernoult to Barr, 5 February 1781.
- 74 Hamilton, II: p. 175.
- 75 Hamilton, II: p. 175.
- 76 John Millar, *Observations on the management of diseases in the Army and Navy* (London, 1783); Millar, *Observations on the Practice in the Medical Department of the Westminster General Dispensary* (London, 1777).
- 77 Iain Chalmers and Ulrich Tröhler, "Helping Physicians to Keep Abreast of the Medical Literature: Medical and Philosophical Commentaries, 1773-1795," *Annals of Internal Medicine* 133 (2000): 238-43, 240-41.
- 78 Reide, p. 95-96.
- 79 Reide, p. 66.
- 80 Reide, p. 96.
- 81 I have recently used these returns in researching soldiers' health during the American Revolution in Tabitha Marshall, "The Health of the British Soldier in America, 1775-1781," PhD thesis, McMaster University, 2006.
- 82 Tröhler suggests that a critical and quantitative approach to medicine first originated in Britain in the second half of the 18th century, not, as is commonly believed, in

- Paris in the first half of the 19th century. Tröhler, *To Improve the Evidence of Medicine: The 18th Century British Origins of a Critical Approach* (Edinburgh: Royal College of Physicians, 2000).
- 83 Reide, p. 54.
- 84 Reide, p. 72.
- 85 Reide, p. 67.
- 86 Reide, p. 209. Other references include publications such as John Hunter's *Observations on the Diseases of the Army in Jamaica* (London, 1788) and Robert Robertson's *Observations on Jail, Hospital, or Ship Fever* (London, 1783).
- 87 Ackroyd et al., p. 377.
- 88 John Bell, *Memorial Concerning the Present State of Military and Naval Surgery* (1800), quoted in Ackroyd et al., p. 106.
- 89 Ackroyd et al., p. 107, 339.
- 90 Kopperman, "The British Army in North America and the West Indies, 1755-83:", p. 56-57.
- 91 Marshall, "The Health of the British Soldier in America, 1775-1781."