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Health and Medicine at Sea, 1700–1900

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As its title suggests, this book covers developments in the medical service of the Royal Navy and among people who travelled aboard ships, whether as serving seamen, convicts, slaves or migrants. These individual areas have been researched before, yet one attraction of this volume is that the period covered by its essays is broad – from the Seven Years' War to the mid 19th century, when diseases such as scurvy, cholera and various fevers caused many problems. Medical progress under the auspices of the Navy's Sick and Hurt Board shows how the Navy recognized the importance of preventing scurvy by altering rations for the men of the Western Squadron without the knowledge of dietetics and nutrition commonplace by the early 20th century. The need for reforming the status of surgeons in the Royal Navy is also analyzed. So too is the specific role of the Sick and Hurt Board.

Medical advances in the Navy during the Seven Years' War are discussed in chapter one (Erica M. Charters, "The Intention is Certain Noble": The Western Squadron, Medical trials, and the Sick and Hurt Board during the Seven Years' War (1756-63)'). This was when victualling was improved by supplying fresh vegetables and fruits – a benefit demonstrated by the Pacific voyages of James Cook in 1767, 1772 and 1776. In the 18th century portable soup and broth were sometimes issued to help prevent scurvy. These advances followed not only the discoveries of Cook but also research undertaken by James Lind, physician at the Haslar naval hospital at Portsmouth between 1758 and 1783. The Sick and Hurt Board expected that dried apples would likewise be effective. As a contemporary medical authority, the Board recognized that most diseases were not curable; in consequence, it tended to focus on the prevention of disease rather than cure. For the Admiralty, of course, avoiding scurvy and maintaining the health of crews was a strategic and financial necessity; naval surgeons therefore reported on medical trials at sea and in naval hospitals. The Board likewise insisted on small-sized experiments afloat and at naval hospitals for examining the effectiveness of medicines and treatments. The author explains how the medical organizations of the Army and Navy were similar, although, significantly, the structure in the Navy was more centralized and the results of experiments could thereby be more efficiently considered. Imperfect as scientific findings and progress were, the Seven Years' War confirmed the Royal Navy's need for the Sick and Hurt Board, both for overseeing medical treatment and for devising reliable administrative and medical instructions.

Chapter two (M. John Cardwell, 'Royal Navy Surgeons, 1793-1815: A Collective Biography') focuses on

naval surgeons by recording their backgrounds and by revealing, as a general picture, that the fathers of most of them were in trade, business and manufacturing, and that they came mostly from modest families and that very few were gentlemen. As for their education, in the late 18th and into the early 19th century, many surgeons had practical training at medical schools. Records show that many medical officers attended such schools in London, Edinburgh and Dublin, as well as passing at the Royal College of Surgeons, before they joined the service. Even though records are scarce, the author reveals that many naval surgeons had some civilian medical practice. Surgeons were often eager to improve their knowledge even after they entered the Navy. Educational costs before employment, however, were considerable and young men were frequently supported by relatives. In some cases, such costs became a family burden. Gradually the Navy recognized that the salary and status of medical officers had to be improved. Surgeons, it transpired, suffered from mental illness more than those who worked in civilian practice; indeed, naval medical officers were required to be resilient professionals throughout their careers in a tough working environment – although during wartime surgeons might be appointed with lesser educational attainments in order to maintain staff numbers. In the era of peace after 1815 the professional knowledge of, and a host of published scientific studies by such distinguished practitioners as Sir John Richardson (in his case achieved by visiting the polar regions and research into natural history in North America) were widely recognized in British society. Royal Navy surgeons certainly contributed to an understanding of the natural world in the early and mid 19th century.

The role of surgeons aboard ship is analyzed in chapter three (Michael Crumplin, 'Surgery in the Royal Navy during the Republican and Napoleonic Wars (1793-1815)'). It was frequently the case that they were better educated compared with other naval officers. Furthermore, despite the lack of anaesthesia and antiseptics, the standard of surgery in the service in the early 19th century was generally good. During a voyage surgeons had to undertake various roles as physician, apothecary and health advisor for the crew, although the range of their medical work was inevitably more narrow than that experienced by their professional brethren in civil life. Naval surgeons cared predominantly for wounds and injuries, venereal afflictions and epidemic diseases, such as typhus, typhoid or yellow fever in the crowded environment of vessels and in tropical climates. Untreated injuries often caused contamination. In the early 19th century the Royal Navy recruited young men trained and examined in medicine, and then sent them out to start their careers either for a few years at one of the large naval hospitals at Portsmouth or Plymouth or else directly to sick bays aboard ships where they worked alongside the loblolly boys who served as nursing staff. In action, care on board ships was comparable to that on battlefields: wounds were patched up where possible and amputations were routinely performed. Significant improvements in skills and the quality of treatment, though, had to wait until anaesthesia began to be used after 1846 and after an effective antiseptic became available after 1865.

The Sick and Hurt Board's place in the history of maritime health is considered in chapter four (Pat Crimmin, 'The Sick and Hurt Board: Fit for Purpose?'). This body was abolished in 1806, when, until 1817, it was merged with the Navy's Transport Board. Thereafter, the Royal Navy managed men's health and medical facilities both afloat and ashore via medical commissioners sitting on the wider Victualling Board, until reorganized once more in 1832 when a specific Medical Department was created. During the 18th century surgeons communicated with the Sick and Hurt Board by correspondence, although the actual care of seamen depended solely on the competence of individual medical officers. Apart from general instructions, the Board had no means of controlling medical treatment on any voyage. The Board was, however, more closely responsible for the health of prisoners of war, and even though responsibility for the care of healthy prisoners was transferred to the Transport Board the administration and supervision of prisoners remained under the Sick and Hurt Board in the late 18th century. Its routine office administration was undertaken by clerks – increasingly so once the abolition of the Board itself became an issue. During wartime the Board's commissioners were expected to visit sick quarters and hospitals frequently; discussions at the Admiralty and attending the Navy Board were also important. In financial matters, however, for example over contracts for rations when managing sick quarters, records show that the Sick and Hurt Board was not well organized, which caused problems for the whole service. Hospital ships were likewise far from perfect at that time. Medicines and drugs were regulated by the Board, and issued at public expense after 1805, but surgeons still had to use their own instruments. Before its abolition the Sick and Hurt Board tried better to control financial and medical problems, and to raise the status of its staff, in an effort to persuade Parliament to reconsider its future. The Board was responsible for the health of seamen throughout their naval service. Acting as a sanitary expert, however, was a broader role than the Board could handle.

Chapter five (Mark Harrison, 'An "Important and Truly National Subject": The West Africa Service and the Health of the Royal Navy in the mid Nineteenth Century') deals with progress within the medical service in the mid 19th century by analyzing how the Navy reduced the death rates of seamen in the West African squadron. That region's climate had always meant that rates of mortality and morbidity were high. Tropical medicine was introduced to the Navy from the late 19th century onwards after the establishment of schools of tropical medicine in London and Liverpool. Earlier, during the Niger expedition of 1841, the supply of quinine proved effective in maintaining the health of Europeans. Gradually the welfare of seamen became a matter of greater public interest in Britain; some attention had already been paid to the health of African slaves. In the mid 19th century the work of surgeons was discussed in the British press and the plight of assistant surgeons, who worked for modest pay and usually in poor conditions, was increasingly mentioned. In this period too, the importance of public health was increasingly acknowledged. In the Royal Navy, ventilation, for instance, was considered essential to improve the work environment of sailors. Washing decks was recognized as a hazard because it caused dampness and fevers among the men. Furthermore, after the Crimean War the improved ration benefited a sailor's health and the death rate declined as a result of better nutrition and sanitary conditions. The West African squadron proved the importance of sanitary measures in the Royal Navy. Such measures, of course, were also necessary and increasingly effective in civilian society.

Chapters six and seven (Hamish Maxwell-Stewart and Ralph Shlomowitz, 'Mortality and Migration: A Survey', and Simon J. Hogerzeil and David Richardson, 'Slave Purchasing Strategies and Shipboard Mortality: Day-to-Day Evidence from the Dutch African Trade, 1751–1797') provide statistical analysis of mortality and migration, which constitute another important perspective on health and sea voyages. Migrant labourers, convicts, emigrants and slaves all suffered from diseases during long voyages, affected by the unhealthy environment of vessels. Mortality among migrants included deaths while they were waiting at ports; labourers and convicts had the same problem while they awaited departure, suffering often from illness even before the journey began. By comparing statistical data between the 17th and early 20th centuries, differences in mortality related to the length of voyages, knowledge of diseases and hygiene among those aboard are all shown. Below decks there was always a high risk of contamination from disease. As the authors discuss, the Middle Passage had high death rates for slaves. Nevertheless, the British realized that they could reduce the large numbers of mortalities by avoiding the worst overcrowding, by isolating the sick, improving rations and by paying more attention to hygiene and the sanitary condition of individuals. The high death rate during the Middle Passage was also caused by a lack of immunity to unfamiliar diseases. Beyond that, health problems in commercial plantations were related to the condition of those who survived the crowded atmosphere of a voyage. Declining death rates among convicts, emigrants and labourers in the 19th century was achieved by the efforts of those who pressed for reforms in sanitary practice. Changes in mortality rates show the need to establish statistical trends and are proof of both the direct and indirect influences of better sick care even by the start of the 19th century. Chapter seven concentrates on a statistical analysis of slave death rates, referring to one slave trade company which dispatched 118 slaving voyages to Africa between the 1730s and 1790s. By analyzing those rates it is shown that improvements in sanitation and hygiene aboard were to some degree effective.

Migrants' voyages make it clear that sanitation on sea voyages produced the same beneficial results for both military personnel and civilians during the 19th century. Chapter eight (Robin Haines, 'Ships, Families and Surgeons: Migrant Voyages to Australia in the Age of Sail') examines migrant vessels leaving Britain for Australia which had surgeons aboard supervising the sanitary measures necessary to maintain the health of passengers who were suddenly living in a very different environment. They would be between three and five months at sea. Unsurprisingly, emigrants often suffered from illness when confined to crowded areas where diseases such as measles, scarlet fever, smallpox and typhoid could spread rapidly. Children were especially

vulnerable and all too often surgeons could not help them. Reforming sanitary conditions in order to prevent disease was effective since ten per cent of ships suffered no deaths, despite carrying children. Under British law, regulations became stricter in the course of the 19th century. Although naval surgeons often undertook such work in the 1830s, they only learnt about sanitary care via publications similar to those available for general housekeeping. Knowledge was adapted for convict and migrant ships. Migrants had medical checks before boarding, after which the surgeon had to work as both physician and sanitary professional in the same way as his counterparts on warships. Washing was important and rations were managed by the surgeon. Instructions about routine cleanliness on migrant ships carrying families over 14,000 miles to Australia were issued. As part of the history of migration, there were also Indian passengers who left their homes and there were Indian surgeons too – as discussed in chapter nine (Lawrence Brown and Radica Mahase, 'Medical Encounters on the Kala Pani: Regulation and Resistance in the Passages of Indentured Indian Migrants, 1834–1900'). It was often the case, though, that during a voyage the surgeon's inspection was refused by female passengers and, because of this, reporting the outbreak of disease could be delayed. Apart from that, there could be difficulties between the surgeons who were employed and Indian medical staff. There was often insufficient information to ensure the migrants' health, especially in relation to details about local medicine and diet. Naval doctors aboard migrant ships practiced both medical care and sanitary precautions. Improvements reduced the rates of death from disease – as was recognized by migrants in the late 19th century.

The level of research for the contributions to this volume is good. The topics covered are interesting and, while enjoyable to read, the book is also ideal for updating the current historiography for each specific field. By discussing the health of migrants as well as sailors, the work adds to our understanding of sanitary advances in 18th and 19th-century British society. It might have been helpful to include a little more about the contributions made by naval surgeons to medical science in this period – although, admittedly, this constitutes a field for historical investigation in its own right. It would, nevertheless, allow readers to appreciate a yet wider perspective on health and life at sea at the time.

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