

# DOCTORS AND NURSES IN THE CRIMEAN WAR

A perspective of Military Medicine with some  
contributions of Russian and British doctors and nurses  
to  
contemporary medicine

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## ABSTRACT

The medical exigencies of war lead to innovation and invention. The history of military medicine records the lives and works of many pioneers whose discoveries have brought great benefit to civilian best-practice medicine of today. Five of the most significant pioneers of military medicine were Ambrose Pare, Sir John Pringle, Dr John Hunter, Baron Dominique-Jean Larrey and Johannes Friedrich von Esmarch. To this fraternity medical historians include also the Crimean contributions of Nikolai Ivanovich Pirogov and those of the Grand Duchess Helena Pavlovna.

Nikolai Pirogov (1810-1881) introduced two significant innovations during the Crimean War. They were to change both the civilian and military practice of medicine forever. The first of these was his successful promotion of the use of anaesthesia in war surgery. Anaesthesia had been first tested in warfare in the Mexican-American War (1846-1848) but was soon discontinued, particularly because of excessive haemorrhage. Undaunted by this, Pirogov, already experienced with ether anaesthesia, introduced its use at the Crimea and “wanted anaesthesia to be used for everyone of the eventual 100,000 operations”. Knowledge of the Russian use of anaesthesia prompted an anonymous correspondent to the *Lancet* to write that “The Russian surgeons perform every operation with chloroform no matter how trivial it might be”. By contrast, surgeons in the British Army were initially reluctant to use anaesthesia. The Principle Medical Officer of the British Army at the Crimea, Sir John Hall (1794-1866), cautioned his doctors against using

anaesthesia — “However barbarous it may appear, the smart of the knife is a powerful stimulant”. Pirogov’s influence and teaching were to win the day. Ultimately, the Crimean War saw military anaesthesia widely used by all combatants for the first time. It is said that “this experience offered civilian anaesthesia practical safety and logistical improvements, as well as improved physical and psychological health for the armies involved in the War”; and since then, in all wars.

The second Russian innovation at the Crimea — under the advocacy, leadership and service of the Grand Duchess Helena Pavlovna (1806-1873) — was the first deployment of female nurses in the field; and their operational service was the first where female nurses cared for soldiers with wounds and life-threatening disease. They were the first role models, in the context of what today are not only the disciplines of emergency surgery and medicine, but the profession of nursing itself. Their pioneering example was paralleled by that of Florence Nightingale and her team of British civilian nurses and Irish nuns who cared for the wounded and sick of that campaign, at Scutari in Istanbul, 400 sea miles to the southwest of the Crimean Peninsula.

One British nurse, Mrs Mary Seacole, established a nursing hostel and hospice, “Mother Seacole’s British Hotel”, at the Crimea itself. Born in Kingston, Jamaica, Mrs Seacole had nursed English and Irish troops on station at Kingston and at Panama. In the same spirit of the Grand Duchess Pavlovna and of Miss Florence Nightingale, Mary Seacole made her way to the Crimea “to be of some use”. Her skill and compassion were

subsequently praised by war correspondents and stricken soldiers alike.

These innovations led not only to the establishment of nursing as the honoured and skilled profession which it is today, but was one of the significant influences which laid the foundations of gender role equality of opportunity, an influence which in the century ahead was to change the world forever.

Like that of all great nations, Russia's heritage is inextricably linked to its military history. Health and disease are major determinants of the outcomes of military campaigns. Russia's heritage of military medicine has contributed significantly to contemporary best-practice systems of health delivery in the wider world today.

Just as Mendeleev, Metchnikoff and Pavlov were pioneers whose discoveries led to much that is the basis of modern medicine, so did Russian military pioneers contribute to what has become the mainstream of modern international health practice. The Crimean War (1854-1856) forever changed medical care not only in Britain (and thence in those countries which were her colonial offspring) but in Russia itself. On the British side, the Crimean War found the Army Medical Department, in the words of Lieutenant General Sir Neil Cantlie,

“completely unprepared for active service, untrained in administration, deficient in equipment and resources of every kind, unprovided with subordinate hospital staff, and

devoid of ambulance transport and hospital ships”<sup>1</sup>.

Infectious diseases afflicted all the combatant forces on the Crimean Peninsula. On the British side, from April 1852 to June 1856, there were 167,786 admissions, of which 63,339 were for acute gastrointestinal diseases including cholera. The ratio of British servicemen who died from disease compared with those who died from wounds was 16:1. Cholera killed Rear Admiral Boxer, Major General Estcourt (the Adjutant General) and also the Commander-in-Chief, Lord Raglan himself, all in the month of June 1855.

After the Battle of Waterloo (June 1815), the results of war surgery had improved compared with statistics from the Peninsula War (1808-1814). Nevertheless, at the Crimea, the mortality of lower limb amputation was still 47% <sup>2</sup> At the Crimea, a minority of surgeons “still treated wounded men by large and indiscriminate bleedings” . The general treatment of gangrene was “the administration of powerful stimulants such as brandy, ammonia, ether, camphor or chloroform” . On the British side, 2,398 cases of frostbite occurred with a mortality of 19.2%.

From the perspective of British medicine, the medical debacle of the Crimea led to many innovations. A shocked nation, confronted with the conservatism and ineptitude of the Army Medical Department, instituted several significant reforms. One such was the appointment of Lord Sidney Herbert (1810-1861) as Chairman of the Royal Commission on the Sanitary State

of the Army. Its findings led to the establishment of the Army Medical School at Fort Pitt at Chatham in Kent in 1860 — later transferred in 1863 to the Royal Victoria Hospital in Netley.

The disaster of the Crimea and the subsequent Royal Commission led also to the establishment of the first Chair of Hygiene [social and preventive medicine] in England, also at Fort Pitt in 1860. It has been said that “the most important English treatise on hygiene was the manual of Edmund Alexander Parkes (1819-1876)” which was published in 1864, again in the aftermath of the Crimea War. Parkes, shocked by what happened on the British side in the Crimea, has been called “the founder and best teacher of military hygiene in our day, the friend and benefactor of every soldier” .

In the British Army, these changes led to an “Era of Reform” . One of the most important administrative changes was the formation, in 1855, of the Medical Staff Corps, renamed and extended in 1857 as the Army Hospital Corps. It was not until 1898, however, that the Royal Army Medical Corps was formed by uniting the Army Hospital Corps with all the individual military surgeons serving in regimental and staff appointments.

On the Russian side in the Crimean War, the great leader in military medicine was Nikolai Ivanovich Pirogov (1810-1881). Prior to the Crimean War (1854-1856) he had already distinguished himself as a pioneer not only of military medicine but of the newly-discovered (1846) techniques of anaesthesia<sup>6</sup> Pirogov, in the great tradition of military surgeons which continues today, had trained

himself “in a remarkable career of self development”. He came to military surgery from the ranks of academia, and had first been appointed as Professor of Surgery at the Medico-Chirurgical Academy at St Petersburg in 1840. He had served as a senior military surgeon in the Russian campaigns in the Caucasus in 1847, and by 1848 had already conducted 11,000 post mortems ‘.

Russian experience in the Crimean War led Pirogov to introduce three permanent innovations which were to change world medicine:

- his demonstration of the efficacy of anaesthesia in trauma surgery;
- his promotion of conservation in limb amputation; and
- his introduction of the true profession of nursing in the field.

With the leadership and service of the Grand Duchess Yelena Pavlovna (1806-1873), nursing became, for the first time, the health profession that we have come to know today. Developed also by Florence Nightingale in the suburb of Scutari in Istanbul, the role of the nurse, combining professional skill and caritas, dates from their influence and innovation.

## MILITARY MEDICINE

The founders of modern military medicine were Pare, Pringle, Hunter, Larrey, von Eschscholtz and Pirogov. Their nationalities — France, England, Prussia and Russia — bring to mind the tragic universality of war. War was what the great St Petersburg military surgeon, Pirogov, himself called “the traumatic epidemic”.

It is a tragic irony of history that war has been the norm, rather than the exception, in the history of Europe. Over the past one thousand years, there has never been a period of 25 years when one or more European nations have been engulfed in war, either civil — to use a tragic oxymoron or international. Such wars have spawned some small compensatory benefits. In the aftermath of such conflict, such inventions and innovations have always been adopted into the practice of mainstream civilian medicine<sup>8</sup>.

One summarises here the contributions of the acknowledged founders of modern military medicine — that the place of the crucial Russian innovations at the Crimea might be seen in perspective.

**Ambrose Pare (1510-1590)** of Paris, was the great surgeon of the Renaissance, and the founder not only of modern military medicine, but of general civilian surgery as well. He observed that gunshot wounds treated with ointment (egg yolk, rose extract and turpentine) healed better than those irrigated with boiling oil. In wound management he ligated arteries, instead of searing them with hot irons. He introduced the implantation of avulsed teeth and discarded the practice of castration for treating

hernias. Pare “made amputation what it is today by introducing the ligature he introduced therapeutic massage, invented artificial limbs, described fracture of the neck of the femur and was the first to suggest syphilis as a cause of aneurysm”<sup>9</sup>. One of Pare’s greatest works was his book on the treatment of gunshot wounds<sup>10</sup>. He is perhaps best known today for his deep understanding of the innate healing power of human tissue, best summed up in his famous phrase with respect to the surgical treatment of wounds —

“I dressed it, but God cured it”.

**Sir John Pringle (1707-1782)** was appointed Physician General to the British Forces during the War of the Austrian Succession (1740-1748). He was the founder of the discipline of social and preventive medicine; and a founder of military medicine as we understand that specialty today. It was Pringle who first formally advanced the principles of camp hygiene, advocating proper drainage, adequate latrines and the avoidance of siting military camps “near the pestilence of marshes”. He first introduced the word “influenza”.

**John Hunter (1728-1793)** of London never completed a course of study at any University, but became one of the greatest of military surgeons. He served as Army Surgeon from 1760-1763. In 1786 he was promoted and appointed as Deputy Surgeon General to the Army; and in 1790 was further promoted to the rank of Inspector General of Hospitals. John Hunter was a founder of experimental and surgical pathology. It was said that

“Hunter came to surgery when it was a mechanical art and left it an experimental science”<sup>12</sup>

Hunter's great work, *Treatise on the Blood, Inflammation and Gunshot Wounds*, was published in 1794.

**Baron Dominique-Jean Larrey (1766-1842)** was the greatest French military surgeon of his time. He was Surgeon-Chief to the Grande Armée. He served in 60 battles and 400 engagements and was wounded three times. At the Battle of Borodino (Sept 7, 1812), some 100 kilometres from Moscow, he performed 200 amputations in 24 hours. In 1792 he invented the concept and institution of the “ambulance volante”, a wagon-drawn medical unit which went into battle with the troops it supported. Larrey is also credited with instituting the concept of triage. He developed the system of prioritising casualties; and for those wounded in battle he provided both shelter and sanctuary; and pre-positioned skilled medical care on the battlefield in anticipation of the carnage which was to follow. Prior to Larrey's “flying ambulances”, the wounded who were left on the battlefield were usually robbed or had their throats slit by marauding peasants during the night which ensued. Those who survived were gradually moved to field hospitals well to the rear of the line of battle.

**Johannes Friedrich von Esmarch (1823-1908)** introduced the concept of self-help and pre-hospital care on the battlefield. Von Esmarch invented the triangular bandage and the elasticised tourniquet which produced a

bloodless field for limb surgery, particularly that for amputation following military trauma. His technical inventions and innovations were great; but his legacy particularly is the concept that individual soldiers would carry, about their person, the basic means to staunch haemorrhage or to fashion a splint for a shattered limb.

In the Crimean War, the British medical system had only partly accepted the discoveries and inventions of these pioneers of military medicine. Pare's teachings had developed to the point where antiseptic dressings for wounds were first used. At the Crimea, Pare's egg yolk and turpentine ointment was replaced by layers of wet lint saturated with salt, zinc sulphate, creosote or calcium chloride. However, Pringle's teachings of field hygiene were largely ignored, with disastrous results. Hunter's insistence on the fundamental study of wound pathology was little developed. The distinction between "hospital gangrene" and "traumatic gangrene" persisted. The "diet of salt meat and biscuit without fresh vegetables made scurvy inevitable"<sup>1</sup>, a century after Lind's discovery (1752) of the cause and prevention of that devastating disease. At the Crimea, scurvy was still "ascribed to solar influences ... and exposure to night dews"<sup>1</sup> and 641 cases of scurvy were diagnosed amongst the British forces in February 1855 alone.

Larrey's teaching that definitive medical care should be near the battlefield was ignored by the British. Paintings such as "Embarking the Sick and Wounded at Balakiava", although fine works of art, are a tragic permanent record of the first step of a journey of some 400 sea miles for surviving sick and wounded, en route

to Florence Nightingale's wards at Scutari in Istanbul, then named Constantinople.

## NIKOLAI IVANOVICH PIROGOV (1810-1881)

**Nikolai Ivanovich Pirogov (181.0-1881)** was the greatest of all Russian military surgeons. Fielding Garrison, perhaps the most scholarly of modern medical historians, has said that “Nikolai Pirogov is, in the esteem of cultivated Russians, the most important figure in their medical history”<sup>13</sup>

Pirogov, graduated in medicine in 1832; and from the earliest years of his professional life developed an international outlook in medicine. He studied for two years at Berlin and Gottingen. In 1835 he returned to Russia and became an esteemed teacher at Dorpat, specialising in surgery and surgical anatomy. In 1840 he was appointed Professor of Surgery at the Medico-Chirurgical Academy at St Petersburg. He was one of the pioneers of topographic anatomy, combining the still “new” anatomical teachings of Versalius and Langenbeck with the practical clinical demands of surgery. In that era before X-rays, the surgeon had to visualise internal anatomy from the surface and contours of the patient’s skin, prior to operation. Pirogov used frozen sections in his teaching, ensuring a correct perspective of cross- sectional anatomy. Using illustrations of frozen sections, he began the compilation of a great atlas which ultimately ran to 220 plates. It was published in St Petersburg over the three years from 1851 to 1854<sup>14</sup>, prior to his service in the Crimean War.

Pirogov was an innovator; and like all innovators he was often subjected to criticism, indeed “bitter enmity and bitter persecution at the hands of the official and military

tshinovniks”<sup>13</sup> With his detailed knowledge of anatomy, and his considerable clinical experience of limb amputation, Pirogov developed a new and better method for amputation of the foot following trauma, one of the most common injuries in battle<sup>15</sup> Prior to his advocacy for a more conservative approach to limb amputation, often much higher amputations were undertaken for unsalvageable trauma of the foot itself. He appreciated that if the heel could be saved, an infinitely better functional result would be achieved. He termed this calcaneous-saving approach his “osteoplastic” technique.

Pirogov is revered throughout Russia as one of that nation’s greatest doctors. In the West, he is known particularly as one of the greatest of all military surgeons. By 1848 he had conducted 11,000 post mortems, among them 800 for cholera victims. He had served in the field during the campaigns of the Caucasus in 1847 and had written about both the FrancoPrussian campaigns and the Russo-Turkish War of his era.

As Surgeon-General, Pirogov served in the field in the Crimean peninsula for 14 months from 1854. He was based in and near Sebastopol and “in trenches and tents, witnessed all the horrors of septicaemia, ‘hospital gangrene’, neurosyphilis and purulent oedema”<sup>13</sup>• Besides his advocacy for a conservative approach to amputation, at the Crimea he instituted two further innovations<sup>16,17</sup> which have become a universal part of all healthcare today.

The first of these relates to his advocacy for anaesthesia for emergency surgery<sup>6</sup> Anaesthesia had been introduced

to the world by William Morton at the Massachusetts General Hospital in Boston in 1846. It was first used in 1847 in Scotland by John Henry Hill Lewellin <sup>18</sup>, and by Pirogov in Russia in the same year. Within twelve months of the invention of anaesthesia, Pirogov had operated on more than 100 patients using ether in his own surgical practice. In the context of what was still an experimental innovation, he invented the effective system of rectal administration of ether. He published these experiences in St Petersburg, within twelve months of Morton's original discovery <sup>19</sup>

Prior to the Crimean War, anaesthesia had not been universally accepted in the West, in spite of the publicity surrounding the successful deliverance of Queen Victoria's son, Prince Leopold, with the aid of chloroform on the 7th April 1853. Many in society still took a moralistic view, "believing that a mother could not love her child if she did not suffer for it... fundamentalism backed this by believing sickness and disease were punishments and that misery in childbirth was punishment for Eve's transgression with the apple" <sup>6</sup>. In addition to this religious and moralistic conservatism, reports continued to accumulate of surgical deaths from anaesthesia. Furthermore, stories circulated of the criminal use of volatile anaesthetics, with accounts of both chloroform and ether used for robbery, abduction and rape <sup>6</sup>.

A significant minority of military surgeons were also resistant to the introduction of anaesthesia. Military anaesthesia had been first used in the Mexican-American War of 1846 —1848. Although successfully employed

by the Chief Surgeon of the Mexican Army, Pedro van der Linden, the U.S. Army surgeons found that ether often caused excessive bleeding. Case reports emanated particularly from the U.S. Army Hospital at Vera Cruz<sup>20</sup> It was subsequently realised that the relatively crude mechanical apparatus used for administration of ether combined with the higher altitude of New Mexico caused increased vaporisation of the ether — both factors which resulted in excessive serum levels of ether and hence excessive haemorrhage<sup>6</sup>

At the Crimea, the British surgeons were initially (1854) very conservative in their use of anaesthesia. The entire British medical preparation for and the logistic deployment of medical support in the Crimean War was one of inexperience and ineptitude. After Waterloo (1815), the British Army had seen three decades without major combat and, as always happens (and continues to happen), nations forget about the importance of national defence. The British military organisation, its equipment and its senior officers had aged greatly, an unfortunate trend which was compounded by the totally inadequate financial resources voted to the Army by the British Parliament. At the outbreak of the Crimean War, the British Army was out-of-date and unprepared. The Principle Medical Officer of the British Army, Sir John Hall (1794-1866), cautioned his doctors against the use of chloroform —

“However barbarous it may appear, the smart of the knife is a powerful stimulant; and it is much better to hear

a man bawl lustily than to see him sink  
silently into the grave”<sup>6</sup>

By contrast, the Russian Army Medical Department at the Crimea encouraged the use of military anaesthesia. Pirogov wanted anaesthesia used for every one of the eventual 100,000 operations which the Russian military surgeons performed<sup>21</sup> In the first year of the Crimean War, an anonymous correspondent wrote to *The Lancet* in London, reporting that the Russian surgeons “performed every operation with chloroform no matter how trivial it might be”<sup>22</sup> By the second year of the War (1855) the French also had reported the use of chloroform in operations upon 25,000 patients.

Historians of military medicine have concluded that in the period from 1846 to 1853, between the discovery of anaesthesia and the outbreak of the Crimean War, military anaesthesia had been introduced to the battlefield with, at best, mixed results. This was an important factor in the guarded conservatism of the use of civilian anaesthesia<sup>6</sup> However, the Russian introduction of anaesthesia in war surgery saw military anaesthesia widely used, with great success, for the first time. This was to have a most significant influence on the implementation of civilian anaesthesia. It has been said that

“the experience [of military anaesthesia by the Russian and French forces at the Crimea] offered civilian anaesthesia practical safety and logistic improvements, as well as improved physical and psychological health of the

armies involved in the Crimean War...  
unlike the military campaigns in various  
parts of the globe between 1847 and  
1853, there was [at the Crimea] great  
public interest in the performance and  
running of all the military logistics and  
military care in the Crimean War....  
News of the importance and success of  
anaesthesia in the Crimean War was  
quickly distributed to civilian circles”<sup>6</sup>

As a result of the influential writing of war correspondents, news of the successes of emergency anaesthesia quickly spread throughout Russian, French and English newspaper reports; and quickly entered the medical literature as well. Although the general use of anaesthesia “would have to wait for improved knowledge about shock and improved anaesthetic apparatus, the Crimean War offered as much help for the development of anaesthesia in the mid-nineteenth century as other public reports of its triumphs, particularly those relating to its successful use by Queen Victoria”<sup>6</sup> Pirogov was at the centre of this movement, indeed its leader.

## THE FOUNDATIONS OF MODERN NURSING

The other great legacy of the Crimean War was the foundation of the profession of nursing, as we know that profession today. This was due to the influence of two of the greatest women of the nineteenth century, the Grand Duchess Yelena Pavlovna (1806-1873) of St Petersburg, and Florence Nightingale of England. Other nursing pioneers were also present at the Crimea, notably Mrs Mary Seacole (1805-1881) whose influence is also important in the evolution of the profession which is so central to health today.

## RUSSIAN MILITARY NURSES

The scholarship and advocacy of Professor Tatiana Sorokina, of the People's Friendship University of Moscow, has highlighted the pioneering, indeed foundation role played by the Russian nurses at the Crimea . The Russian nurses, 68 in all, were led by Yelena Pavlovna, Alexandra Stakhovich, M. Merkulova and Yekaterina Mikhailovna Bakunina (1812-1894). Unlike the British nurses based 600 kilometres to the southwest at Istanbul [Constantinople], the Russian nurses worked under shelifire in the field, and in small field medical units in ten towns on the Crimean Peninsula. Seventeen of the 68 Russian nurses who served died on duty during the Crimean War, six in the town of Simferopol alone <sup>23</sup>•

On 4 November, 1854, Florence Nightingale landed at Scutari, with 38 female nurses whom she had personally selected. They consisted of

“14 who were ladies from Anglican religious institutions, 10 were Roman Catholic Nuns of the Irish Sisters of Mercy, trained by Mother Catherine McAuley, and the remaining 14 were trained professional nurses from hospitals in England. It was recorded that those women nurses who had come from hospitals were of a lower social class, and there was little contact between them and the religious nurses”<sup>24</sup>

Mrs Bracebridge was Florence Nightingale’s principal assistant. Nurses lived in one of the corner towers of the Barrack Hospital at Scutari, which came to be known as the Sisters’ Tower. After “waiting in enforced idleness for four days, surrounded by 2,000 sick and wounded from Inkerman, on the 9th November [1854] they were asked to enter the wards”<sup>24</sup> Their dedication and service, and Florence Nightingale’s influence both on the military and more importantly upon the British Parliament, were to have profound effects both in the United Kingdom and in her Colonies.

### **YELENA PAVLOVNA (1806-1873)**

The true foundations of military nursing, indeed of the civilian profession of today, can be dated from the field service at the Crimea of the nurses of the Cross Exaltation Community led by the Grand Duchess Pavlovna.

In September 1854, Pirogov wrote to the Grand Duchess Yelena Pavlovna at St Petersburg and in early October

was afforded an audience with her. He was subsequently to write that “she explained to me her own great plan: to establish female help to the sick and wounded in the battlefield and invited me to choose medical personnel and supervise the whole affair”<sup>23</sup> The Grand Duchess made a personal

“appeal to Russian women of different social classes, ‘who wanted to undertake the hard and difficult obligations of nurses’ in the aid points and mobile infirmaries in the Crimean War theatre; and, on the 6th November, 1854, the day following the Battle of Inkerman, Pavlovna established with her own funds the Cross Exaltation Community of Nurses to care for wounded and sick warriors”<sup>23</sup>

The first group of women nurses, under the jurisdiction of Alexandra Stakhovich (a Captain’s widow), arrived at the town of Simferopol on December 11, 1854. The town was under British bombardment. At that time several thousand wounded also arrived from the Battles of Alma and Inkerman. The wounded were gathered together in Simferopol where the Russian nurses cared for them.<sup>23</sup>

Yelena Pavlovna was born Princess Charlotte von Wuerttemberg, at Stuttgart on 8th January 1807. She was the daughter of Prince Paul von Wuerttemberg and Princess Charlotte of Saxe-Hildburghausen, the Duchess of Saxony. Princess Charlotte married the Grand Duke Mikhail Pavlovich of Russia (1798-1849) at St

Petersburg on 19 February 1824. At the time of her marriage, Charlotte converted to the Russian Orthodox faith, and changed her name to “Yelena Pavlovna”. According to her brother-in-law, she was the “scholar of the family”. Her husband, Grand Duke Mikhail, was very much a soldier, although he is reported to have been of a retiring, even shy personality. His brother, Constantine, said that he loved only two things “the Army and sleep... and that he had a kind disposition, but a rough exterior and has a propensity to make puns”.

On the 9 September 1849, Grand Duke Mikhail died in a horse-riding accident. His widow, the Grand Duchess Pavlovna, immersed herself in good works. She continued to live in the magnificent family home, the Mikhailovsky Palace in St Petersburg, where she became a leader in the cultural and charitable life of the city. She was a person of great refinement and compassion. Pavlovna established a private orchestra where Franz Liszt performed. It is said that she “worked eagerly for the abolition of serfdom in Russia and she ‘liberated’ her own serfs years before all serfs were liberated in that nation”. Her greatest legacy was her role in establishing nursing as a skilled and honoured profession.

## **RUSSIAN NURSES IN THE FIELD**

The Russian nurses, many from the most senior ranks of St Petersburg society, served in the field throughout the Crimean campaign. Professor Sorokina has described how

“the Cross Exaltation Community united women-patriots of the various social classes; illiterate common women

worked together with wives, widows and daughters of titular and collegiate councillors, nobles, landlords, merchants and women of the families of the Russian Army and wives and widows of Russian Naval Officers”<sup>23</sup>

In a letter to his wife of December 1854, Pirogov wrote:

“The Cross Exaltation Community of Yelena Pavlovna arrived here [in late November 1854] five days ago.. .and they ardently set to work.. .day and night they stay in hospitals, help in bandaging, help during operations, serve the patients with tea and wine, supervise the attendants and servants and even doctors. The presence of a woman, neat and compassionate, enlivens the sad veil of sufferings and distress...”<sup>23</sup>

News of the professionalism and of the enormous increase in morale that the Russian women nurses engendered, influenced women of the Russian nation. It was recorded that:

“Fresh women recruits from St Petersburg and Moscow announced the decision to leave for the Crimean War theatre. The second detachment of 13 nurses came to Sebastopol on January 25, 1855, headed by the senior nurse, M. Merkulova. Several days later there

arrived eight nurses of the third detachment headed by nurse E.M. Bakunina, and nineteen more nurses arrived with the fourth detachment on April 9th [1855] headed by Nurse Budberg”<sup>23</sup>•

Besides Yelena Pavlovna herself, the best known of the field nurses was Yekaterina Mikhailovna Bakunina (1812-1894). She was described as “the ideal kind of nurse”<sup>23</sup> The nurses worked in small detachments in such towns as Bakhchisarai, Simferopol, Perekop, Kherson, Nikolaev as well as in the besieged city of Sebastopol itself. They suffered great privations and almost all “contracted typhus or other epidemics; whilst some were wounded or contused... by March 1855, six of the nurses had died in Simferopol. After the War, 68 nurses were recommended for the Medal inscribed For Defence of Sebastopol”<sup>23</sup>•

After the Crimean War, Yelena Pavlovna herself went on to establish the Russian Red Cross. In 1862, she founded the Conservatory for Music, in St Petersburg. She died in 1873, mourned by all.

### **BRITISH NURSES IN THE FIELD - MRS MARY SEACOLE**

The British nurse, Mrs Mary Seacole (1805-1881) was also in the field at the Crimea. Like many who volunteer to help in times of crisis and disaster, she made her own way to the theatre of war and gave her skill and caritas to stricken British soldiers.

Mary Seacole was born Mary Jane Grant, in Kingston Jamaica, the daughter of a mulatto mother who was a Jamaican “doctress”, from whom she learnt her medical and nursing skills <sup>25</sup>. Her father was a Scottish military officer. In 1836 she married Edward Seacole but was soon widowed. She nursed British soldiers (including those of the 97th Regiment of Foot) both in Kingston and at Panama <sup>25,26</sup>. She voyaged personally to Scutari in Istanbul, spent a night in the Scutari “Hospital washerwomen’s Quarters” <sup>27</sup> where Florence Nightingale found a bed for her. She journeyed on to the Crimea on The Hollander. There she established Mother Seacole’s British Hotel, a hostel and hospice situated on the main road between Balaklava and the British Camp at Cathcart’s Hill some 400 metres from the LTC Hospital. There she overcame considerable obstacles but was praised by the British War Correspondent, Sir William Henry Russell, and by many independent sources, including, most significantly, many soldiers themselves <sup>28</sup>. She received the Crimean War Medals for her service and was honoured in 1857 by a mildly- laudatory cartoon in Punch, for her welfare and nursing services to sick and injured soldiers.

## POSTSCRIPT

In the decades which followed the Crimean War, a great groundswell of international opinion developed to formulate what were to become the Geneva Conventions and the Laws of War. After the Battle of Solferino (June 24th, 1859), Henri Dunant established the International Red Cross (1864).

After the Crimean War, the Russian people continued to suffer in both international and civil wars. Their privations, indeed unimaginable sufferings, were to contribute to a deeper understanding of the natural but tragic history of many diseases. The history of post-bellum epidemics and disease has, albeit at almost unimaginable cost, contributed to an understanding of preventive medicine. Russia's experiences during the First World War (1914- 19 18), during its two Revolutions of 1917 and 1919 and throughout the Great Famine (1919-1923) added to this tragic corpus of medical knowledge. The citizens of Russia suffered more from starvation, physical and mental suffering than those of all other European nations combined <sup>29</sup> During the Famine, 10 million Russians died from starvation. Typhus afflicted 35 million and cholera 205,000 in 1921 alone. In the last year of the Great Famine (1923), malaria afflicted the nation and in that year alone six million malaria sufferers were registered.

The Crimean War was a campaign of appalling ineptitude and of great personal courage. It was another exemplar of many instances where the obscenity of war has led, often unexpectedly, to great advances in civilian health <sup>8</sup>• Lessons from the Crimean War have

contributed to medical systems and innovations which are taken for granted today. Gender equality of opportunity in the health professions saw its origins in the development of nursing as a true health profession. Medical planning and medical logistics in the modern sense, date their origins also from the era of the Crimean War. Such systems were first tested, with great benefit to the efficiency but not to the carnage of war, in the American Civil War a decade later. Civilian anaesthesia, particularly emergency anaesthesia, saw its true genesis in the wider civilian field after the Crimea. Improved medical logistics, pre-planning for mass casualties and medical emergencies, and formal medical training for the combined professions of Arms and Aesculapius date from that campaign.

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## REFERENCES

1. Cantlie, LtGen Sir Neil. Crimean War III (1855-56) In: A History of the Army Medical Department. Volume 2. Edinburgh, Churchill Livingstone, 1974: 184,189.
2. Ibid: Amputations: 193.
3. Ibid: Wounds: 191-192.
4. Baron Mundy [of Vienna]. Quoted in "Public Hygiene" In: Garrison, Fielding H. In: An Introduction to the History of Medicine. Fourth Edition. Philadelphia, W.B. Saunders Company, 1929: 661.
5. Cantlie, Lt General Sir Neil. Op. Cit. See Ref 1. The Era of Reform: 196-237.
6. Metcalfe NH. The influence of the military on civilian uncertainty about modern anaesthesia between its origins in 1846 and the end of the Crimean War in 1856. *Anaesthesia* 2005; 60: 594-601.
7. Garrison, Fielding H. "Nikolai Ivanovich Pirogov (1810-1881)" In: An Introduction to the History of Medicine. Fourth Edition. Philadelphia, W. B. Saunders Company, 1929:496-499.
8. Pearn JH. Civilian Legacies of Army Health. *Health and History* 2004; 6: 4-17.

9. Kelly HA. Ambrose Pare (1510-1590). Johns Hopkins Hospital Bulletin (Baltimore) 1901; 12: 240-242.
10. Pare A. La Manière de traicter les playes... Paris, 1545.
11. Pearn JH. "Sir John Pringle (1707-1782)" In: A Doctor in the Garden. Brisbane, Amphion Press, 2001: 308-310.
12. Garrison, Fielding H. An Introduction to the History of Medicine. Fourth Edition. Philadelphia, W.B. Saunders Company, 1929: 347.
13. Ibid., 498.
14. Pirogov Nikolai. Anatomie topographica sectionibus per corpus humanum congelatum tropilce directione ductis illustrata. St Petersburg, 1851-54.
15. Pirogov Nikolai Ivanovich. Voyenno Med/ca/Journal 1854; 63 [2 sections): 83-100.
16. Pirogov NI. Recherches pratiques etphysiologues sur l'éthérisation. St Petersburg, Bellizard, 1847. 109pp.
17. Pirogov NI. Kostno-plasticheskoye udlineniye kostel goleni privilushtshenhi stopi. Voyenno-med. Jour., St Petersburg, 63, Sect. 2, 83-100, 1854.
18. Pearn JH, Macdonald AG. Emigrant etherist: the medical and scientific influence of John Henry Hill Lewellin (1818-86). Pioneer anaesthetist and surgeon and Patron of Botany in Australia. AustNZJ Surgery 1994; 64: 790-94.
19. Pirogov NI. Recherches pratiques etphysiologiques sur l'éthérisation. St. Petersburg, 1847.
20. Smith GW, Judah C. Chronicles of the Gringos: the US Army in the Mexican War, 1846-1848. Albuquerque [USA], Univ of New Mexico Press, 1968: 348-350.
21. Secher O. Pirogov. Anaesthesia 1986; 41: 829-837.

22. Anon. The War — From a Correspondent. *Lancet* 1854; ii: 223-224.
23. Sorokina, Tatiana. *Nursing Service in the Crimean Campaign of 1854-1856*. [www.Report of Russian Medical Nurses in the Crimean Campaign of 1854-56. Delivered at the 34th Biennial Congress of the International Society of the History of Medicine. Glasgow, 1994.
24. Cantlie, LtGen Sir Neil. Op. Cit. See Ref 1: 90-92.
25. Anionwu Elizabeth. *Seacole's Legacy*. *Nursing Standard* 2005; 19: 19.
26. Seacole, Mary. *The Wonden'u/ Adventures of mrs Seaco/e [in Many Lands]*. London, James Blackwood. [Republished by Penguin Classics, London, 2004].
27. Robinson, Jane. *A Short History of MaiySeaco/e*. London, Royal College of Nursing, 2005.
28. Editor. "To be of use somewhere". *Nursing Standard* 2005; 19: 18-20.
29. Garrison, Fielding H. Op. Cit. See Ref 7: 794.



Ambroise Paré (1510-90).



*Grand Duchess Helena Pavlovna*

(1807-1873)



Dominique-Jean Larrey (1766-1842).



Nikolaj Ivanovich Pirogoff (1810-81).