

D I A G R A M

CHEST & TUBERCULAR DISEASES, & OTHER DISEASES
in the ENGLISH MALE POPULATION aged 15-45, and in the INFANTRY of the LINE, serving at Home before & since Lord Herbert's Administration.

ENGLISH MALE POPULATION

AGED 15-45.

1848-54.

Zymotic Diseases 2.0 to 1000 living	Chest & Tubercular Diseases 4.5 to 1000 living	All other Diseases 3.5 to 1000 living
<i>Deaths Annually to 1000 living from All Causes 9.5</i>		

THIS IS HOW LORD HERBERT FOUND THE ARMY.

INFANTRY OF THE LINE
(SERVICING AT HOME)

1837-46.

Zymotic Diseases 4.1 to 1000 living	Chest & Tubercular Diseases 10.1 to 1000 living	All other Diseases 3.7 to 1000 living
<i>Deaths Annually to 1000 living from All Causes 17.9.</i>		

THIS IS HOW LORD HERBERT LEFT THE ARMY.

INFANTRY OF THE LINE
(SERVICING AT HOME)

1859-60-61.

Zymotic Diseases 0.36 to 1000 living	Chest & Tubercular Diseases 4.2 to 1000 living	All other Diseases 3.4 to 1000 living
<i>Deaths Annually to 1000 living from all Causes 8.56</i>		

ARMY
SANITARY ADMINISTRATION
AND
ITS REFORM

UNDER THE LATE LORD HERBERT.

BY

FLORENCE NIGHTINGALE.

*(Read at the London Meeting of the "Congres de Bienfaisance,"
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ARMY SANITARY ADMINISTRATION, AND ITS REFORM UNDER THE LATE LORD HERBERT.

BY FLORENCE NIGHTINGALE.

It has been well and truly said that, in long wars, the real arbiter of the destinies of nations is not the sword, but pestilence.

It is this destroying angel which, following on the march of armies, exacts of every man to the full whatever penalties follow on the infraction of natural law.

In times past, war has been conducted in more or less forgetfulness, sometimes in total oblivion, of the fact, that the soldier is a mortal man, subject, to all the ills following on wet and cold, want of shelter, bad food, excessive fatigue, bad water, intemperate habits, and foul air.

And so the waste of human life, and the destruction of human health and happiness, have been, in all ages, many times greater from disease than from actual encounter in the field.

If peace has its victories as well as war, it has also its unnecessary losses from disease and death. Only the losses of peace are greater than those of war; because they are daily and consent, while war occurs at intervals of time.

To endeavour to prevent this destruction of life is by no means to encourage war, no more than to attend on the sick and wounded in a field hospital is to encourage war.

The object is primarily one of humanity. It is to save life, and to diminish suffering. And all who engage in this work are, in the best sense, savers of men.

Highest among such must be ranked Sidney Herbert.

As years pass on, so will the work, which he was a main agent in accomplishing, become better known and followed up.

And who can tell how much systematic attempts, made by all nations to diminish the horrors of this great curse, war, may not lead the way to its total disappearance from the earth ?

The faithful records of all wars are records of preventible suffering, disease, and death. It is needless to illustrate this truth, for we all

know it. But it is only from our latest sorrow, the Crimean catastrophe, that dates the rise of army sanitary administration in this country.

Royal Commission on the Sanitary State of the Army, 1857

The losses then incurred, and the experience derived from these, induced her Majesty to issue the now famous royal commission on the "Sanitary State of the Army," composed of men qualified to grapple with the whole subject, and to suggest the necessary remedies. Sidney Herbert presided over that commission, and embodied its results in a masterly report, showing, for the first time, the great and unnecessary mortality to which the army was at all times subject, the diseases occasioning it, their removable causes, and the administrative reforms required to arrest this awful loss of life and efficiency. At that time, the death rate among soldiers from consumption and tubercular diseases *alone* (the monstrous products of breathing foul air), exceeded the *total* death rate *from all causes* among the civil population of the corresponding ages. The total mortality in the army was nearly double--in the Guards more than double--that of the civil population. It is now actually *less* than in civil life.

Sidney Herbert's report laid the foundation of army sanitary reform. Lord Panmure, aware of its price, issued, under Sidney Herbert's advice, four sub-commissions for giving effect to its recommendations:--

Barrack and Hospital Improvement Commission, 1857.

One, the Barrack and Hospital Improvement Commission, examined the barracks and military hospitals of the united kingdom, and found their sanitary condition as to overcrowding, want of ventilation, want of drainage, imperfect water supply, &c., sufficient to account for most of the excessive death rate from which the troops occupying them had suffered. These establishments have, under the direction of the commission, been provided with combined ventilation and warming, without machinery of any kind. Drainage has been introduced, or improved. Water supply has been extended, baths introduced both for barracks and hospitals, and the lavatory arrangements generally improved. The barrack kitchens have been completely remodelled; the wasteful cooking apparatus, only fit for boiling, has been replaced by improved and economical cooking ranges for roasting, &c., so that the men may now have the change of cookery required for health, instead of the eternal soup and boiled beef. Gas has been introduced into many barracks, instead of the couple of "dips," which only made the barrack room look darker still, and by the light of which it was impossible for the men to read, or to pursue any occupation except smoking. Many important structural alterations for increasing window light, circulating fresh air by removing useless partitions, for ventilating stables, abolishing ash-pits, &c., have been carried out. More simple and healthy principles for the construction of future barracks and hospitals, for ensuring better drainage, efficient ventilation, more cubic space for both sick and well, and greater facilities for administration and discipline, have been laid down, and applied in several new structures;--amongst others, in the great "Herbert Hospital" at Woolwich.

The labours of the same commission have since been extended to the Mediterranean stations, where they were greatly required; and, it is to be hoped, will be farther extended to the West Indies and Canada.

Mediterranean Stations, 1861

The result of the improvements, already made, is that just one half of the Englishmen that enter the army die (at home stations) as formerly died.

The *total mortality* at home stations, *from all diseases*, is now actually *less* (by above one per thousand per annum) than was formerly the mortality from consumption and chest diseases *alone*. The reduction in deaths from consumption has been as remarkable : in some arms one-half, in others two-thirds of the mortality from this fatal disease has disappeared.

To shew what has already been done, I have transferred, from the Report of the Royal Commission, a diagram, shewing the death statistics of the English male population, between the ages of fifteen and forty-five, and the death statistics of the infantry of the line, serving at home, from 1837 to 1846. This is how Sidney Herbert found the army. I have added a third division, shewing the death rate of the same infantry for the three years following the introduction of sanitary improvement, 1859-60-61. This is how Sidney Herbert left the army.

As a supplement to the improvements in barrack cook-houses (already referred to), Lord Herbert directed a school for practical cookery to be established at Aldershot, for the training of regimental and hospital cooks; instead of taking it for granted, as was the practice, that any man could cook just as he could mount guard. This school is gradually supplying both regiments and hospitals with cooks capable of giving men a wholesome meal.

School in Military Cooking.

The second sub-commission was appointed for re-organizing the army medical department, and for framing a code of regulations for the hospital and sanitary service of the army. This commission found that, according to existing practice, no provision was made for systematically caring for the soldier's *health*, but only for his *sickness*. The chief recognised function of the army medical officer was attending men in hospital; but in no way was it considered his duty to render it unnecessary for men to come into hospital at all.

New Code of Regulations for Sanitary Army, 1857-9.

To supply this great want, the commission drew up a code for introducing the sanitary element (for the first time) into the army, defining the positions of commanding and medical officers, and their relative duties and responsibilities regarding the soldier's health, constituting the regimental surgeon the sanitary adviser of his commanding officer, who is now bound to give effect to all sanitary recommendations made by his medical officer, unless he can assign satisfactory reasons in writing to the superior authority for non-compliance.

The same code contains regulations for organizing general hospitals, and for improving the administration of regimental hospitals, both in peace and during war. Formerly, general hospitals in the field had

to be improvised, on no defined principles, and on no defined personal responsibility. The wonder is, not that they broke down, as they did in all our wars, but that they could be made to stand at all. In all our wars our general hospitals have been signal failures, fatal examples of how to kill, not to cure. All this is now changed; and, with the most ordinary administrative capacity; the sick during war may now have every necessary care and comfort.

This code is the best ever framed ; and, in practice, has been found to succeed in every climate, whether at home, in garrison, or in the field. It has been successfully tested in two expeditions, since issued by Lord Herbert in 1859. On the day which took him from us, its general hospital system was realized in the hospital at Woolwich, including its governor, principal medical officer, captain of orderlies, female nurses, and their female superintendent, &c., which system will be transferred to the magnificent hospital, now being built there, of which Lord Herbert was the founder, and which will bear his name. He also directed a plan to be drawn up for the organization of a second general hospital at Devonport, on the same principles, which will shortly be carried into effect.

Army Medical
School at
Chatham,
1857-60.

The third sub-commission was charged with organizing a practical school at Chatham, for instructing candidates for army medical service **in military hygiene and other specialties.**

Formerly young men were sent to attend sick and wounded soldiers, who **perhaps** had never dressed a serious wound, or never attended a bedside, except in the midst of a crowd of students, following in the wake of some eminent lecturer--who **certainly** had never been instructed in the most ordinary sanitary knowledge ; although one of their most important functions was hereafter to be the prevention of disease in climates, and under circumstances where **prevention** is everything, and medical treatment often little or nothing.

The sub-commission drew up an admirable scheme ; and the school at Chatham was opened by Sidney Herbert in person, in 1860. Already its results have been most satisfactory. A large number of men of high attainments have been sent from it into the army; and we may confidently expect a lower sick rate and death rate (especially on foreign stations and on field service) as one of its results, as well as higher hospital efficiency.

Army Medical
Statistics,
1857-61.

The fourth sub-commission was charged with the duty of re-organizing the army medical statistics, which were then in such a condition as to afford very incomplete data, especially during war. These statistics have been reformed, and are now by far the best and most useful in Europe. They can be reduced with much less labour, and with much greater promptitude than formerly; because the manner of recording cases is now much more precise, and there is a special division in the army medical department for reducing them to obtain the results ; while they enable the exact state of health, of every regiment and station, to be ascertained, and any unusual amount of disease, **with its removable causes**, to be brought at once to the cognizance of the authorities.

In the course of years they will add immensely to our knowledge of army diseases, as well as of those incident to particular climates and seasons.

Although the first annual report under the new system, being a **first** report, does not give all the data, regimental and stational, required by the instructions: yet every succeeding year's experience will render these annual reports more complete and more valuable.

Of all these commissions Sidney Herbert was head and centre. He superintended himself carefully every step of their procedure, and took his share of the work, as well as the responsibility attaching to it in his public capacity, by identifying himself with the reforms. In England it is so much the custom to look upon statesmen merely in their political, and not in their administrative capacity, that it is almost forgotten that they have an administrative function at all. No one thinks of a secretary of state, e. g., as the head of an office which has in its hands the lives and morals of men. But Sidney Herbert, although his passion, his hereditary occupation, to which he was born and bred, was politics, yet made his administrative labours greater, set his administrative object higher, recoiled from none of its dry fatigues, and attained its highest usefulness. What has been **well-**advised to a rising statesman, he performed. He did not sink in politics the powers which were meant for mankind.

Sidney
Herbert.

Army medical officers had felt much and just dissatisfaction with their position in the army. The royal commission advised therefore the preparation of another warrant, ensuring to these officers the rank and emolument to which their services entitled them. It was framed by Sidney Herbert, and issued by General Peel in 1858.

Army Medical
Officers' War-
rant, 1858.

Another great reform was introduced into the Purveying Department, which, like many others, had no well-defined position, duties, or responsibilities. It was efficient or inefficient almost by chance. Like other departments, it broke down when tried by war; and all its defects were visited on the sick and wounded men, for whose special benefit it professed to exist.

Purveyor's
Warrant and
Regulations,

To put an end to this, and to introduce method into the service, Lord Herbert issued in 1861 a new purveyor's code and regulations, re-organizing the department in accordance with the views expressed by himself, as Chairman of the Royal Commission. The regulations now define with precision the duties of each class of purveyor's officers, together with their relation to the army medical department. They provide all necessaries and comforts for men in hospital (both in the field and at home) on fixed scales; instead of requiring sick and wounded men (even in the field) to bring with them into hospital articles for their own use, and which they had lost before reaching it. These regulations have been already tried, both for home and field service, and have been found to answer every purpose.

Lord Herbert also named a committee to re-organize the army hospital corps. In former times there were no proper attendants on the sick. For regimental hospitals a steady man was appointed hospital sergeant, and two or three soldiers, fit for nothing else, were sent into the hos-

Army Hos-
pital Corps,
1860.

pital, to be under the orders of the medical officer; if he were **fortunate enough to find one man fit to nurse a patient, was sure to lose him by his being recalled "to duty ; "** sometimes, indeed, men were mounted in rotation over sick in hospital as they would mount guard over a store. And this is still done in India, and in some regiments at home.

No special training was considered necessary ; no one, except the medical officer, who was helpless, had the least idea that attendance on the sick is as much a special business as medical treatment.

Unsuccessful attempts had been made to organize a corps of orderlies, unconnected with regiments : the result was most unsatisfactory. Lord Herbert's committee proposed to constitute a corps--the members of which, for regimental purposes, are to be carefully selected by the commanding and medical officers--specially trained for their duties, and then attached permanently to the regimental hospital, from which they cannot be removed to the ranks, except for proved incapacity or breach of discipline. This was carried into effect shortly after his death.

Success of all these measures in reducing Army

The crowning testimony of the great national importance of the new system of sanitary administration, inaugurated by Lord Herbert, is to be found in the last Chinese expedition, where his reforms were first practically tested. An expeditionary force was sent to the opposite side of the world, into a hostile country, notorious for its epidemic diseases. Every required arrangement for the preservation of health was made, with the result that the mortality of this force, including wounded, was little more than three per cent. per annum, while the "constantly sick" in hospital were about the same as at home. Let us contrast with this great success what happened during a former war in China. The 26th Cameronians, a "total abstinence" regiment, and one of the finest and most healthy in the British service, was landed at Chusan, 900 strong, and left to its fate without any sanitary care. In two months only twenty men could be got together.

To take another contrast upon a larger scale. During the first months of the Crimean war, from September 1854 to March 1855, the death rate among the British troops was sixty per cent. per annum, until means were taken to prevent this fearful sweep of death. During the same months, the "constantly sick" in the hospitals were sevenfold those in the war hospitals in China.

Indian Army Sanitary Commission, 1859

Impressed with the enormous death rate and loss of efficiency in the Indian army, Lord Herbert undertook in 1859 the presidency of the Royal Commission on the "sanitary state" of that army, called together to devise means for reducing these great losses. He was obliged to relinquish this to Lord Stanley in 1861, on account of official business, and, alas ! of failing health. But by that time the evidence received from Indian stations had been sufficient to convince him that removable causes, of far greater importance and intensity than any which have been discovered in our home stations, were destroying the lives of our soldiers, and the physical efficiency of the Indian army.

Among other reforms initiated during Lord Herbert's life, but incomplete at his death, were the following :--

He had seen that the sanitary defects in barracks and hospitals had arisen from the unsatisfactory manner in which these buildings had been planned and constructed. No one engaged on them had had any knowledge of the requirements for health. If they had been made to put guns and stores in, and not men at all, or horses, they could not, in fact, have been worse. There was no recognition of the necessity even of space, or of fresh air, or of drainage, either for sick or well. To prevent this in future, Lord Herbert called together a committee, to inquire into the present system of executing barrack works, and to suggest administrative improvements.

The department, charged with spending money on buildings to keep men healthy, knew little about the principles of healthy construction, such knowledge not having been required of them

The result of the labours of the committee, it is expected, will be a better and more economical organization, a proper training in the principles of sanitary works, and a total change in the sanitary construction of our future military buildings.

Another very important commission was also called, to consider the question how best to provide soldiers' day-rooms and institutes in order to struggle with the great moral evil supposed to be inseparable from garrisons and camps.

Lord Herbert saw that, at present, the soldier was hardly thought of as a man at all. The effect of moral agencies upon him was practically ignored. He (Lord Herbert) had taught every one, by this time, the results of treating the soldier physically as if he were not a human being, subject to the laws of physical health. And, in the moral tone of garrisons and camps, he recognised the legitimate results of treating the soldier morally, as if he were not under the laws of moral health. Placed, as he is, under strict restraint, lodged in a crowded, uncomfortable, barrack-room--without privacy, without social intercourse, except that afforded by the canteen or by some much worse place ; without home ties ; without occupation or amusement, except such as is provided for him by those (and they are everywhere) who pander to his passions--the soldier has a position most unfavourable to his moral nature. And just as the soldier was formerly accused of dying unnecessarily, or because it could not be helped, the real causes being all the while ignored ; so now, the sequences of overlooking moral causes go by the name of "camp vices." Not that nothing has been done in the way of direct teaching to counteract the evil; but, all the while, the immoral agencies or temptations by which the man is surrounded, have been left untouched ; while no counteracting agencies of a moral kind have been provided to cope with these.

In civil life at home, it is supposed inconsistent with individual liberty to put down bad places of resort, and to prevent open temptations to profligacy ; while, in certain continental states, it is not supposed against liberty or morals to make prostitution as little dis-

Committee on
Barrack
Works, 1861

Commission
for Soldiers'
Day-Rooms
and Institutes,
1861.

agreeable as possible--viz., by "regulating " it, to avert the consequences of this vice, leaving all the temptations just as they were.

Lately, the remedy alluded to has been repeatedly urged for Aldershot, in the face of the notorious fact that, while no proper places of resort or occupation have been created for the men, the remedy would leave the abominations of the town to go on untouched.

In dealing with this question, there are obvious principles. Governments can prevent this open infamous trading, as they do other open infamous trading. They can prevent open temptations to vice, as they can prevent open temptations to crime. They can do these things both for the civilian and the soldier. But for the soldier they can do more; and it is this which the committee on soldiers' day-rooms was called to consider by Lord Herbert.

They have shown that the men's barracks can be made more of a home--can be better provided with libraries and reading-rooms ; that separate rooms can be attached to barracks where men can meet their comrades, sit with them, talk with them, have their newspaper and their coffee, if they want it, play innocent games, and write letters; that every barrack, in short, may easily be provided with a kind of soldiers' club, to which the men can resort when off duty, instead of to the everlasting barrack-room or the demoralizing dram-shop ; and that, in large camps or garrisons such as Aldershot and Portsmouth, the men may easily have a club of their own out of barracks.

The committee also recommended increased means of occupation, in the way of soldiers' workshops, outdoor games and amusements, and rational recreation by lectures and other means.

The plan has been tried with great success at Gibraltar, Chatham, Montreal. There is no reason why it should not succeed elsewhere. At all events, let it be tried.

Lord Herbert's latest act was directing an inquiry at Aldershot, as to the best means of introducing the system there. The country will support the cherished scheme of its dead statesman.

This is a short sketch of the labours and successes of Lord Herbert's last brief administration. The lesson which these reforms teach is, that the real foundation of War Office efficiency is to be laid in the efficient working of each department--in simplifying procedure, abolishing all divided responsibility clearly defining the duties of each officer--in giving direct responsibility to each head of a department--and, lastly, in placing all the departmental heads in direct communication with the Secretary of State. It is by this procedure that the spirit which was breathed into Lord Herbert's reforms, may be expected to accomplish what he constantly kept before him as the great object of his official life--viz., to increase the efficiency, improve the position, and preserve the health of the British soldier.

There were indeed other important reforms made by Lord Herbert during this his last short tenure of office. But not for these, or so much for these as for the rest, will he be remembered. He will be remembered chiefly as the first war minister who ever seriously set

himself to the task of saving life--who ever took the trouble to master a difficult subject so wisely and so well, as to be able himself, and to show the way to others, to husband the resources of this country, in which human life is of more value than in any other--of more value than any thing else.

To the army, in the person of Sir John Pringle, is due the credit of first having recognized the real, ever-operating effects of physical laws on human health and life. To the army, Sidney Herbert has, a century later, bequeathed the administrative means of applying those laws, so as to mitigate or to prevent the very diseases which previous administrators ignorantly supposed inseparable from the soldier's occupations.

The results cannot fail to re-act on the whole progress of sanitary reform in civil life. Let us hope that the great lesson which has been taught, will have its weight with those charged with the duty of protecting the public health.