

**PAPERS RELATING TO THE
SANITARY STATE OF THE
PEOPLE OF ENGLAND**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649171804

Papers relating to the sanitary state of the people of England by Edward Headlam Greenhow

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

EDWARD HEADLAM GREENHOW

**PAPERS RELATING TO THE
SANITARY STATE OF THE
PEOPLE OF ENGLAND**

GENERAL BOARD OF HEALTH.

PAPERS RELATING TO THE SANITARY STATE
OF THE PEOPLE OF ENGLAND:

BEING

The Results of an Inquiry into the different Proportions of Death produced by certain Diseases in different Districts in England; communicated to the General Board of Health by EDWARD HEADLAM GREENHOW, M.D., Licentiate of the Royal College of Physicians, Lecturer on Public Health at St. Thomas's Hospital, and Physician to the Western General Dispensary;

WITH

An Introductory Report, by the MEDICAL OFFICER OF THE BOARD, on the Preventability of certain Kinds of Premature Death.

Presented to both Houses of Parliament by Command of Her Majesty.



LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY,
FOR HER MAJESTY'S STATIONERY OFFICE.

1858.

485
679

589643
4.8.54

INTRODUCTORY REPORT BY THE MEDICAL OFFICER
OF THE BOARD.

General Board of Health ;
June, 1858.

SIR,

I HAVE the honour of laying before you a paper which Presentation of annexed paper. exposes in a very remarkable manner the present wasteful expenditure of human life in England.

It is the work of Dr. Greenhow, Lecturer on Public Health at St. Thomas's Hospital ; who, having recently found it requisite for his own purposes, as a teacher of sanitary science, to analyze more minutely than had hitherto been done, the distribution of diseases among different parts of the community, has done me the favour of acquainting me with the results of his inquiry. And as these results appear to me of singular public interest with reference to sanitary administration, I have begged Dr. Greenhow to let me submit to you the paper in which he has embodied them.

It cannot be necessary that, with the paper here to speak for itself, I should attempt to offer you any complete analysis of its contents. But there are some of its conclusions which I would ask leave particularly to mention ; partly because of their own very great interest ; and partly because, in the new light which they afford, the sanitary state of the people of England almost imperatively claims to be reconsidered as a whole.

On this opportunity, therefore, I shall venture to submit to you my opinions as to the degree in which premature death can practically be prevented in England ; and I shall refer to that most valuable evidence which Dr. Greenhow's paper presents, as illustrating how very much remains to be done in great part of England before the limits of that practical preventability will be even distantly approached.

It has now for some time been taught in the reports of the Registrar-General, that, of the entire annual mortality of England, Alleged excess of deaths in England. at least a fourth part is of artificial production.

England is divided into 628 registration districts. Of these there are sixty-four (containing a population of about a million inhabitants) wherein the annual death-rate per 100,000 ranges from 1,500 to 1,700. But the average death-rate of England is about 2,266. Nearly nine-tenths of the registration districts

of England show death-rates which are in excess of 1,700. and which, in some notorious cases, run up to 3,100, 3,300, and 3,600.*

No one pretends that people live too long in the 64 districts first referred to. That life is artificially shortened in the other 564 districts, seems the necessary alternative.

At this point the general statistical argument requires to be re-inforced by the more detailed results of two other inquiries:—first, what does medical experience say as to the dependence on removable causes—in other words, as to the preventability of certain diseases which contribute largely to the total mortality of England? and, secondly, what difference is there in the prevalence of these diseases in different districts of England?

It is the second of these questions which, to a great extent, Dr. Greenhow has answered. The value of his answer consists in its applicability to the purposes of local sanitary education and local sanitary improvement; an applicability which cannot be otherwise tested and defined than by taking the two questions together, and considering the different local pressures of different diseases in connexion with the degree to which each disease admits of prevention.

First, then, as to the preventability of certain diseases:—

CAUSES OF DEATH.

Natural death.

Death by old age is, physiologically speaking, the only normal death of man. And its essence is this:—that organs necessary to the mere vegetative life of the body have naturally undergone such modifications of texture that they can no longer fulfil their former ministerial uses.† Having first ripened to their several prefigured patterns, and having performed for a while their several appointed functions, they become incapable of continuing longer without decline. Thus it is that death, unaccelerated by exterior influences, creeps at last on all; and the textural changes which mark its gradual progress are probably, in their kind, common to every living creature. In the human subject it is by degenerative changes in the heart and arteries

* In the Registrar-General's last Quarterly Return (No. 36) it is well argued that, to account for this difference of effect, there must exist some difference of cause; and "whether the cause admit or do not admit of removal, the fact is incontestable and must not be lost sight of, that the excess of deaths in England and Wales over those from causes which exist in 64 districts was 91,856 in the year 1857; for 420,019 persons died in that year [though its death-rate was below the average], and about 328,163 persons would have died had the mortality not exceeded the standard of 17 deaths in 1,000 living."

It deserves notice that the mortality which most peculiarly may be called premature—the mortality of young children—shows a still greater range of difference than the mortality of all ages. The death-rates of children in the first year of life were observed during the years 1838–44, to range per 1,000, in the *counties* of England from 118 in Westmorland to 237 in Lancashire; and in the *districts* of England from 77 in Glendale, Bellingham, and Haltwhistle to 296 in Aston-under-Lyne and Nottingham.

† "Causa autem periodi ea est; quod spiritus, instar flammæ levis, perpetuo predatorius, et cum hoc conspirans aër externus . . . tandem officinam corporis et machinas et organa perdat, et inhabilis reddat ad munus reparationis."—*Bacon, Hist. Vita et Mortis.*

that natural death most frequently occurs. And to undergo *Natural death*, these changes in old age is as natural a part of human life as to have attained in succession youth and manhood. But the period when they tend to consummate themselves in death is not precisely defined. There are personal differences of longevity. Death, virtually by old age, comes to some men even before their sixtieth year. To most men it comes much later. A few complete their fifth vicenniad, and even carry far into it their noblest mental endowments. And apart, so far as is known, from any immediate dependence on exterior circumstances, these differences tend to repeat themselves in particular families. They are differences of stock.* But they are not operative to any great extent. And it cannot be far from the truth to assume that, if there were no artificial interference with the duration of life, death by natural decay would, in this country, under its present circumstances, usually happen at about 80 years of age.†

Now little more than a tenth part of the deaths of England *Premature death* happen at 75 years and upwards. And thus, physiologically speaking, one may say that at least nine-tenths of the entire mortality occurs more or less prematurely.

But this physiological statement must be guarded from misapplication. It would require more knowledge than is yet possessed by the professors of medicine to say that all *premature death* is, even in theory, *preventable death*. And while the science of medicine is hitherto unable to advance this proposition, even as ideally true, still less can any reasonable person pretend that, practically speaking, it so much as approximates to truth.

The daily experience of every man is sufficient to tell him *UNAVOIDABLE CAUSES OF PREMATURE DEATH* that there always have operated, and always must operate, very many causes of premature death. Most properly he may seek to reduce these causes to their least possible degree of destructiveness. Most properly he may watch against too indolent an acquiescence in any existing evil. But he cannot refuse to recognize that a certain proportion of what science classifies as premature death is, to all practical intents and purposes, not preventable.

For, first, the certainty of premature death—a certainty quite *Congenital and hereditary influence*.

* Lord Bacon (loc cit.) noticed this fact, but noticed it with a qualification:—"illud vero experientia docet esse quasdam stirpes *ad tempus* longævas, ut longævitas sit, quemadmodum morbi, res hereditaria *in aliquibus periodis*." The meaning of the qualification, expressed in the words which are italicised, is of course obvious. A long-lived type of man can be perpetuated only by the same sort of care (impossible, of course, on any large scale for the human subject) as is applied to perpetuate particular valuable qualities of farm stock; and similarly the short-lived type could only be changed by cross breeding.

† In the Farøe islands, with a population of about 8,000, it appears that the period for death by old age is from the 80th to the 90th year; for, according to Dr. Panum, *many more deaths happen within that decennium of age than within any other decennium after the completion of the first year of life*.—Virchow's Archiv. I. 493.

irrespective of the immediate influence of exterior circumstances—is a *condition under which many are born*. Children come into the world, sometimes with malformations, which render healthy life impossible; sometimes with inherited disease or inherited morbid predisposition; sometimes with various ill-defined weaknesses of vitality, which render them unable to struggle onward, even for a single year, or dispose them more readily to sink under the ordinary trials of infancy. One family has become liable to gout and rheumatism; another to tubercular diseases; another to epilepsy and mania; another to this or that other form of visceral or humoral disease: and children born of these stocks have not the average expectation of healthy life. A certain share of every existing generation has in it from these sources the seeds of premature death. Such seeds may or may not be developed. In respect of many of the cases referred to, medicine has hitherto but imperfectly learnt the art of prevention. In respect of others (and fortunately this applies to the most fatal of the number) exterior circumstances can be shown to exert immense influence, certainly over the development of individual predisposition, and probably over the further propagation of that hereditary fault.

Unquestionably, however, deaths referred to under the present head are to a certain extent not preventable. And in order to determine whether the limits at which they become preventable have in any particular case been exceeded, the following considerations furnish, I think, the safest argument for guidance:—(1) that the influence alleged to be non-preventable in the causation of these deaths is the personal or family predisposition; (2) that in any one country of moderate extent and mixed race, with a population exercising from part to part the freest intercourse and intermarriage and intermigration, this influence would tend to be uniformly diffused; and (3) that, therefore, no natural reason can be conceived for its being in any one district of such a country much more powerful than in another district. So far, then, as personal predisposition accounts for the diseases in question, they would hardly be expected to vary much in their proportionate fatality in different districts of England. And any considerable exception to their uniform diffusion would suggest a very strong suspicion, that in the districts where they excessively prevail certain exciting causes must be specially and preventably in operation.

Contagions of
small-pox,
hooping-cough,
measles and
scarlatina.

A further—practically speaking, unavoidable—cause of premature death in every civilized country is the risk of its *current contagions*. In Europe there are certain infectious complaints of which, once in life, nearly all persons are susceptible. The contagions of these diseases are never long absent from large communities; and a child during its first few years of life is almost of necessity exposed to them. Hence it is that, in European experience, the diseases in question—small-pox, hooping-cough, measles, and scarlatina—are so well known as diseases

of childhood. To those who choose to avail themselves of Jenner's discovery, small-pox—the most fatal malady of this class—needs no longer be counted as a danger; but liability to the other infections is a more or less considerable risk which science hitherto cannot avert. Hooping-cough, measles, and scarlatina are, therefore, to a certain extent inevitable causes of premature death. The severity with which any one of these diseases attacks an individual patient depends on his individual constitution; and often we are able to observe that corresponding differences of constitution (the sources of which are quite unknown to us) belong to several members of the same family. But, given a certain severity of attack, the fatality of these diseases is greatly and evidently proportionate to exterior conditions. And the poor suffer from them immensely more than the rich, partly from possessing less ample means of treatment, but mainly because of the impure atmosphere which commonly surrounds the patient in his overcrowded and unventilated dwelling.

In respect, then, of these diseases (as of those previously spoken of) it may fairly be supposed that their natural tendency is to prevail with equal severity or equal mildness in all districts of England; and any disproportionate fatality of these diseases in certain districts, as compared with their habitual fatality in other districts, is a fact which requires to be accounted for by the operation of local causes.

Practically, too, it must be reckoned that, even with the high Privation. civilisation of this country, and with its unequalled system of poor-law relief, *privation* still exists as a cause of premature death. Among the surgical cases treated at hospitals and dispensaries, diseases from insufficient nourishment form a very considerable part. Children especially suffer from this cause; and many of their so-called scrofulous ailments are in fact mere starvation-disorders, which a few weeks of better feeding can cure. And, besides the direct stint of food, and that indirect stint which consists in the use of damaged and adulterated provisions, there are other kinds of privation practically inseparable from poverty. It must have scanty house-room; and this—at least till the means of ventilating poor dwellings are thoroughly popularised—is an increased liability to disease. It must have scanty clothing and scanty fuel, and with little other protection than habit must encounter inclemencies of weather. It must have a weight of care in its daily struggle for subsistence; it must have little of the variety and pleasurable excitement which are good for mind and body. Few tasks can be more difficult than to estimate the diffusion of poverty, as distinguished from pauperism, in different parts of England; and I have no means of determining whether poverty, in this sense, be one of the local conditions to which any preventable disease at all closely proportions itself. But, as regards pauperism, such certainly is not the case; a glance at Dr. Greenhow's table is sufficient to show that districts with the highest, and districts with the lowest, propor-