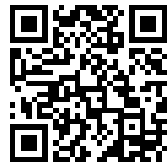


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GENERAL BOARD OF HEALTH.

2,

MEDICAL COUNCIL.

REPORT

OF

THE MEDICAL COUNCIL

TO

THE RIGHT HON. SIR BENJAMIN HALL, BART., M.P.,

*President of the General Board of Health, &c. &c. &c.,*

IN RELATION TO

THE CHOLERA-EPIDEMIC OF 1854.

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

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FOR HER MAJESTY'S STATIONERY OFFICE.

1855.



# GENERAL REPORT

OF

## THE MEDICAL COUNCIL.

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To the Right Hon. Sir BENJAMIN HALL, Bart., M.P.,  
President of the General Board of Health.

SIR,

IN presenting our Report of inquiries conducted under your sanction into the course and phenomena of the late Epidemic of Cholera, the Medical Council may be allowed to express their satisfaction at Science having at length been recognised by the State as the ally of civil jurisprudence, and as the guide to a more enlightened code of medical police. They trust that this propitious movement may be regarded as the inauguration of a system ultimately destined to carry its ameliorating influence through all the ramifications of our sanitary institutions; and that the present fragmentary and imperfect application of medical knowledge in several departments of the State, may give place to a complete and comprehensive system, under the sole direction and control of one central department.

From the multifarious character of the objects embraced by this wide inquiry, it was found expedient to distribute them into several classes, and to entrust the examination of each class to a special section of the Council.

Of such special sections of the Medical Council, there were three: one, constituted to report on such *scientific inquiries* as it had seemed expedient to institute; a second, to digest from the general mass of contributed material whatever facts could illustrate the relative advantages of rival *methods of treatment*; a third, to invite from the cultivators of science in *foreign countries* any information which could be given as to the results of their kindred investigations.\*

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\* The members of the three Committees were respectively as follows:

COMMITTEE FOR SCIENTIFIC INQUIRIES.—Dr. Arnott, Dr. Baly, Dr. Farr, Mr. Owen, Mr. Simon.

TREATMENT COMMITTEE.—Dr. Alderson, Dr. Babington, Dr. Paris, Dr. Tweedie, Mr. Ward.

COMMITTEE FOR FOREIGN CORRESPONDENCE.—Dr. Babington, Mr. Bacot, Sir James Clark, Mr. Lawrence.

As it was the paramount object of the Council to collect from members of their profession all the facts which medical observation and experience could afford; so was it their first duty to frame such a formula of instructions as might secure amplitude, accuracy, and technical uniformity in the returns they were thus desirous to obtain; and when we consider the crushing pressure under which our medical brethren laboured during the ravages of this fearful epidemic, too much praise cannot be accorded to them for the alacrity and goodwill with which they responded to the call.

In adverting to the results respectively obtained by the three Committees of their body, the Council must first express regret that their *Committee for Foreign Correspondence* have not been successful in their endeavours to elicit satisfactory information; but it may be justly pleaded that difficulties of no ordinary kind embarrassed all our inquiries, which no amount of zeal and diligence could overcome. It will be remembered that the Medical Council was not called into existence until the epidemic had already passed its culminating point: the way had not been sufficiently cleared by preliminary inquiries, and the prospective path of investigation had not been traced or enlightened by any scientific pioneers.

The *Scientific Committee* have collected some valuable information with regard to the past epidemics, and much more as a guide to future inquiry. This is more especially the case with respect to the impure condition of the London atmosphere, and its capability of influencing the intensity of an epidemic; to the foul state of the Thames, and its share in rendering the atmosphere impure; and to the farther intimate connexion between cholera and local sanitary defects. An inquiry still pending, but nearly completed, will, it is believed, show an equally close relation between the epidemic and the impurity of the water used as a beverage.

The various sources of atmospheric impurity are too well known to require enumeration, but there is one which, on account of its paramount importance, cannot be passed over without comment, viz., the present system of sewers. The Medical Council do not presume to judge of the merits of conflicting systems, or to decide which best fulfils certain theoretical conditions for the conveyance of a given volume of fluid; but they confidently assert that the existing sewers often fail in accomplishing their main object. Instead of carrying off almost inodorously the excrementitious and refuse matters

of the population, they evolve offensive effluvia, provoking general and grave complaint; and it is a fact worthy of remark, that the intensity of this nuisance is greatly aggravated in certain parts of the metropolis by obstructions to which their drainage is subject by reason of its outfall into a tidal river. The reckless disturbance of the contents of sewers, and their exposure on an extended surface, more especially pending an epidemic, is a practice which the Medical Council feel it necessary to reprobate.

The Scientific Committee lay great stress upon that source of impurity which results within dwellings from overcrowding the inhabitants, from defects of drainage, and from want of cleanliness and ventilation; and they deem it indispensable for the protection of the poor that the local authorities should vigilantly exercise the powers committed to them for preventing such evils. The good effects of sanitary improvements have been strikingly exemplified in the model lodging-houses, and in public baths and wash-houses. The establishment of burial-places beyond the boundaries of the metropolis is another circumstance of prime importance, and the relief thus afforded to overcrowded churchyards will, no doubt, be regarded by the future historian as one of the greatest improvements in the nineteenth century.

The Metropolis Local Management Bill, introduced by yourself, and already sanctioned by one branch of the Legislature, is a subject of sincere congratulation, since it promises efficient sanitary government for the metropolis; and it is to be devoutly hoped that similar measures, equally needed for the whole country, will speedily follow. All these considerations are forcibly pressed upon us by the probability that epidemics of cholera may be frequent, if they do not actually become persistent; as we are fearfully reminded that the interval between the epidemics of 1831-2 and that of 1848-9 was 17 years, whereas the late epidemic followed the second after an interval only of five years.

Nor are such measures to be regarded merely as safeguards against the invasion of cholera; they are equally applicable, and not less effective, against the spread of other epidemics, such as the varieties of continued fever and scarlatina, which have been lately stated by the College of Physicians to be far more destructive to human life than even the periodical scourge of cholera.

The Scientific Committee have taken pains to investigate the possible relations subsisting between the outbreaks of cholera and certain meteorological conditions. Mr. Glaisher's

elaborate report will be studied with great interest. If in a subject so obscured by inappreciable influences he has not succeeded in arriving at absolute demonstration, he has gone very far to establish high probabilities, which future observation may raise into certainties. And, here again let us remark, that his admirable system of observations could not be fully organized until the epidemic had already attained its climax. He has, however, shown, that during the three epidemics there has existed a great predominance of calm, rendering the season defective in those atmospheric changes which renew the purity of the air, and, at the same time, an undue height of the barometer, operating against vaporous diffusion; and further, a great excess in the temperature of the Thames at night, as compared with that of the superincumbent atmosphere, giving rise to nocturnal clouds of vapour, which are necessarily charged with impurities derived from the foul contents of the river. The great principle which was first laid down in Dr. Farr's Report to the Registrar General respecting the relative immunity enjoyed at particular altitudes may be connected with this new link of evidence. Mr. Glaisher has clearly shown that in the low-lying districts, wherein the epidemic assumed its highest malignity, the air was stagnant, and moisture, impregnated with impurities, was especially induced to hover.

Special examinations of the atmosphere were conducted by Dr. Thomson and Mr. Rainey, but their results possess little more than a negative interest, since they failed to discover any new or significant element of an organic or inorganic nature, as a possible agent in the causation of cholera.

The chemical and microscopical inquiries into the water-supply of houses and districts suffering from cholera have been investigated by Dr. Thomson and Dr. Hassall, and the results are embodied in the Report of the Scientific Committee; and as the period is now at hand when the water companies will be required to have their sources of supply amended, the Medical Council state that the facts before them show the necessity of a stringent enforcement of the provisions of the Metropolis Water Act, and of an inquiry as to how far these provisions are adequate to insure the purity and wholesomeness of the water supplied to the public. For the abolition of cesspools—in itself a sanitary advantage—has indirectly led to another evil. The excrements of the population are now to a great extent poured into the Thames; and, as might have been expected, our chemical and microscopical inquirers concur in stating that traces of this abominable

filth are found by them in the drinking-water supplied to a large part of the population.

The extraordinary irruption of cholera in the Soho district which was carefully examined by Mr. Fraser, Mr. Hughes, and Mr. Ludlow, does not appear to afford any exception to generalizations respecting local states of uncleanness, overcrowding, and imperfect ventilation. The suddenness of the outbreak, its immediate climax, and short duration, all point to some atmospheric or other widely-diffused agent still to be discovered, and forbid the assumption, in this instance, of any communication of the disease from person to person, either by infection or by contamination of water with the excretions of the sick.

In undertaking the pathology of the disease the Committee for Scientific Inquiries laboured under the disadvantage to which we have frequently adverted—the delay of all inquiry until the epidemic had already passed a climax; for, as they justly remark, “in order to obtain large results, it is most desirable that such inquiry should be commenced at an early period of the epidemic, and that, moreover, it should to some extent be continued in the absence of the disease which they aim at elucidating.” Forms of instruction were, however, as speedily as possible prepared for circulation in order to obtain returns as to the stages of the disease, its duration, fatality, and relative frequency. A considerable amount of information was thus collected, and will be found embodied in a tabular form.

The duties of *the Treatment Committee* consisted, in the first place, in the invention of a mode by which the individual experience of practitioners might be brought under one comprehensive view, and thus has the science of statistics, for the first time, been applied on a large scale to medical treatment. The degree of faith which may be accorded to the inferences deduced by this method has been evidenced by the corroborative results of several separate sets of returns, or various materials separately worked, which have displayed corresponding results. The difficulty of devising a mode of extracting statistical facts from voluminous returns sufficiently shows that the work ought only to be considered as in the progress of development; and the same consideration justifies a belief that the farther prosecution of the inquiry, aided by the experience now gained, may carry it forward towards a far greater state of perfection, and elucidate truths of still greater value.



The facts elicited relate chiefly to the absolute inutility or relative inefficiency of certain classes of medicines and measures, thus clearing away valueless modes of treatment and redeeming from idle waste the few short and hurried, but precious, moments during which succour may be available, and securing that brief interval for the use of more promising means, or for others which are yet fairly open for judicious experiment.

There is one feature in this inquiry to which the Treatment Committee direct particular attention. It appeared to them that a most interesting line of investigation, promising valuable and instructive practical results, was opened by tracing the success of certain modes of treatment under which, according to their analysis of the evidence, the stage of collapse was avoided, and the far less dangerous alternative of consecutive fever was accepted.

It is much to be desired that a more extended body of evidence should be accumulated on this important topic, to which a scrupulously careful analysis should be applied. The prospect of discovering truths of high practical importance by this investigation is enhanced by the statement of certain corroborative facts enunciated in the Report of the Scientific Committee.

*Statistical Tables* are appended to the Report of the Scientific Committee, to which the Council desire to direct especial attention, as they exhibit a compendious summary of the extent of the epidemic, its duration, its comparative mortality in different districts, and at different ages.

In concluding our Report, and thus bringing the duties of the Medical Council to a termination, we most earnestly, but respectfully, urge upon the Government the paramount importance of pursuing with unabated diligence that path of investigation which Science sanctions, and into which the circumstances of the late epidemics had directed and guided us.

That which has been so repeatedly and wisely urged regarding the removal of accumulating filth, and the correction of nuisances, during intervals comparatively free from disease, may be pleaded with equal truth as to the necessity of an uninterrupted continuance of scientific inquiries during the same seasons of immunity, from which alone can we reasonably expect to obtain the requisite data for a true theory of the causes, or a wise plan for the cure of any future epidemic.

From regarding the future necessity for continued and competent investigation, the Council gratefully recur to the assistance they have received under your presidency. The members cannot separate without recording the deep sense they entertain of the kindness and courteous attention with which, on all occasions, you have been pleased to accept their suggestions; nor can they refrain from expressing their regret that political changes are removing you from an office with which your name will remain identified, and from the administration of laws which you have given so much pains to establish.

JOHN AYRTON PARIS,  
Chairman.

General Board of Health,  
July 26, 1855.

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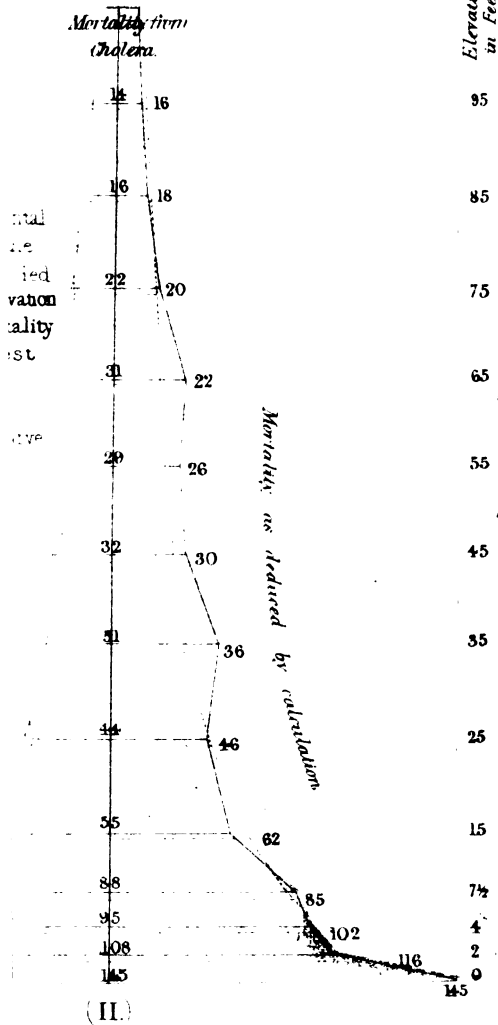
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*[The Two Diagrams herewith enclosed should have been inserted in the Scientific Committee's Report on the Cholera-Epidemic of 1854, delivered in August last;—that on the Influence of Elevation at p. 16, and that showing a Comparison of Mortality during the two Epidemics of 1849 and 1854, at p. 24.]*

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mean of 1849 & 1853½ 54.



ment Elevations indicated by the height  
 1853½-54 from Cholera, was 20 in 10,000

*Dep. of Civ. Eng. in the Army*











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