

Paddington : report from the Medical Officer of Health on the means for carrying out disinfection in an adequate and effectual manner in the parish.

Contributors

Hardwicke, William.
Royal College of Surgeons of England

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Paddington.



REPORT

FROM THE

MEDICAL OFFICER OF HEALTH

ON THE

MEANS FOR CARRYING OUT DISINFECTION
IN AN ADEQUATE AND EFFECTUAL MANNER
IN THE PARISH.

AT a Meeting of the SANITARY and PUBLIC HEALTH COMMITTEE
on the 13th of November, is the following:—

“ Resolution directing the Medical Officer to state in a Special Report to
“ this Committee whether adequate means of disinfecting (with
“ special reference to the provisions of the Sanitary Act 1866) exist
“ in the Parish, and if not, to specify in detail the steps he recom-
“ mends for carrying out disinfection in the Parish in an adequate and
“ effectual manner.”

CLAUSES IN SANITARY ACT, 1866,

29 & 30 Vict., Cap. 90.

Sect. 22.

If the Nuisance Authority shall be of opinion, upon the Certificate of any legally qualified Medical Practitioner, that the cleansing and disinfecting of any house or part thereof, and of any articles therein likely to retain infection, would tend to prevent or check infectious or contagious disease, the Nuisance Authority shall give notice in writing, requiring the owner or occupier of such house or part thereof, to cleanse and disinfect the same, as the case may require; and if the person to whom notice is so given fail to comply therewith, within the time specified in the notice, he shall be liable to a penalty not exceeding Ten Shillings for every day during which he continues to make default; and the Nuisance Authority shall cause such house, or part thereof, to be cleansed and disinfected, and may recover the expenses incurred, from the owner or occupier in default, in a summary manner.

Sect. 23.

The nuisance authority in each district may provide a proper place, with all necessary apparatus and attendance, for the disinfection of woollen articles, clothing, or bedding which have become infected, and they may cause any articles brought for disinfection to be disinfected free of charge.

Sect. 25.

If any person suffering from any dangerous infectious disorder shall enter any public conveyance without previously notifying to the owner or driver thereof that he is so suffering, he shall on conviction thereof before any justice be liable to a penalty not exceeding Five Pounds, and shall also be ordered by such justice to pay to such owner and driver all the losses and expenses they may suffer in carrying into effect the provisions of this Act, and no owner or driver of any public conveyance shall be required to convey any person so suffering until they shall have been first paid a sum sufficient to cover all such losses and expenses.*

Sect. 38.

Any person suffering from any dangerous infectious disorder who wilfully exposes himself, without proper precaution against spreading the said disorder, in any street, public place, or public conveyance, and any person in charge of one so suffering who so exposes the sufferer, and any owner or driver of a public conveyance who does not immediately provide for the disinfection of his conveyance after it has, with the knowledge of such owner or driver, conveyed any such sufferer, and any person who without previous disinfection gives, lends, sells, transmits, or exposes any bedding, clothing, rags, or other things which have been exposed to infection from such disorders, shall on conviction of such offence before any justice, be liable to a penalty not exceeding Five Pounds: Provided that no proceedings under this section shall be taken against persons transmitting with proper precautions any such bedding, clothing, rags, or other things for the purpose of having the same disinfected.

Sect. 39.

If any person knowingly lets any house, room, or part of a house in which any person suffering from any dangerous infectious disorder has been, to any other person without having such house, room, or part of a house, and all articles therein liable to retain infection, disinfected to the satisfaction of a qualified Medical Practitioner, as testified by a certificate given by him, such person shall be liable to a penalty not exceeding Twenty Pounds. For the purposes of this section the keeper of an Inn shall be deemed to let part of a house to any person admitted as a guest into such Inn.

* The Inhabitants of this Parish are informed that the Fever Carriage may be had for the purpose of removing any person suffering from such dangerous infectious disorders by applying to SAMUEL HARDY, at the Vestry Hall.

*To the Members of the Vestry of the Parish of
Paddington.*

GENTLEMEN,

AT the request of the Sanitary and Public Health Committee, I have been engaged for some time in making detailed inquiries into the present means that exist in this Parish, and what future plans may be adopted for carrying out disinfection of clothing, bedding, linen and such other articles that have become contaminated by infectious disease.

I am not aware that there exists, either in this Parish or in any other in the metropolis, a really efficient means of carrying out, either publicly or in private, in accordance with the Sections of the Sanitary Act of 1866, suitable processes of disinfection, or purification of clothing, bedding, linen, carpets, curtains, or other articles that may need it. I entertain a belief that if such an establishment existed and were made publicly known, it would be frequently resorted to by a class of persons willing to pay for its use, and that the money returns would go a long way towards meeting the working expenses of the Institution, or even yield a moderate profit.

I am fully satisfied, from cases that come under my observation almost daily, that the necessity has arisen of attempting to carry out, as far as practicable, the intention of the Legislature, expressed in Section 22 & 23 of the Sanitary Act of 1866.

On examining the returns of mortality from contagious diseases in Paddington for the last 3 years, we find them to be annually 342, 378, 325—in all, 1045. These deaths represent about 15,000 cases of illness, including scarlatina, measles, whooping cough, small pox, fever, erysipelas, &c.—Diseases that admit of prevention to a great extent by isolation and other precautionary measures that might be taken when first cases occur.

The fact ought to be more generally known, that scarlatina, both as regards deaths and frequency of the attack of the disease, has been far from exclusively confined to the poorer class of the community either in this Parish or elsewhere.

In Paddington there have been 98 deaths from scarlatina in the

year up to October, and many instances have come to my knowledge where the bed-room things and linen are dangerously exposed in close proximity to healthy families.

The following recent examples before me show what often happens ; (*a*) a female dies after a few days illness from a very bad form of fever ; before death it was difficult to get a nurse to attend her ; and after death the bed-linen was packed up to go somewhere for disinfection ; but as no place could be found it was ultimately taken away through the streets by a wash-woman without any precaution whatever. (*b*) In an over-crowded house in an adjoining Parish, I lately found a child that had died from malignant scarlatina, and when too late, the parents were informed by persons living in the same house that they had entered the the very same room after a death had occurred, and that it had not been cleaned or disinfected ; it also appeared that two other children were then suffering in the same house from a similar malady. (*c*) At 93, Cirencester Street, three children died from scarlet fever ; the parents took fever and went into the Fever Hospital ; two other children were taken care of in the work-house ; the rooms of the people were locked up during their absence and disinfection was prevented. On their return from the Fever Hospital these persons removed with their fever-stricken things and their remaining two children to another set of rooms, thus exposing strangers to the great danger and risk of propagating disease. (*d*) A gentleman, his wife, and six apparently healthy young children living in a large and roomy house, were alarmed at two of their children dying after little more than 24 hours illness. On the supposition that the house was at fault the other four children were dispersed and placed with friends, but within a few days two of them died also ; a fifth escaped after passing through the regular stages of scarlet fever, the poison of which had most likely caused death in all.

It is by no means uncommon for two or three children to be found playing about in the same room where the dead body of a scarlet fever case lies ; and what is worse, where one or more children are dangerously ill of this contagious disease, healthy children often sleep in the same bed with the patients.

When we consider that one death of scarlet fever represents

from 15 to 20 cases of the disease—for it is estimated that in some districts and populations one death happens in 10 or 15 cases—we may assume that 1500 persons must have suffered in our own Parish from Scarlatina alone, where epidemic forms of disease are comparatively less common than elsewhere.

Besides scarlet fever, we have to provide for measles, a few small-pox cases, and fevers of the typhoid type—say nothing of the possibility of typhus and relapsing fever again making their appearance amongst us.

Through the kindness of an Architect, Mr. Albert Bridgeman, 105, London Wall, I am enabled to furnish the Committee with a detailed plan of a building properly constructed to carry out as far as our present experience will guide us, disinfection and cleaning on a moderate scale.

It consists of a receiving room with an Office; near this is an oven or air tight chamber, capable of being heated to a temperature of 300; also heated by the same means a drying closet, with frames so adjusted that they are capable of being drawn out for linen to be hung up for drying. Here must also be a convenience for washing and boiling clothes. In the adjoining room is an apparatus or furnace for heating the drying closet and disinfecting oven. In the plans presented, accommodation is provided also for residence, although that is not an essential part of the scheme.

There must be a copper boiler or vat in which the water is made to boil by a jet of steam from the steam boiler, and over it is hung a tray or cage capable of being lowered by a chain or pulley into the vat. This tray will be charged with the wet linen or things to be strained or boiled in water which is impregnated with a disinfecting agent.

Rotatory drying machine would be wanted, and perhaps a mangle, with convenience for ironing. A tall chimney would be essential to take away the effluvia, and into which smoke from the furnace and the hot air flue should be carried from the oven. The smoke and effluvia would be required to be carried well off.

I have also recommended a room for the store of disinfectants; and in my opinion this establishment would be the proper place for the fever carriage to be kept at, for after use it could be imme-

diately aired and disinfected, and before use it could be properly aired and ready for immediate action, which is now not generally the case.

I submit these details as the main features that may in the present state of our knowledge and experience be safely acted upon. The total expenditure for fittings will not exceed £200. One very obvious and convenient mode of providing a proper establishment for disinfection would be to combine the plan with that of the contemplated Mortuary and Dead-House.

I would further add that I believe the institution may be made almost, if not altogether, self-supporting, if the managers were allowed to adopt such regulations as they deem desirable to make it publicly known, and such as would meet the convenience and wants of the public.

With regard to the management of a public disinfecting establishment, I consider a man and his wife would be required to take charge of it, and stores belonging to it, and they ought to reside on the spot or in the building itself. There would be ample work to occupy both himself and wife. He would have to manage a small steam boiler and furnace, or an oven or hot air chamber would require looking after, and perhaps other apparatus would have to be kept in proper order. They would have to receive and give vouchers for the articles committed to them, and engage to return them in a given time, and to receive and give an account of money paid for the disinfecting or for the use of the hot closet.

The duties to be performed in the establishment would consist in the purification and exposure to heat of bedding, mattresses, washing of sheets, linen, &c.; in addition to this, the same man or woman might be sent out to private houses where disinfecting has been ordered by the Medical Officer or the Inspector of Nuisances, in accordance with Section 22 of the Sanitary Act of 1866; where such orders cannot, by private resources be effectually carried out. In other instances a special payment might be demanded, if the duty is not ordered to be gratuitously performed by the Public Health Authority.

It would be a great advantage and a real charity to employ occasionally one or two women with brushes, soap and soda, &c.,

for washing rooms, stairs and passages where poor persons or a large number of families congregate in one house. It frequently happens that no one is at hand to do cleaning, where also warm water, soap and brushes, are scarce articles.

With regard to the best site for a public disinfecting establishment, a great difficulty will be found, on account of its being a building used for objectionable or dangerous purposes. It ought not to be nearer than 50 to 100 feet from any inhabited house ; if possible, it should be away in the fields ; the only places I can suggest are on the Amberley Wharves or on some other part of the canal bank, or at the end of Manor Place, or in the fields at the rear of the Parish, or somewhere up in the Kensal Green Road alongside the canal. If a situation were advertised for, some other locality would in all probability be made known.

As to the method of charging for the disinfection of articles brought to the establishment, I would suggest a tariff regulated by the estimated value of the articles themselves. Thus, articles of value under 5s. at 2d. each ; articles about the value 5s. or under 20s. at 6d. each ; articles of a value of upwards of 20s. at 1s. each. Thus, small linen articles and wearing apparel would cost 2d. each or even 1d. ; sheets, blankets, counterpanes, &c., 4d. to 6d. each ; curtains, carpets, beds, woollen dresses, matrasses, say 1s. each. These are low charges, and would not be deterrent in their operation.

The materials that may be most safely employed as disinfectants and for sanitary purposes, are Chlorine, Chloride of Lime and Zinc, Carbolic Acid, and Condy's liquid. By judicious methods of employing these materials, either with or without the assistance of heat, either dry heat, or heat and moisture or steam combined, or diluted with water, a degree of chemical action is secured sufficient to destroy noxious matter, and at the same time not to injure the materials so exposed to their influence.

Carbolic Acid, and Chloride of Zinc, and dry-powdered Charcoal are highly antiseptic, and possess the power of preserving animal matter from decomposition ;—such as fresh hides, &c. may be preserved. The contents of sewers, stools and secretions may also be rendered innocuous if plenty of it be used, and continuously.

But the mere vapour of the former has not the power of acting upon solid floating morbid particles in the air of rooms, or in the sewers in the same way that chlorine, iodine, or sulphur has. The potash permanganate, or Condy's liquid in the form of spray, or when used from a syringe with fine holes, has a remarkable and speedy action upon the foul air of rooms and places contaminated by smells or contagion.

Dr. Letheby agrees with Dr. Budd in his opinion that Scarlatina may be prevented by isolation; the former recommends the use of chlorine gas as a disinfectant; and he believes that disinfection of clothes, bedding, linen, &c. cannot be safely depended upon at a dry heat of less than 300° ; but when moisture by steam is used he thinks a temperature of 220° may suffice to destroy infection. Hot air, or steam can be got cheaply, and if efficient, would assist and even supersede anything else.

For further information, the following papers may be consulted with great advantage:—

1. Minute of Information on Disinfection and Deodorization, by Mr. Linsey Blyth, late Analytical Chemist to the Board of Health.
2. Memorandum on Disinfection, from the Privy Council Office.
3. The Disinfectant Question,—Review of a book by Dr. R. Angus Smith. Published by R. Hardwicke, 192, Piccadilly.

I remain,

GENTLEMEN,

Your obedient Servant,

WM. HARDWICKE,

Medical Officer of Health, &c.