

I believe that the local Acts in operation at Manchester, at Salford, and the important township of Chorlton-upon-Medlock, contain provisions similar or analogous to those of the Little Bolton Police Act, and I have heard that the operation of those Acts has been extremely beneficial.

It cannot therefore be doubted that the operation of similar provisions in other of the towns in Lancashire and the adjoining manufacturing districts, would be of the greatest advantage to the already large and still fast-increasing population of those towns.

It will be perceived, however, that the best of the local Acts at present in operation by no means embrace the provisions necessary to counteract all the various causes tending to the propagation of fevers, which might be counteracted by legislative enactment.

How far it may be possible to devise any general measure applicable to the removal or diminution of any or all the evils in question, without invading or limiting the rights of private property beyond what may be reasonably insisted upon for the protection of the public, it is for the wisdom of Parliament to determine.

Without dwelling further upon that part of the subject, it is sufficient to state, in conclusion of this Report, that most of the causes of fever enumerated in the Metropolitan Reports appear to prevail more or less in every description of locality in this district, so far as can be judged from those Medical Reports which have been received.

I have the honour to be, Gentlemen,

Your very obedient Servant,

A. POWER, *Assistant Poor-Law Commissioner.*  
Malvern, 9th February, 1841.

#### No. 19.

#### ON THE SANITARY STATE OF LIVERPOOL.

BY DR. W. H. DUNCAN.

*Liverpool, August 31, 1840.*

GENTLEMEN,—In reporting to you my opinion of the causes which favour the prevalence of contagious diseases in Liverpool, it would be almost sufficient to refer to the excellent report of Drs. Arnott and Kay on the sanitary state of the labouring classes in the metropolis, the causes pointed out by those gentlemen being, with one or two exceptions, in equally active operation in this town. But as Liverpool presents, in some important respects, peculiar features, it will be proper to enter somewhat into detail.

The population of Liverpool, at present, may be stated at about 250,000, and of this number the *working classes* may comprise about 175,000.

These last, during illness, are dependent for medical relief chiefly on the two dispensaries, (branches of *one* institution,) which receives a subscription of 500 guineas a-year from the parish, and the officers of which act in the capacity of parochial medical officers. The sick wards of the workhouse and the different hospitals also receive annually a number of pauper patients, but the great majority of these have previously been entered on the books of the dispensaries.

But there are also in Liverpool a number of clubs or benefit societies, to each of which there is usually a surgeon attached, and the members of which (who are principally mechanics or labourers in the receipt of good wages) are not received as patients by the dispensaries. The largest of these clubs consists of 8000 members, and it is probable that in the aggregate they amount to more than 20,000.

During the last five years, (1835 to 1839, inclusive,) there have been treated by the two dispensaries alone upwards of 25,000 cases of *fever*, giving an annual average of more than 5000 cases.

During the same period the club surgeons have probably treated on the average annually . . . 1500 „

To these are to be added the cases treated by private practitioners, including those sent to the fever ward otherwise than through the medium of the dispensary officers or club surgeons, say . . . 500 „

Making together . . . 7000\* „

And giving an average of 1 in 25 of the working population annually affected with fever, a higher ratio, I believe, than is afforded by any other town in England. The proportion which the cases of fever bear to the whole number of medical cases is about 1 in 5½.

There can be little doubt that the causes of the unusual prevalence of this disease in Liverpool are to be found principally in the condition of the dwellings of the labouring classes, who are almost exclusively its victims; but partly also in certain circumstances connected with the habits of the poor.

With regard to their *dwellings*, I would point out as the principal circumstances affecting the health of the poor:—

1. Imperfect ventilation.
2. Want of places of deposit for vegetable and animal refuse.
3. Imperfect drainage and sewerage.
4. Imperfect system of scavenging and cleansing.

\* During one year (1837) more than 7000 cases of fever were treated by the two dispensaries alone.

The circumstances derived from their *habits* most prejudicial to their health, I conceive to be :

1. Their tendency to congregate in too large numbers under the same roof, &c.
2. Want of cleanliness.
3. Indisposition to be removed to the hospital when ill of fever.

#### DWELLINGS.

I. As regards the nature of their dwellings, the working population of Liverpool may be divided into three great classes, viz. :

1. Those inhabiting courts, or back houses.
2. Those inhabiting cellars.
3. Those inhabiting houses or rooms in the front of the street.

1. *Courts.* These consist of two opposite rows of houses, each row containing from two to six or eight, and being separated from the opposite row by an intervening space of from 6 to 15 feet in width.\* The houses are three stories high, containing three rooms of about 10½ feet square each, and being built back to back with the houses of the adjoining court, all the windows look out upon the area in front, from which the door enters. The courts communicate with the street by a narrow entrance or archway, very commonly built up overhead, and sometimes so low as to require a person entering from the street to stoop in order to gain admission; at the further end of the court is a wall or the back of an adjoining building, so placed as to convert the court into a *cul-de-sac*.

It is unnecessary to point out the effect of such an arrangement in preventing the circulation of air through the court, and in interfering with the proper ventilation of the houses.

Of the 175,000 individuals of the working classes, I estimate that nearly one-half inhabit courts.†

2. *Cellars.*—The cellars are dwellings under ground, in many cases having no windows, and no communication with the external air excepting by the door, the top of which is sometimes not higher than the level of the street. When the door of such a cellar is closed, therefore, light and air are both excluded. The access to the door is by a narrow flight of steps descending from the street; the roof is often so low as not to admit of a person of moderate height standing upright; and there is frequently no floor of any kind except the bare earth. Generally, however, it is flagged, and in a very few cases, boarded. There is usually only one apartment (10 or 12 feet square) but in some cases there is a *back* cellar, used as a sleeping room, having no direct com-

\* The average distance between the rows is perhaps about 9 feet; and the average number of houses in a court, from 6 to 8.

† I have thought it unnecessary to give the data on which these estimates are founded.

munication with the external atmosphere, and receiving its light and air exclusively from the front apartment.

It will be easily imagined that the cellars are dark, damp, ill ventilated, and dirty.

There are upwards of 8,000 inhabited cellars in Liverpool, and I estimate their occupants at from 35,000 to 40,000.

In a report lately made by the surveyors appointed by the Town Council to examine the condition of the court and cellar residences within the borough, it is stated that of 2,398 *courts* examined, 1,705 were closed at one end so as to prevent thorough ventilation. Of 6,571 *cellars*, whose condition is reported on, 2,988 are stated to be either wet or damp, and nearly one-third of the whole number are from 5 to 6 feet below the level of the street.

It will be understood that there are many cellars as well as courts, especially among those of a more recent date, of a better class than those which I have described above.

3. The remainder of the working classes inhabit *houses or rooms in the front of the street*. These dwellings of course vary much in their character. Small houses are occasionally occupied by a single family, but most generally the rooms are sublet, each apartment being occupied by one or more families. Most of the lodging-houses also are in front.

The average width of the streets is about 25 feet, being often much narrower, and seldom exceeding 30 feet. The houses have no thorough draught.

In this general description of the dwellings of the poor, I have directed attention chiefly to the first of the accessory causes of fever above noticed, viz. *imperfect ventilation*. The influence of this cause is shown, I think, in the case of the cellars, whose ventilation is more imperfect than that of the courts and houses, at the same time that they afford a much larger proportion of fever cases. Of the 5,000 cases annually treated by the dispensaries, nearly 1,500 occur in cellars, being 35 per cent. more than the cellar population ought to yield, as compared with the total working population.

II. *Want of places of deposit for vegetable and animal refuse.*—I shall say nothing on the disputed question as to the power of putrefying organic matter to *generate* fever. It is enough to know that no one disputes its power to favour the extension of contagious disease. That at least is a doctrine which no one can doubt who knows anything of the physical condition and medical history of the poor of Liverpool. The filth which abounds in and around their dwellings is no doubt in part the consequence of their own habits, but there can be as little doubt that those habits are fostered and encouraged, if not engendered, by the absence of facilities which it is the duty of others to afford them. Without receptacles for their refuse matter, (dirt, ashes, organic remains, &c.,) it

is impossible, however great may be their abhorrence of filth, to keep their houses or streets even tolerably clean. I have often been surprised and pleased to see what effect a little encouragement has in stimulating the exertions of the poor to maintain neatness and cleanliness around them. Many of the courts, in place of being flagged, are paved with small stones, which easily loosen and break up, giving rise to the formation of holes here and there, which give ready lodgement to water and filth. From the difficulty of keeping such courts clean, the inhabitants usually give up the attempt in despair, and are content to breathe the polluted atmosphere. But I have frequently observed that when such a court has been flagged and plentifully supplied with water, the inhabitants have appeared to feel a pride in keeping it in proper order. In the same way those streets are always the most filthy which are the most neglected by the commissioners of paving.

At the further end of each court there are in general two privies, with an ash-pit between them which serves as a receptacle for the refuse of all the houses in the court; it is in consequence very speedily filled, and as it is no one's business to see it emptied, it not unfrequently continues full to overflowing for weeks together, or until the nightmen, who pursue the occupation of collecting manure, happen to visit the court in their rounds. In the mean time the ashes, &c. are deposited in the corners or other vacant spaces in the court, and the ash-pits being themselves uncovered, the atmosphere becomes impregnated with all sorts of nauseous effluvia. None of the cellars have any place of deposit for refuse attached to them, and the great majority of the front houses inhabited by the poor may be said to be in the same predicament. In an investigation lately made by the Watch and Scavenging Committee, it was ascertained that in the district bounded by Scotland-road on the one side, and Vauxhall-road on the other, and comprising perhaps about 2,500 front houses of all descriptions, there were not less than 922 front houses and 1,843 cellars without the accommodation in question, viz. without either yard, privy, or ash-pit. There was thus considerably more than one-third of the whole number of front houses (putting the cellars out of the question) without any place of deposit for filth and refuse; and if we confine the calculation to the dwellings of the *working classes*, it would appear that a very large majority of the inhabitants have no means of getting rid of their filth but by throwing it out into the street, or carrying it into some of the adjoining courts and depositing it in the ash-pits there. Sometimes the latter alternative is adopted, (and the court privies are frequently made use of by the inhabitants of the streets,) an annoyance of which the court inhabitants complain; but in nine cases out of ten, refuse matter of every kind is thrown into the open street. The scavengers do not *profess* to visit these streets oftener than once a-week, and the interval is frequently much longer, so that the atmosphere is

being constantly contaminated by the emanations from this extensive surface of putrefying and offensive matter. I have frequently visited a street a few hours after the scavengers had made their weekly clearance, and its appearance would have naturally led to the belief that *days* in place of *hours* had elapsed since the operation.\*

The state of many of the entries and passages in the most densely peopled streets it is impossible to describe. It is sufficient to say that they require the most careful management of both eye and nose on the part of the unpractised visitor.

It is difficult to give distinct examples of the morbid effects of each separate cause, the influence of so many different agents being mixed up together, and rendering it impossible to assign to each its relative value. It is notorious, however, that a very dirty street is always an unhealthy one, although an unhealthy street may not always be a very dirty one; and I may mention one case in which the want of proper receptacles for filth seemed to favour the extension of contagion. In a cellar in Preston-street, where nearly 30 individuals slept every night, (it was a double cellar,) a kind of well had been dug in the floor for receiving the offal and filth of the household. This hole, situated in the front cellar or sitting apartment, not only filled that with its effluvia, but these were carried by the draught from the door directly into the back cellar, where most of the inmates slept, and which had no communication with the external air. Fever of a malignant type broke out among these unfortunate beings, and in the course of a week or two carried off seven or eight of their number.

III. *Imperfect drainage and sewerage.*—The state of the drainage and sewerage it is important to notice in connexion with the prevalence of fever. The sewerage of Liverpool was so very imperfect, that about ten years ago a local Act was procured, appointing commissioners with power to levy a rate on the parish for the construction of sewers. Under this Act, which expires next year, about 100,000*l.* have been expended in the formation of sewers along the main streets, but many of these are still unsewered, and with regard to the streets inhabited by the working classes, I believe that the great majority are without sewers, and that where they do exist they are of a very imperfect kind. Unless where the ground has a natural inclination, therefore, the surface water and fluid refuse of every kind stagnate in the street, and add, especially in hot weather, their pestilential influence to that of the more solid filth already mentioned. With regard to the courts, I doubt whether there is a single court in Liverpool which

\* I ought to mention that the Watch Committee are about to try the experiment in a small district of the town, of sending round carts, with a bell, every morning, for the purpose of removing anything that the inhabitants may choose to bring out, but I very much fear, that unless means are taken to *enforce* the bringing out of the refuse, &c., or at all events to prevent its deposition in the street, the measure will fail of the effect intended.

communicates with the street by an under-ground drain; the only means afforded for carrying off the fluid dirt being a narrow, open, shallow gutter, which sometimes exists, but even this is very generally choked up with stagnant filth.

There can be no doubt that the emanations from this pestilential surface, in connexion with other causes, are a frequent source of fever among the inhabitants of these undrained localities. I may mention two instances in corroboration of this assertion. In consequence of finding that not less than 63 cases of fever had occurred in one year in Union-court, Banastre-street, (containing 12 houses,) I visited the court in order to ascertain, if possible, their origin. I found the whole court inundated with fluid filth which had oozed through the walls from two adjoining ash-pits or cesspools, and which had no means of escape in consequence of the court being below the level of the street, and having no drain. The court was owned by two different landlords, one of whom had offered to construct a drain provided the other would join him in the expense; but this offer having been refused, the court had remained for two or three years in the state in which I saw it; and I was informed by one of the inhabitants that fever was constantly occurring there. The house nearest the ash-pit had been untenanted for nearly three years in consequence of the filthy matter oozing up through the floor; and the occupiers of the adjoining houses were unable to take their meals without previously closing the doors and windows. Another court in North-street, consisting of only four small houses, I found in a somewhat similar condition, the air being contaminated by the emanations from two filthy ruinous privies, a large open ash-pit, and a stratum of semi-fluid abomination covering the whole surface of the court. An intelligent Irishman who lived there told me that it was in vain to attempt to keep the court clean unless the landlord would repair the privies, put a cover on the ash-pit, and make a drain; but all this he had refused to do. The stench at night he said was enough to "rise the roof off his skull as he lay in bed," and the court was never free from disease: 17 cases of fever had occurred there in the previous year. He thought, since their landlord would do nothing for them, the parish ought to put the court into a habitable state; and he had no doubt they (the parish) would be repaid by the saving which would arise from the diminution of fever alone.

From the absence of drains and sewers, there are of course few cellars entirely free from damp; many of those in low situations are literally inundated after a fall of rain. To remedy the evil, the inhabitants frequently make little holes or wells at the foot of the cellar steps or in the floor itself; and notwithstanding these contrivances, it has been necessary in some cases to take the door off its hinges, and lay it on the floor supported by bricks, in order to protect the inhabitants from the wet. Nor is this the full

extent of the evil; the fluid matter of the court privies sometimes oozes through into the adjoining cellars, rendering them uninhabitable by any one whose olfactories retain the slightest sensibility. In one cellar in Lace-street, I was told that the filthy water thus collected measured not less than two feet in depth; and in another cellar, a well, four feet deep, into which this stinking fluid was allowed to drain, was discovered below the bed where the family slept!

IV. *Imperfect scavenging and cleansing.*—I have already mentioned that the scavengers do not visit the bye-streets oftener than once a-week at the most; and that they take no cognizance whatever of the courts. A deficient or irregular supply of water has been in some instances alleged as a reason for the dirty state of the courts; but, as a general rule, I believe the supply is tolerably good: should the landlord be in arrear for water-rent, however, the punishment falls upon the inhabitants, whose supplies are liable to be stopped in consequence. When the pipes go out of order, the courts are sometimes without water for weeks together.

Such are the principal circumstances connected with the dwellings of the poorer classes, tending to promote the spread of fever. The causes which remain to be noticed are partly at least dependent on their

#### HABITS.

I. The first to be mentioned, viz., their tendency to congregate together in numbers disproportioned to the space they occupy, must be considered in many cases, perhaps, as the inevitable result of poverty, but may be partly also ascribed to their gregarious habits, particularly in the case of the lower Irish, and to their ignorance of its baneful consequences. From many calculations which I have made I have found that, *cæteris paribus*, the prevalence of fever in any street, court, or house, is generally proportioned to the density of the population. Thus in Lace-street, one of the most densely-peopled streets in Liverpool, containing 1285 inhabitants, in a space which gives only four square yards to each inhabitant, there occurred on an average of the last five years 160 cases of fever annually; in other words, 1 in 8 of the population was yearly affected with fever; while in Addison-street (in the same neighbourhood), with a population of 1191, in a space giving  $8\frac{1}{2}$  square yards to each, there occurred only 72 cases; in other words, 1 in  $16\frac{1}{2}$  of the inhabitants was yearly affected with fever. In Addison-street the density of population being less than half that of Lace-street, the prevalence of fever was also less than half. These, with some analogous results, are shown in the following table:—



Streets.	Square Yards to each Inhabitant.	Proportion of Fever to Inhabitants annually (average of 5 years).	Remarks.
Lace-street .	4	1 in 8	*In one year (1837) more than one-fifth of the inhabitants of Oriel-street were attacked with fever, 335 cases having occurred among 1585 inhabitants.
Oriel-street .	6	*1 in $9\frac{1}{2}$	
North-street .	7	1 in $5\frac{3}{4}$	
Crosbie-street	7	1 in 12	
Johnson-street	$7\frac{1}{2}$	1 in $11\frac{1}{4}$	
Banastre-street	8	1 in $12\frac{1}{2}$	
Addison-street	$8\frac{1}{2}$	1 in $16\frac{1}{2}$	
Primrose-hill	$14\frac{3}{4}$	1 in $26\frac{1}{2}$	

It will be observed that the only material deviation in the above table, from the rule laid down, is in the case of North-street, where the proportion of fever is higher than the rule would indicate. That street is almost exclusively inhabited by the lowest class of Irish; it contains a number of lodging-houses, and the courts are in a most abominably filthy state, and altogether of the very worst description.

The same principle holds good with regard to the *courts*, as shown by the following table. It will be seen that in Coop-court, North-street, with only one square yard to each inhabitant, 1 in  $2\frac{1}{2}$  of the inhabitants were yearly attacked with fever; while in Barker-court, in the same street, having  $4\frac{1}{2}$  square yards to each inhabitant, the cases of fever were only 1 in 10. In Fir-court, Crosbie-street, having 118 inhabitants in eight small houses, or  $1\frac{1}{2}$  square yards to each, 1 in  $2\frac{1}{2}$  were annually attacked; while the inhabitants of Elm-court, with  $4\frac{1}{4}$  square yards to each, were attacked only in the proportion of 1 in 9.

Courts.	Square Yards to each Inhabitant.	Proportion of Fever to Inhabitants.
North-street:—		
Coop-court . . .	1	1 in $2\frac{1}{2}$
Spencer-court . . .	2	1 in $3\frac{1}{4}$
Newton-court . . .	2	1 in 4
Barker-court . . .	$4\frac{1}{2}$	1 in 10
Fleming-court . . .	6	none.
Crosbie-street:—		
Fir-court . . . .	$1\frac{1}{2}$	1 in $2\frac{1}{2}$
Oak-court . . . .	$1\frac{1}{2}$	1 in $3\frac{3}{4}$
Pine-court . . . .	2	1 in $4\frac{2}{3}$
King-court . . . .	$2\frac{1}{2}$	1 in 8
Lime-court . . . .	$2\frac{2}{3}$	1 in 10
Ash-court . . . .	$3\frac{1}{6}$	1 in 13
Elm-court . . . .	$4\frac{1}{4}$	1 in 9
Lace-street:—		
Rycroft-court . . .	$1\frac{3}{4}$	1 in $5\frac{1}{2}$
Cumming-court . . .	$2\frac{1}{4}$	1 in $7\frac{3}{4}$
Friends-court . . .	$4\frac{3}{4}$	1 in 8

I do not know the dimensions of the remaining courts in Lace-street with sufficient accuracy to include them in the list. The higher ratio of fever in Friends-court may possibly be explained by the fact, that three of the four houses of which it consists are public brothels of the lowest kind, and filled with prostitutes.

In the case of individual *houses* I believe the rule will still apply, although I am unable to give statistical data on the subject; but it is notorious that many of the lodging-houses, in which 30 or 40 individuals, or more, are accommodated nightly, are seldom entirely free from fever. I have already mentioned the cellar in Preston-street, where, out of nearly 30 persons who slept there, six or eight were carried off by a fever which broke out among them. In three adjoining lodging-houses in Banastre-street, 40 cases of fever occurred in 12 months; and in another small house in the same street, occupied by 17 individuals, 13 were attacked with fever within three months. In a lodging-house in Shaw Hill-street, 23 cases occurred in six months; but the cellar of that house was used as a receptacle for manure, and sent up into the rooms above a stench which it was almost impossible to bear. It is not an uncommon practice with the keepers of lodging-cellars to cover the floor with straw, and allow as many human beings as can manage to pack themselves together to take up their quarters for the night, at the charge of a penny each; and I was told of a lodging-house keeper in Johnston-street who was said to receive 16s. a-night from his lodgers, paying an average charge of about threepence each. The dwellings of the lower Irish (not what are called "lodgings") are often crowded in a nearly equal degree. I have known four families reside in a cellar not more than 9 or 10 feet square.

II. The second circumstance to be noticed with regard to the habits of the working-classes, is their *want of cleanliness*. I have already stated that they are not responsible for *all* the filth amidst which they live; but when it is considered that there are not less than 50,000 of the lower Irish resident in Liverpool, it will be understood that some portion of it, at least, must be the result of their own indifference. Even when a plentiful supply of water is at hand, the inhabitants of the filthy courts inhabited by the Irish too often neglect to avail themselves of its services; and when the removal of a nuisance is in their power, they seem to think it hardly worth the trouble which it would occasion them. The cellar in Preston-street, where a well was made in the middle of the floor to receive the refuse and dirt of its 30 inmates, is a case in point; and I was told of a cellar in New Bird-street, where a hole had been made in the back wall which separated the cellar from the ash-pit of an adjoining court, in order that the offal, &c., might be at once thrown into the ash-pit, and the inmates be saved the trouble of carrying it round by the entry into the court. The saving of trouble more than counterbalanced in their estimation,

the disadvantage of living in a room having an open communication with a cesspool!

In many cases the cellars beneath the houses are used as places of deposit for manure collected out of the streets. I have mentioned an instance of this kind beneath a house in Shaw Hill-street which was seldom free from fever. In Oriel-street there is a court (John-court), containing 10 houses, nearly all of whose cellars are used for the purpose alluded to, and in that court 33 cases of fever were treated by the dispensary in 12 months; and in an *inhabited* cellar in Johnston-street I was assured by the agent of the Statistical Society that not less than three cartloads of dung, mixed with the offal of slaughter-houses, &c., had been collected from the street; and that although the people overhead complained of the nuisance, the family in the cellar lived and slept contentedly cheek-by-jowl with the putrefying mass.

The custom prevalent among the Irish of keeping pigs in the cellars and even garrets which they inhabit, ought to be noticed in connexion with the present subject. On one occasion I had to grope my way (at noon-day) into a house in a court in Thomas-street; and on a candle being lighted, I discovered my patient lying on a heap of straw in one corner, while in the opposite corner of the room a donkey was comfortably established, and immediately under the window was the dunghill which the donkey was employed to assist in gathering from the street.

The general fact of the unhealthiness of dirty streets has been already noticed; and I may here add that the three streets which appear by the list in a former page to have yielded the largest proportion of fever cases (*viz.*, Lace-street, North-street, and Oriel-street), are three of the most notoriously dirty streets in Liverpool, being very ill supplied with ash-pits, &c., and chiefly inhabited by the lowest class of Irish. Of 58 front houses in Lace-street, 51 have no yard, privy, nor ash-pit; of 50 in Oriel-street, 41 are similarly situated; and of 29 in North-street, only 6 are supplied with any convenience of the kind. Addison-street, which yields a much smaller ratio of fever, is better provided with conveniences, there being 28 privies, &c., among 79 front houses.

III. The disinclination (especially among the Irish) to be removed to the hospital on the first appearance of fever in their dwellings, is a circumstance which favours very much the extension of the disease. In illustration of this many instances could be given, if necessary.

Such are the principal circumstances which, in my opinion, favour the prevalence of fever in Liverpool. The remedies, so far as they admit of remedy, are obvious, *viz.*, power lodged in some public authority to regulate the building of courts or houses intended for the habitation of the working-classes; to prevent cellars being inhabited, if possible,\* or at least to provide for their

\* In the Corporation leases, a clause prohibiting the habitation of cellars has been inserted for the last 30 years, but it unfortunately has never been enforced.

proper ventilation; to provide a sufficient number of ash-pits, or places of deposit for dirt and refuse; to oblige every court and house to communicate by means of an underground drain with the main sewer, and to cause the formation of these last, where deficient. Such powers as these might be embodied in a general Building Act. But there ought further to be authority to inspect and regulate lodging-houses, to prevent more than a certain number of individuals sleeping in a room or house of given dimensions, to secure periodical white-washing, &c., and to remove immediately to the hospital any inmate who may be affected with fever. This last suggestion may be looked upon as too arbitrary for English notions; but it is one which the security of the poor themselves, more than of any other class of the community, seem to require. No one should be allowed to keep pigs or donkeys, or manure, &c., in any building occupied as a dwelling-house; and it is even doubtful whether pigs, at least, should be allowed to be kept in courts. Lastly, supposing a sufficient supply of ash-pits to be provided, any one depositing filth in the street should be punishable by fine.

In large towns it would be desirable to appoint a Board of Health, or salaried "Inspector of Public Health," or both, whose duty it should be to point out nuisances or infringements of the sanitary regulations, and to exercise a general supervision of matters affecting the health of the community. If it were thought objectionable to intrust more extensive powers to such a Board or officer, the *executive* department might be left to the municipal authorities.

Were these suggestions carried into effect, I do not doubt that the prevalence of fever might be very much diminished in Liverpool. But it is to be remembered that many of the evils which I have pointed out are, perhaps, the inevitable results of poverty; and I believe that fever, to a certain extent, is an inseparable accompaniment of extreme poverty affecting large masses of the community. Among the causes of fever in Liverpool I might have enumerated the large proportion of poor Irish among the working population. It is they who inhabit the filthiest and worst-ventilated courts and cellars, who congregate the most numerous in dirty lodging-houses, who are the least cleanly in their habits, and the most apathetic about everything that befalls them. It is among the Irish\* that fever especially commits its ravages; and it is they who object the most strongly to be removed to the hospital from their miserable abodes. Nor does the evil stop with themselves. By their example and intercourse with

\* During nine months of 1838, the officers of the North Dispensary visited (exclusive of surgical cases) 2428 English patients, of whom 637 were ill of fever, and 1826 Irish, of whom 601 were ill of fever.

The fever cases among the English patients were thus little more than 26 per cent., and among the Irish nearly 3 per cent. of the whole number of patients.

others they are rapidly lowering the standard of comfort among their English neighbours, communicating their own vicious and apathetic habits, and fast extinguishing all sense of moral dignity, independence, and self-respect. No one interested in the welfare of his poorer brethren can contemplate the prospect without a feeling of melancholy foreboding; and I am persuaded that so long as the native inhabitants are exposed to the inroads of numerous hordes of uneducated Irish, spreading physical and moral contamination around them, it will be in vain to expect that any sanitary code can cause fever to disappear from Liverpool.

## No. 20.

ON THE PREVALENCE OF DISEASES ARISING FROM CONTAGION, MALARIA, AND CERTAIN OTHER PHYSICAL CAUSES AMONGST THE LABOURING CLASSES IN MANCHESTER.

BY RICHARD BARON HOWARD, M.D.,

*Physician to the Ardwick and Ancoats Dispensary.*

*Manchester, April, 1840.*

GENTLEMEN,—It was not without considerable hesitation and diffidence on my part, that I acceded to your request, to furnish a report of the extent to which the causes of contagious diseases prevail amongst the labouring classes in Manchester.

Fully sensible of the importance which may be attached to such a report, from this populous and, in many respects, extraordinary district, and of the attention it might attract, I felt conscious that in undertaking the task, I was engaging in an onerous duty, and incurring no small degree of responsibility. I was quite aware, also, that I should have to encounter great difficulties in my inquiries, from the imperfect state of the records in many of the public medical institutions:—imperfect at least insofar as affording no facilities for obtaining the statistical information which was desirable for preparing such a report as you required. As I had anticipated, I soon found that to collect useful statistical data from these documents, required more labour than I have been able to bestow on the subject, and also more time than has been allowed me for the preparation of my report. It would certainly have been much more satisfactory to you, as well as to myself, if I had always been able to verify the statements I have made, from facts derived from the registers of the public institutions; and it is to me a matter of much regret that, from the causes just alluded to, I have frequently been prevented from doing so. I may however state, that the opinions and views I have advanced are the result of above 10 years' constant medical attendance on the poor in Manchester, and that a connexion with the Royal Infirmary and Poor House, during the greater part of

that period has afforded me extensive opportunities of becoming acquainted with the diseases and the general condition of the labouring classes.

According to the census of 1831, the population of Manchester (including Salford and the immediate suburbs) was 232,578, and may at present probably amount to 260,000. That of the whole parish was then 270,961, and cannot now be estimated at less than 300,000. In the following report, the term Manchester will be used generally, and must be understood to comprehend Salford and the adjoining suburbs.

The patients admitted during the last year at the various medical charities in Manchester amount to 40,858; and if to this number be added the sick under the care of the surgeon to the Manchester Poor House, and those attended in Salford and Chorlton-upon-Medlock, by the medical officers of these unions, we find that the enormous number of 42,964 persons (nearly one-sixth of the whole population) are dependent on public charity for medical advice:—a melancholy proof of the indigence and unhealthy condition of the working-classes in this district.

Owing to the defective registration of the diseases, it is impossible to ascertain with precision the amount of fever occurring amongst these persons; but from the most correct calculations I have been able to make, it is probable the number of cases of idiopathic contagious fever would not exceed 2432; including, of course, those treated at the House of Recovery. This, however, is a larger proportion than has been usual in former years; for fever has certainly prevailed much more extensively during the last two years and a half than for many years preceding. As a proof of this, it may be mentioned that the average number of patients admitted into the House of Recovery during the last three years is 1071, whilst that for the 10 years previous is only 511. In order to account for the apparently small ratio which I have allotted to fever, out of the 42,964 persons treated at the various medical institutions, it is necessary to state that in this number are comprehended the patients admitted at the Lying-in, Lock, and Eye Hospitals, where, of course, cases of fever occur only casually:—that no less than 6495 were cases of accident, and that all the fever patients occurring to the surgeon to the Manchester Poor House, and a large proportion of those occurring at the Royal Infirmary, are sent to the House of Recovery.

This amount of fever among our pauper population, though very considerable, cannot be deemed large for a town which might certainly be supposed in many respects peculiarly fitted to promote the diffusion of contagious diseases; and which, in many localities, seems to possess all the requisites for the generation and extension of infection. Indeed, when we consider the greatness and density of the population—constantly suffering from numerous causes of physical depression, with the indigence, improvidence, irregular