Thesis

"A Review of Sanitation in an Urban Sanitary District during 5 years with remarks as to the difficulties in the way of Progress therein"

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The population of the Urban Sanitary district the subject of this Thesis and the sanitary history of which during the past 5 years I propose briefly to review was in 1881 returned as 4110 and in 1871 it was 3342 and the acreage is 1080 acres. The population consists almost entirely of glassbottle makers, potters and miners - One part which adjoins the river is flat and level with the river almost - The population of this subdistrict which we shall call A was in 1881 returned as 1769 - The other part is situated partly on an eminence and partly level, the latter part of this subdistrict which we shall call B being almost rural in character - The population of this subdistrict was returned at the Census of 1881 as 2341 - The houses in the district by a street in each part are continuous towards the east with the houses forming a part of an adjoining Urban Sanitary district (a town in fact) the population of which at 1881 was 10523 - Towards the west there is an interval of a quarter of a mile between the houses of this district & those of the two adjoining

Sanitary districts on the north is the river + on the south there is an interval of more than a mile between the houses of the district + those of any other sanitary district -

In 1881 subdistrict A was sewered but the houses were not connected therewith by drains while in B from the houses & the sewers were drains with gully traps for the removal of liquid sewage - This was conveyed ½ a mile + by irrigation was distributed on land - The drains were of earthenware pipes - The solid excreta + refuse was removed from both parts of the district by privies + ashpits of the ordinary kind which were built of brick + covered In neither district was there any provision made for draining the soil and the storm water was carried off by the Combined sewers in Subdistrict B. The water supply was from wells and in many cases it was bad in quality and insufficient in quantity - A good many houses had only rainwater for water supply -

With this outline of the sanitary condition of the district in 1881 - I shall now give the death rate &c for the year -

In 1881 there were 99 deaths registered

giving a deathrate of 24·08 per 1000 living - 23 deaths were due to Scarlet fever, one to typhoid fever, 2 to Continued fever, 2 due to Hooping Cough, and 6 to diarrhoea - There were 6 deaths from Phthisis - The Zymotic rate for the year was 8·02 per 1000 living - The following table will shew the number of deaths in each subdistrict

	Scarlet Fever	Diarrhoea	Hooping Cough	Continued Fever	Enteric Fever
Subdistrict A	6	4	2	1	1
do B	17	2	—	1	—

In 1882 the sanitary condition of the district remained the same as in 1881 - There were 76 deaths registered which gave a death rate of 18·1 per 1000 living and a Zymotic rate of 3·5 per 1000 - The following table gives the numbers in each subdistrict of deaths from Zymotic disease in 1882 - Phthisis caused 5 deaths -

	Measles	Diarrhoea
Subdistrict A	3	3
do B	5	4

In 1883 with the exception of ten houses in subdistrict A all the houses during the year were provided with gully ~~se~~ traps communicating

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with drains for the removal of liquid sewerage from the houses and during the latter 4 months of the year a new supply of water was distributed over the district and used by the great majority of the inhabitants at once - We may therefor expect that there will be a decrease in the number of deaths from zymotic diseases and more especially diarrhoea - During this year in which these improvements above mentioned were taking place 107 deaths were registered - The death rate was thus 25 per 1000 living for the year estimating the population to the middle of the year - 29 deaths were due to zymotic diseases and the zymotic rate was thus 6·7 per 1000 - Six deaths were returned as from Croup and from the fact that diphtheria was prevalent in the district having in fact caused 5 deaths we may almost certainly say that some if not all would be of a diphtheritic character - What also shews the connection of the 2 diseases is that in 1881 when there were no deaths from diphtheria there were no deaths from croup - In 1883, 1884, and 1885 there were deaths from ~~Croup~~ diphtheria in each year and also death from Croup - The are

therefor apparently mostly found together and this would lead one to suppose they had a common origin.

I am of opinion that it is very difficult + almost impossible thing from this intimate association of the two diseases to find out exactly the number of deaths from croup + diphtheria as they are no doubt very often confounded if they are not different phases of the same disease.

The following table gives the number of deaths from the different zymotic diseases which caused death in each subdistrict during the year 1883.

	Diphtheria	Hooping Cough	Enteric Fever	Diarrhoea	Simple Cholera
Subdistrict A	2	6	1	3	0
do B	3	0	1	6	1

The death from enteric fever in subdistrict B was that of a person who had just come into the district who had indeed been ill when brought into it. I may mention here that there is no workhouse or other institution in the district to which people could come from other districts. As an instance of the way in which disease is produced I may hear state

that in subdistrict B where you will observe there were six deaths from diarrhoea I found numerous cases of this disease in that subdistrict and on inquiry at a row of houses where the disease was most prevalent I found that they all used rain water having no other water supply for domestic purposes - This water was stored in tanks built underground of brick - As these tanks were situated between the privies & ashpits & of course on a lower level and considering the fact that they were uncemented & therefore and without concrete pervious it would one would imagine be a miracle if the water escaped pollution - The water was as a matter of course found to be coloured and had an offensive odour - The case of simple cholera also occurred here -

During the 3 years 1881-82-83 (the greater part of the latter year) the two subdistricts A & B differed only in this that while there was provision made for the removal of liquid sewerage in B there was no such provision in A. ~~All the drainage from~~

From the foregoing tables you will observe that while in A there were 10 deaths from diarrhoea during the 3 years there were only 12 in B - The deaths from this disease are therefore much less in B than in A in proportion

& the population as we should expect. All the deaths from whooping cough occurred in the undrained district and this would lead one to ask is there any connection between the want of drainage and the increase of deaths? I should think the greater dampness & generally almost flooded state of A in wet weather is to be attributed the excess of deaths in this subdistrict. This wetness in A was greater than in B because of the latter being on a higher level. This damp wet state of A I have no doubt generate the complications of the disease, eg Bronchitis, Pneumonia &c thence increase the fatality from it.

The 2 deaths from enteric fever excluding the imported case occurred in subdistrict A. Scarlet fever & measles were somewhat more prevalent in B than in A judging from the number of deaths occurring in each. Diphtheria was equally prevalent in both. We have thus more deaths from Diarrhoea, enteric fever & ~~Whooping~~ cough and fewer deaths from scarlet fever & measles and as many deaths from diphtheria in ~~the undrained portion as~~ undrained

portion in comparison with the drained in which there were more deaths from scarlet fever and measles - In the three years the proportion of deaths of children under 1 year of age to the 1000 born was 160 - we may now proceed to consider the vital statistics of the remaining 2 years and contrast these with those of '81 '82 & '83.

In 1884 - the drainage of the district was completed and the improved water supply was distributed all over the district and those wells the water of which was found to be of bad quality on analysis were closed - They were gradually being closed in 1883 (latter part of it) but in this year all were closed with one exception which was that of a spring the water of which was found to be good -

we shall now therefore expect those diseases arising from the use of polluted water or defective drainage to be considerably reduced in number and the Health of the district generally to be greatly improved -

In this year 90 deaths were

registered which estimating the population as usual to the middle of the year gave a death-rate of 20.7 per 1000 living - The Zymotic rate was 5 per 1000 -

Annexed is a similar table to the preceding for this year -

	Scarlet Fever	Typhoid Fever	Diarrhœa	Diphtheria	Hooping Cough	Measles
Subd. A	1	0	2	2	1	1
do B	0	4	2	9	0	0

You will observe that the deaths from Diarrhœa are less than in the three preceding years the average for these 3 years being ~~7.0~~ 7.3 Of the 4 registered during this year 2 were complicated with other diseases -

In the three preceding years we find that the Zymotic deaths were more numerous in A than in B & we shall now ascertain whether with improved drainage the deaths continue to be more numerous in A than in B. While we have in B (the drained portion) 15 deaths from Zymotic disease in ~~1883~~ 1884 we have only 8 deaths in A although the proportion of the

population is as 15 to 11·3 respectively
This reverses the state of matters
in 1881-82-83 -

In 1885 with a pure water supply
and the drainage complete all
over the district we have the same
sanitary state as in the year pre-
ceding - The deaths in this year
were 83 which estimating the pop-
ulation to the middle of the year
gave a deathrate of 18·7 per 1000 living
The zymotic deaths were seven in
and the zymotic rate was thus 1·5
per 1000 - Two deaths from diarrhoea
occurred in children a few weeks old
and were complicated as a secondary
cause with convulsions -

Again is annexed a table shewing
the distribution of the zymotic diseases
causing death in A + B during 1885

	Diarrhoea	Diphtheria	Enteric Fever	Scarlet Fever
Subd. A	1	1	—	—
do B	1	2	1	1

We have in this year again evidence
of the improved sanitary condition
of A as it shews again a decrease
of deaths from zymotic disease
and that to a greater degree than

in the preceding year - Taking the 2 years together we find that while in A we have 9 zymotic deaths in B we have 20 - The proportion of the population in A is to that in B as 9 is to 11½ - This reverses the order of things in 1881 - 82 - 83 -

The evidence of an improved sanitary condition in the whole district may be found (1) in the reduction of the zymotic rates in 1884 & 1885 the mean of which was 3·2 as compared with those of 1881 1882 & 1883 the mean of which was 6·07 - In England & Wales the mean zymotic rate in 1881 & 1882 was 2·44 - This is much less than that which has existed in this district (2) There is a marked reduction in the deaths from diarrhoea under the improved conditions of a good supply of water & better drainage - I think this reduction is principally due to the purer water supply - (3) The proportion of deaths from children under 1 year per 1000 born was as previously mentioned 160 in 1881, 82, 83 on an average - In 1884 & 1885 the average proportion was only 147 per 1000 born -

This shews that the circumstances conducing to the greater mortality of infants have been lessened in their influence -

(4) Although there has been an apparent increase from enteric disease I found that in each case they were sporadic as no other cases existed in the neighbourhood of each - Two of the deaths of the 5 which occurred during the 2 years 1884-'85 occurred at the outskirts of the district but were in no way connected either with water supply or milk supply -

Only one death from Rheumatic Fever during the 5 years & that was in 1884 in Subdistrict A which was then drained so far as I have already said -

These Statistics as far as they go shew the improved state of public Health in the whole district during 1884-85 compared with what prevailed in 1881-82-83 and as regards the subdistricts A & B they shew the improvement in the former from improved drainage - No doubt if we had been able to get the data for a longer period than we have we should have been better satisfied with the deductions & their accuracy

but although not extended over a long period and although taken from a comparatively small population yet they bear out the facts & truths of Sanitary science viz that diarrhoea especially is increased by polluted water & bad drainage and that other zymotic diseases are also increased thereby - It is yet to be seen whether the improvement of the last 2 years will continue -

As regards Phthisis I shall give the number of deaths in each year from this disease & also from the other lung diseases in the following table, the rate per 1000 living from all these diseases & the percentage of deaths from all causes which these diseases give -

Year	Phthisis	Bronchitis Pneumonia Pleurisy	Rate per 1000 living	Rate per 100 deaths from all Causes from Phthisis Bronchitis
1881	6	11	4·13	17·17
1882	5	9	3·34	18·42
1883	9	18	6·32	25·23
1884	6	17	5·29	25
1885	8	12	4·52	24·09

In 1881 & 1882 the deaths from Phthisis were taking the average 5 ½

and during last 3 years 12½ - This would induce one to think that the exciting causes of this disease have been more active during the past 3 years. Including the other three diseases of the respiratory organs the rate per 1000 living from phthisis &c taking the average of 1881-82 3·73 and during 1883-84-85 the average rate was 5·44 - There has therefor been an increase from these diseases during the past 3 years as compared with the preceding 2 years - Drainage for the removal of liquid sewage does not seem to affect the deaths from phthisis as in the 3 years 1881-82-83 the deaths in B were 12 and only 8 in A i.e. the deaths were less numerous in the undrained portion in proportion to the population - Taking the whole district with the completed system of drainage & improved water supply in 1884-85 we have an average of [redacted] deaths from phthisis per annum and in 1881-82-83 an average of 6·6 per annum -

This of course does not in anyway disprove the theory or I should say the truth of Dr Buchanan's

statement that this disease is very considerably reduced by the reduction of the level of the subsoil water or to put it in other words that this disease increases or decreases in inverse ratio to the distance between the basements of dwellings and the level of the subsoil water - In this district I have no doubt that there would be a great reduction of deaths from this disease if there was a System of drainage for drying the ground + basements of the houses -

There was also an increase of deaths from the other diseases of the respiratory organs. During the first 7 years there was an average of 10 deaths and during the last 3 years an average of 15 deaths - Taking Phthisis Bronchitis Pneumonia + Pleurisy there has been a gradual increase in the proportion of the deaths from these diseases per 100 deaths from all causes until last year when there was a very slight fall indeed -

As regards occupation I find that of the total number of deaths

from phthisis during the 5 years viz 34 the following were the occupations of such as had any - Miners 4 - 2 were potters & 5 were glassbottle - Makers 3 of whom were glassblowers and 2 glassmoulders. 4 of the deaths were children under 5 years - The occupations of the remaining 19 were not those as are generally supposed to produce this or other lung diseases 11 were domestics, 2 clerks, 2 labourers 1 child of 8 years, 1 Butcher, 1 clay mixer 1 a joiner - Only six deaths or about 17 per cent of the total number were deaths of persons following trades which are supposed to be conducive to the production of this disease - Glassblowers I consider are apt to suffer from this and other lung diseases from the great vicissitudes of temperature to which they are exposed and also to the Strain placed on the lungs in glass-blowing - We thus see that there must be some other cause at work besides occupation to account for the other deaths and I think that (excluding the dyeing of the ground as pointed out by Dr Buchanan) it is to be found

in the overcrowding and bad or I should say the want of ventilation of the sleeping rooms of the working classes - Dr B.W. Richardson in Hygeia (p 45) states that in his model city "that large class of deaths from pulmonary Consumption induced in less favoured cities by exposure to impure air and badly ventilated rooms" He thus lays stress on this matter of bad ventilation and now that drainage has been carried out in so many districts in England & Wales it becomes a very important matter - The evil is made still worse since as stated by the Medical Officer to the Privy Council "the dwelling place to which he (the working man) goes to rest is as badly ventilated as the workshop which he leaves" This I am afraid is too frequently the case in this district -

Of the 67 deaths from Bronchitis Pneumonia and Pleurisy 36 were Children under 5 years and 5 under 10 years, another a boy of 16 of no occupation and 8 were domestics - There are thus 50 deaths which

could not be affected by oc- 18
cupation out of the 67 - Of the
remainder 5 were coalminers, one
was employed in brickworks and
I was a manager of a brickwork,
4 were labourers, 1 fireman, 1 glass-
founder, 1 limeburner, 1 cooper, 1 coal
wainer and 1 a carter - Although
there are numerous potters who
reside in the district there was
not a single death from any of
these diseases amongst them in
the 5 years - Not knowing the
number of miners in the district
it is impossible for me to give the
rate of mortality of the miners
in the district from this disease -
and I may say the same as
regards other occupations -
The Medical Officer of Health may
obtain this information from the
census returns but I am of opinion
that each Medical officer of Health
on his appointment should be
furnished with a return of the
population of his district classified
according to occupation &c I am
quite certain that the majority
of the Medical officers of Health of

small sanitary districts (urban) V9
do not possess this information.
He could then be able to estimate the
rate of mortality from any disease
class of diseases amongst the followers of
any occupation - as Dr. Farr says
"the only way in which the mortality
and duration of life of miners &c
can be determined is to determine
the ratio of deaths at each age to
the living during a certain time"

From the data we have got we
see that occupation has not to any ~~much~~ extent
to do with the etiology since 74 per
cent of the deaths were persons of
no occupation - I am speaking of
the deaths from Bronchitis, Pneumonia
& Pleurisy - There is no doubt that it
does have an effect in the
causation of some diseases of the
respiratory organs - I am inclined
to concur in the opinion that "not
only phthisis but other other diseases
of the lungs such as pneumonia and
Bronchitis are generated to a large
extent under like conditions"
(Vide Wilson p 72) viz. deficient
ventilation causing respiratory
impurities - The chief causes therefor
of phthisis and other pulmonary

diseases to be Considered by the Medical officer of Health are (1) and especially as regards phthisis a waterlogged or damp soil (2) occupation in badly ventilated workshops and especially where there are particles of fine dust thrown off in the manufacturing processes (3) Bad ventilation and overcrowding of dwellings and especially sleeping apartments.

This leads to the subject of overcrowding and I shall first ask the question what is overcrowding? There is a great amount of uncertainty about this matter and some amount of cubic space allowable per individual should be fixed on and in the case of reduction beyond this should necessitate the action of local authorities. I have been informed of several Medical officers of Health who make the limit 300 cubic feet per adult and for Children whose combined ages amounted to 18 years they allow the space of one adult. Thus three children whose ages were 4, 6, and 8 respectively they Class as an adult. Parkes in his practical Hygiene (footnote p 117)

states that the Poor Law Board 121
does not allow less than 300 cubic
feet per head in dormitories and
(page 125) although according to his
belief from 750 to 1000 cubic feet is
the proper amount of space per head
probably only from 200 to 250 cubic
feet would be found in artizans
rooms per head, and also that some
persons class 2 children as equal
to one adult and that when such
is the case it would be safer to
do so with children under one year -

Dr B.W. Richardson in his "model
city" allows in sleeping apartments
1200 cubic feet per head, and Prof.
Corfield (Dwelling Houses p 16) says
"we are not able to insist on any
thing like 1000 or 750 cubic feet of
space (per individual) in all
instances and amounts varying
down to as low as 300 cubic feet
per individual are adopted - In
the case of a family living in one
room which is so small as to
afford less than 300 cubic feet
per individual it is usual to con-
sider that the limit of overcrowd-
ing which should be allowed by
law has been reached"

Dr Wilson (Handbook of Hygiene)
states that it is difficult even

with the aid of a well devised plan of ventilation to supply the necessary amount of fresh air per head per hour without creating a perceptible draughts occasionally in a cubic space of less than 600 cubic feet"

Dr de Chaumont holds that each healthy adult ought to have 1000 cubic feet of space allowed -

From all these different statements it is clear that whatever is the difference in the opinion as to the amount necessary per head to keep the air at the standard of purity and there is not much difference in that, it is evident that nothing less than 300 cubic feet per head should be allowed - Now if this is so why should it not be acted on? I have found on visiting 18 houses, taken at random, of working people in this district that five were overcrowded if you take 300 cubic feet as the minimum space - Now although this space is admitted on all sides to be very small indeed and entirely inadequate with good ventilation to keep the air of the proper standard of purity without causing dangerous draughts yet I find that out of the

18 houses, as I have said taken at random, that 5 are under that amount. In the first house I found that there was a family of 7 persons occupied a room with a cubic space for each individual of 214 cubic feet. In the second for each there was a cubic space of 216 cubic feet per head. In the 3d * which were two rooms. I found in one room 3 persons slept & the cubic space allowed for each was 210 cubic feet & in the other room 6 slept in a cubic space for each of 168 cubic feet. In the 4th house there was a room with seven occupants and the cubic space for each was 174 cubic feet. In the 5th house there was one room with 9 occupants and as the room was unusually large the space was 266 cubic feet per head. That overcrowding therefor takes place to a very alarming extent amongst the working class community is thus perfectly evident and this can scarcely be wondered at since the great majority of the houses of the average workman contain only one room (sleeping room). What makes matters still worse is the fact that

there is a total absence of ventilation, and that especially in winter any accidental openings by which a little pure air would be admitted are carefully closed up - The people have a dread of any openings made with a view to ventilation and their whole thought in cold weather is how to shut out the external air - I have often seen a bedroom, and I have no doubt it is nothing new in the experience of practitioners among the working classes, which a working man and his family have occupied during the night together, without a fireplace and with a window that could not be opened - In other cases I have found that where there has been a fireplace it has been closed up as when a fire was put in it smoked and when there was none in there was a down draught and so the fireplace is either closed with any rubbish stuffed into it or completely built up - Imagine a family of young children passing a night in such a veritable box as that described and then brought down in the morning to the living room to be dressed - The living room

door. in my experience I find mostly open even in cold weather. with such a state of things can it be wondered that a child existing under such circumstances should be seized with Bronchitis &c. when once seized with this disease what chance has a child of recovering under the like circumstances, exposed to constant draughts during the day & breathing ~~a tainted~~, with what little breathing power remains to it, a tainted atmosphere during the night.

There is no doubt a great difficulty in dealing with this subject of overcrowding and what is generally accepted as the greatest difficulty is the extra expense which would be incurred by the artizan in renting a house with greater bedroom accommodation. what I cannot but consider as another difficulty is the uncertainty as to the minimum space to be allowed per head including male & female, old & young, because as I have said there are Medical officers of Health who class 2 or it may be 3 children as one

adult, and so if one medical officer says that all should have 300 cubic feet of space and recommends action where this is not obtained he is met by the statement ~~that~~ of other medical officers of Health that children should be grouped as I have already stated to require the space allowed for an adult.

The Public Health Act (1875) gives us no assistance as it simply states that there should be action by the Local Authority where a house or part of a house is so overcrowded as to be dangerous or injurious to the health of the inmates whether or not members of the same family. This according to the authorities already mentioned would be the case in any house where there was a bedroom which did not give a cubic space to each sleeper of from 750 to 1000 cubic feet. It is impossible even to get a space of 300 cubic feet in the sleeping apartment of the average working ~~man~~ man with a large family and with equal justice action should be taken where there is a space of 500 cubic feet as this also is too small for health. If the space was definitely settled

by law and that loophole of escape (27)
of allowing the same space for 2 or 3
children as for one adult was closed
I am of opinion much might be done
to lessen the amount of overcrowding -
The overcrowding caused by persons
keeping lodgers, and that by persons
who have not anything like the
required space for their own family
could be dealt with - As a case in
point I may mention that in the first
house of the 18 in which I found over
- crowding 7 members of one family
occupied one room and in a recess
on the stair landing was a bed oc-
cupied in turns by 3 lodgers - One of
them who worked during the night
occupied the bed during the day -
This I may say is not a solitary
instance of the kind which I have
met with amongst the working
classes more especially miners -

This is a subject of the greatest
importance as now that there is a
purer water supply and an improved
system of drainage in most districts
in England this overcrowding and
bad ventilation must exercise a
very considerable influence in
increasing the deathrate from

pulmonary diseases and in spreading the infectious disease not only by exposing people to a greater extent to the infection but in inducing a low state of Health in which the resistance of the body to infection is reduced to a minimum - Since it has been shewn that the tendency to phthisis and other lung diseases is increased among workmen in trades in which the air they breathe is impure from dust &c the greater need is there that he should have a room in which he may at some time of the 24 hours breathe a comparatively pure air - The only time at present when he does do so is when he is outside his dwelling or workshop -

Dr. Wilson in his handbook of Hygiene says "that in places where there is a scarcity of houses it is evidently impossible to abate the nuisance (of overcrowding) to any extent because in attempting to reduce it in one part you only increase it elsewhere". In reply to this I say why in the first place should there be a scarcity of houses as you may be sure where there is a demand for houses ther

are very soon built - Again if the minimum space was fixed on and made say from 250 to 300 cubic feet perhead and was in action all over the country the people would not then be able to increase the overcrowding elsewhere as they would find the same measures in force all over the country wherever they went -

There is also much resentment felt by the people themselves at anything in the shape of interference in the matter of overcrowding and this no doubt has some effect on the members of the sanitary authorities who are their representatives -

This leads me to the difficulties in the way of sanitation generally - according to Dr Wilson it is the permissive nature of the legislation on sanitary matters and that it is so there can be no doubt - The majority of the clauses of the public Health Act (1875) hold the words "The sanitary Authority may &c" and very often the words "where the Sanitary Authority is satisfied" &c - I think they require

a good deal of satisfying especially where there is a prospect of increased expenditure -

As the members of the Sanitary authorities from the nature of their qualifications to act as such, are interested in preventing expenditure and thus keeping down the rates, and as the people who elect them are also interested in the same object and considering the ignorance that exists among the people as the members, very often, on Sanitary matters it is not to be wondered at and not surprising that where they possibly can do so (and they are permitted to do so too frequently) they take no action.

This is especially the case in any question involving expense and in most instances the Local Government Board cannot interfere - For instance in this Sanitary Authority You will have noticed the great number of deaths from Scarlet fever in 1881. There is no hospital for infectious cases of disease in this neighbourhood for the purpose of isolating such cases

and the Union authorities are averse to receiving any such cases in their Hospital - There are 4 urban Sanitary districts in which this is included lying close together this one being between the other 3 - What should have been done and what was talked of when the epidemic of scarlet fever was on (and I may say it was spread over all the 4 districts) was to combine and erect a small Hospital for the reception of infectious cases - There has not however been anything done and should any case of small pox to occur there would be no means whatever of preventing its spread by isolation - Here you see they are permitted not to take action and they don't, simply to keep down the rates, as it resolved itself into a question of expense The Local Government Board could only point out that it was necessary and I must admit the authorities also were of that opinion and there the matter remains -

Another matter which I submit requires some remedy is the mode of appointment of Medical Officers of Health and here I may remark that all the subjects I have touched on refer to England & Wales -

At present there are two modes of appointing Medical Officers of Health - In the one case the Medical officer is paid altogether by the Local authorities and he is thus the servant of such Local Authority and may be dismissed by them at any time without the consent or interference of the Local Government Board - In the other case the Local Government Board pay half the Salary and then this Board has the same powers in the Appointment &c of such Medical officers of Health as they have in the case of Union Medical officers - In the former instance what is the result? I have not the slightest doubt but that in many cases the Medical Officer of Health overlooks many things

which he would not otherwise do - nuisances on the premises and offensive trades carried on perhaps by members of the sanitary authorities themselves.

The Medical officer of Health occupies a very responsible position and accordingly he ought to be in a position to speak out without fear or favour, and this applies more especially to practitioners who are allowed to practice - There is also the dread of offending patients by the Medical officer of Health who practices in the district for which he is the officer - This is a very unsatisfactory state of matters and the Medical officer should not, however little he may be influenced by them, be the subject of so many inducements to remissness in the discharge of his duty - Dr G Wilson says that "what is wanted is a thoroughly organised Public Health service with efficiently trained Health officers who shall be debarred from private practice, and competent sanitary inspectors all of them holding permanent

appointments under the control of the Local Government Board." What in my opinion would remedy the present evil to a very considerable extent would be the appointment of all medical officers of Health to sanitary districts on the same footing as District Medical officers of Unions which is ad vitam aut culpam and this would take away the power of the Local Authorities of dismissing a Medical Officer of Health without the consent of the Local Government Board. As they (the Medical officers of Health) may incur the displeasure of members of authorities from simply recommending expensive improvements this is the more necessary.

I may here refer briefly to another matter and that is the question of Compulsory registration or notification of cases of infectious disease. At present a medical officer of Health may reside at any distance from the Metro-

Sanitary district to which he may be Medical Officer and be seldom in it except for inspection &c since his practice is not there - Sam of Course speaking of a Medical Officer in a small urban Sanitary District and who is not debarred from practice - The first intimation therefor which he receives of the outbreak of any infectious disease is from the registrar of births and deaths when there is a death from such a disease - The Inspectors of Nuisances might inform him but as they are also generally Road Surveyors and Collectors &c they are generally too busily engaged to inquire if any cases of infectious disease exists in the district - I need not say that when a death has occurred the Steps which may be taken to arrest the Spread of the disease are often ineffectual whereas if the Medical Officer of Health had received intimation of the first case and if this case was thoroughly isolated the disease would thus be arrested in its Spread in all probability ——