

Hutchinson, J R
Report on the incidence
of scarlet fever and of
diphtheria in 1922 in the
village of Ramsbury

UNIVERSITY OF TORONTO



3 1761 00833864 2

RC
182
S2H8



34

REPORTS
ON
PUBLIC HEALTH AND
MEDICAL SUBJECTS.

No. 16.

REPORT BY DR. J. R. HUTCHINSON
ON THE INCIDENCE OF SCARLET
FEVER AND OF DIPHTHERIA IN 1922
IN THE VILLAGE OF RAMSBURY, IN
THE RAMSBURY RURAL DISTRICT,
COUNTY WILTS.



MINISTRY OF HEALTH.

LONDON:
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

1923.

Price 9d. Net.

REPORTS
ON
PUBLIC HEALTH AND
MEDICAL SUBJECTS.

No. 16.

REPORT BY DR. J. R. HUTCHINSON
ON THE INCIDENCE OF SCARLET
FEVER AND OF DIPHTHERIA IN 1922
IN THE VILLAGE OF RAMSBURY, IN
THE RAMSBURY RURAL DISTRICT,
COUNTY WILTS.



MINISTRY OF HEALTH.

LONDON:
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

1923.

Price 9d. Net.

PUBLIC HEALTH AND
MEDICAL SUBJECTS

RC
182
S2H8



863943

MINISTRY OF HEALTH

PUBLISHED BY THE MEDICAL LIBRARY SERVICE

MINISTRY OF HEALTH,
WHITEHALL, S.W.1.

The Rt. Hon. NEVILLE CHAMBERLAIN, M.P.,
Minister of Health.

SIR,

As a result of the complaints received by the Minister respecting the undue incidence of Scarlet Fever and Diphtheria in the village of Ramsbury, in the Ramsbury Rural District, Wiltshire, Dr. J. R. Hutchinson, one of the Medical Officers of the Ministry, was instructed to make local inquiry into the matter, and I beg to present his report on the subject. I agree with the findings of the Report, which have been concurred in by Dr. Reece, the Senior Medical Officer of the Ministry concerned with these matters.

The isolation hospital, provided by the Abingdon Joint Hospital Board by means of a loan sanctioned by the Local Government Board, was built on a well-designed plan. It had ample accommodation to serve the needs of the hospital district which comprises the Borough and Rural District of Abingdon. From time to time, however, the Joint Hospital Board have entered into agreements to take patients from other districts, with the result that the Board now seeks to provide accommodation at this hospital for a population (census 1921) of 110,000 over an area of 740 square miles. On the Ministry's standard, the hospital accommodation is sufficient for 46 patients. There were 124 beds and 120 patients in the hospital when Dr. Hutchinson visited it on 16th January, and as many as 138 patients are said to have been under treatment at one time.

It is difficult to prove by direct evidence that an isolation hospital is responsible for the spread of disease, but in this instance the circumstantial evidence is so strong as to admit of little doubt on the matter and it would appear that the gross overcrowding, which resulted in the occurrence of many cases of cross-infection in the hospital, led to the introduction and re-introduction of diphtheria into Ramsbury at a time when the village was otherwise free from the disease, and to a very high percentage of return cases of scarlet fever.

It may be argued that in the present state of our knowledge "return cases" of scarlet fever are inevitable, but it is also within our knowledge that the conditions appertaining at the isolation hospital of the Abingdon Joint Board were such as to favour "return cases." We know that overcrowding of "fever" patients in hospital is likely to be followed by "cross-infection," and that patients sent into such a hospital with one disease are liable to develop another. The result is that the patients are exposed to the added risk of a second illness superimposed on the first and their retention in hospital is unduly prolonged,

and this again leads to further congestion of the wards. In this way, the patients thus overcrowded tend to develop complications and sequelæ that may continue for months, or even years, possibly necessitating immediate or later surgical treatment. It is obvious that in many cases it would be far better for the patients to be treated in their homes than to be exposed to "cross-infection" in hospital and to sequelæ which may leave them permanently damaged and handicap them for life.

Numerous complaints have recently been received by the Ministry in reference to the manner in which certain isolation hospitals are being conducted, and it is hoped that the facts set out in Dr. Hutchinson's Report may be helpful to those responsible for, or interested in, the administration of such institutions.

I am, Sir,

Your obedient servant,

GEORGE NEWMAN.

Whitehall, May 1923.

REPORT BY DR. J. R. HUTCHINSON ON THE INCIDENCE
OF SCARLET FEVER AND OF DIPHTHERIA IN 1922
IN THE VILLAGE OF RAMSBURY, IN THE RAMS-
BURY RURAL DISTRICT, COUNTY WILTS.

REASON FOR THE INQUIRY, TOGETHER WITH A BRIEF
DESCRIPTION OF THE DISTRICT.

In January, 1923, complaints of the undue incidence of Scarlet Fever and of Diphtheria in the village of Ramsbury during the latter half of 1922 were received by the Minister, and it was alleged that this incidence was in part due to the return of recovered cases from the Isolation Hospital of the Abingdon Joint Hospital Board. As a result I was directed to make inquiries into the matter, and this I did on January 15th and subsequent days.

The Ramsbury Rural District is the most easterly situated of the sanitary districts in the County of Wiltshire and lies a few miles east of Marlborough between that town and the western border of Berkshire. It has a population of 6,318 scattered throughout 12 parishes with a total acreage of 51,614. For public health purposes it is a constituent of the East Wilts Combined Sanitary District, the other constituents being the Borough of Marlborough and the Rural Districts of Amesbury, Marlborough, and Pewsey.

The most populous parishes in the Ramsbury Rural District are Ramsbury, 1,784; Aldbourne, 1,069; Great Bedwyn, 880; Shalbourne, 716; Grafton, 684; and Little Bedwyn, with 505 persons. The only villages in the parish of Ramsbury of any importance are those of Ramsbury and Axford. It is the former, which is much the larger, with which the first part of this report is concerned.

PREVIOUS HISTORY OF SCARLET FEVER AND DIPHTHERIA
IN RAMSBURY VILLAGE.

For several years immediately preceding 1922 the whole of the Ramsbury Rural District enjoyed almost complete freedom from these diseases: during the eight years 1914-1921 the average annual number of notifications was one. It is, however, significant that of two cases of Scarlet Fever occurring in 1921 one was suspected to have given rise to a return case early in 1922.

SCARLET FEVER AND DIPHTHERIA IN RAMSBURY VILLAGE
DURING THE PERIOD FROM 1ST JANUARY, 1922, TO
15TH JANUARY, 1923.

The register of the Medical Officer of Health (Dr. Wilson) contains 91 entries relating to notifiable infectious diseases

occurring in the whole rural district during 1922. During the period from 1st January, 1922, to 15th January, 1923, 79 cases occurred in the village of Ramsbury alone: of these, 57 were Scarlet Fever, 19 Diphtheria, and three were cases in which Scarlet Fever and Diphtheria were present simultaneously. The register records merely the names, ages and addresses of the patients, the names of the certifying practitioners, and whether or not the patients were removed to hospital. It omits to record, amongst other things, the dates on which the patients were removed and those on which they returned home. Some of the entries are very vague and it is difficult to account for all of them in terms of patients. After visiting the Abingdon Isolation Hospital, however, I was able to obtain particulars relating to the 79 cases that occurred in Ramsbury village. A complete list of these is given in Appendix A.

There was only one case—of Scarlet Fever—notified in 1922 before the last week in March. The notifications were as follows:—

	Scarlet Fever.	Diphtheria.	Simultaneous Scarlet Fever & Diphtheria.
March - - -	1	—	—
April - - -	—	—	—
May - - -	1	—	—
June - - -	3	—	—
July - - -	—	—	—
August - - -	12	—	—
September - - -	4	2	—
October - - -	25	—	—
November - - -	5	—	1
December - - -	6	8	2
1923 to Jan. 15 -	—	9	—
	<hr/> 57	<hr/> 19	<hr/> 3

Examination of Appendix A shows that in two instances there were seven cases of Scarlet Fever in one house: in one instance, six cases: in two instances, five cases: in one instance, four cases, and in four instances, three cases: while there were at least seven instances of two cases in one house. Thus 60 cases occurred in 17 houses and 46 in 10: these figures are significant particularly as in the majority of instances the groups of cases were spread over an average period of approximately two and a half months. At first sight they suggest gross infection by a single agent of wide distribution, or repeatedly overlooked cases. There is no evidence to support the first suggestion; simultaneity of onset was the exception rather than the rule.

At the same time it might well be asked, assuming that infection is introduced into a house and that the patient remains

there, what are the mathematical probabilities of its spread in the absence of reinforcement from without? So far as I am aware, this factor is not known, but overlooked cases of Scarlet Fever are not uncommon, while instances in which seven, six, four, or three cases occur in a house from which the cases are removed promptly are rare. The number of houses in which multiple cases occurred in the outbreak under consideration, and the length of time over which these cases were spread, are much in excess of the usual experience. This fact and the change in the character of the infection in a house from that of Scarlet Fever to that of Diphtheria are significant of re-introduction from without.

EVIDENCE OF RE-INTRODUCTION OF INFECTION.

The cases in Appendix A fall into certain well defined groups mainly by reason of a common address or other circumstance of epidemiological importance. It is necessary to examine each of these groups in detail, and to facilitate reference each is identified with a letter: in every instance the hospital alluded to, unless the contrary is stated, is the Isolation Hospital of the Abingdon Joint Hospital Board. To take the groups of cases as bracketed in the appended list seriatim—

Group A. (Cases 1–3).

Case 1 of Scarlet Fever was notified on 30th March and was removed to hospital on that day. He was discharged on 21st May and on 10th June, 20 days after his return home, his sister (case 2) was notified as suffering from Scarlet Fever, and was removed to hospital the same day. She returned home on 2nd August, and nine days later, on the 11th August, her mother (case 3) was notified as a case of Scarlet Fever. So far as the Medical Officer of Health could remember, cases 1 and 2, on return from hospital, showed no physical signs of being in an infective condition.

Group B. (Cases 8–9).

Case 8 was notified as Scarlet Fever on 10th August, and was removed to hospital on that day. He returned home on 10th October: 25 days later, on 4th November, his sister (case 9) was admitted to hospital suffering from Scarlet Fever and Diphtheria. A swab from her throat on 3rd November contained Klebs-Loeffler Bacilli, and she subsequently died in hospital. So far as I was able to ascertain, there was no clinical evidence of case 8 having been in an infectious condition on his return from hospital.

Group C. (Cases 10 and 11).

Case 10 was notified as Scarlet Fever on 11th August, and was removed to hospital the same day. He returned home on 30th September. On 6th October his sister (case 11) was admitted with Scarlet Fever.

Group D. (Cases 12-16).

Case 12 was admitted to hospital with Scarlet Fever on 11th August, and was discharged on 10th October. The subsequent history of this group is as follows:—

October 14th case 13 (sister) admitted to hospital with Scarlet Fever.

October 16th case 14 (sister) admitted to hospital with Scarlet Fever.

October 20th case 15 (sister) admitted to hospital with Diphtheria.

October 25th case 16 (brother) admitted to hospital with Diphtheria.

October 25th case 12 (the original case) was found by the Medical Officer of Health to have onychia and a nasal discharge which contained Klebs-Loeffler Bacilli. He was sent back to hospital. This is the first instance in which there is a suggestion that a Scarlet Fever patient, on his return from the isolation hospital, may have been the means of introducing the infection of Diphtheria into the household. It is possible that case 15 derived Diphtheria infection from some other source, and herself infected case 12, more especially as there is *primá facie* evidence that cases 13 and 14 were return cases of Scarlet Fever. It is not recorded of cases 13 and 14 whether or not they had previously suffered from Diphtheria, and the balance of evidence appears to be in favour of case 12 as the originator of the Diphtheria as well as the Scarlet Fever infection.

Group E. (Cases 17-23).

In this group of seven cases of Scarlet Fever the first six were notified within a period of six days: four of them were subsequently discharged from hospital on 4th October and the other two on the 10th October. On the 29th October, 25 days after the return home of the first four, case 23 was notified as suffering from Scarlet Fever. On 1st November, case 17 was found to have a nasal discharge and was sent back to the hospital. The dates of onset of illness of these cases is not recorded, but it was probable that prompt investigation would have resulted in the discovery of one or more overlooked cases.

Group F. (Cases 25-33).

Cases 25-30 were the children of case 31. Case 33 was their domestic help, while case 32 was the daughter of 33 and lived elsewhere in the village. Case 33 divided her time between her own house and that of her employer.

The first six cases (25-30) were of Scarlet Fever: they call for no comment except that the continued incidence of the disease in the house after the removal of the earlier cases as they occurred deserved more attention and detailed inquiry than it received at the time. Between the dates of notification of cases 30 and 31 the return from hospital of cases 25-30 took place. Within a

week of the return of the last case, and some seven weeks after the return of the first, case 31 was notified as suffering from Diphtheria. In a period of from 14–18 days after the notification of Case 31, her husband—who does not figure in the list—her domestic help (case 33) and the help's daughter (case 32) were notified as cases of Diphtheria.

Thus there was a sequence of six cases of Scarlet Fever and then one of four cases of Diphtheria, the possible link being the return of the first six from hospital. On 21st December, the day after the first case of Diphtheria was notified, swabs were taken from the throats of cases 25–30 with the result that in five of the six Klebs-Loeffler Bacilli were found.

This group is illustrated in tabular form as follows :—

Number.	Address.	Age.	Sex.	Disease.	Date of Notification of Removal.	Date of Return.	Result of Examination of Throat Swab and date.
25	Q2	10	M.	S.F.	7 Sept.	2 Nov.	+ 21 Dec.
26		9	F.	S.F.	26 "	20 "	
27		4½	F.	S.F.	5 Oct.	20 "	+ 21 "
28		6	M.	S.F.	14 "	4 Dec.	+ 21 "
29		4	M.	S.F.	19 "	4 "	+ 21 "
30		5	F.	S.F.	25 "	14 "	+ 21 "
Return of 6 recovered Scarlet Fever patients from the Abingdon Isolation Hospital.							
31	Q2	43	F.	D.	20 Dec.	13 Jan.	+ 21 Dec.
32	X2	16	F.	D.	3 Jan.		
33	Q2 & X2	48	F.	D.	7 "	16 Jan.	+ 21 Dec.

Group G. (Cases 34–39).

This group is divisible into two sub-groups 34–5–6 and 37–8–9, separated in point of time by the return from hospital of case 34. All were cases of Scarlet Fever. The first three occurred within a period of approximately one month, while the latter three were notified within three days of each other and within a week of the return from hospital of case 34.

It may be argued that the two sub-groups are really one, and that the case 34 did not play the part of infector of the second sub-group. The month's interval between the sub-groups, the return home of case 34 in the third week of the interval, the subsequent prompt infection of cases 37, 38 and 39, and the finding of a nasal discharge and of septic foci on the fingers and toes of case 34, serves to confirm the opinion that cases 37, 38 and 39 were return cases.

Group H. (Cases 41–43).

Case 41 returned home from hospital on 20th November after recovery from Scarlet Fever. On 20th December, 30 days later, her two sisters (cases 42 and 43) were admitted to hospital with

Diphtheria. On clinical grounds, case 41 was suspected of infecting cases 42 and 43. She was sent back to hospital, but the Medical Officer was unable to detect any signs of infectivity and sent her home again after 2 days' detention.

Group I. (Cases 44-53).

Case 44 was removed to hospital suffering from Scarlet Fever on 28th September, and was discharged on 14th November. On 4th January his mother (case 51) was notified as a case of Diphtheria, and on 6th January a swab from the throat of case 44 contained Klebs-Loeffler Bacilli.

Cases 45, 46 and 47, also of Scarlet Fever, were removed to hospital between 27th October and 2nd November. The return of cases 45 and 46 from hospital was followed within 24 days by the notification as cases of Diphtheria of their brothers, cases 48 and 49. At this time a swab from the throat of case 46 contained Klebs-Loeffler Bacilli.

Case 50 (the brother of case 51) and cases 52 and 53 of Diphtheria were notified within a period of 28 days of the return of cases 45 and 46, of whom they were contacts. Cases 50, 51, 52, and 53 were contacts of each other.

Group J. (Cases 54-56).

The evidence tabulated here suggests that cases 55 and 56 were return cases of Scarlet Fever infected by case 54 after her return home, where she developed middle ear disease.

Group K. (Cases 58-61).

This group appears to furnish further evidence of cross-infection. Case 58 was admitted to hospital on 3rd October with Scarlet Fever, and returned on 13th December. Within a period of 10 days and within 36 hours of each other, a sister and two brothers (cases 59-61) were notified as cases of Diphtheria. Swabs taken from the throats of cases 58, 59 and 60 on 28th December were found on examination to contain Klebs-Loeffler Bacilli. Cases 60 and 61 on admission to the isolation hospital on 28th December were found to be suffering from Scarlet Fever and Diphtheria.

Group L. (Cases 70-71).

Case 70 had Scarlet Fever, and returned from hospital on 2nd January. On 12th January her mother (case 71) was notified as a case of Diphtheria. A swab from the throat of case 70 proved negative on examination on 14th January.

SUMMARY OF EVIDENCE SET OUT.

The results of the detailed consideration of these groups do not lend themselves easily to summarisation inasmuch as the possibilities are numerous. But it shows that—

- (1) The return to a house of a recovered case of Scarlet Fever from the Abingdon Isolation Hospital was frequently

associated with the occurrence of a further case or cases in the same house.

(2) There was a number of houses in which cases of Scarlet Fever were followed after a brief interval by one or more cases of Diphtheria, the interval being punctuated by the return to the house from the Abingdon Isolation Hospital of a recovered case of Scarlet Fever.

(3) In no instance in which both Scarlet Fever and Diphtheria occurred in a house did the Diphtheria precede the Scarlet Fever.

(4) In no instance did Diphtheria occur in a house in which there had been recent Scarlet Fever until after the return to it from the Abingdon Isolation Hospital of at least one recovered case of Scarlet Fever.

The evidence here recorded cannot be regarded as direct proof of the allegation that the Abingdon Joint Hospital was responsible for many return cases of Scarlet Fever and for the introduction of Diphtheria into Ramsbury. Allegations of this kind are not susceptible of direct proof, but circumstantial evidence in favour of both contentions is very strong.

The Abingdon Isolation Hospital serves a large number of other sanitary districts, and it is important therefore to know whether there is any similar evidence forthcoming from these.

THE SANITARY DISTRICTS SERVED BY THE ABINGDON ISOLATION HOSPITAL.

The Abingdon Joint Hospital Board's Isolation Hospital serves in all 14 sanitary districts situated as shown on the map on p. 16. These are—

in Berkshire—

the Abingdon Borough	-	-	} West Berkshire Combined Sanitary Districts. Medical Officer of Health—Dr. W. Sisam.
„ „ Rural District	-	-	
„ Faringdon Rural District	-	-	
„ Wantage Urban „	-	-	
„ „ Rural „	-	-	
„ Hungerford „ „	-	-	
„ Newbury „ „	-	-	
„ Bradfield „ „	-	-	

in Oxfordshire—

the Witney Urban District	-	} North Oxfordshire Combined Sanitary Districts (Part of). Medical Officer of Health—Dr. E. Morton.
„ „ Rural „	-	

in Oxfordshire—*cont.*

the Culham Rural District	-	} South Oxfordshire Combined Sanitary Districts (Part of). Medical Officer of Health—Dr. W. H. Hill.
.. Goring " "	-	
.. Wheatley Urban "	-	

in Wiltshire—

the Ramsbury Rural ..	-	-	East Wiltshire Combined Sanitary District (Part of). Medical Officer of Health—Dr. A. H. Wilson.
-----------------------	---	---	--

INCIDENCE OF SCARLET FEVER AND OF DIPHTHERIA IN DISTRICTS, OTHER THAN THE RAMSBURY RURAL DISTRICT, SERVED BY THE ABINGDON ISOLATION HOSPITAL.

Culham Rural District.

In June, 1922, a complaint of the continued incidence of Scarlet Fever in the Culham Rural District was received by the Minister. *Inter alia*, the complainant stated: "There are specific charges of incomplete and inadequate disinfection of patients after their return from Abingdon Isolation Hospital." Dr. Wilkinson, a Medical Officer of the Ministry, visited the district, and a report also was furnished by Dr. Hill, the Medical Officer of Health. Dr. Wilkinson could find no evidence that the return of recovered patients from the Abingdon Isolation Hospital was responsible for the spread of Scarlet Fever in the Culham Rural District. This accords with Dr. Hill's report that "in no household has a fresh case developed after the return of a member of the family from the Abingdon Hospital," and "Finally, I have not been able to satisfy myself that there is any justification for the statement which I believe has been made, that the cases have been sent out of hospital too soon."

So much for the negative evidence.

Abingdon Borough and Abingdon Rural District.

In December, 1922, a not dissimilar complaint was received relating to the Borough of Abingdon. In the 23 weeks ended 2nd December there were notified in the Borough 98 cases of Scarlet Fever and 11 of Diphtheria; for the same period the figures for the Abingdon Rural District were 46 and 10 respectively. On the 20th December, the Minister wrote to the Town Clerk of Abingdon and the Clerk to the Abingdon Rural District Council asking to be furnished with reports by the Medical Officer of Health on the prevalence of Scarlet Fever and of Diphtheria in their respective districts.

Subsequently Dr. Sisam submitted the two reports asked for.* The salient points in the report relating to *Scarlet Fever* in the *Borough of Abingdon* are as follows :—

In the 15 months October, 1921–December, 1922, 294 cases were notified. In 1922 the monthly notifications were :—

January, 15; February, 1; March, 11; April, 29;
May, 21; June, 11; July, 9; August, 5; September, 14;
October, 26; November, 46; December, 32—a total of
220.

This represents an incidence of 30 cases per 1,000 of the estimated population, which Dr. Sisam remarks is very high indeed. Of the 221 cases (including one which occurred in December, 1921), 127 were primary and 94 secondary; “of the latter, 22 could be classed as return cases according to the usual rule of regarding as such any case arising in a household within 28 days after the return home from an isolation hospital of a previous case of the disease.” Suspicion fell on a certain milk supply, but this suspicion was not confirmed; and Dr. Sisam expresses the opinion that “so far as could be ascertained the disease was spread entirely by personal infection from case to case, though in only a minority of the primary cases could the source be definitely traced.” The mildness of the attack was an important factor in the spread; in many instances the patients went about as usual on the first day of illness, and in four cases the disease remained unrecognised for several weeks. Two hundred and two cases were removed to the Abingdon Isolation Hospital without delay. In his conclusion Dr. Sisam calls attention to the strain which was thrown on this hospital, where the accommodation was taxed to its utmost limit and buildings not formerly used as wards were brought into use.

The *Diphtheria* notifications in the Borough in 1922 were as follows :—In June, 1; July, 1; August, nil; September, 1; October, 6; November, 2; December, 10—a total of 21. Dr. Sisam reports that medical attendants arrange direct with the hospital for removal of their patients; that this takes place within a very short period after the diagnosis has been made and that as a rule antitoxin is first administered at the hospital. Admission to hospital, he says, is not limited to notified cases, but is extended also to suspected cases which are admitted to separate observation wards.

While there is evidence in the Abingdon Borough of an incidence in 1922 of a little over 10 per cent. of return cases of *Scarlet Fever*, there is nothing to suggest that any case of

* On 29th April, 1922, Dr. Sisam had submitted a report on an outbreak of suspected milk-borne *Scarlet Fever* in the Boar's Hill neighbourhood of the Abingdon Rural District. The evidence that the infection was milk-borne was not conclusive and correspondence ensued.

Diphtheria was attributable to a recovered case of Scarlet Fever after return from hospital.

The pertinent facts from Dr. Sisam's report on the *Abingdon Rural District* are as follows :—

There were during 1922 100 cases of *Scarlet Fever* notified, or approximately 10 per 1,000 of the estimated population. The notifications month by month were—January, 4; February 2; March, 19; April, 9; May, 8; June, 3; July 12; August, 4; September, 6; October, 10; November, 14; December, 9. The type of disease varied within wide limits as was the case in the Borough. Ninety-one patients were removed to the Abingdon Isolation Hospital and there were three return cases. Generally the spread of infection is attributed to personal contact. A reference is made to the need of additional accommodation at the Isolation Hospital " which has been much overtaxed."

Of *Diphtheria* in the Rural District, Dr. Sisam says that during the year there were 14 primary and 3 secondary cases. He adverts to his report on the alleged milk-borne outbreak of Scarlet Fever in the Boar's Hill neighbourhood in March, 1922, in which the suspicion arose that a case of Diphtheria was due to the return from the Abingdon Isolation Hospital of a recovered case of Scarlet Fever; and he cites further similar cases at Frilford, Drayton and Sutton Wick. There was one instance in which a patient was notified as suffering from Diphtheria two days after his return from the Abingdon Isolation Hospital on recovery from an attack of Scarlet Fever. Speaking of four cases at Sutton Wick, Dr. Sisam remarks that " in every case there was association with cases recently discharged from the Abingdon Isolation Hospital after Scarlet Fever." There is nothing said of the clinical condition of the supposed infecting cases.

Thus Dr. Sisam reports the existence in 1922 of 10 per cent. of return cases of Scarlet Fever in the Borough of Abingdon and of a lesser number in the Rural District. Moreover, he is satisfied that in the Rural District some of the hospital-treated cases of Scarlet Fever were responsible for the introduction of Diphtheria into the houses to which they returned.

The position, then, in the Abingdon Borough and Rural District is similar to that in Ramsbury village.

COMPARISON OF THE INCIDENCE OF SCARLET FEVER AND OF DIPHTHERIA IN THE SEVERAL GROUPS OF DISTRICTS SERVED BY THE ABINGDON ISOLATION HOSPITAL.

If the case incidence of Scarlet Fever and Diphtheria per 1,000 population in the Abingdon Joint Hospital District in 1922 be compared with that in the rest of the districts served by the

Hospital in the County of Berkshire and with those districts served in Oxfordshire and Wiltshire, the figures are as follows :—

Rates per 1,000
Population.

	Population.	Scarlet Fever.	Diphtheria.
A. Abingdon Boro. and R.D. (Abingdon Jnt. Hospital District).	17,475	18·5	2·1
B. Districts served in Co. Berks by agreement.	60,306	3·0	1·0
C. Districts served in Co. Oxon. by agreement.	26,187	3·2	1·3
D. District served in Co. Wilts by agreement (Ramsbury R.D.).	6,318	9·7	1·7
Total -	110,286		

The above Table shows that as regards Scarlet Fever the incidence of attack in the Sanitary Districts in Group A was some six times greater, and in Group D three times greater, than in Groups B and C. Are there any factors to account for the relative freedom of the districts in B and C? Inquiry in this matter was not extended to Group C, but with regard to Group B the following observations may be made.

Dr. Sisam, the Medical Officer of Health of the West Berkshire Combined Sanitary Districts, the area of which comprises 70 per cent. of the total population served by the hospital, attributes the freedom of Group B to the fact that opportunities for the introduction of infection from the isolation hospital were, in that portion of his district, cut down to a minimum by the control he exercised over the admission of Scarlet Fever patients. It is his practice elsewhere than in Abingdon Borough and the Abingdon Rural District, where, he said, the people had become habituated to hospital isolation and demanded it as a routine, to await the report of his Sanitary Inspectors in all cases of Scarlet Fever; if the patient can be nursed safely at home he is not removed to hospital. This custom differs materially from that in Abingdon Borough and the Rural Districts of Abingdon and Ramsbury, where the sending of the patient into hospital frequently precedes notification.

Apart from this difference in practice in the Joint Hospital District and in the rest of the West Berkshire Combined Districts, I know of no pertinent factor which is adducible to account for the absence of any prejudicial effect of the isolation hospital in

the rest of the combined districts as compared with the Abingdon Borough and Rural District.

The Ramsbury Rural District is precisely in the same position as the Abingdon Borough and Rural District, inasmuch as the practice as to hospital isolation is exactly similar. It would appear that this similarity of practice has been followed by similarity of effects.

THE ABINGDON ISOLATION HOSPITAL.

The Abingdon Isolation Hospital is situated some 20 miles in a straight line north-east of Ramsbury village, and is the property of the Abingdon Joint Hospital Board, of which the constituent authorities are the Abingdon Town Council and Abingdon Rural

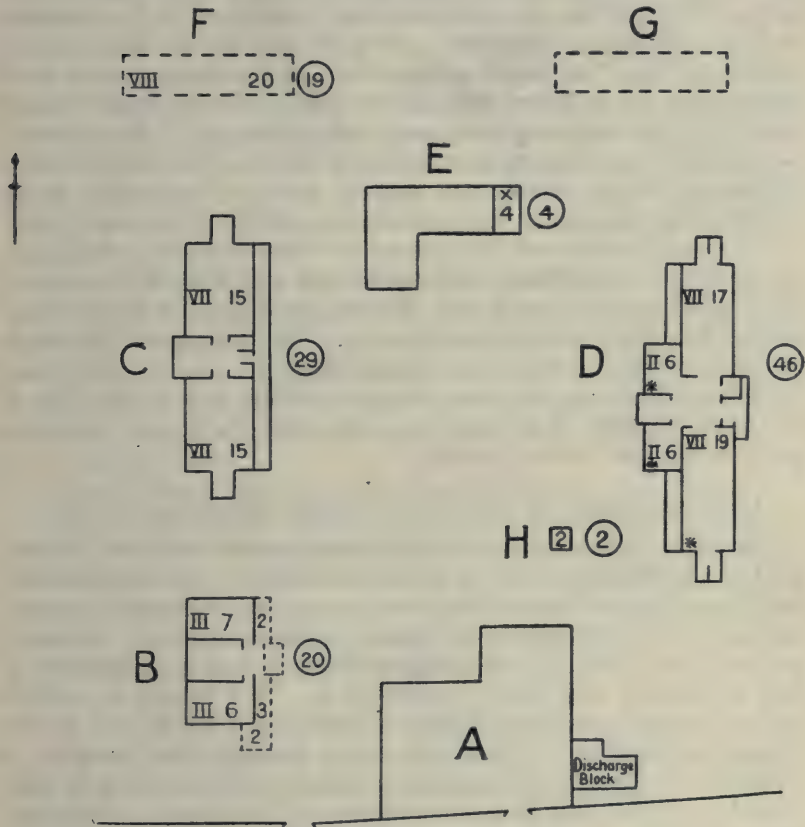
Map showing Districts from which Patients are sent to the Isolation Hospital of the Abingdon Joint Hospital Board.

The Hatched Area indicates the Joint Hospital District.



District Council. Built out of loan in 1900–1905, the hospital comprised originally (A) an administration block with a discharge block, (B) an enteric fever block, (C) a diphtheria block, (D) a scarlet fever block, (E) laundry, &c. block, all of a permanent character on a 3½ acre site in Marcham Road, Abingdon. Diagrammatically the position at the hospital may be illustrated as in the plan below, where blocks in continuous outline are of permanent and those in interrupted outline of temporary materials.

Sketch Plan of the Abingdon Isolation Hospital.



* Wards for "Dirty cases."

Dotted outlines indicate Temporary, and continuous lines, Permanent blocks.

- | | |
|-------------------------|-------------------------------------|
| A=Administrative Block. | E=Laundry. |
| B=Enteric Fever Block. | F=Army Hut (Scarlet Fever). |
| C=Diphtheria Block. | G=Army Hut (in course of erection). |
| D=Scarlet Fever Block. | H=A wooden open-air shelter. |

The Roman numerals indicate the number of beds which each ward can accommodate on a basis of 144 sq. ft. per bed. The Arabic indicate the number of beds in each ward on the 16th Jan. 1923, and the figures in circles the number of occupied beds on that date.

To take the ward blocks seriatim: (B) consists of two wards, each of which on a basis of 144 square feet per bed will accommodate 2.8 beds—a total of 6. (C) consists of two wards each for 6.5 beds—a total of 14. (D) consists of 4 wards, two for 7 beds apiece, and two for 2.3 beds apiece—a total of 18. (E) is the laundry block and attention is here called to the room of 10 feet by 16 feet 6 inches marked "X."

The total patient bed accommodation in permanent buildings is therefore 6+14+18, or 38, and the population primarily intended to be served is approximately 17,500 in the Borough and Rural District of Abingdon. But the Joint Hospital Board from about 1909 onwards made agreements with many neighbouring local authorities for the reception and treatment in the hospital of cases similar to those they themselves were in the habit of admitting from the hospital district. At the present time such agreements are in force with all the local authorities set out on pp. 11-12. No retaining fee is paid, but a charge of £2 7s. per week per case, plus the cost of conveyance, is made. The census (1921) population of the whole area served, which is estimated to be about 740 square miles, is approximately 110,000 (*see* page 15).

To meet the demand thus created on their bed accommodation, the Joint Hospital Board recently bought and erected F a second-hand wood-asbestos army hut 70 feet by 16 feet by 10 feet on a site to the north-west of the laundry. This hut, on a 144 square feet basis, will accommodate eight beds.

A second hut, G, of a very similar pattern, was at the time of my visit in course of erection in a line with the former and at a point north-east of the laundry.

OVERCROWDING OF PATIENTS IN THE HOSPITAL WARDS.

On 16th January, when I visited the hospital with Dr. Taylor, the County Medical Officer of Health of Berkshire, the accommodation, on a basis of 144 square feet per bed, was 46 beds, allocated as signified by the figures in Roman characters in the diagram, but we found that the verandah of Block B had been boarded in and a wooden hut incorporated in it. The figures in Arabic characters indicate the number of beds in the wards and on the verandah, while the figures in circles indicate the number of patients actually in the respective blocks. Thus Block B contained in all 20 beds occupied by cases of Diphtheria. Similarly Block C, instead of 14 beds, had 30, of which 29 were occupied by so-called "clean" cases of Scarlet Fever. D, instead of 18 beds all told, had 17 beds for "clean" cases of Scarlet Fever and 19+6+6 (31) beds for so-called "dirty" cases, allocated as indicated by asterisks in the plan. Of these 48 beds, 46 were occupied. F, with its standard of 8 beds, contained 20 beds, 19 of which were occupied by convalescent Scarlet Fever cases. In the room marked "X" in Block E, ordinarily a gardener's store-room, were four beds occupied by four convalescent Scarlet Fever patients. H, a wooden open-air shelter, contained two

N.B.—Throughout this report the word "beds" includes "cots."

beds similarly occupied. In all, therefore, instead of 46 beds, we found 124 beds, of which 120 were occupied.

In the nine months April–December, 1922, there were some 330 admissions from the Abingdon Borough and Rural District and the Ramsbury Rural District. This represents approximately the total number of patients which a 46-bed isolation hospital can reasonably be expected to accommodate in that time, assuming a constant demand. But the demand is inconstant and is greatest in the October–March period. I was informed that on occasion there had been as many as 138 patients in the hospital at one time.

On the day of my visit there were in Block B seven patients with 60 square feet and six patients with 70 square feet of floor space apiece, and on the closed-in verandah were other five patients with at the most 80 square feet apiece. In Block C were 15 patients with 59 square feet and 14 others with 63 square feet of floor space apiece. The floor space per patient in Block D varied from 53 to 59 square feet. In Block E were four convalescent Scarlet Fever patients occupying a room 165 feet square. In Block F the allowance per occupied bed was approximately 59 superficial square feet.

The floor space per bed varied, therefore, from 41–80, but the latter figure is excessive inasmuch as it refers to beds on an eight-foot wide verandah, the middle portion of which, amounting to one-fourth, was a common passage forming the entrance to the wards and the means of access to the sanitary annexe; if this space be deducted, then the superficial space per bed is reduced to 60 square feet.

In any event, the above figures show gross overcrowding of patients in the wards: some of the beds were not more than 2 feet apart, and it would be quite an easy matter for patients to transfer articles from one to another without any particular effort. In the circumstances not only was it not possible to admit suspected cases to separate isolation wards (*vide* Dr. Sisam), but it was impossible to isolate mixed infections.

STAFF OF THE HOSPITAL.

The Medical Officer of the hospital is Dr. H. S. Challenor, who lives in Abingdon, where he is in private practice; he attends the hospital daily.

It might pertinently be asked how the 120 patients now in the hospital are being nursed and where any additional staff is housed. The total female staff on the occasion of my visit was 35, of whom seven are definitely allocated to a 22-bed tuberculosis pavilion which occupies an adjacent site. This leaves 28, of whom nine are private nurses temporarily engaged for the isolation hospital. The Administration Block contains 15 bedrooms in which 17 of the staff sleep, six others sleep at a cottage rented by the Joint Hospital Board and managed by the matron, one lodges at a cottage at a mill in the immediate vicinity, another at a house in the town, while 10 are day workers.

PROCEDURE REGULATING THE ADMISSION OF PATIENTS.

To secure the admission of a patient the usual procedure in the Abingdon Borough and Rural District and the Ramsbury Rural District is for the notifying practitioner to telephone to the hospital asking for removal; on receipt of the message a nurse goes for the patient in a motor ambulance. She takes with her a number of blankets and usually removes the patient in these, leaving his personal clothing at home. She makes inquiries as to the co-existence of other infectious diseases in the home. Removal as a rule is effected the same day the telephone message is received. On reaching the hospital the patient is admitted to a Scarlet Fever or Diphtheria Block, as the case may be. The Medical Officer sees him in due course, and after a period of treatment in an acute ward, he is transferred to a convalescent block until such time as recovery is complete and all desquamation has ceased.

PROCEDURE ON DISCHARGE.

It is now the custom not to discharge any Scarlet Fever* or Diphtheria patient until two negative swabs from both throat and nose have been obtained. When the time for discharge arrives and the patient has been examined and passed by Dr. Challenor, the matron is stated to send a postcard to the Medical Officer of Health or Sanitary Inspector of the district to which he is about to return, giving the day of return. On the morning of that day the patient is carried in blankets to the discharge block, where his blankets are left in the "dirty" room, and he passes into the bathroom and is bathed. Hence he enters the "clean" room and is given clean night clothes or, alternatively, his own day clothes which in the meantime have been brought to the hospital. He remains in the "clean" room four hours and is given a meal there, at the end of which time he is taken home in a motor ambulance, accompanied by the matron or a nurse. Arrived at the home, whoever accompanies the patient asks the mother to ascertain whether the patient is clean and free from vermin, and if so, the mother is asked to sign a certificate to this effect. She is also given a leaflet of instructions directing that the returned child should sleep alone, and not mix with other children, for a period of 14 days. The discharge block is capable of dealing with half a dozen patients a day, each one being bathed separately with fresh hot water. I can find no instance in which it is reported that a child returned home with a nasal or aural discharge or with any skin lesion—there are instances in which these developed subsequently.

RECORD-KEEPING AND ADMINISTRATION OF THE HOSPITAL

On asking what records of the patients were kept in hospital, I was shown two books in which the condition on admission

* The Scarlet Fever patients are swabbed in order to ascertain whether or not Klebs-Loeffler Bacilli are present.

was noted by the matron. They contained entries relating to verminous conditions, rash, and so on, but these particulars had latterly ceased to be entered, the matron having been fully occupied in looking after patients. No bed cards are kept, but occasional scanty notes are made on the temperature charts. I do not think it would be possible to take the case of a given patient and trace it satisfactorily in detail from admission to discharge.

The administration of the hospital is left largely in the hands of the matron, who appears to be a capable and experienced woman, but the overcrowding of patients in the wards is so gross and the opportunities of cross-infection so numerous that I did not consider inquiry into the details of nursing arrangements necessary.

Dr. Challenor informed me that he had repeatedly reported to the Joint Hospital Board on the overcrowded state of the hospital, and had more recently refused to take in any more patients pending additional ward accommodation being built. He said he had submitted to pressure from parents who had represented to him the hardship of prolonged home isolation in the case of Scarlet Fever; he had never declined to admit a case of Diphtheria.

CO-OPERATION BETWEEN THE MEDICAL OFFICER OF HEALTH OF THE RAMSBURY RURAL DISTRICT AND THE MEDICAL OFFICER OF HEALTH OF THE HOSPITAL.

Co-operation between the Medical Officer of Health of the Ramsbury Rural District and the Medical Officer of the hospital leaves much to be desired. The former blames the latter for not answering letters, while the latter is somewhat incensed at certain reports in the press of the proceedings of the Ramsbury Rural District Council in which appeared some reflections on the hospital.

The Isolation Hospital is some 50 miles from the Medical Officer of Health's house at Salisbury, and he relies largely on postal communications. He is paid no travelling expenses, the journey by rail is difficult and wasteful of time, and the out-of-pocket expenses involved in a 100-mile motor car journey are considerable.

ACTION TAKEN BY THE RAMSBURY RURAL DISTRICT COUNCIL ON NOTIFICATION OF A CASE OF SCARLET FEVER OR DIPHTHERIA.

Following the request by a medical practitioner to the hospital for removal, the case is notified to the Sanitary Inspector, who lives at Hungerford and also acts as Surveyor to the local authority. On the receipt of the notification this officer visits the address from which the patient is notified and makes the

inquiries set out in the form annexed—Appendix B. It will be observed that these are directed more particularly to the sanitary and structural conditions of the premises, and the form is capable of considerable amendment. The result of the inquiries is subsequently submitted to the Medical Officer of Health (Dr. Wilson), whose office is at Salisbury. The Sanitary Inspector takes with him on his motor bicycle or in his private motor car a formalin spray and a formaldehyde lamp with which to disinfect the room and the clothing and bedding of the patient. I am informed that it is customary for the Sanitary Inspector if the patient has been removed to hospital to spread the clothing about the room, to spray the walls with formalin, to seal up the fireplace, doorways and other apertures and to light the formaldehyde lamp. If possible, the room is not unsealed until the following day; but at times it is necessary to open it up before this, when as long a time as practicable is allowed to elapse. On occasions the Sanitary Inspector arrives before the removal of the patient, and in these cases it is not unusual for the work of disinfection to be left in the hands of the occupier, who is duly instructed. In either event it is stated that the mother is subsequently advised to wash and scrub the floors, and to wash all bed and body linen. The Sanitary Inspector makes a second call to see that this has been done, but there is evidence to show that it is not done in every case, as is illustrated by the fact that on one occasion the nurse on taking a child home after a period of treatment in hospital found his stockings in his trousers just as he had taken them off prior to removal to hospital. The Medical Officer of Health is said to be notified by the hospital of the date when a recovered case is to go home. Some of these notifications go to him and others to the Sanitary Inspector, but the former contends that the total number of patients about whom he has received intimations falls short of the total number discharged; in any case it would appear that all the notices should go to one officer. The difficulty is largely the outcome of the fact that Salisbury, where the Medical Officer of Health lives, is some 25 miles from Ramsbury. I cannot find that the Medical Officer of Health has ever been called upon to check the accounts rendered to the Rural District Council by the Joint Hospital Board; for this purpose it would be necessary for him to have all the information relating to duration of stay in hospital.

The Medical Officer of Health paid a number of personal visits to investigate alleged return cases, but it is hardly sufficient simply to send the supposed infecting case back to hospital without an appreciation of the conditions to which he is returning. Dr. Wilson acted with promptness in the matter of recovered cases of Scarlet Fever who were found to be harbouring Klebs-Loeffler Bacilli, and several of them were removed to the Marlborough Joint Isolation Hospital until two negative swabs from both throat and nose were obtained. He had also made temporary

arrangements whereby cases of Diphtheria could be sent to the Swindon Town Council's Isolation Hospital until such time as the conditions at the Abingdon Isolation Hospital had improved.

I suggested to Dr. Wilson that—(a) a much more careful and detailed inquiry into notified cases of infectious disease was necessary as a routine; (b) the system whereby all cases of Scarlet Fever have hitherto been removed to the Abingdon Isolation Hospital at the instance of the general practitioner, and irrespective of home or hospital conditions was unsatisfactory; (c) it was probably better that notified cases of Diphtheria should, as a routine, be admitted forthwith; (d) the position at the hospital should be known to him from time to time; (e) the practice customary in the West Berkshire Combined District whereby each notified case of Scarlet Fever is investigated by the Sanitary Inspector and his report submitted to the Medical Officer of Health, who determines whether or not the patient should be removed to hospital, should be adopted; (f) no further cases of Scarlet Fever or Diphtheria should be sent to the Abingdon Isolation Hospital until such time as the bed accommodation there approximates to the Ministry's standard; (g) the arrangements he had made in the meantime with the Swindon Town Council for the reception of cases of Diphtheria into their isolation hospital should continue; (h) similar arrangements for the hospital isolation of selected cases of Scarlet Fever might also be made with the Swindon Town Council or the Marlborough Joint Hospital Board.

CONCLUSIONS.

(A) *Scarlet Fever.*

The incidence of this disease in 1922 in Ramsbury village was heavy, largely on account of the number of instances in which multiple cases occurred.

There is no evidence to show how the disease was introduced.

In spite of the prompt removal of patients to the Abingdon Isolation Hospital multiple cases in one house were common.

The return from hospital of certain recovered cases was associated with a number of return cases. There were 10 per cent. of return cases in the Borough of Abingdon and a lesser percentage (3·3) in the Abingdon Rural District.

No evidence could be deduced to show that any of the recovered cases exhibited physical signs of possible infectivity at the time of their discharge from the hospital. In some cases signs developed subsequently.

(B) *Diphtheria.*

Diphtheria was introduced into Ramsbury village by a recovered Scarlet Fever patient on his return from the Abingdon Isolation Hospital. It was reintroduced in this manner several times, and was similarly introduced into certain villages in the Abingdon Rural District. There is no evidence to suggest that any other of the sanitary districts served were thus affected.

So far as the rest of the East Berkshire Combined Sanitary District is concerned, the freedom from return cases of Scarlet Fever and from the introduction of Diphtheria from the hospital is attributed by the Medical Officer of Health to the fact that the admission to hospital of patients suffering from Scarlet Fever is restricted and hospital isolation adopted only in exceptional cases.

(c) *Abingdon Isolation Hospital.*

The Abingdon Isolation Hospital contains, on a standard of 144 square feet per bed, space for 46 beds in nine wards in four pavilions. On January 16th, 1923, there were 120 occupied beds; this represents 140 per cent. of overcrowding. There is evidence to show that the overcrowding has persisted for a considerable time.

The district served by the hospital is some 740 square miles in area, with a population of over 110,000.

The position is such that cross-infection is inevitable, and the means of dealing adequately with it entirely lacking.

There is lack of co-ordination between the Medical Officer of Health of the East Wiltshire Combined District and the Medical Officer of the Isolation Hospital.

(D) *Ramsbury Rural District—Administration.*

The routine inquiries into cases of notified infectious diseases and the manner in which these are made require amendment. The system by which all cases of Scarlet Fever and Diphtheria are removed to hospital as a matter of routine at the instance of the notifying practitioner requires revision.

I should like to acknowledge the willing assistance I received from Dr. Taylor, Dr. Sisam, Dr. Wilson and Dr. Challenor.

J. R. HUTCHINSON.

April, 1923.

APPENDIX A.

REPORT—INCIDENCE OF SCARLET FEVER AND DIPHTHERIA
IN VILLAGE OF RAMSBURY.

Group.	Number of Case.	Address.	Age.	Sex.	Disease.	Date of notification.	Date of removal.	Hospital.	Date of return home	Remarks.
A.	1 2 3	Q ₁	7	M.	S.F.	30/3	30/3	Abingdon	21/5	No clinical evidence of infectivity on discharge. Mother of cases 1 and 2.
			6	F.	"	10/6	10/6	"	2/8	
			36	F.	"	11/8	11/8	"	22/9	
	4	A	—	F.	"	21/5	21/5	"	3/7	
	5	E	14	F.	"	15/6	15/6	"	2/8	
	6	X ₁	9	M.	"	20/6	23/6	"	10/8	
	7	U	9	M.	"	1/8	2/8	"	22/9	
B.	8 9	AO	9	M.	"	10/8	10/8	"	10/10	No clinical evidence of infectivity on discharge. Swab + 3/11 admitted with S.F. and D.
			14	F.	S.F. & D.	4/11	4/11	"	Died	
C.	10 11	I ₁	8	M.	S.F.	11/8	11/8	"	30/9	No clinical evidence of infectivity on discharge. Otitis media.
			3	F.	"	6/10	6/10	"	—	
D.	12 13 14 15 16	IO	8	M.	"	11/8	11/8	"	10/10	Sent back to Hosp. 25/10 with onychia and nasal discharge. Confirmed + D. 25/10.
			6	F.	"	14/10	14/10	"	4/12	
			6	F.	"	15/10	16/10	"	2/1	
			3	F.	Diph.	20/10	20/10	"	Died	
			4	M.	"	25/10	28/10	"	20/11	
E.	17 18 19 20 21 22 23	I ₂	8	F.	S.F.	14/8	15/8	"	4/10	Sent back to Hosp. 1/11 with nasal discharge, returned 9/11.
			2 ^a ₁₃	M.	"	16/8	16/8	"	10/10	
			10	M.	"	16/8	16/8	"	4/10	
			5	M.	"	17/8	18/8	"	10/10	
			1 ^a ₁₂	F.	"	19/8	19/8	"	4/10	
			12	M.	"	19/8	19/8	"	4/10	
			11	M.	"	29/10	29/10	"	15/12	
			24	LA	22	M.	"	22/8	22/9	

Group.	Number of Case.	Address.	Age.	Sex.	Disease.	Date of notification.	Date of removal.	Hospital.	Date of return home.	Remarks.	
F.	25	Q ₂	10	M.	S.F.	7/9	7/9	Abingdon.	2/11	Throat swab + 21/12.	
	26		9	F.	"	26/9	26/9	"	20/11		
	27		4½	F.	"	5/10	5/10	"	20/11	Throat swab + 21/12.	
	28	N ₂ & Q ₂	6	M.	"	14/10	14/10	"	4/12	" "	
	29		4	M.	"	19/10	19/10	"	4/12	" "	
	30		5	F.	"	25/10	25/10	"	14/12	" "	
	31		43	F.	Diph.	20/12	20/12	"	13/1/23	" "	
	32		16	F.	"	3/1/23	3/1/23	"	—	—	
	33	48	F.	? "	7/1/23	7/1/23	M'boro	16/1/23	" "		
	G.	34	O ₁	16	F.	S.F.	15/9	15/9	Abingdon.	2/11	Returned to Hosp. 13/11 with desquamation, nasal discharge and septic foci on fingers and toes.
35		8		F.	"	17/10	17/10	"	Died 15/12		
36		11		M.	"	8/10	8/10	"	23/12		
37		13		M.	"	6/11	7/11	"	—		
38		4		F.	"	7/11	7/11	"	—		
39		2	F.	"	9/11	9/11	"	23/12			
40		Q ₃	4	F.	"	17/9	17/9	"	30/11		
H.		41	O ₂	8	F.	"	25/9	26/9	"	20/11	Infectivity suspected on clinical grounds and patient sent back to hospital 20/12.
		42		17	F.	D.	20/12	20/12	"	—	
		43		18	F.	"	20/12	20/12	"	—	
	44	CWF		7	M.	S.F.	27/9	28/9	"	14/11	Throat swab + 6/1/23.
	45	K ₁		14	M.	"	26/10	27/10	"	15/12	
46	2		F.	"	30/10	30/10	"	21/12	Throat swab + 6/1/23. Otitis media.		
I.	47	K ₁	10	F.	"	1/11	2/11	"	—		
	48		7	M.	Diph.	6/1/23	6/1/23	M'boro	—		
	49	K ₂	6	M.	"	8/1/23	—	"	—		
	50		20	M.	"	31/12	2/1/23	Abingdon.	—		
	51	CWF	30	F.	"	4/1/23	5/1/23	"	—		
	52		6	M.	"	12/1/23	12/1/23	M'boro	—		
53	KF	14	F.	"	6/1/23	—	—	—			
J.	54	Y ₁	3	F.	S.F.	1/10	2/10	Abingdon.	30/11		
	55		5	F.	"	4/12	—	"	—		
	56		1½	M.	"	21/12	21/12	"	—		
	57	I ₂	4	F.	"	2/10	2/10	"	21/12		

Group.	Number of Case.	Address.	Age.	Sex.	Disease.	Date of notification.	Date of removal.	Hospital.	Date of return home.	Remarks.	
K.	{ 58	M	8	F.	S.F.	3/10	3/10	Abingdon.	18/12	Throat swab + 29/12.	
	59		11	F.	Diph.	27/12	28/12	"	—	Throat swab + 28/12.	
	60		13	M.	D. and S.F.	27/12	28/12	"	—	Throat swab + 28/12, Scarlatiniform rash on admission.	
	61		7	M.	"	28/12	28/12	"	—	Throat swab ?+ 28/12. Scarlatiniform rash on admission.	
	62	I ₄	16	M.	S.F.	7/10	7/10	"	14/11		
	63	O ₃	23	M.	"	8/10	8/10	"	?		
	64	I ₅	10	M.	"	10/10	10/10	"	20/11		
	65	F	6	M.	"	12/10	12/10	"	—		
	{ 66	Y ₂	18	F.	"	14/10	14/10	"	15/12		
	67		15	M.	"	14/10	14/10	"	15/12		
	{ 68	X ₃	9	M.	"	26/10	27/10	"	15/12		
	69		8	F.	"	30/10	30/10	"	21/12		
L.	{ 70	P	8 ⁶ / ₁₂	F.	S.F.	12/11	15/11	"	2/1/23	Throat swab - 14/1/23.	
	71		38	F.	Diph.	12/1/23	16/1/23	Swindon	—		
		72	X ₄	18	F.	"	8/12	8/12	Abingdon.	—	
		73	I ₅	8	M.	S.F.	9/12	10/12	"	—	
		74	S	11	F.	"	22/12	—	—	—	
		75	B	11	F.	"	22/12	23/12	Abingdon.	—	
		76	L	10	M.	Diph.	28/12	24/12	"	—	
		77		7	F.	"	24/12	25/12	"	—	
		78	X ₅	13	M.	S.F.	24/12	26/12	"	—	
		79	O ₄	14	F.	Diph.	3/1/23	4/1/23	"	—	

APPENDIX B.

RURAL DISTRICT COUNCIL OF RAMSBURY.

No.....

NOTICE OF INFECTIOUS DISEASE BY SANITARY INSPECTOR.

Owner

Name of Occupier

To.....Medical Officer of Health

Nature of Illness..... By whom notified

Name of Patient..... Age.....

Residence..... No of bedrooms

No. of Children..... Male..... Female

School..... Standard..... Class.....

When last at school.....

When taken ill..... Date doctor attended.....

Closet..... Flushing..... Ventilation.....

Drains cut off..... Ventilation.....

Water.....

Milk

Last illness in family Nature of attack.....

Is washing, &c., taken in ? Other business.....

How isolated.....

Remarks

.....

.....

(Signed)

.....

PUBLIC HEALTH AND MEDICAL SUBJECTS.

The following Reports in this series have been issued by the Ministry of Health since 1920 :—

- No. 1.—The Complement Fixation Test in Syphilis, commonly known as the Wassermann Test. (Price 5s.)
- No. 2.—Incidence of Notifiable Infectious Diseases in each Sanitary District in England and Wales during the year 1919. (Price 1s. 3d.)
- No. 3.—The Progress and Diffusion of Plague, Cholera and Yellow Fever throughout the World, 1914–1917. (Price 7s. 6d.)
- No. 4.—Report on the Pandemic of Influenza, 1918–1919. (Price 10s.)
- No. 5.—Dr. A. A. Jubb's Report to the Ministry of Health on the Occurrence of Gastro-Intestinal Illness in the Sandown Urban District, Isle of Wight. (Price 6d.)
- No. 6.—Incidence of Notifiable Infectious Diseases in each Sanitary District in England and Wales during the year 1920. (Price 2s.)
- No. 7.—Report on the Causation of Foetal Deaths. (Price 10s.)
- No. 8.—Small-pox and Vaccination. (Price 3d.)
- No. 9.—Diet in Relation to Normal Nutrition. (Price 3d.)
- No. 10.—Report on Diphtheria. (Price 9d.)
- No. 11.—Report on Encephalitis Lethargica. (Price 10s.)
- No. 12.—Dr. W. V. Shaw's Report on an Outbreak of Enteric Fever at Bolton-upon-Dearne. (Price 2s.)
- No. 13.—Bacteriological Studies on the Pneumococcus. (Price 2s. 6d.)
- No. 14.—Dr. T. W. Wade's Report to the Welsh Board of Health on the occurrence of Bacillary Dysentery in the Ogmore and Garw Urban District in Glamorgan. (Price 1s.)
- No. 15.—Dr. Janet Campbell's Notes on the Teaching of Obstetrics and Gynæcology in Medical Schools. (Price 1s. 3d.)
- No. 17.—Notes on the Pasteurisation of Milk, by Dr. J. Hamill. (In press.)
- No. 18.—Bacteriological Studies on the Pneumococcus, by Dr. A. Eastwood and Dr. F. Griffith. (In press.)
- No. 19.—The Use of Hydrocyanic Acid for Fumigation Purposes. (In press.)
- No. 20.—Report on an Outbreak of Dysentery in Lynton, Devon, by G. C. Hancock, C.B.E. (In press.)

Copies of the above-named publications can be purchased through any bookseller, or directly from H.M. Stationery Office, or at the following addresses: Imperial House, Kingsway, London, W.C.2; 28, Abingdon Street, London, S.W.1; York Street, Manchester; 1, St. Andrew's Crescent, Cardiff; 120, George Street, Edinburgh.

LONDON:
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

To be purchased through any Bookseller or directly from
H.M. STATIONERY OFFICE at the following addresses:
IMPERIAL HOUSE, KINGSWAY, LONDON, W.C. 2, and 28, ABINGDON STREET, LONDON, S.W. 1;
YORK STREET, MANCHESTER; 1, ST. ANDREW'S CRESCENT, CARDIFF;
or 120, GEORGE STREET, EDINBURGH.

1923.

Price 9d. Net.

RC
182
S2H8

Hutchinson, J R
 Report on the incidence
of scarlet fever

Biological
& Medical

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

