Report of the Commissioners in Lunacy to the Lord Chancellor : 67th part 1, 1912

LUNACY.

COPY

OF THE

SIXTY-SEVENTH REPORT

OF THE

COMMISSIONERS IN LUNACY

TO

THE LORD CHANCELLOR.

PART I.

(Presented pursuant to Act of Parliament.)

Ordered, by The House of Commons, *to be Printed,*
30 *June* 1913.

LONDON:
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

To be purchased, either directly or through any Bookseller, from
WYMAN AND SONS, LTD., FETTER LANE, E.C., and 32, ABINGDON STREET, S.W.,
and 54, ST. MARY STREET, CARDIFF; or
H.M. STATIONERY OFFICE, (SCOTTISH BRANCH), 23, FORTH STREET, EDINBURGH; or
E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN;
or from the Agencies in the British Colonies and Dependencies,
the United States of America, the Continent of Europe and Abroad of
T. FISHER UNWIN, LONDON, W.C.

PRINTED BY
EYRE AND SPOTTISWOODE, LTD., EAST HARDING STREET, E.C.,
PRINTERS TO THE KING'S MOST EXCELLENT MAJESTY.

1913.

182 *Price One Shilling.*

LUNACY.

COPY

OF THE

SIXTY-SEVENTH REPORT

OF THE

COMMISSIONERS IN LUNACY

TO

THE LORD CHANCELLOR.

PART I.

(Presented pursuant to Act of Parliament.)

Ordered, by The House of Commons, *to be Printed*,
30 *June* 1913.

LONDON:
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.
To be purchased, either directly or through any Bookseller, from
WYMAN AND SONS, LTD., FETTER LANE, E.C., and 32, ABINGDON STREET, S.W.,
and 54, ST. MARY STREET, CARDIFF; or
H.M. STATIONERY OFFICE (SCOTTISH BRANCH), 23, FORTH STREET, EDINBURGH; or
E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN;
or from the Agencies in the British Colonies and Dependencies,
the United States of America, the Continent of Europe and Abroad of
T. FISHER UNWIN, LONDON, W.C.

PRINTED BY
EYRE AND SPOTTISWOODE, LTD., EAST HARDING STREET, E.C.,
PRINTERS TO THE KING'S MOST EXCELLENT MAJESTY.

1913.

182 *Price One Shilling.*

PART I.

CONTENTS.

REPORT.

E (3)0.18 1250 7/13 E & S

PART I.

CONTENTS.

REPORT.

E (3)0.18 1250 7/13 E & S

SUPPLEMENT TO REPORT.

BOARD OF COMMISSIONERS IN LUNACY.

THE RIGHT HONOURABLE THE EARL WALDEGRAVE, *Chairman.*

SIR EDWARD STANLEY HOPE, K.C.B.

HENRY DAVID GREENE, ESQ., K.C.

CHARLES HENRY ROBERTS, ESQ., M.P.

Medical.	*Legal.*
FREDERICK NEEDHAM, ESQ., M.D.	LIONEL L. SHADWELL, ESQ.
E. MARRIOTT COOKE, ESQ., M.B.	ARTHUR HILL TREVOR, ESQ.
SIDNEY COUPLAND, ESQ., M.D.	S. J. FRASER MACLEOD, ESQ., K.C.
C. HUBERT BOND, ESQ., M.D.	BARNARD T. HODGSON, ESQ.

Secretary.—OSWALD EDEN DICKINSON, ESQ.

THE

SIXTY-SEVENTH REPORT

OF THE

COMMISSIONERS IN LUNACY,

1913.

TO THE RIGHT HONOURABLE THE LORD HIGH CHANCELLOR.

My Lord,

On the 1st of January 1913 the number of notified insane persons under care in England and Wales was 138,377, a number exceeding that recorded on the 1st January 1912 by 2,716.

This increase for the year 1912 contrasts with that of 2,504 for 1911, of 2,604 for 1910, of 1,766 for 1909, and of 2,703 for 1908. The average annual increase for the ten years ending 31st December 1912 was 2,441, and that for the five years ending on the same date 2,459.

The increase for the year 1912 was, therefore, 275 above that of the annual average of the decennium, and 257 above that for the quinquennial period. It was 212 above that for 1911.

[It may be pointed out that the figures for 1912 show an increase of 2·0 per cent. on those for 1911, which is almost the same as the average annual percentage increase during the past 10 years.]

The returns show that, as compared with those of last year, the number of inmates in the Metropolitan Licensed Houses are fewer by 11, and of those in the Naval and Military Hospitals by 4. With these exceptions the figures give an increase in all groups, namely, of 2,412 in the County and Borough Asylums, of 41 in Registered Hospitals, of 53 in the Provincial Licensed Houses, and of 35 in the State Criminal Asylums at Broadmoor, Parkhurst and Rampton. The numbers under care in ordinary Workhouses have increased by 167, and in the Metropolitan District Asylums by 1. The private single patients increased by 19, and those in receipt of poor-law relief in the care of friends by 3.

The percentage increase over the figures of last year was, therefore, for Asylums, 2·4; Registered Hospitals, 0·9; Provincial Licensed Houses, 3·1; Criminal Asylums, 3·9; ordinary

Workhouses, 1·4; and for Single Patients, 3·0. The increase of the number under care in the Provincial Licensed Houses is entirely due to the boarding-out of pauper insane in Fisherton House, Salisbury, where there was an increase of 62 such cases. The number of insane out-door paupers is now almost stationary, contrasting with the decline noted of late years and ascribed to the operation of the Old-Age Pensions Act, which may, therefore, now be assumed to have exercised its full effect in this respect.

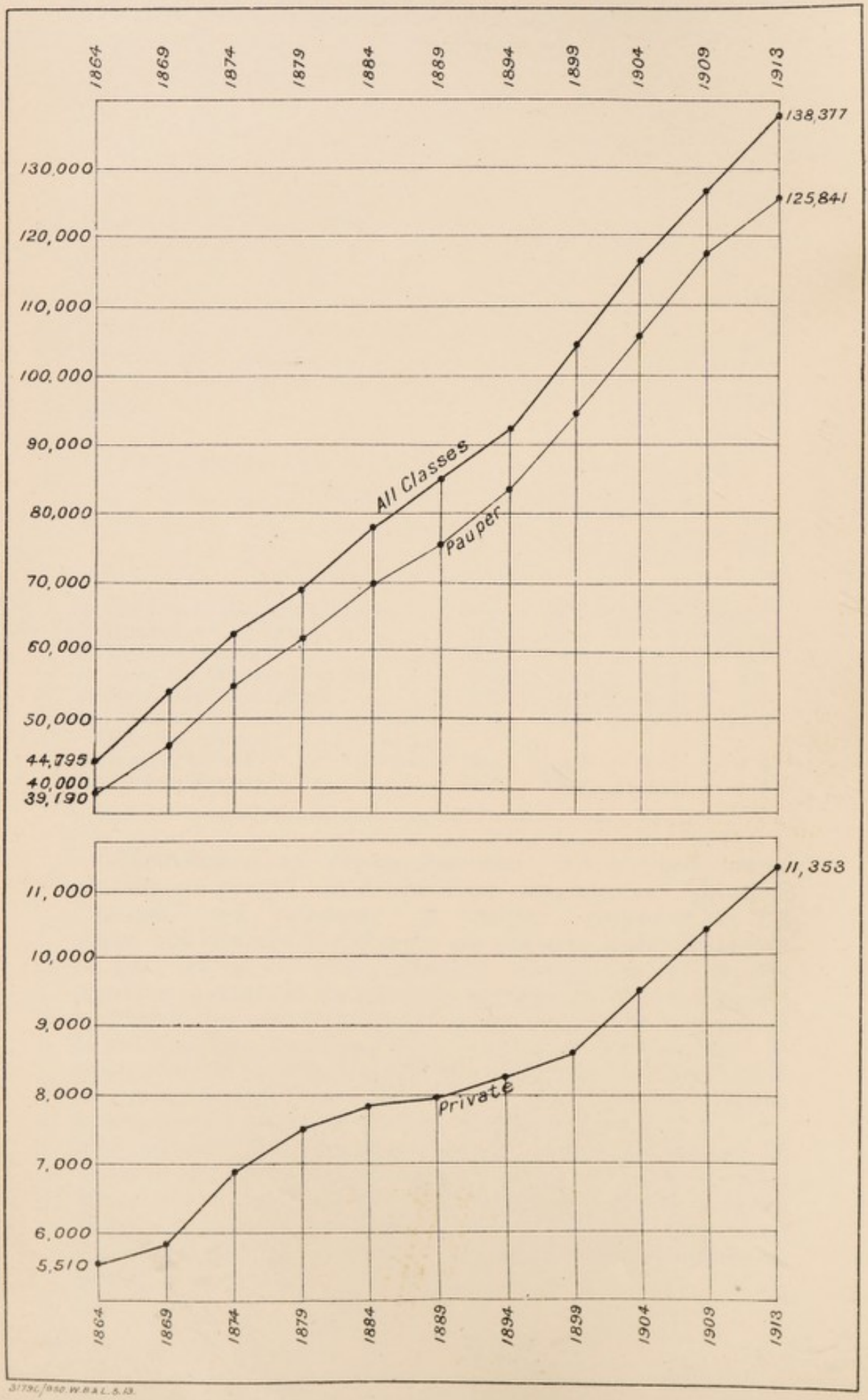
The appended summary shows the distribution of the insane under care on the 1st January 1913. The proportionate distribution is almost the same as that which obtained last year; but as will be seen from the table given below there has been a considerable variation during the past 30 years, mainly in the relative rise in the numbers of pauper insane maintained in the County and Borough Asylums, with a corresponding fall in that of those detained in Workhouses or cared for in their own homes.

Proportion per cent. of Total Number of Notified Insane under care on 1st January.

——	1883.	1893.	1903.	1913.
In County and Borough Asylums -	57·4	64·0	72·0	75·0
In Registered Hospitals - - -	3·9	4·4	3·8	3·4
In Licensed Houses - - -	6·2	4·9	3·2	2·5
In Naval and Military Hospitals -	0·4	0·3	0·2	0·1
In State Criminal Asylums - -	0·7	0·7	0·6	0·7
In Workhouses and Metropolitan District Asylums.	22·6	18·8	15·0	13·9
As Single Patients - - - -	0·6	0·5	0·4	0·5
As Outdoor Paupers - - -	8·2	6·4	4·8	3·9

Classification of Insane Patients. — All certified insane persons are ranged under the three categories of "private," "pauper," and "criminal." A "pauper" patient is one for whose maintenance the charges are defrayed, either wholly or in part, out of the rates. Many so classed are not, strictly speaking, paupers in the generally accepted sense, and a certain number of them are actually maintained by relatives, who refund to the Poor Law Guardians the whole cost of maintenance. In some districts (notably London) it is customary to class such a case as a "private" one; but the more usual practice is for the charge for a private patient in a County or Borough Asylum to be fixed at a rate higher than the bare cost of maintenance, in order to include therein the interest on capital sums expended in the erection and upkeep of the building. It may be noted that there are annually transferred to the "private" class about ·2 per cent. of those who have been admitted into Asylums as paupers.

CHART Nº 1:- SHOWING TOTAL NUMBER OF INSANE PERSONS IN ENGLAND & WALES REPORTED TO BE UNDER CARE ON THE 1ST JANUARY IN EACH YEAR SPECIFIED; & OF THOSE IN THE PAUPER & PRIVATE CLASSES RESPECTIVELY.



3179C/850.W.B.&L.5.13.

Summary of Insane Patients, 1st January 1913.

Where Maintained on 1st January 1913.	Private.			Pauper.			Criminal.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
In County and Borough Asylums - -	1,472	2,288	3,760	46,613	53,220	99,833	202	47	249	48,287	55,555	103,842
In Registered Hospitals (including Idiot Establishments).	1,899	1,970	3,869	507	252	759	—	—	—	2,406	2,222	4,628
In Licensed Houses:—												
Metropolitan (including an Idiot Establishment).	638	944	1,582	26	64	90	—	—	—	664	1,008	1,672
Provincial (including three Idiot Establishments).	455	858	1,313	214	262	476	—	—	—	669	1,120	1,789
In Naval and Military Hospitals - -	170	—	170	—	—	—	—	—	—	170	—	170
In Criminal Lunatic Asylums - - -	—	—	—	1	—	1	701	233	934	702	233	935
In Workhouses:—												
Ordinary Workhouses - - - -	—	—	—	5,465	6,593	12,058	—	—	—	5,465	6,593	12,058
Metropolitan District Asylums - -	—	—	—	3,567	3,705	7,272	—	—	—	3,567	3,705	7,272
Private Single Patients - - - -	218	441	659	—	—	—	—	—	—	218	441	659
Outdoor Paupers - - - - - -	—	—	—	2,115	3,237	5,352	—	—	—	2,115	3,237	5,352
Total - - - - -	4,852	6,501	11,353	58,508	67,333	125,841 (*a*)	903	280	1,183	64,263	74,114	138,377

(*a*) One hundred and one of these patients were boarded out from Asylums in Workhouses under the provisions of the Lunacy Act, 1890, s. 26. *See* Appendix B., Table VI.

The *private* patients under care on the 1st January 1913 numbered 11,353 (males 4,852, females 6,501), an increase on the figures of the preceding year of 217, or nearly 2 per cent. This increase was 14 in excess of the average for the past 10 years, but 31 below that of the five years 1908–13.

The patients in the Naval and Military Hospitals (Yarmouth 159, Netley 11) are included under this head, as also are persons found lunatic by inquisition. But there are 77 males and 66 females of the latter category who do not fall within the scope of our statistics.

The distribution of the private patients and their relative proportions during the past 30 years are as follows :—

Private Patients.—Proportion per cent. under care on 1st January.

——	1883.	1893.	1903.	1913.
In County and Borough Asylums -	8·5	12·1	21·1	33·1
In Registered Hospitals - - -	37·3	43·1	40·0	34·1
In Licensed Houses - - -	44·2	36·6	31·2	25·5
In Naval and Military Hospitals -	4·2	2·9	2·5	1·5
As Single Patients - - - -	5·8	5·3	5·2	5·8

So that whereas in 1883 less than one-tenth of all private patients were in the public Asylums, and more than four-fifths in Registered Hospitals and Licensed Houses, the proportion now in the former institutions is nearly one-third, and in the latter about three-fifths.

The increase over last year's figures of the numbers of such patients in County and Borough Asylums was 176, or 4·9 per cent., which was lower than the rate in 1911–12. The number in Registered Hospitals increased by 36, or 0·9 per cent., whilst the Licensed Houses contained 10 patients less than last year, a decrease of 0·3 per cent. The patients in single care increased by 19, or 3·0 per cent.

It may be noted that the males in this class increased by 36 and the females by 181—the rate of increase being 0·75 per cent. for the former and 2·86 per cent. for the latter. The proportion per 1,000 persons of 427·4 males and 572·6 females shows an advance in the latter beyond the figures of the past two years.

The *pauper* patients under care on 1st January 1913 amounted to 125,841 (males 58,508, females 67,333), or 90·9 per cent. of all the reported insane. This number is 2,441 in excess of that of last year, or 236 in excess of the mean annual increase of the past 10 years. It is 213 above the increase for 1911, and 271 above the annual average increase for the five years 1908–13.

The following table exhibits the distribution of this class during the past 30 years:—

Pauper Patients.—Proportion per cent. under care on 1st January.

——	1883.	1893.	1903.	1913.
In County and Borough Asylums -	63·2	69·8	77·0	79·3
In Registered Hospitals - - -	0·2	0·5	0·5	0·6
In Licensed Houses - - -	1·9	1·8	0·7	0·4
In Workhouses - - - -	17·9	13·4	10·9	9·6
In Metropolitan District Asylums -	7·7	7·4	5·6	5·8
As Outdoor Paupers - - -	9·1	7·1	5·3	4·3

Although there is, thus, evidence of the tendency for a growing proportion of the pauper insane to be received into Asylums, this has not proceeded to as marked an extent in the third as in the two preceding decades of this period.

As compared with the numbers of last year, the increase of this class in County and Borough Asylums has been 2·3 per cent., or 0·8 per cent. more than the increase for 1911. Those maintained in Registered Hospitals increased by 0·8 per cent., whilst those in Licensed Houses increased by 10·1 per cent., due, as was the case last year, entirely to the increase in the numbers boarded out at Fisherton House, to which reference has already been made. In ordinary Workhouses they increased by 1·4 per cent., whilst in the Metropolitan District Asylums the numbers under care were practically unchanged. The out-door paupers were only increased by 3, being less than 0·1 per cent.

The rate of increase for the whole number of pauper patients was very slightly above that for private patients. The increase amongst the male sex was 1·8 per cent., as compared with a female increase of 2·1 per cent.—the relative percentage increases in the two sexes being the reverse of that obtaining in the previous year.

The proportion of males to females (pauper) under care on 1st January 1913 was 464·9 : 535·1, which gives a much higher figure for the male sex than obtained amongst private patients.

The *criminal* patients (males 903, females 280) numbered 1,183 on the 1st January 1913, or 46 more males and 12 more females than 12 months previously, the males having increased by 5·4 per cent. and the females by 4·5 per cent. Of the whole number, 249 or 21·0 per cent. were under care in County and Borough Asylums. We trust that now the second State Criminal Asylum at Rampton has been opened it will be found possible to relieve county authorities of the responsibility of finding accommodation for cases of this class.

Statistics of the Pauper Insane in Counties and Boroughs.

Increase or Decrease in 1912.—From returns made to us by the clerks to the guardians, we are enabled to collate the numbers of the insane (pauper) in the various unions and parishes of the administrative counties and boroughs and to compare those assigned on the 1st January 1912 with those of the 1st January 1913. From the figures thus obtained it would appear that during the year 1912 there was a net increase of 2,430 over the whole of England and Wales, whereas in the preceding year the increase was 2,181. In that year, owing to some important extensions of borough boundaries, the net increase in the counties (excluding London) was only 145, whilst that in the county boroughs was 1,430. In 1912 the changes caused by the absorption of county areas by boroughs were of far smaller extent, so that we have to record for this year an increase in the counties amounting to 1,117, and in county boroughs to 785.

In the county of London an increase of 472 in 1911 was followed by one of 488 in 1912, and excluding these figures we find that whereas in 1911 there were 37 *administrative counties* with a total increase of the pauper insane of 983, in 1912 there were 46 with an increase of 1,306; and whilst in 1911 there were 22 with a decrease amounting to 838, in 1912 there were only 10 in which there was such decrease, totalling 189. Moreover, in the former year the numbers showed neither increase nor decrease in three counties, in the latter there were six having this condition. [It should be noted that in 1911 the return for the newly created county borough of Eastbourne was reckoned in the county total in order to afford comparison with that of the previous year.]

Further analysis shows that—

(*a*) Of the 37 counties which in 1911 showed an increase over the figures of the preceding year of 983, there were 27 which also yielded an increase in 1912 amounting to 999, the extent of the increase being greater in 1912 than in 1911 in 17 counties (631 as against 241), notably Kent, Derby, Surrey, Yorks, W.R., Suffolk, E., and Herts. The most striking instance is afforded by the county of Kent, where a total increase of 13 in 1911 was followed by one of 169 in 1912. All but five of the 26 unions in the county contributed to the amount, the largest contributors being those of Medway, Maidstone, and Tonbridge. It is also interesting to note that whereas the male pauper insane increased by 45, the females increased by 124. Further, that whilst on 1st January 1908 the total number of pauper insane in the county was returned as 2,841, and in 1912 as 2,914, the figure in 1913 was 3,083; and the number of pauper inmates in

the two County Asylums increased during 1912 by 134. In nine counties the total increase for 1912 was lower than that for 1911 (356 : 490), the decline being marked in Middlesex (156 : 108) and Essex (130 : 101), counties where the rate of pauper insanity is comparatively high. In one county, the Lindsey division of Lincolnshire, the increase for 1912 was the same as that for 1911, namely, 12.

(*b*) In 8 counties an increase of 129 in 1911 was followed by a decrease of 66 in 1912, notably in Bucks, Cornwall, Northumberland, and Cambridge, a portion of the last-named county being taken into the borough during the year.

(*c*) On the other hand, in 17 counties a decrease amounting to 709 in 1911, was followed by an increase of 287 in 1912, the chief contributions to the latter being made by Norfolk, Somerset, and Oxford.

(*d*) Of the 5 counties which yielded an aggregate decrease of 129 in 1911 there were 2 (Warwick, Devon) which show a decrease in 1912 amounting to 123, owing mainly to an omission last year by a clerk to the guardians of a union in the county of Warwick to transfer to the extended borough of Birmingham the whole of the cases affected by the change in area. The other 3 counties in this group (Radnor, Salop, Westmorland) had neither increase nor decrease in 1912.

(*e*) Two counties (Chester and Suffolk, W.), which gave an increase of 111 in 1911, had neither increase nor decrease in 1912, whilst, *per contra*, there were 2 (Cumberland and Berks) which, having neither increase nor decrease in 1911, gave an increase of 20 in 1912. Lastly, there was no change in 1912 on the number of insane (2) returned as pertaining to the Isles of Scilly.

With the exception of Eastbourne, which until 1911 had been included in the county, the *county boroughs* yielded in 1912 a net increase in the number of their pauper insane of 772 (or 785, if Eastbourne be included) as compared with 1,430 in 1911. This results from the fact that whereas in 1911 there were 50 boroughs with a total increase of 1,682, and 20 with a decrease of 252, in 1912 there were 48 with an increase of 1,036, and 22 with a decrease of 264. In each year there were 4 boroughs without decrease or increase.

(*a*) In 31 boroughs the increase took place in both years, being much greater in 1911 than in 1912 (1,397 : 823). This increase was higher in 1912 than in 1911 in 15 boroughs (223 : 436), especially in West Ham, Northampton, Walsall, and Wigan; and lower in 15

(1,173 : 386), the most marked instances being those of Leeds (87 : 14), Liverpool (81 : 8), and Manchester (52 : 36). In the borough of Merthyr Tydvil the numbers increased by 1 in each year.

(*b*) In 15 boroughs where there had been an increase of 264 in 1911, there was a total decrease of 156 in 1912, the most striking being Nottingham (+ 23 : − 38), Bradford (+ 49 : − 6), Salford (+ 27 : − 5), and Burton (+ 28 : − 13). The borough of Bath, which, owing to the extension of its boundaries, had an increase of 79 in 1911, showed a decrease of 1 in 1912.

(*c*) In 13 boroughs with a decrease of 116 in 1911, there was an increase of 182 in 1912, the chief being Huddersfield, Plymouth, and Exeter.

(*d*) In 7 boroughs having a decrease of 136 in 1911, there was also a decrease of 108 in 1912. Brighton, West Bromwich, and Cardiff fall into this category.

(*e*) In the 4 boroughs which in 1911 showed neither an increase nor decrease (Worcester, Swansea, Burnley, Middlesbrough) there was an increase of 31 in 1912; whilst in 4 (Bournemouth, Chester, Oxford, York), with an aggregate increase of 21 in 1911, there was neither increase nor decrease in 1912.

Of the 19 boroughs named in Schedule IV. of the Lunacy Act, 1890, there were 10 which yielded an increase of 82 in 1912, this figure being mainly attained by the extension of Cambridge, so that this borough had an increase of its insane paupers of 50, as compared with a decrease of 6 in the previous year. There were 9 boroughs with a decrease amounting to 42, so that the net increase for the year (1912) was 40, which contrasts with one of 3 for 1911.

From this summary it will appear that the total net increase for each of the two years has been thus distributed—the figures for Eastbourne being included in the counties in 1911 and in the county boroughs in 1912 :—

	Counties.	County Boroughs.	Scheduled Boroughs.
1911 - -	748	1,430	3
1912 - -	1,605	785	40

The variations in the number of the insane for whom provision has to be made from year to year in counties and boroughs afford less satisfactory information for the purposes of comparison than when a longer period is taken. This is afforded by Table XI. in which the average annual percentage rate of increase during the 5 years—1908 to 1913—is given, by contrasting in each instance the numerical return of these two years. Such a comparison is necessarily limited to those counties and boroughs of which the areas have remained unchanged throughout the period; and as there happen to have

CHART No. 4. *Comparative Distribution of the Pauper Insane (both sexes), 1911.*

(see 66th Report. Appendix A. Table IIa).

Ordnance Survey, Southampton, 1913.

Less than 2·5 per 1000 of Population.

From 2·5 to 3 ,, ,, ,,

,, 3 to 3·5 ,, ,, ,,

,, 3·5 to 4 ,, ,, ,,

More than 4 ,, ,, ,,

been several such alterations of recent years—the list is by no means complete. The calculations show that the annual average increase of the pauper insane between 1st January 1908 and 1st January 1912 has been—for the counties 1·5, for the county boroughs 2·8, and for the scheduled boroughs 1·0.

These average rates have been most markedly exceeded, as regards the counties, in Middlesex (4·9), Durham (3·9), Herts (3·9), Surrey (3·7), Derby (3·5), and Soke of Peterborough (3·0); and as regards the county boroughs, by Canterbury (6·7), Bournemouth (6·4), Coventry (6·1), St. Helens (5·8), Gateshead (5·7), Hastings (5·6), and Smethwick (5·3).

Distribution of Pauper Insane in Counties of England and Wales in the Census Year, 1911.

In our Sixty-sixth Report last year we were enabled to publish a table (Appendix A IIA), based on the returns of the Census 1911, giving for that year the ratios of the pauper insane to the population in the various administrative areas of England and Wales; and a brief reference was made to the facts thus collected.

In further development of this subject we have endeavoured to ascertain the relative incidence of insanity in each county by including therein the figures pertaining to its boroughs. We are thus enabled to obtain a comparison of the existing amount of pauper lunacy in the various counties, which, excluding London, ranged from a ratio of 2·0 per 1,000 of population in the county of Durham to 5·6 per 1,000 in the county of Hereford. It may be stated that these ratios do not embrace the whole of the insane community known to us, as, for obvious reasons, it has not been possible to allocate the class of private patients to their respective counties; but as this class does not amount to more than 8 per cent. of the total notified insane, its exclusion may probably not much affect the general result.

A map (Chart 4) has been drawn to illustrate the results of these calculations, and it shows the relative position of each county in respect to the proportion borne by its pauper insane on 1st January 1911 to the whole population of the county as ascertained by the Census taken three months later. This map may be usefully compared with a similar one in our Fifty-ninth Report (Map 2) which was based on the returns of the 1901 Census. In the country as a whole the ratio of pauper insane per 1,000 of population has risen from 3·0 in 1901 to 3·4 in 1911, and, generally speaking, an analogous difference appears in the figures yielded by the constituent counties. In London (county and city) the respective ratios were 4·8 and 6·0; but in certain counties the variation between the 1901 and 1911 rates has been more marked, either in the direction of increase or of diminution. The appended table sets forth these ratios, the counties being ranged in the order of their growth (or decline) in population during the intercensal period.

Counties with the Associated County Boroughs.	Increase (+) or Decrease (−) per Cent. in Intercensal Period, 1901 to 1911.		Pauper Insane. Ratio per 1,000 of Population.		Increase or Decrease (per 10,000 of the Mean Population) of the Pauper Insane during the 10 Years, 1901-1911. (*V.* Chart 5.)
	General Population.	Pauper Insane.	1901.	1911. (*V.* Chart 4.)	
England and Wales -	+10·9	+23·3	3·0	3·4	+ 6·7
London (Co. and City)	− 0·3	+25·1	4·8	6·0	+12·1
Middlesex - -	+42·1	+68·1	2·2	2·6	+12·2
Monmouth - -	+32·8	+29·3	3·0	2·9	+ 7·6
Glamorgan - -	+30·3	+36·6	2·5	2·6	+ 7·9
Surrey - - -	+29·4	+52·4	2·4	2·8	+11·0
Essex - - -	+24·6	+50·6	2·4	2·9	+10·9
Herts - - -	+20·4	+42·7	3·0	3·6	+11·7
Hants - - -	+18·9	+23·4	3·3	3·4	+ 7·0
Carmarthen - -	+18·5	+ 3·5	3·3	2·9	+ 1·1
Notts - - -	+17·4	+13·6	3·0	2·9	+ 3·8
Worcestershire -	+16·2	+20·0	3·1	3·2	+ 5·7
Northumberland -	+15·5	+21·2	2·3	2·4	+ 4·6
Durham - - -	+15·4	+32·6	1·8	2·0	+ 5·3
Cheshire - - -	+14·2	+27·0	2·6	2·9	+ 6·6
Derbyshire - -	+14·0	+29·1	1·8	2·1	+ 5·1
Flintshire - -	+13·8	+ 4·6	2·7	2·5	+ 1·1
Beds - - -	+13·3	+ 9·9	3·3	3·2	+ 3·1
Lincolnshire - -	+12·8	+20·0	2·6	2·8	+ 4·9
Bucks - - -	+11·4	+17·9	3·0	3·2	+ 5·1
Yorks, E.R.* - -	+11·3	+20·7	2·5	2·7	+ 5·3
Yorks, N.R. - -	+11·2	+15·3	2·3	2·4	+ 3·0
Warwickshire - -	+10·6	+12·1	2·9	3·0	+ 3·4
Dorset - - -	+10·5	+ 4·8	3·6	3·4	+ 1·6
Yorks, W.R. - -	+10·3	+28·1	2·1	2·5	+ 5·5
Sussex - - -	+10·1	+35·6	3·3	4·0	+11·1
Denbighshire - -	+10·0	+11·9	2·4	2·4	+ 2·7
Brecon - - -	+ 9·4	−15·0	3·8	3·0	− 5·5
Staffs - - -	+ 9·0	+20·2	2·4	2·7	+ 4·7
Lancashire - -	+ 8·9	+19·4	2·8	3·0	+ 5·1
Leicestershire - -	+ 8·9	+18·7	2·9	3·1	+ 5·1
Kent - - -	+ 8·8	+23·6	2·6	3·0	+ 6·0
Berks - - -	+ 7·3	+12·9	3·1	3·3	+ 3·9
Cambridgeshire -	+ 7·2	+ 2·9	3·6	3·4	+ 1·0
Oxfordshire - -	+ 6·9	+14·7	3·7	4·0	+ 5·3
Devon - - -	+ 5·7	+21·3	3·5	4·0	+ 7·2
Wilts - - -	+ 5·7	+ 7·5	4·1	4·2	+ 3·0
Suffolk - - -	+ 5·5	+16·9	3·0	3·3	+ 5·0
Somerset - -	+ 5·3	+13·0	3·7	4·0	+ 4·7
Norfolk - - -	+ 4·7	+14·9	3·6	3·9	+ 5·2
Gloucestershire -	+ 3·9	+11·0	3·6	3·9	+ 4·0
Northamptonshire -	+ 3·8	+21·8	2·8	3·3	+ 6·1
Rutland - - -	+ 3·2	+19·2	2·6	3·0	+ 5·0
Hunts - - -	+ 2·7	+16·3	2·7	3·1	+ 4·4
Salop - - -	+ 2·7	− 5·8	3·5	3·2	− 2·0
Pembrokeshire -	+ 2·4	+ 8·9	2·8	3·0	+ 2·5

* Including York county borough.

Counties with the Associated County Boroughs.	Increase (+) or Decrease (—) per Cent. in Intercensal Period, 1901 to 1911.		Pauper Insane. Ratio per 1,000 of Population.		Increase or Decrease (per 10 000 of the Mean Population) of the Pauper Insane during the 10 Years, 1901–1911. (*V.* Chart 5.)
	General Population.	Pauper Insane.	1901.	1911. (*V.* Chart 4.)	
Cornwall - -	+ 1·8	+17·0	2·8	3·2	+ 4·7
Anglesey - -	+ 0·6	+28·0	3·0	3·8	+ 8·3
Herefordshire - -	+ 0·1	+ 8·2	5·1	5·6	+ 4·2
Cumberland - -	— 0·4	+ 9·4	2·4	2·7	+ 2·3
Carnarvonshire -	— 0·5	+21·8	2·3	2·8	+ 5·0
Westmorland - -	— 1·3	+17·9	2·5	3·0	+ 4·5
Cardiganshire - -	— 2·0	— 4·0	4·1	4·0	— 1·6
Radnor - - -	— 3·0	— 7·8	5·0	4·7	— 3·9
Montgomery - -	— 3·2	—	3·9	4·1	—
Merioneth - -	— 6·7	+16·7	2·6	3·2	+ 4·4

A scrutiny of the figures shows that, of the 54 counties (excluding London), there are 42 in which the ratio of the pauper insane per 1,000 of population was higher in 1911 than in 1901, and that in 17 of these this difference was proportionately greater than obtained for the whole country. Eleven counties exhibited a fall in the ratio, whilst in one (Denbigh) the rate is the same in the two years:—

(*a*) Of the 42 counties with a rising ratio, there were 6 in which the amount of this increase more or less closely approximated that of the general rate, viz., Hunts, Devon, and Cornwall, where this rate was exceeded, and Staffs, Cumberland, and Cheshire, where it was lower. It is instructive to note that the percentage rate of increase in population was very different in these counties. Thus in Devon it was 5·7 per cent.; in Hunts, 2·7; in Cornwall, only 1·8; and the rate of increase in the number of insane was, for Devon, 21·3; Hunts, 16·3; Cornwall, 17·0. On the other hand, the population of Cheshire increased by 14·2 per cent., and of Staffs by 9·0 per cent., whilst the number of insane in 1911 was in the former 27·0, and in the latter 20·2 per cent., above that in 1901. Lastly, in Cumberland, where the population had declined by 0·4 per cent., the insane had increased by 9·4 per cent.

(*b*) Of the 14 other counties where, in addition to the three above mentioned, the rise in the ratio was proportionately greater than that for the whole of England and Wales, there are 10 where this divergence was

very marked. The most striking instances are afforded by counties in which the population had remained practically stationary or had actually declined, such as Anglesey, Merioneth, and Carnarvon. Similar, if less extreme, disparity between the population and insane (pauper) rates of increase within the decennium is afforded in the case of Sussex, Essex, Herts, and Westmorland, the last named with a fall in population of 1·3 per cent., having an increase of insane amounting to 17·9 per cent. The West Riding of Yorkshire, Middlesex, and Northants show like divergencies, especially noticeable in the case of the populous county of Middlesex, as will be seen by reference to the table. It may be added that the low ratio of insane to population afforded by Derby County in 1901, viz., 1·8 per 1,000, was increased in 1911 to 2·1, a rise proportionately the same as that exhibited by Surrey, where the rise was from 2·4 to 2·8, whilst the population of the former county had increased by 14 per cent., and of the latter by 29·4.

(*c*) Amongst the 11 counties in which the insane ratio has diminished, it will be seen that there was a concomitant decline in population and of insane in Cardigan and Radnor; and a decrease in the number of insane in Salop and Brecon, notwithstanding a rise in their respective populations of 2·7 and 9·4 per cent. respectively. The rate of increase in the number of insane was much below that of the population in Carmarthen, Cambridge, Dorset, and Flint. In Beds the population increased by 13·3 per cent., the insane (pauper) by 9·9 per cent.; and in Notts these percentages were respectively 17·4 and 13·5. In the county of Monmouth, where in 1901 the ratio of insane to population was 3·0 per 1,000, and 2·9 in 1911, the population had grown by 32·8 per cent., and the increase of the insane was 29·3 per cent.

These examples may suffice to show that there does not appear to be any parallelism between the growth of a community and of the number of its insane; and it is also obvious that in districts where, during an intercensal period, the population has been practically stationary, or has even declined, a rise in the insane ratio at the end of the period, as compared with that at the beginning, may mean no increase in the number of the insane, or at least only an increase much below the mean. But on the other hand in such instances as are afforded here by the counties of Anglesey, Merioneth, Carnarvon, and Westmorland, the amount of insanity may be so disproportionate to the population as to indicate a real increase in its prevalence. Perhaps the most striking instance of all is afforded by London—which in respect

to this question of insanity might well be considered apart from the rest of the country—where the population was practically the same (there being an actual decrease of 0·3 per cent.) in 1911 as in 1901, whilst the number of its pauper insane had increased by 25 per cent.

Comparative Increase or Decrease in County Ratios of Insane to Population in the Intercensal Period 1901–1911.

It must be pointed out that the map (Chart 4) does not convey the whole truth regarding the prevalence of insanity in the various counties. It indicates merely the differences which obtain as respects the relative proportion of the pauper insane to the population on a certain date, without taking into consideration the fluctuations due to the very varying numbers of freshly occurring cases, which really represent the degree of lunacy in a district. To represent this accurately it would be necessary to know, for each district, the proportion to the population of those persons who, being notified insane in the course of the year, were known to be suffering from their first attack of insanity. Unfortunately we do not (except in the case of institutions) possess the requisite data for such a calculation. Nor again do we possess such information in respect to first admissions to care (which include many not attacked for the first time) as regards those received into workhouses or placed on the lists of out-door paupers.

Since, in dealing with county population, the only figures available in respect to any intercensal year are those of the preceding census, it is obvious that the proportion of fresh cases occurring in any such year would, in the case of a rising population, yield too small a ratio, whilst the converse would obtain in the case of a declining population.

In the endeavour to meet these difficulties and utilising such data as we do possess for revealing, at least approximately, what is the real amount of prevalent insanity in different parts of the kingdom, we may compare the variations exhibited by the recorded increase or decrease in the numbers of the insane under care during an intercensal period. It is hardly necessary to point out that the net increase in such numbers in any given area during one or more years represents the accumulation throughout the period—in other words the difference between the fresh admissions on the one hand and the losses from death and discharge from care on the other. We may take as a basis of comparison the mean population of each county for the intercensal period, 1901 to 1911, and estimate upon it the ratio which, during the same period, the total increase in the numbers of the pauper insane bears per 10,000 of population. These ratios are given in the foregoing table and are indicated on the annexed map (Chart 5). Such an estimation does to some extent give due weight to the variations in population, since a rising population raises the mean and a falling one necessarily

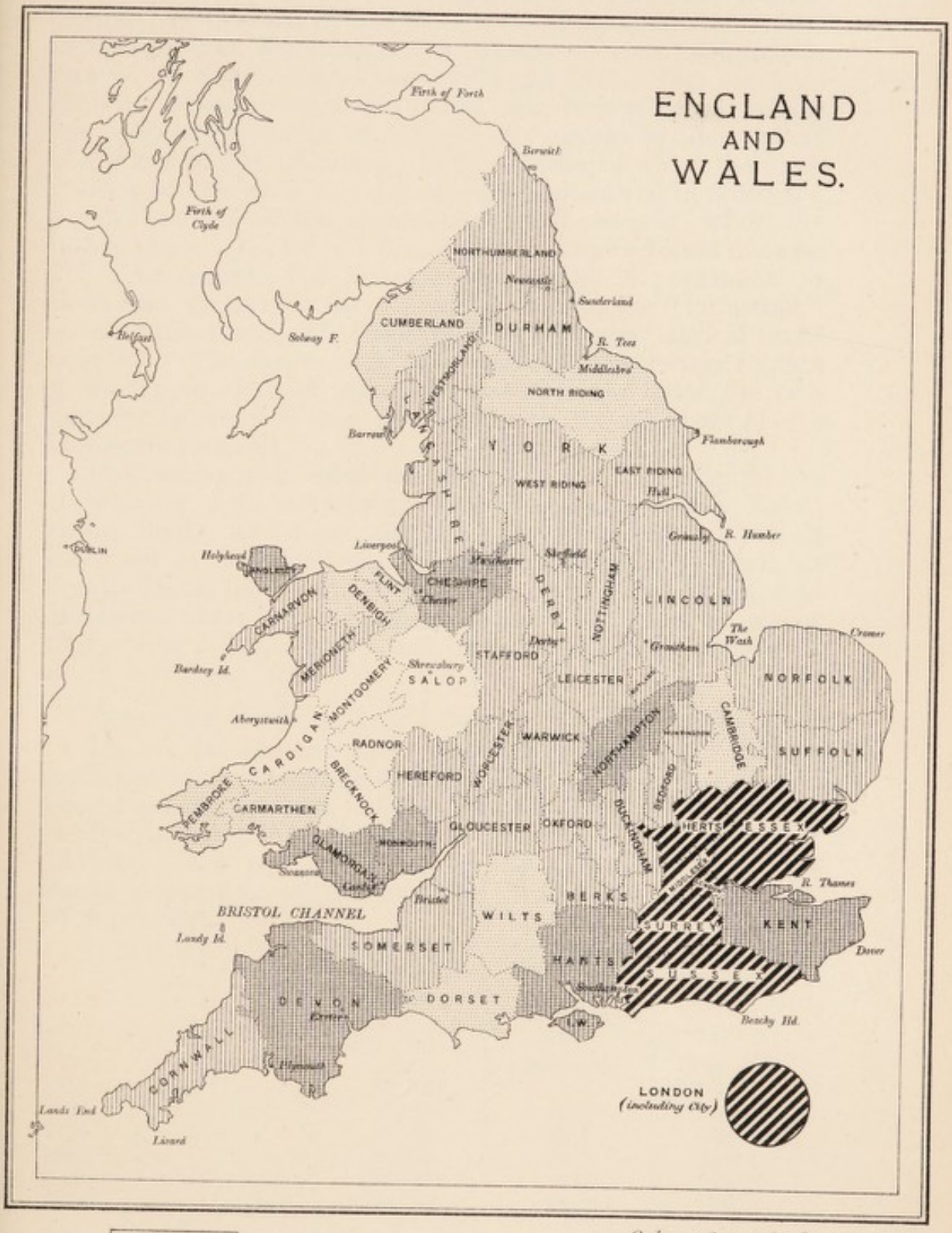
lowers it. On this account alone, quite apart from the other factor of the increase in the insane, one expects that this map will differ from the other, and when this other factor is added still more marked departures from the relative positions of the counties as shown on Chart 4 may be exhibited. At the same time it must be borne in mind that although Chart 5 may illustrate approximately the comparative incidence of pauper lunacy (*i.e.*, of newly occurring cases) in each area throughout the intercensal period, it does not take into account such variations as may be caused by any wide departure in certain localities from the average rates of mortality and recovery of the pauper insane in the country generally.

The ratio for England and Wales is 6·7 per 10,000; for London it is 12·1. There are 10 counties in which the ratio is higher than that obtaining for the whole country, and all but two of those are counties in which the percentage increase of the population is also disproportionately high. But there is no exact parallelism, except in the case of Middlesex, which yields the highest insane ratio (12·2) and also the highest percentage increase in population (42·1). The county of Herts, with the ratio of 11·7 increase of the numbers of its insane, had a population increase of 20·4 per cent., whilst in Monmouth a higher rate of increase in population (32·8 per cent.) gives a lower insane ratio (7·6). In Sussex, where the insane increase ratio was 11·1, the growth of population was 10·1 per cent.; in Devon these rates were 7·2 and 5·7 respectively; whilst in Anglesey they were 8·3 and 0·6. Anglesey, therefore, has a greater disproportion of insane than the county of Hereford, where the population is equally stationary, for although in 1911 the ratio of pauper insane per 1,000 was 3·8 in the former and as high as 5·6 in the latter, the ratio of the net annual increase for the 10 years was, in Anglesey 8·3, in Hereford, 4·2.

Other examples might be cited, as a study of the table will show, tending to prove that there is no relationship between increase in population and increase in the numbers of the insane, no more than there is between density of population and such increase, as exemplified in our Fifty-ninth Report on the returns of the Census 1901, which in this respect do not yield much difference in 1911. Now, as then, it will be seen that in several of the counties which contain thickly peopled industrial towns, the amount of prevailing insanity is proportionally less than in the counties fringing on the Metropolis, where, as we have above stated, the pauper insane increased by 25 per cent. in the 10 years under review.

The Report of the Census of England and Wales, 1911 (Vol. I., pp. xiv and xv), after a reference to the increase of population in all the counties surrounding or adjacent to the metropolis, goes on "to compare the rate of growth of popula-" tion in the counties which, broadly speaking, are mainly " commercial and industrial in character, and the rate in the

CHART No. 5. *Shewing for each County the increase or decrease (per 10,000 of the mean population) of the Pauper Insane (both sexes) during the 10 years 1901-1911.*



Ordnance Survey, Southampton, 1915.

Decrease or no change.
Increase less than 3 per 10,000 of mean Population.
" from 3 to 6 " " " "
" " 6 to 9 " " " "
" more than 9 " " " "

The increase for the whole of England & Wales was 6·66

" counties of an agricultural character." Taking as examples of the former class, 21 counties in which from 60 to 80 per cent. of the male population was engaged in commercial and industrial occupations at the Census of 1901, it is shown that in the aggregate there was a net increase of their total population of 11·8 per cent. between 1901 and 1911. Our statistics show for the same counties in 1911 a mean ratio of pauper insane per 1,000 of population of 2·8 and an increase for the 10 years of 4·7 per 10,000. Similarly, in 23 counties, of which the occupations of the male population were agricultural in character, the net increase of the aggregate was 6·2 per cent., whilst the insane ratio in 1911 was 3·6, and that of the intercensal increase 2·5. As regards the comparative density of population in these two groups, it may be noted that in the "industrial" counties this averaged 1·4 persons per acre, in the "agricultural" only 0·3. The figures show that although the former contain a lower proportion of insane persons than the latter, the proportions as regards rate of increase in the numbers of the insane are reversed.

Contrasting with these are the conditions obtaining in the six counties of the metropolitan area—Middlesex, Surrey, Essex, Herts, Bucks, and Kent, the aggregate population of which increased in the intercensal period by nearly 24 per cent., its density being, on the whole, about 1·4 persons per acre (or in Middlesex alone 7·6). In these counties the ratio of pauper insane was 2·9 per 1,000, and of the intercensal increase as much as 9·5 per 10,000.

Comparative Statistics of the Insane and General Population.

On the 1st January 1859, the date at which our lunacy statistics commence, there were known to be under care 36,762 insane persons, and on the 1st January 1913 the number so notified amounted to 138,377, an increase on the figures of 1859 of 276·4 per cent. During the same period the estimated population of England and Wales has increased by 87·5 per cent. :—

Year.	Number of Insane.	Increase on preceding Decennium.	Total Increase on 1859 Figures.
		Per cent.	Per cent.
1859	36,762	—	—
1869	53,177	44·6	44·6
1879	69,885	31·4	90·1
1889	84,340	20·7	129·4
1899	105,086	24·6	185·9
1909	128,787	22·5	250·3
*	*	*	*
1913	138,377	—	276·4

It will be found that whilst the general population is estimated to grow by fairly regular increments year by year, the numbers of the insane show more variable rates of increase,

which is exemplified by a comparison of these rates for each year in the past decennium :—

Year.	Number of Insane.	Increase on preceding Year.	Total Increase on Figures of 1903.
		Per cent.	Per cent.
1903	113,964	—	—
1904	117,199	2·8	2·8
1905	119,829	2·2	5·1
1906	121,979	1·8	7·0
1907	123,988	1·6	8·8
1908	126,084	1·7	10·6
1909	128,787	2·1	13·0
1910	130,553	1·4	14·6
1911	133,157	2·0	16·8
1912	135,661	1·9	19·0
1913	138,377	2·0	21·4

A clearer estimate of the apparent disproportionate increase in the numbers of the insane is to be found by contrasting, at different periods, the ratio which the latter bear to the general population.

On the 1st January 1913 the total number of notified insane persons in England and Wales stood to the estimated population in the proportion of 1 : 267, or 37·48 per 10,000—an increase on the ratio of the preceding year of 0·35—the actual numerical increase being 2 per cent.

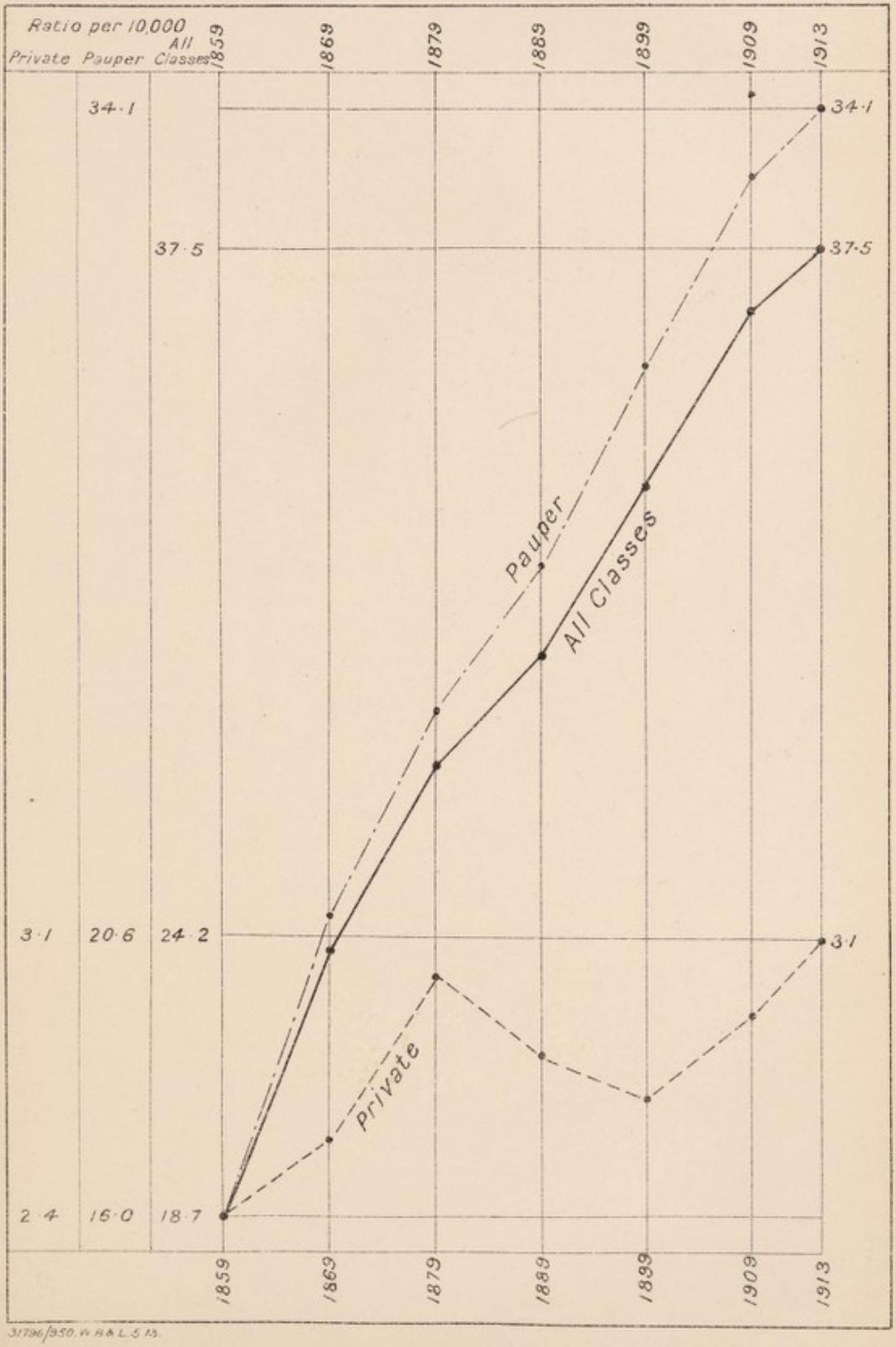
On the 1st January 1903 this ratio was 34·23, so that in the 10 years it has increased by 9·49 per cent., the proportion of insane to population rising from 1 : 292 to 1 : 267.

The private patients, who in 1903 numbered 9,323, had increased by 1913 to 11,353 (*i.e.*, 21·8 per cent.), their ratio per 10,000 of population rising from 2·80 in the former to 3·07 in the latter year. The number of pauper patients in the same period increased from 103,794 to 125,841 (*i.e.*, 21·2 per cent.), and their ratios have risen continuously from 15·95 in 1859 to 34·09 in 1913. In Chart 2 these changes are represented by curves, constructed by taking as the unit of the scale the difference between the maximal and minimal ratios yielded by the private class.

Table of Ratios of Insane to Population, per 10,000.

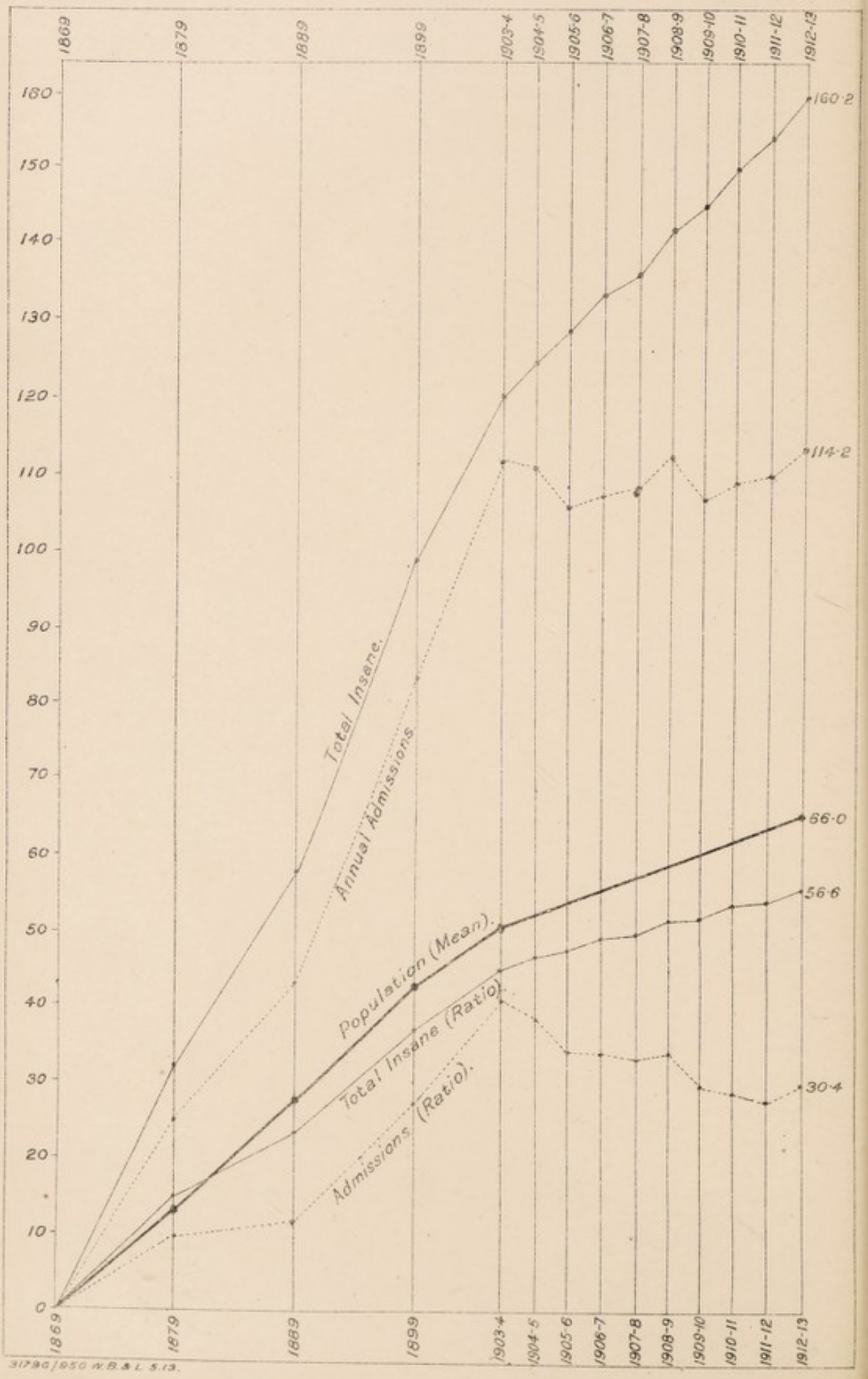
Year.	Pauper.	Private.	All Classes.
	Per cent.	Per cent.	Per cent.
1859	15·95	2·38	18·67
1869	21·03	2·61	23·93
1879	24·29	2·97	27·54
1889	26·59	2·80	29·65
1899	29·99	2·72	32·96
1909	33·13	2·93	36·35
*	*	*	*
1913	34·09	3·07	37·48

CHART Nº 2. SHOWING COMPARATIVE VARIATIONS IN THE PROPORTION OF THE INSANE IN ENGLAND AND WALES (AND OF THE PAUPER AND PRIVATE CLASSES RESPECTIVELY.) TO TOTAL POPULATION 1859 TO 1913.



31796/950. W. H. & L. S. Ltd.

CHART Nº 3. To illustrate Rate of Increase Per Cent of (A) Population of England & Wales; (B) of Insane Community; (C) of the yearly Admissions to Care; (D) of the Ratio of Insane to Population; and (E) of the Ratio of Admissions to Population, 1869–1912-13.



31790 | 950 W.B.&L. 5.13.

The ratio for all (known) insane has increased in the 54 years by 100·7 per cent.

Figures dealing with the annual admissions to care, which do not include cases admitted into workhouses or treated as outdoor paupers, are only available from 1869, and the ratio (per 10,000) they bear to the population was 4·71 in that year. Since then, with many fluctuations, the ratio reaching as high as 6·93 in 1902, and falling in the course of the last decade to 6·06 in 1911, had risen in 1912 to 6·14, or about 30·4 per cent. increase on the 1869 ratio as compared with an increase in 1902 of 47·1.

Since 1898 numerical record has been kept of the *first admissions.* Of these the ratio they bore to the population in that year was 4·92 per 10,000, and in 1912 it was 5·12, a higher figure than obtained in either of the three preceding years, but below the average rate (5·2) during the past decade. The proportion which such cases bore to the total admissions in the year was 83·5 per cent., which implies that for every 100 admitted between 16 and 17 had been previously under care; a proportion which is rather lower than the average.

The accompanying chart (No. 3) illustrates the growth of the general population, the numerical increase of the notified insane, and of those annually admitted to care, from the year 1869 to the end of 1912, a period of 44 completed years. During this period the population is estimated to have increased 66·1 per cent., and the insane community (as known to us) by 160·2 per cent. The numbers admitted to care during 1869 were 10,472; in 1912 they were 22,432, an increase on the former figure of 114·2 per cent., which contrasts with that of 118·2 attained in 1902, when the admission rate reached its maximum level in the period named.

There is also shown on the chart the gradual rise in the ratio of insane to population during this period. On 1st January 1869 it was 23·93 per 10,000, and on 1st January 1913 it was 37·48, an increase of 56·6 per cent. The ratio of admissions to population was, as stated, 6·14, or 30·4 per cent. increase on the rate for 1869, and 1·3 per cent. on that of 1911.

It may be added that the yearly average of admissions in the 5 years 1903–7 was 21,931, and that of 1908–12 was 22,041, there being thus a percentage increase of 0·5 per cent. in the second as compared with the first half of the decade, or an average annual numerical increase of 110. A like calculation shows as between the same quinquennial periods an increase of those under care of 9·4 per cent.

Statistics of Patients in Asylums, &c.

Admissions, Discharges, and Deaths in 1912.—The number of patients under detention on the 1st January 1912 in all institutions (exclusive of idiot establishments) and in private

single care was 108,973, being an increase of 26·6 per cent. on the number similarly detained on the 1st January 1902, viz., 86,103. During the ten years those in County and Borough Asylums had increased from 78,260 to 101,430, or 29·6 per cent.; in Registered Hospitals from 2,535 to 2,545, or 0·4 per cent.; in the State (Criminal) Asylums from 665 to 900, or 35·3 per cent.; whilst the private single patients had increased from 464 to 640, or 37·9 per cent. In the same period there has been a decrease of 16·3 per cent. in the number of those in Licensed Houses, or from 3,925 to 3,284. The Naval and Military Hospitals, which had 254 inmates in 1902, contained 174 on the 1st January 1912.

At the close of the year there remained 111,525 patients under care.

1912.

Under detention 1st January - - -	108,973
Admitted during year - - - -	22,432
	131,405
Discharged, recovered - - - -	7,345
„ not recovered - - - -	2,182
Died - - - - - - - -	10,353
Remained - - - - - - -	111,525
	131,405

The above figures do not include 73 patients who had to be recertified under the provisions of section 38 of the Lunacy Act, 1890, nor those who in the course of the year were transferred from one institution to another, amounting to 3,407, who are technically included as "discharged, not recovered" from one institution and as "admitted" into the other.

The *daily average number resident* had increased from 87,866 in 1902 to 110,216 in 1912—the proportion in County and Borough Asylums being 91·5 per cent. in the former year and 93·1 in the latter.

The *admissions* were 22,432, or 526 above the number recorded in 1911; and of these 18,738 were *first* admissions, being 595 above the decennial mean. These first admissions form 85·5 per cent. of the total. Of the whole number 20,449 or 91·2 per cent. were admitted into County and Borough Asylums. The numbers show an increase on those admitted in 1911 of 2·4 per cent., the rate being practically the same for each sex. The proportion of males to females was 47·7 : 52·3.

Of those *discharged*, 7,345 had recovered, and of these 6,610, or 90·0 per cent., were discharged from County and Borough Asylums. The *recovery-rate*, reckoned upon the total admissions,

was 32·74, being 3·02 below the percentage for the decade—1903–12 inclusive. The rate for females (36·10) was higher than that for males (29·08), the former being 1·49 below, and the latter 0·16 above the rate for 1911. In Asylums the rate for both sexes was 32·3 per cent.; in Hospitals, 42·4; in Licensed Houses, 37·3; and amongst those in single care, 33·0.

Those patients who were absolutely discharged as "relieved" or "not recovered" numbered 2,182, or 9·7 per cent. of the admissions.

The *deaths* numbered 10,353, or 303 in excess of the number in 1911. The death-rate, reckoned on the daily average number resident, was 9·39, or 0·31 below the average for the 10 years, and 0·07 above the rate for 1911. The rate for males was higher and that for females lower than in the preceding year, being 10·72 and 8·25 respectively.

The table (App. A., Table XXVII.) of the summary of Causes of Death for the year 1912, has been drawn up on the lines of the International List now adopted by the Registrar General in his Annual Reports. It also, for the first time, includes the total incidence of "secondary" as distinguished from "primary" or principal causes, the latter only being subdivided into age-periods. We hope to take the opportunity next year to comment in detail on the information which is furnished in this return.

The Causation of Insanity.

In previous reports we have endeavoured to analyse more or less fully the statistical returns furnished every year by the medical staffs of institutions for the insane, based on the facts recorded in the statutory registers. These returns concern the year preceding that with which each current report treats, and are dealt with in the tables in Appendix A. in the form of quinquennial averages. The adoption, in 1907, at the instance of the Medico-Psychological Association, of revised forms of registers, and of schedules relating to the causes and forms of insanity, necessitated a new departure in that year in our published tables. By the inclusion of the returns of 1911 we are now enabled to give (Tables XIV. to XXVI.) the first quinquennial averages since the change was made.

Instead of attempting a survey of the whole field of information contained in these various tables, much of which is singularly uniform from year to year, we propose in the present Report to limit our observations to what is, perhaps, the most important of the subjects dealt with by the returns, namely, the causation of insanity. It is also undoubtedly the most difficult to treat statistically; the record of its facts is peculiarly liable to be affected by the "personal equation," and apart from this source of fallacy, it may even be doubted whether the problems concerning the causation of insanity can be satis-

factorily determined by statistical analysis; for it must be admitted that a mere enumeration of what are termed "etiological factors" in any case of disease, bodily as much as mental, does not reveal all that is to be known respecting its real cause. At the most it does no more than direct attention to certain antecedents in the life-history of the patient, and the value of the record depends mainly on the comparative frequency with which the facts or incidents recur in association with the disease. Nor has the knowledge thus gained been without importance in general medicine, as often affording a basis for preventive treatment. The same is true of insanity; but when, as we are compelled to do here, these antecedents are considered in reference to the whole field of mental derangement, there is some risk of either unduly magnifying or minimising the importance of any special possibly etiological factor. For when such factors are of common occurrence, their significance in the etiology of particular diseases is liable to be overrated.

For example, if in a series of female cases of insanity, the percentage ascribed as correlated with the climacterium were the same as that in association with child-bearing, we should have to remember that the former factor operates through a much less number of years than the latter, and that for the most part the latter is restricted to married women whereas the former is an attribute of all who reach that particular age period. The more thorough scientific investigation of insanity —clinical as well as pathological, psychological as well as physiological—which has of late years made gratifying progress, is likely to lead to more precise knowledge of the conditions that determine special forms of derangement than can possibly be gained by numerical estimation of the antecedents to the attack.

Nevertheless the results of careful systematic investigation of the facts in the family and personal history of individual patients, and the collation and analysis of as large a number of such records as possible, cannot be without value as contributing to knowledge of the etiology of diseases in general, and of insanity in particular. On the latter head the substitution in our tables of the new schedule for the previous list of "Causes of Insanity" has been a decided advance in systematisation, besides giving the analysis a wider range. The arrangement of the facts given in the returns in tabular form permits them to be subjected to numerical analysis and comparison, and the objection that from obvious causes the returns are incomplete, as well as liable to disturbing influences, as, for instance, the personal equation, may be met by the response that positive data are alone considered, and that absence of information on the subject does not affect a comparison that is based on its presence. It is certainly desirable that the number of instances in which no facts are forthcoming could be diminished, and we may hope that as time goes on such deficiencies will be less marked than

is at present the case in some of the returns made to us. Full time (three months) is afforded for investigation before the required data need be entered in the register, and though we can appreciate the difficulties often encountered in making a complete and accurate record, the fact that, taken altogether, the tables in question seem less complete than could be desired, is possibly attributable to the inevitable lack of uniformity as regards scientific zeal on the one hand and precise interpretation of facts on the other.

It is, perhaps, a disadvantage that in treating of the causes of insanity, we have perforce to speak of it as a single entity, although we recognise that it comprises several types of disorder, sufficiently marked in their characteristics almost to justify their being regarded as separate diseases. No doubt the tendency to speak of "mental disease" rather than of "mental diseases" is in great measure due to the fact that, except in such conditions as general paralysis and congenital imbecility, there is not as yet sufficient ground for a pathological as distinct from a clinical differentiation. For distinctions between the "insanities" is still mainly and necessarily based on their symptomatology rather than on their essential nature or pathology. Hence the difficulty in estimating the precise importance to be attached to the personal and environmental conditions which may appear to have contributed to mental derangement; for were the analysis as thorough as possible, it would probably be found that the type of an insanity is determined by some special antecedent influence. This has indeed been recognised in some of the "classifications" that have been framed. But when the study of such "causes" is not limited to special forms of insanity, their field must be wide enough to embrace every kind of agency which experience has shown to be likely to interfere with normal mentality. It, therefore, happens that amongst "assigned causes and associated factors" of insanity (as a whole) there have to be included some influences, such as that of age, which can only come under such category because of their manifest connection with the individual attack.

As an example of this one may take "puberty and adolescence." The inclusion amongst the "causes of insanity" of this critical period of life to which all mankind is subject, does not mean anything more than that its perturbations do actually constitute a factor (perhaps the principal or even the sole factor) in the attack, so that certain forms of disorder are particularly prone to occur at this period of life. Such, indeed, may be inferred from the statistics given in Table XX., which deals with the various forms of insanity as occurring amongst new admissions during the years 1907–11. Dealing only with cases of first attack, the figures clearly show a disproportionate liability to certain forms—such as insanity associated with epilepsy, primary dementia, and recent mania—at the age-period, 15 to 19 years. The following is the percentage

incidence on the total cases admitted in that and subsequent periods of those suffering from these forms compared with those who were the subjects of melancholia :—

First Attacks.	At all Ages.	15–19.	20–24.	25–34.	35–44.	45–54.
Insanity with epilepsy -	5·2	11·4	9·1	6·7	5·1	3·8
Primary dementia - -	2·6	9·3	7·6	3·2	1·4	1·8
Recent mania - -	24·7	42·9	37·7	30·8	24·4	20·6
„ melancholia -	26·7	19·7	25·9	28·6	20·7	30·3

Similarly, bearing in mind the apparent relationship between the climacteric disturbance of function in respect to the mental organisation of women, it will be seen that for that sex the comparative incidence of melancholia is higher in the age-period, 45–54, than at any previous period—the incidence of cases of mania being precisely the reverse.

First Attacks.	At all Ages.	15–19.	20–24.	25–34.	35–44.	45–54.
Recent mania - -	26·8	44·8	41·5	34·4	27·0	21·7
„ melancholia -	31·6	21·5	27·2	33·9	35·3	37·6

These figures contrast with those of the male sex, where with an average incidence of melancholia for all ages of 21·7 per cent., the highest is in the period 20–24, where it was 24·4 per cent.; whilst in the period 45–54 it was 22·6 per cent.

There is no need to further exemplify the importance of the age-factor in the etiology of insanity by reference to senile dementia, for which, so far as available knowledge goes, there is often no tangible reason other than that of the natural decadence of advancing years. The subject will be referred to again, in connection with the question of those other factors which may most commonly be associated with youth and age, premising only that of all the cases in which "adolescence" appears as a factor, in rather more than half it was returned as the principal element in the case; whilst in those of senility two-thirds are so returned.

We do not propose to deal here with every one of the etiological factors enumerated in Tables XV. to XVIII., especially as the number of recorded instances of several of them has been but small. In Table XV. will be found the yearly average number of instances of these factors, in respect to each sex, and the percentage rate of their incidence on the total number (yearly average) of direct admissions; and in Table XVI. these are distributed between the private and pauper classes respectively. The number of instances in which the recorded factor was stated to be the "principal" one is also given. It is noteworthy that in about one-tenth of all the cases with which the

inquiry treats, there was, owing to defective history, "no factor ascertained"; whilst in a rather smaller fraction it was not possible to assign any particular etiological factor in the case, "notwithstanding full history and observation."

For our present purpose we may limit analysis to those cases in which the attack of insanity was the first from which the patient suffered, and may further confine it to the "assigned causes" that were most often met with in the case-histories. Their relative incidence can be estimated from the figures given in Tables XVII. and XVIII., which are also so drawn as to enable comparisons to be made with respect to the various combinations of factors recorded in the register for every case.

Table of Incidence (per Cent.) of certain assigned Causes and Etiological Factors on Yearly Average of Cases admitted during 1907–11 *for First Attack of Insanity. (V. App. A., Tables XVII. and XVIII.) Males,* 6,049; *Females,* 6,414.

Assigned Causes.	Incidence of each Cause or Factor assigned either alone or in combination with others.		Incidence of each Cause assigned without any correlated Cause or Factor.	
	Males.	Females.	Males.	Females.
1. Insane heredity	22·7	28·4	6·6	8·4
2. Congenital mental deficiency	3·1	3·4	0·8	0·9
3. Puberty and adolescence	4·9	5·3	1·7	1·9
4. Climacteric	—	10·3	—	4·3
5. Senility	11·4	11·8	5·4	6·5
6. Puerperal state	—	6·1	—	3·2
7. Sudden mental stress	3·9	6·5	1·6	2·5
8. Prolonged mental stress	21·5	22·9	9·3	10·0
9. Privation and starvation	2·4	2·3	0·6	0·6
10. Alcohol	26·3	10·4	10·8	4·1
11. Influenza	3·4	3·2	1·3	1·2
12. Syphilis	12·6	1·8	5·1	0·6
13. Injuries	5·1	1·1	1·9	0·4
14. Lesions of brain	3·2	2·2	1·5	1·0
15. Epilepsy	7·2	5·6	3·6	2·6

1. *Heredity.*—Foremost amongst the circumstances in the life-history of one who becomes insane is that of an inherited tendency to mental and nervous instability. For if to the figures given for an insane heredity there be added those of a family history of nervous affections and of inebriety—the proportion of cases in which such inheritance was noted would amount to from 30 to 40 per cent.—the ratio being higher in the female than in the male sex. The careful analysis carried out in recent years by Dr. Mott of the facts of heredity furnished by the clinical records of the London County Asylums more than confirms the impression conveyed by these

general returns. From the latter it will be seen that in about 7 per cent. of all the cases of first attack, no other factor than this one of inheritance could be definitely assigned as the causal agency. As to the remainder, in which one or more additional factors were recorded, it is to be noted that there was scarcely one in the somewhat lengthy schedule which escaped this association. Amongst those in which such correlation was especially frequent may be mentioned mental stress, influenza, and epilepsy in either sex; alcoholic intemperance in males and the puerperal state in females. That is to say, the subjection to such influences—psychical, nervous, toxic, or physiological—is particularly liable to lead to mental breakdown in one who is predisposed to it by reason of inherited instability; and the same applies, but to a less marked degree, with many other contributory agencies. It is particularly noticeable, also, that of all the factors which may be associated with adolescence and the climacteric in women, this of an inherited tendency occurs in the highest proportion. But, although the fact of such inheritance may go far to explain the reason for an individual becoming insane if subjected to influences that would have no such result in one not so predisposed, there must still remain no small number of the insane who have no such neuropathic taint. Hence the need for much wider investigation before the whole problem of insanity can be solved.

2. *Congenital Mental Deficiency, not amounting to Imbecility.*—Those patients whose acquired insanity was associated with a personal history of congenital feeblemindedness, formed about 3 per cent. of all the cases under consideration. They were mostly adolescents and epileptics, the statistics also showing that amongst the conditions which most often contributed to the loss of mental balance were states of privation and the intervention of sudden (mental) stress. In females also the debilitating influence of lactation and anæmia not infrequently contributed to their insanity.

3. *Puberty and Adolescence.*—Besides its frequent association with an inherited taint (of insanity) and with some degree of congenital mental deficiency, the forms of insanity common to adolescents were often induced in either sex by some sudden mental stress or emotional disturbance. Epilepsy and anæmia were also not unusual contributory factors in the production of the mental disorder at this period of life.

4. *Climacteric.*—It has been already stated that, according to these returns, the liability to insanity in females at the climacteric was much favoured by an inherited mental instability. The actual attacks were in many cases induced by or associated with mental stress. Excess in alcohol or the depressing action of the influenza toxin were agencies which often played a part in the case, whilst amongst physical

conditions more commonly associated with the mental disorder were cardiac disease and anæmia.

5. *Senility.*—Conditions of cardio-vascular degeneration and valvular heart disease, especially the former, prevailed in individuals attacked for the first time by insanity when advanced in years; and no doubt such circulatory derangements had some share in the cerebral degeneration to which the mental symptoms might probably be ascribed. It is established that senile dementia is comparatively rare in one who has suffered earlier in life from mental disorder (the proportion of first-attack cases being 90 per cent. as compared with 73 per cent. as the average for all other forms of insanity); and the tables (XVII. and XVIII.) show that the factor of "senility" is seldom associated with that of "heredity" or of congenital weak-mindedness. On the other hand, such dementia is not seldom met with in individuals who have hitherto been remarkable for their intellectual vigour. Our statistics also tend to show that the supervention of such mental decay may be aided in some by conditions of privation, in others by intemperance, and in others by attacks of influenza. It is natural, too, that definite lesions of the brain should not infrequently be found associated with other senile changes in those cases, whilst, in a considerable proportion, "senility" alone is returned as the cause of the dementia. There would seem to be room here for deeper inquiry, since it is difficult to believe that the natural regressive changes of old age can alone account for the mental defect.

6. *Puerperal State.*—These returns tend to confirm the fact, which has been long recognised, that insanity in puerperal women is especially liable to occur in those who are predisposed to mental disorder by reason of inherited instability. For of all the factors associated with an insane heredity in females, this of the puerperium holds the chief place; and, conversely, such heredity appears as the leading factor in the history of those who become insane during and after childbirth. But it is also shown from the figures here dealt with that prominent amongst the conditions favouring such derangement in the puerperal period are early maternity and subjection to worry and anxiety (prolonged mental stress), such as doubtless may be induced by the circumstances of the pregnancy, lack of sufficient nourishment, and concomitant anæmia. It may be added that although far less frequent than the puerperal state in the antecedents of insanity, lactation is a recognised factor, having much the same correlations as the former; and, if the returns are to be relied upon, also not uncommon in the congenitally defective, and in those depressed by influenza.

7 and 8. *Mental Stress.*—The psychical factors in the etiology of insanity are obviously of great importance: indeed, from one standpoint, all other elements in the case are merely subsidiary. They have been summed up in the schedule under the heading

of "mental stress," and the distinction is made between those cases in which this is of the nature of a sudden perturbation or shock, and those where it is prolonged, such as anxiety and worry. It is instructive to note that sudden stress is a far less frequent antecedent than prolonged stress, but in each instance an appreciable number of cases were returned in which the stress was the only recognisable factor in the attack—viz., in prolonged stress—9·3 per cent. of the male and 10 per cent. of the female cases. The comparative frequency with which, when associated with other factors, it is found that the patient came of an insane stock, merely indicates that, owing to his presumably less stable mental organisation, he has been unable to withstand a strain, which in one not so handicapped would not have led to derangement. As regards combinations with other factors than heredity, it may suffice to note, from these statistics, that both forms of stress conduce to insanity in the aged, and are often correlated with influenza. In females such stress is especially associated with the climacteric. It is also significant that sudden stress is more prone to conduce to insanity in the adolescent and weak-minded, whilst prolonged stress was especially noted in connection with states of privation, which no doubt caused it.

9. *Privation and Starvation.*—But in respect to insanity generally, it would not appear that such privation is a frequent antecedent in the history of an attack of insanity. These statistics only assign it an incidence of rather more than 2 per cent. of all the cases dealt with; and it occurred mostly in association with other factors, the more frequent to be so associated being senility, prolonged stress, and intemperance, and in male cases, syphilis. In females, its main correlation was with the puerperal state and anæmia.

10. *Alcohol.*—The fact that personal addiction to alcohol appears from these returns to have been regarded as a factor in 26·3 per cent. of male and 10·4 per cent. of female cases of first attacks of insanity ought not, perhaps, to be too literally interpreted. Such a return implies that in these proportions these insane persons were admittedly intemperate; and the estimate requires to be controlled by an analogous census of the same class of individuals who do not become insane; and also to allow for cases where inebriety is as much a consequence as a cause of mental deficiency. Obviously no such means of comparison exist, and in our Fifty-ninth Report we had occasion to point out the singular (and *primâ facie* paradoxical) fact that in certain counties notorious for their high proportion of crimes due to drunkenness, the insanity rate was comparatively low, although the proportion of cases in which alcoholic excess was noted was higher than in other counties. Nevertheless, it is beyond dispute that alcoholic excess does contribute to mental derangement, and we may, in support of this statement, simply

record the fact that, in 11 per cent. of the male and 4 per cent. of the female, this factor was the only one which could be assigned as the causal agent. In the remainder it was found to be associated in varying but predominant degree in individuals having an insane heredity (and also, in particular with an "alcoholic heredity"—which was met with in nearly 6 per cent. of each sex), in those exposed to privation as well as in those suffering from prolonged mental stress, conditions in which resort to alcohol was not unlikely. It was associated too with the climacteric factor in women, and to a less marked degree with senile insanities—as well as with epileptics and in the subjects of cardio-vascular degeneration. Amongst the male cases especially, the alcoholic factor was fairly common in those whose attack of insanity was preceded by traumatism, syphilis, or brain disease.

11. *Influenza.*—Although influenza as a precursor of insanity was not recorded in more than from 3·2 to 3·4 per cent. of the cases under consideration, in nearly one-half of the instances it was assigned apart from any other factor being established in correlation with it; where this was the case it was, like the other toxic agencies, more often associated with inherited predisposition to mental derangement, with mental stress in the individual, and, in women, with the climacteric period, than with any other of the scheduled factors.

12. *Syphilis.*—The admitted fact that its toxin is directly responsible for the anatomical lesions that characterise general paralysis of the insane sufficiently explains the much greater prevalence of syphilis in the antecedents of male cases than in those of females. Where other conditions are named as being associated with this disease in the history of the case, they have mostly been such as intemperance, privation, traumatism, and diseases of the brain or blood vessels, these latter being also probably of specific origin. It is to be noted that prolonged mental stress often occurred in these subjects.

13. *Injuries.*—A history of an injury ante-dating the onset of insanity was naturally met with more commonly in males than females. It occurs not infrequently in the history of a general paralytic, which may account for the fact that when it occurs there was also often a history of acquired syphilis. The frequent association of this factor with those of intemperance and of epilepsy is only what might be anticipated.

14. *Lesions of the Brain.*—Excluding general paralysis the proportion of cases where insanity supervened on manifest disease of the brain is comparatively small, such lesions being recorded as factors in the attack in not more than 3·2 per cent. of the male and 2·2 per cent. of the female cases. In about one half of these cases the cerebral affection was apparently regarded as the sole agent in the mental disorder, whilst in the rest it was more or less markedly associated with intemperance,

syphilis, cardio-vascular disease, and senility. It need hardly be said that the phrase "lesions of the brain" does not comprise such cerebral changes as underlie the "toxic" insanities, the study of which is affording much scope for extended research.

15. *Epilepsy.*—That epilepsy is a forerunner of insanity does not require statistical proof, and in about one half of the cases in which it was so recorded, it stood alone as the "assigned cause." From Table XX. we learn that the average yearly proportion of cases of first attacks of "insanity with epilepsy" admitted in 1907–11 to the whole of the (first attack) admissions, was for males, 6·0 per cent., for females, 4·5 per cent. In the recorded histories of all cases of first attack, epilepsy was met with in the proportions of—males, 7·2 per cent., females, 5·6 per cent.; thus showing a small surplus in which other forms of mental disorder were met with in epileptics. Besides an inherited tendency (especially an epileptic heredity) the antecedent factors most often found in association with epilepsy were congenital mental deficiency, puberty and adolescence, alcoholic excess, and traumatism.

Amongst other conditions in the life history of insane patients, were recorded cardio-vascular degeneration, valvular heart disease and tuberculosis, the last-named occurring in 1·2 per cent. of the male cases and 1·1 per cent, of the female. In the latter sex also a condition of anæmia was recorded as a factor in the case in 1·8 per cent.; and functional neuroses, *e.g.* hysteria, in 1·5 per cent. Pregnancy was associated with the attack of insanity in 1·6 per cent. and lactation in 2·2 per cent. Sunstroke as a precursor of insanity was met with in 0·9 per cent. of male attacks, and in about one half of these it was the only cause assigned.

It is noteworthy how rare it was comparatively for insanity to be associated with a deprivation of the special senses, the total instances of loss of sight amounting to only 0·4 per cent. in males and 0·2 per cent. in females; and those of loss of hearing to 0·3 per cent. in the former and 0·4 per cent. in the latter. Again, physical over-exertion, which undoubtedly may contribute to mental breakdown, is only so mentioned in 0·7 per cent. of the male cases and 0·1 per cent. of the female. Finally, as regards known toxic agents other than those already specified, it is somewhat reassuring to find that lead-poisoning was only found to be a precursor of the attack in 0·4 per cent. of the males and in only 5 out of a total of 6,414 cases in females. The drug habit was recorded in 0·2 per cent. of each sex, and the toxins of the specific fevers in about 0·6 per cent., an incidence which is about the same as that ascribed to all "other toxins." These are small proportions, but it may be safely predicted that, with the advance of scientific research, such toxæmic "causes" will be found to assume a more prominent position in regard to insanity.

Such in brief are some of the facts which emerge from the tables bearing on the causes of insanity. They are by no means all that might be given, but in regard to the "correlations" they leave on one side the majority of the "assigned causes" of the schedule, since the number of instances is mostly too few to justify such detailed examination. The results, such as they are, may lack precision, but the data are hardly such as to warrant more definite conclusions. Nor can they possibly cover the whole ground of causation. The need for research, systematic, prolonged, and thorough, is therefore very pressing. There are many lacunæ in knowledge to be filled before full answers can be supplied to the questions as to what is the nature of insanity, why it occurs, and how its amount can be lessened.

The recognition of the share taken in the causation of insanity by heredity, alcoholism, and syphilis, suggests that an appreciable diminution in its amount might follow on a reasonable application of the principles of eugenics and of social reform. But there are many other conditions—some possibly yet to be revealed—concerning which, much information is required before any marked progress in this direction can be assured.

So far as remedial treatment is concerned, the recovery rates recorded year by year do not encourage much hope for further advances in this direction; although it is not perhaps sufficiently known that no small proportion of the insane admitted to care do recover within a comparatively short period. And as has been so often pointed out, the increasing numbers under care result mainly from the accumulation of chronic and irremediable cases. It would seem to be needful, as already indicated, to turn from the therapeutic side to the preventive, if insanity is to be effectively controlled. Or rather that whilst retaining and, as far as possible, improving the former class of measures, more ample consideration should be given to the latter. And the condition precedent for this is a fuller knowledge of causation to be gained here as in other departments, by the prosecution of scientific research, in the hope that as in respect to disease in general, so in this special field of insanity, the lines for control and prevention may be definitely established.

County and Borough Asylums.

With but very few exceptions we have been satisfied with the management of these institutions; and the condition in which we have found them at our annual visits of inspection has, as a general rule, been creditable. The reports made at these visits will be found printed in full in Part II. of this report, page 336.

A list of these Asylums, with the names of the Medical Superintendent and of the Clerk to the Visiting Committee of each one, is given in Appendix L. in Part II., page 592. They are 95 in number, they provide accommodation for 105,127 patients, and the ground attached to them covers a total area of 19,583 acres, of which 17,622 acres is freehold land, the rest being rented.

Of the five Asylums mentioned in our last report as in course of erection or about to be erected, none was completed during 1912; but the Essex Asylum at Colchester was approaching completion at the end of the year.

Table VII. in Appendix B., Part II., of this report shows the amount and cost of land, cost of building, and accommodation for patients in each Asylum up to 1st January 1913. Table IX. indicates the accommodation provided by, and the vacant accommodation existing in, each Asylum on the same date.

On the 1st January 1913 the County and Borough Asylums contained 103,842 patients, classified as follows:—

——	Males.	Females.	Total.
Private	1,472	2,288	3,760
Pauper	46,613	53,220	99,833
Criminal	202	47	249
Total	48,287	55,555	103,842

Upon the year there was a net increase of 2,412 in the number of patients resident.

During the year there were 20,449 admissions, as shown below:—

——	Males.	Females.	Total.
Total admissions in 1912	11,133	12,041	23,174
Deduct transfers from other Institutions, and re-admissions on fresh reception orders to replace lapsed orders	1,314	1,411	2,725
Number of fresh admissions	9,819	10,630	20,449

The fresh admissions in 1912 were 421 more in number than those of the previous year, and 543 more than the average of the 10 preceding years.

Of these fresh admissions 16·2 per cent. had been previously discharged from Institutions for the insane.

The discharges during the year were 10,951, of whom were—

——	Males.	Females.	Total.
Discharged "recovered" - - -	2,853	3,757	6,610
Discharged "not recovered," including the transfers to other Institutions and the re-certifications to replace lapsed orders	2,029	2,312	4,341
Total - - - -	4,882	6,069	10,951

The above figures show a percentage of recoveries to admissions of 32·3 as compared with an average percentage of 35·6 for the preceding 10 years.

During the year, 9,811 patients (5,173 males and 4,638 females) died.

The proportion per cent. of deaths to the daily average number resident was 9·6, namely, 10·8 males and 8·4 females. The average death-rate for the preceding 10 years, calculated on the same basis, was 10·0 per cent., namely, 11·3 per cent. for males and 8·9 per cent. for females.

The number of post-mortem examinations was 7,669, being 78·2 per cent. of the total number of deaths.

In 38 Asylums a post-mortem examination was made in over 85 per cent. of the cases; but in the Cornwall, Lancaster, Northampton, Northumberland, Salop, Exeter, and Portsmouth Asylums the proportion of these investigations was in each instance below 50 per cent.

The questions in dispute between the local authorities interested in the South Wales Joint Counties Asylum, Carmarthen, have for another year remained unsettled, and in consequence the improvements which we have so long urged the committee to make have not been undertaken.

The failure of the West Riding Visiting Committee to provide chapels for its Asylums at Menston, Scalebor Park, and Storthes Hall has been the subject of repeated remonstrances on our part. As these produced no result, the opinion of the Law Officers was taken, and acting thereon we, in February 1912, reported to the Secretary of State under section 247 of the Lunacy Act, 1890, that the West Riding County Council had failed to satisfy the requirements of the Act as regards Asylum accommodation inasmuch as they had not provided chapels in any of the three Asylums. The attention of the House of Lords was called to the matter by the Bishop of Wakefield on 25th of April 1912, who dealt very fully with the facts. His motion was withdrawn on receiving satisfactory assurances from the Government. A requisition preliminary to proceedings for mandamus had, on the 23rd of April, been issued by the Home Secretary calling upon the county council to provide chapels in the case of Storthes Hall Asylum in accordance with

plans and contracts approved by the Secretary of State in 1905, and in the case of Menston and Scalebor Park Asylums in accordance with plans and contracts to be submitted to us and a Secretary of State and approved by the said Secretary of State. No further legal steps were, however, taken, in consequence of the passing of the after-mentioned West Riding of Yorkshire Asylums Act, as it was thought that a reasonable time should be allowed to the Board thereby created to consider what action it should take.

On the 30th of May an agreement was entered into between the County of Stafford and the newly constituted County Borough of Stoke-on-Trent with respect to the user of the County Asylums, being a new arrangement within section 244 of the Lunacy Act, 1890, which section had been rendered applicable to the case by the terms of the Order constituting the County Borough. The agreement provided that the borough should be entitled to 255 beds, which should as far as practicable be found for it in Cheddleton Asylum. The proportion of Asylum expenses to be contributed by the borough was fixed, and provision was made for contribution by the borough to the cost of further accommodation if at any time required, and for readjustment in that event of the number of beds to be allotted to it. The parish of Hanley, forming part of the borough, was excluded from the agreement, as it was already entitled to a separate quota of accommodation in the County Asylums, acquired while it was itself a county borough, by a new arrangement under the above section made in 1892.

In consequence of the extension of the boundary of the Borough of Cambridge by the Cambridge Extension Order 1911, a variation was rendered necessary in the provisions of the agreement to unite existing between the county, the Isle of Ely, and the borough. This was effected by an agreement of the 3rd of June which was duly sanctioned by the Secretary of State, the contribution of the borough to the Asylum expenses, and the number of its representatives on the Visiting Committee being increased, and a corresponding reduction made in the contribution and number of representatives of the county.

With a view to the approaching completion of the new Asylum at Colchester, an agreement for further union was in July entered into between the County of Essex and the Borough of Colchester, whereby the Visiting Committee was increased from 20 to 30 members, 25 to be elected by the County Council, and five by the Borough Council.

A revision of the general rules for the Surrey Asylums was carried through during the year; and some amendments were made in the rules for the North Riding and London County Asylums. One of these amendments we think deserving of mention here, that which relieved the Second Assistant Medical Officers of the London County Asylums from the requirement of celibacy, the rule as it previously stood having allowed none

but the Senior Assistants to be married men. We welcomed the relaxation of the rule and had much pleasure in recommending it for the sanction of the Secretary of State.

The examination of "batch continuation certificates," *i.e.*, certificates sent to us under section 7 of the Lunacy Act, 1891, with reference to patients whose reception orders bore date three months or more before the 1st of May 1890, having brought to our notice that in certain Asylums some laxity prevailed in the method of carrying out the duties imposed by the section, we issued the following circular on the subject to the Medical Officers of Asylums throughout the country.

Lunacy Commission,
66, Victoria Street, S.W.
May, 1912.

Sir,

It has come to the knowledge of the Commissioners in Lunacy that, in some instances, batch continuation reports have been sent to them from institutions in which no special examination of the patients had been made so as to enable the certificates justifying the reports to be properly given.

I am directed to draw the attention of Medical Officers, and the deputies who act for them, to the need which, in the opinion of the Commissioners, exists for the special examination of each patient for the purpose of such reports and certificates.

The Legislature evidently contemplated that the reports and certificates would indicate the re-examination and re-consideration of the mental and physical state of each patient at certain definite recurring periods, and that in no instance would this be left in doubt either from the size of the Asylum or any other cause.

The Commissioners will in future expect that the same care should be exercised in the case of batch reports as they have reason to believe prevails with reference to patients other than those who were admitted three months or more prior to May the 1st, 1890.

I am, Sir,
Your obedient Servant,
O. E. Dickinson,
Secretary.

The Medical Officer.

The following appointments of Medical Superintendents were made during the year :—

Dr. Ogilvy, Senior Assistant Medical Officer of Horton Asylum, was appointed to succeed Dr. Bond as Medical Superintendent of Long Grove Asylum on the latter's retirement to take up his duties as Commissioner in Lunacy.

In March the construction of the New Asylum at Severalls for the County of Essex and Borough of Colchester, having reached the stage at which it was considered necessary to have the services of a Medical Superintendent, Dr. Turnbull, the Senior Assistant Medical Officer at Brentwood Asylum, was chosen to fill the post.

Dr. Skeen, who had administered the Durham Asylum as Superintendent for 13 years, died to our regret on the 13th of November, having previously sent in his resignation to take effect on the 1st of December. The vacancy thus created was filled by the appointment of Dr. Cribb, Senior Assistant Medical Officer at Cane Hill Asylum.

Dr. Wiglesworth, who had been Medical Superintendent of Rainhill Asylum for 23 years, during which period he had, besides ably administering the Institution, done work of high scientific value in the investigation of mental disease, retired in November on a pension and was succeeded by Dr. Cowen, Senior Assistant Medical Officer at Lancaster Asylum.

In the same month Dr. Gardiner Hill also retired after nearly 24 years' service as Medical Superintendent of Wandsworth Asylum, the duties of which office he had throughout performed with marked efficiency and success. He was succeeded by his Senior Assistant Medical Officer, Dr. Worth.

The total number of day and night attendants and nurses, exclusive of head attendants and assistant head attendants, employed in the County and Borough Asylums on 31st December 1912 was 12,337 (5,762 males and 6,575 females). Of that number, the proportion under one year's service was 23 per cent. (namely, male attendants, 17 per cent., and nurses, 29 per cent.); and the proportion over five years' service (excluding six Asylums open less than seven years, where 655 attendants and nurses were employed) was 37 per cent. (namely, male attendants, 52 per cent., and nurses, 24 per cent.).

Table X., Appendix B., Part II., supplies further information respecting the attendants and nurses, and also some particulars connected with the care and treatment of the patients.

The National Insurance Act, 1911.

Employment in a County or Borough Asylum being one of the class of employments specified in Schedule I., Part II., of the National Insurance Act, 1911, it was open to Visiting Committees to obtain for themselves, and their employees, exemption from the provisions relating to insurance against sickness and disablement contained in Part I. of the Act, conditionally on the Insurance Commissioners certifying that "the terms of employment are such as to secure provision in "respect of sickness and disablement on the whole not less "favourable than the corresponding benefits conferred by "Part I." of the Act. Applications for certificates had, by the end of April of this year, been made on behalf of 85 out of the 95 asylums in England and Wales; and certificates had been granted in 80 instances, the other 5 applications being still under consideration. The committees of 9 asylums had resolved not to apply for certificates, and one committee had not come to any decision on the question. In the last case, and

in two cases where the decision had been against applying for certificates, advantage had been taken of the provisions of section 47 of the Act.

The Asylums Officers' Superannuation Act, 1909.

Two Bills for the amendment of the Act were introduced in Parliament. One was presented by Lord Wolmer, and was in accordance with his Bill of the previous year; the other was presented by Sir Charles Nicholson. Both were read a first time in the House of Commons, but were dropped before reaching the stage of second reading.

The West Riding of Yorkshire Asylums Act, 1912.

This received the Royal Assent on the 7th of August, and came into operation on the 1st of October 1912. Following the lines of the Lancashire Asylums Act, 1891, it creates and incorporates a Board consisting of 50 members elected by the councils of the West Riding, and of the county boroughs of Bradford, Halifax, Huddersfield, Leeds, Rotherham, and Sheffield. The Asylums at Wakefield, Wadsley, Menston, and Storthes Hall are transferred to the Board, together with all the rights, powers, duties, obligations, and liabilities, of the councils as local authorities under the Lunacy Acts, and of the West Riding Visiting Committee with respect to the Asylums transferred, and the providing of Asylum accommodation, except in relation to Asylums for paying patients provided before (at Scalebor Park) or to be provided after the commencement of the Act. The Board is required to appoint out of its own body a Visiting Committee for each of the Asylums or for two or more Asylums, and may delegate to them some of its powers, but the acts of such committees are, unless the Board otherwise directs, to be submitted for its approval.

On the introduction of the Bill our opinion thereon was invited by the Home Office. While expressing general approval of the measure, we made, with respect to certain of its provisions, criticisms which were met by amendments.

Finance.

The total expenditure on the up-keep of the County and Borough Asylums in England and Wales, and on the maintenance, supervision, and treatment of the patients in them during the financial year ending 31st March 1912, amounted to the sum of 3,268,462*l.*, made up as follows:—

	£
Maintenance - - -	2,781,239
Building and repairs - -	437,177
Land purchased - - -	45,326
Land rented - - -	4,720
	£3,268,462

The above figures, details of which will be found in Part II., Appendix B., Table VIII., do not include any expenditure on new Asylums as yet unoccupied.

Contrasted with the figures of the preceding years there is an increase of 78,479*l.* in the amount expended on maintenance, accounted for almost entirely by the larger number of patients under care; a decrease of 10,893*l.* in the cost of building and repairs; an increase of 32,220*l.* in the outlay on land; and a decrease of 152*l.* in the amount paid for land rented, making a total net increase of 99,654*l.*

Average Weekly Cost.

The average weekly cost of maintaining the patients in the County and Borough Asylums for the year ending 31st March 1912, excluding the cost of repairs, additions, and alterations, was as follows:—

	s.	*d.*
In County Asylums - - -	10	$0\frac{1}{8}$
In Borough Asylums - - -	11	2
In both taken together - -	10	$3\frac{1}{2}$

The items making up the average weekly cost for the last two financial years are contrasted in the following table:—

Details of the Average Weekly Cost.	County Asylums.		Borough Asylums.	
	1910-11.	1911-12.	1910-11.	1911-12.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
Provisions not supplied from Asylum garden and farm, but procured from outside the Asylum (including malt liquor in ordinary diet) - - - - - - - - -	3 $0\frac{1}{8}$	3 0	3 $1\frac{1}{8}$	3 $0\frac{7}{8}$
Clothing of patients and attendants - -	0 $7\frac{1}{8}$	0 $7\frac{1}{4}$	0 8	0 $8\frac{3}{8}$
Salaries and wages (less deductions under the Asylums Officers' Superannuation Act, 1909)	3 $0\frac{7}{8}$	3 1	3 $3\frac{3}{4}$	3 $3\frac{5}{8}$
Pensions, Gratuities, &c. (charged to maintenance account) - - - - - -	0 $0\frac{3}{8}$	0 1	0 $0\frac{1}{8}$	0 $0\frac{3}{4}$
Necessaries (*e.g.*, fuel, light, washing, &c.) -	1 $4\frac{1}{8}$	1 $3\frac{5}{4}$	1 $6\frac{5}{8}$	1 6
Surgery and dispensary - - - - - -	0 1	0 1	0 $1\frac{1}{4}$	0 $1\frac{1}{4}$
Wines, spirits, porter - - - - -	0 $0\frac{1}{8}$	0 $0\frac{1}{8}$	0 $0\frac{1}{8}$	0 $0\frac{1}{8}$
Furniture and bedding - - - - -	0 $4\frac{1}{4}$	0 $4\frac{1}{2}$	0 $4\frac{3}{4}$	0 $5\frac{1}{8}$
Garden and farm - - - - - -	1 $0\frac{1}{4}$	0 $11\frac{7}{8}$	1 $3\frac{3}{8}$	1 $3\frac{3}{4}$
Miscellaneous - - - - - -	0 $10\frac{1}{2}$	0 $10\frac{1}{4}$	1 $0\frac{3}{8}$	1 $0\frac{3}{4}$
	10 $4\frac{3}{4}$	10 $4\frac{3}{4}$	11 $6\frac{3}{8}$	11 $6\frac{1}{8}$
Less monies received for articles, goods, and produce sold (exclusive of those consumed in the Asylum) - - - - - - -	0 5	0 $4\frac{5}{8}$	0 $5\frac{5}{8}$	0 $4\frac{5}{8}$
Net Total average weekly cost per head - - - -	9 $11\frac{3}{4}$	10 $0\frac{1}{8}$	11 $0\frac{3}{4}$	11 2

The total average weekly cost per head for all Asylums shows a rise of $\frac{1}{2}d.$ on the previous year; the corresponding comparison in our last report showed a fall of $\frac{1}{8}d.$ The cost of "Provisions" and "Garden and Farm" together show a reduction of $\frac{1}{2}d.$ in County Asylums and of $\frac{3}{8}d.$ in Borough Asylums.

The total average weekly cost per head of "Pensions, gratuities, &c." in the County and Borough Asylums during the financial year was $2\frac{1}{8}d.$ Of this sum $1\frac{1}{8}d.$ was chargeable to the building and repairs account, and $1d.$ to the maintenance account. The charge for this item, as was anticipated in our 66th Report, as the result of the Asylum Officers' Superannuation Act, 1909, is decreasing in the building and repairs account, and is increasing in the maintenance account.

In reviewing the cost of pensions it should be noted that there was also paid direct by county and borough councils a total sum of 27,817*l.* for pensions granted under the Lunacy Acts of 1890, and previous years, which do not appear as a charge on the accounts of the several Visiting Committees, but which should be included in the total cost of pensions, which then works out at $3\frac{3}{8}d.$ per head per week.

Buildings.

At our visits of inspection we have found the buildings of the various Institutions maintained in good order.

The schemes for the erection of new Asylums, and for alterations, additions, and improvements to existing ones that have been dealt with in our office and approved by the Secretary of State, were 123 in number, and involved an expenditure of public money amounting to 1,078,433*l.* 0*s.* 4*d.*

In every instance we have exercised the greatest care to ensure suitability of design and the elimination of embellishment and everything of an unnecessarily costly nature.

The more important of these schemes we shall refer to in some detail. Those which involved an expenditure not exceeding 1,500*l.* in amount are tabulated in Appendix D. (*see* page 509).

It will be observed that in several instances the schemes are for the better housing of attendants and nurses, either by the provision of detached homes for those who are unmarried or by the erection of cottages for married attendants. Such accommodation was urgently needed, and is indeed much required elsewhere; no doubt by its provision contentment and long service will be promoted among the members of the respective staffs, which must reflect benefit on the patients.

Besides the above schemes others have been dealt with relating to Lunatic Hospitals and Licensed Houses which required our approval, but not the sanction of the Secretary of State, the expenditure of public money not being involved.

Alterations, Additions, and Improvements.

The principal alterations, additions, and improvements at the County and Borough Asylums approved by the Secretary of State were the following:—

Beds, Herts, and Hunts Asylum.—The Visiting Committee have extended the freehold estate of the Asylum to 396 acres by the purchase of 141a. 3r. 6p. of land which had for some years been leased to them. The step was a prudent one in view of the rapidity with which residential houses are increasing in number in the locality, and the importance of insuring for the future a sufficient area of ground for the occupation and recreation of, and for the raising of farm and garden produce for, the 1,100 patients the Institution is able to accommodate. The price paid for the property, which includes a farm house and two cottages, was 5,000*l.*, or about 35*l.* per acre.

Bucks County Asylum.—The Visiting Committee have been fortunate in securing the freehold of a field about 27 acres in extent hitherto only rented, but which has for many years been used for the disposal of the Asylum sewage, and is indispensable for that purpose. In the circumstances, the price of 2,000*l.* was not unreasonable.

Cheshire Asylums: Upton.—In our 64th Report (*see* page 25), after referring to the extensive additional accommodation for patients which had been decided upon, we mentioned that plans had also been submitted to us of other proposed additions and improvements. These comprised various sanitary and other alterations needed to bring the main buildings of the Asylum up to the standard of modern requirements; the erection of a small Isolation Hospital for cases of infectious disease; new workshops; a new mortuary; a home for nurses; cottages for married attendants, and additions to the chapel. With the exception of the home for nurses, which it has since been suggested might be provided by a conversion of the mansion on the Bache Hall Estate, acquired about two years ago (*see* 66th Report, page 37), the plans relating to all the above matters, as well as some others, including a much needed extension of the airing courts, have, after considerable revision in our office, been approved, the estimated cost being 20,173*l.*

Dorset Asylum.—Owing to the increase in the number of female patients an enlargement of the female division of the Asylum has been decided upon. The extension will take the form of a three-storey block sufficient for 50 patients, with eight extra bedrooms for nurses. The scheme, which includes the erection of a new mortuary, will entail an expenditure estimated at 5,566*l.*

Glamorgan County Asylum.—The Visiting Committee are desirous of providing 16 cottages for the use of married attendants. Ten of these cottages are to be built in a row at

the Parc Gwyllt division of the Asylum, the erection of these, at a cost of 2,732*l.* 15*s.*, having been sanctioned by the Secretary of State. As regards the other six, which the Committee propose to provide at the Angelton division, no final decision has, as yet, been come to owing to difficulties that have arisen regarding drainage.

Hants Asylum: Knowle.—The Visiting Committee recognizing the desirability of enlarging the freehold estate of the Asylum, comprising 176 acres, have wisely availed themselves of an opportunity of purchasing 51a. 3r. 23p. additional land adjoining the estate, at the moderate price of 32*l.* per acre.

They have also decided to provide, at an estimated cost of 1,500*l.*, three more pairs of cottages for married members of the staff.

Kent County Asylums: Barming Heath.—Male Ward No. 8, hitherto only a one-storey building comprising a dayroom and seven single rooms, is to be remodelled, raised a storey, and provided with sanitary conveniences and other rooms necessary to make it a self-contained ward suitable for quiet chronic patients. In this way additional accommodation will be provided for upwards of 50 patients at an average cost of about 80*l.* a bed.

For some time past attention has been called by members of our Board at the annual inspections of the Asylum to the lack of adequate arrangements for the general bathing of the patients. Accordingly it is with satisfaction we are able to report that the Visiting Committee have decided upon the provision of a general bath-house, so arranged and placed that it can be used by patients of both sexes. This addition, which is estimated to cost the sum of 1,000*l.*, will not only enable the bathing to be carried out more satisfactorily and under due supervision, a matter of much importance in the interests of the patients, but will also effect considerable economy in coal consumption.

Chartham.—This Asylum at present provides accommodation for 1,139 patients, and the question of the necessity of enlarging it for 200 more is under consideration. The Visiting Committee have, therefore, wisely decided to extend the estate, which at present only comprises about 121 acres, and with that object have purchased nearly 84 acres additional land at a price averaging about 30*l.* per acre.

Lancashire Asylums: Lancaster.—Plans have been approved for the erection of a detached block for 115 private patients who are to pay from one to one and a half guineas per week. The block will also have accommodation for 12 quiet, working, non-paying patients who will be employed in it. A convenient and commanding site has been selected for the building, which is estimated to cost 29,139*l.* 18*s.* 5*d.*, or about 230*l.* a bed. The block for 50 male private patients erected at this Asylum a few years ago (*see* 62nd Report, page 23), cost only about 112*l.* a

bed, but it is a very simple type of building and does not afford accommodation for patients who are very troublesome, turbulent, or sick. The proposed new block is not to be thus limited in its scope, and consequently owing to the number of separate wards and rooms that have to be provided must be much more expensive to erect. Moreover, the building is to have a separate administrative department as well as accommodation for a Medical Officer.

Prestwich.—A new boiler-house and chimney are to be erected here at an estimated cost of 2,800*l.*, which includes the provision of one new boiler, a heat economizer, mechanical stokers, and other apparatus. The existing boiler-house is in a very dilapidated state, and both it and the chimney are now, owing to the recent ward extensions, of insufficient capacity.

Rainhill.—The following works are to be carried out at this Asylum: (1) a building of two storeys, connected by a closed corridor with the Annexe, is to be erected to accommodate 100 female patients who are to be quiet chronic cases and the better class of imbeciles and dements; (2) additional cooking appliances are to be installed in the main kitchen; and (3) certain structural alterations are to be effected at the laundry and additional machinery provided there. The estimate for these works, even after considerable reductions had been made in our office, amounted to 14,020*l.* This, though apparently high, being equivalent to 140*l.* a bed, we were satisfied was not unreasonable, having regard to the facts that the building will provide some extra rooms for nurses, beyond what will be required for the ward itself, in order to meet an existing deficiency of such rooms in the Annexe, and that, owing to the sloping character of the site, the depth of the foundations will be greater than is usual.

Winwick.—Plans and a contract amounting to 6,949*l.* 6*s.* 6*d.* for a new three-storey block, which is to serve two purposes, have been approved. The ground and first floor of the building will be devoted to the accommodation of 40 imbecile boys and their attendants, the boys to be those who are too old to asscciate with the younger boys in the Winwick Hall Annexe. The second floor is to provide accommodation for 21 male attendants who are either now insufficiently housed in other parts of the Institution, or are to be engaged as additional staff, the need for the increase being due to the decision of the Visiting Committee to grant more extended leave of absence.

On the female side 12 additional nurses will have to be engaged as the outcome of this decision, and there are some 15 nurses occupying rooms never intended for that purpose. It has therefore been determined to add, at a cost of 1,950*l.*, another wing to the Nurses' Home corresponding to the one that has recently been built.

A scheme involving an estimated expenditure of 2,500*l.* has also been sanctioned for the centralisation of the hot water system and the utilisation of the exhaust steam from the engines which at present is wasted. The new system will enable the steam mains to the heating apparatus to be shut off during the summer time, and will, it is anticipated, by effecting a reduction in the consumption of coal, result in a saving of about 400*l.* per annum.

London County Asylums: Banstead.—The Asylums Committee of the London County Council have wisely acquired the Fairlawn Down Farm for the purpose of enlarging the estate of this Asylum. The area of the farm is 83 acres and the purchase price 4,000*l.*, or an average of about 48*l.* an acre. The area of the estate, previously 117½ acres, of which only 76½ acres were available for cultivation and pasturage, was inadequate, and considerably less than the area of the estate of any other London County Asylum containing more than 2,000 patients.

Colney Hatch.—Plans were approved in March dealing with another section of the general scheme for modernizing the wards (*see* 66th Report, page 30), chiefly by improving the ventilation and lighting in the day rooms, dormitories, single rooms and offices. The alterations consist of the removal of many internal walls, the cutting of openings in others, the substitution of large wooden sash windows for the present fixed iron lights, the provision of ventilation openings in single rooms, the enlargement of ward sculleries and the plastering of the rough inside walls. This section of the scheme is estimated to cost the sum of 4,350*l.*

Staffordshire Asylums: Burntwood.—To provide for the additional nurses that will have to be engaged in consequence of the decision of the Visiting Committee to shorten the hours of duty of the attendants and nurses in all their Asylums, and to give proper accommodation for some of the nurses now on the staff who are at present unsuitably housed, a detached home sufficient for 41 nurses and female officers is to be built here at a cost of 6,500*l.* The home will contain, in addition to the requisite number of bedrooms, a recreation room, a writing room, and a charge nurses' sitting-room, as well as a kitchen and the necessary sanitary conveniences.

Stafford.—For reasons identical with those mentioned in the last paragraph, a detached home, sufficient for 44 nurses, is also to be provided in connection with this Asylum, at an estimated cost of 5,840*l.* The building will be somewhat similar to the proposed home at Burntwood Asylum, and in both instances the rooms vacated by the nurses will be able to be utilized for patients.

Surrey County Asylums: Netherne.—The Visiting Committee have decided to erect six more cottages as a further step

towards meeting the difficulty experienced by the married attendants in obtaining accommodation for their families in the neighbourhood of the Asylum. The cost is expected to work out at about 276*l.* 13*s.* 4*d.* per cottage.

North Riding of Yorkshire Asylum.—At this Institution also six more cottages are being built. They will be in one row and are to cost about 290*l.* each.

Birmingham City Asylums: Winson Green.—The Visiting Committee have acquired on lease for 21 years, under the provisions of section 261 (2) of the Lunacy Act, 1890, a house known as Stechford Hall, with 13½ acres of land attached to it, situate about 4½ miles from the Asylum. It is to replace "The Leveretts," which, after having been for some years occupied by patients, had become unsafe, owing to subsidences due to mining operations, and was vacated on the 30th of September. The house and grounds will be utilised for 60 male convalescent patients, private and pauper. A good many alterations, estimated to cost 900*l.*, have been necessary to render the house suitable for this purpose, including the provision of additional baths and w.c.'s; a fire escape staircase from the second floor; alterations to the windows and doors; the introduction of fresh gas and water services, and a new system of drainage.

Brighton Borough Asylum.—The ward in the female division devoted to the more turbulent and troublesome patients is to be improved by the provision of a new dayroom and sanitary spur, by a rearrangement of the side rooms, and by the enlargement of the existing window openings and the substitution of sash windows for the present iron casements. The airing courts are also to be enlarged and improved. We have for some time felt that both as regards some of the accommodation and certain matters of administration at this Asylum changes were needed. We, therefore, welcome this scheme, which will probably involve an outlay of 4,544*l.*, as evidence of the desire of the Visiting Committee to give effect to the views we have expressed.

Hull City Asylum.—Various alterations and additions are to be effected at the farm buildings at an estimated cost of 2,629*l.* They include, among other matters, a number of new piggeries and a new cowhouse for 34 cows.

Leicester Borough Asylum.—Various important alterations and additions are to be carried out at this Asylum. They comprise: (1) the remodelling of the laundry and the renewal of the machinery there; (2) the installation of additional electrical plant; (3) the provision of new quarters for the matron and the assistant matron; and (4) the provision of a new general bathroom for the female patients. The original estimate of the cost of these works was 9,500*l.*, but during the

passage of the plans through our office we made, with the assistance of our architect, suggestions to the Committee, by the adoption of which it was reduced to 8,338*l*.

Middlesbrough Asylum.—In order to have a larger area of ground for the raising of farm and garden produce, and to preserve the amenities of the Asylum, the Visiting Committee have purchased 12 acres of land adjoining the Asylum estate. This was the only suitable land obtainable in the vicinity of the Institution, and the price paid for it, 1,560*l*. 18*s*. 9*d*. (or about 130*l*. per acre) we thought by no means excessive having regard to its proximity to the town.

The Committee have also determined to erect six cottages on the estate for the use of married attendants and artizans. The estimated cost is the moderate sum of 1,380*l*., or only 230*l*. per cottage.

Portsmouth Borough Asylum.—An isolation hospital, for cases of infectious disease, providing accommodation for 3 patients of each sex, is to be erected here at a cost of about 2,300*l*.

This building is to take the place of the existing isolation hospital which the Committee of Visitors intend, when some alterations have been made, to devote to the treatment of patients suffering from tuberculosis.

New Asylums sanctioned or in course of Erection.

Hants 2nd Asylum.—The Secretary of State has approved the plans of this Asylum which, in our 64th Report (*see* page 40), we stated were being prepared.

The Asylum is to be erected on the site known as Park Prewett, situated near Basingstoke, and will, when completed, have accommodation for 1,600 patients; but, in the first instance, though the entire administrative department will be built, wards will only be provided for 1,400 patients.

The approved plans comprise (1) the main Asylum for 810 patients; (2) a detached reception hospital for the treatment of 50 recent cases of each sex; (3) eight detached blocks, of which four will each be for 40 quiet, chronic working patients —two will each accommodate 40 epileptics and two will each be devoted to 30 convalescent patients; (4) a detached block for 50 private patients of each sex, the maintenance charge for whom the Committee propose shall not be less than one guinea per head per week; (5) two sanatoria, each with 45 beds, intended for the separate treatment of patients suffering from phthisis and dysentery; (6) a detached chapel with seating accommodation for officers, attendants, and 752 patients; (7) a detached house for the Medical Superintendent; (8) residences for other members of the staff, including a house

for the steward and 16 cottages for married attendants and artisans; and (9) a detached isolation hospital with six beds, to be reserved for the immediate isolation of patients suspected to be suffering from infectious disease.

The water supply will be derived from a well on the site. The sewage will, after treatment by the bacterial process, be disposed of by surface irrigation. The buildings will be warmed by a forced circulation of hot water, and lighted by electricity. The Asylum will be connected by a siding with the London and South Western Railway at Basingstoke for the delivery of goods and stores, which should not only prove a convenience, but also promote economy in the delivery of goods.

The general construction and arrangements of the buildings have received very careful consideration during the passage of the plans through our office, and anything of an extravagant character has been rigidly excluded. The total estimated cost of erecting the Asylum for 1,400 patients, including the cooking apparatus and all the various machinery, the laying out of the grounds and airing courts, fencing, future farm buildings, architect's commission, &c., is 355,000*l*. This represents an average cost of 253*l*. 11*s*. per bed, which is reasonable, having regard to the fact that the cost of the whole of the administrative buildings as well as that of the private patients' block and of the siding is included in the estimate.

Lancashire: Whalley Asylum.—In our 65th Report at page 41 we gave particulars of this the sixth Asylum for Lancashire, now in course of erection, and stated that, although the whole of the administrative department sufficient for the requirements of the 2,000 patients, for whom the plans provide, was to be proceeded with at once, wards for only 630 patients of each sex were, in the first instance, to be built. The Asylum is still far from being ready for occupation, but it is already fully apparent that the accommodation now being provided will be quite insufficient to meet the needs of the county. Accordingly it has been decided at once to complete the Asylum, by proceeding with the construction of the blocks for 370 quiet, chronic, and working patients of each sex, the erection of which was postponed.

The estimate for these blocks is 85,745*l*., or 16*l*. per bed higher than the amount (100*l*.) they were originally expected to cost. But even so, the average cost per bed of the Asylum when completed for 2,000 patients should not exceed 211*l*.

London County Eleventh Asylum.—The Secretary of State has also approved plans for a new Asylum (*see* 64th Report, page 33) which the London County Council propose to erect upon the Horton Estate at Epsom. This estate, comprising 1,059 acres of land, was acquired by the Committee in the year 1896, and since that time four Asylums have been erected upon it, namely, the Manor, Horton, Epileptic Colony, and Long

Grove, each of which is administered by a separate Sub-Committee. It is proposed to set apart the portion of the estate (231a. 3r. 22p. in extent) not at present utilised for Asylum purposes, and to erect thereon buildings which will constitute the Eleventh Asylum belonging to the County of London.

The buildings will provide accommodation for 2,066 patients (1,098 males and 968 females), and will comprise a main building; an admission hospital for 55 recent patients of each sex; two detached blocks containing accommodation for 30 patients of each sex suffering from phthisis and dysentery; two convalescent homes for 25 patients of each sex; detached blocks for working patients, and for noisy, chronic, and epileptic patients; a chapel with seating accommodation for 854 patients and a number of the staff; an isolation hospital for 3 patients of each sex; a residence for the Medical Superintendent, and three cottages.

The general arrangement of the buildings is somewhat similar to that of Long Grove Asylum, the last Asylum erected by the County Council, with such modifications in detail as have from experience of that Asylum been deemed desirable.

Water will be obtained from the central pumping station which supplies the other four Asylums and, if need be, from the mains of the local authority.

The sewage will be discharged into the system of the Epsom Urban District Council.

Electrical current for lighting and power will be supplied from the Asylums Committee's central station on the estate, and a supply of gas for cooking purposes will be obtained from the Epsom Gas Company.

Having given very careful consideration to this scheme in all its details we are satisfied that the plans provide for buildings suitable to their several purposes.

The total estimated cost is 467,970*l.* which works out at an average of 226*l.* 10*s.* per bed. This we look upon as quite reasonable having regard to the fact that the estimate is based upon the rates and hours specified for the building, engineering, and other trades in the London County Council's list now in force, which are nearly 15 per cent. higher than those in the north of England. The estimate also includes a sum of 6,600*l.* for new farm buildings (not yet determined upon), and repairs and additions to existing buildings.

Suicides and some other Fatal Casualties in County and Borough Asylums.

Twenty-one deaths by suicide have been reported to our Board as having occurred during the past year amongst the patients of County and Borough Asylums. In 13 instances the act from which death resulted was done while the patient was under treatment at the Asylum; in three instances it was

done before admission, in three whilst the patient was on trial, in one after escape, and in one case whilst out for the day with friends.

Of the 13 suicides by patients whilst resident in the Asylums four were by hanging, three by cutting their throats, one each by drinking disinfectant fluid, by drowning, by jumping off a ladder, and by self-strangulation; one patient threw himself under a coal cart, and one was asphyxiated by placing his head in a bucket of water. Six of these patients had been regarded as actively suicidal and were ordered to be kept under constant supervision, two were under modified supervision as potentially suicidal, and the remaining five were not regarded as having suicidal tendencies. In two of the cases where the patients died from cutting their throats, the acts were done with razors which belonged to attendants, and which had against the regulations been placed elsewhere than where they should have been, namely, in their rooms under lock and key. In three of the cases of hanging illustration was afforded of the danger to which we have from time to time drawn attention of leaving pipes and other projections not covered in or protected in places not under observation.

The following cases of suicides are selected as deserving of particular mention:—

Barming Heath Asylum.—J. W., a male patient admitted on the 15th April 1912, although known to be suicidal, having made an attempt on his life previously to admission, was not regarded as actively so, and was not placed on a special "suicidal card," although the charge attendant of the ward was instructed that the patient should be kept under observation. The patient, who was in the reception ward, was put in bed during the day in a single room, where he was seen and spoken to by an attendant at 7.30 a.m. on the 18th April; 25 minutes later he was found in a kneeling position beside the bed with a strip of carpet looped round his neck and the rail at the head of the bedstead. Artificial respiration failed to revive him, and he died in a few minutes.

The case appeared to us to show a want of good judgment and adequate care, as the patient, being obviously suicidal on admission, should have been kept under the close and constant observation of a special attendant.

Devon Asylum.—R. P., admitted on 18th June 1910, died on 26th December 1912 by hanging himself from the catch of the window of a single room by means of a piece of string attached to the scarf he had been wearing. The patient, who was regarded as actively suicidal, was allowed to pass out of the day room as if to go to the closets, where there was an attendant on duty, and instead passed along the gallery and entered one of the single rooms, the door of which had been left open for purposes of ventilation.

We suggested the removal of the window-sash fasteners.

Bexley Asylum.—E. F., a patient who had been under a reception order for seven years, and who was considered to have had suicidal tendencies during practically all the time she was a patient at this Asylum, which was since November 20th, 1908, on the early morning of July 18th last eluded the observation of the nurse in special charge of her, and while the nurse was doing the hair of another patient, and while some of the nurses were away at breakfast, obtained access to the boot room on the landing below, and there suspended herself from a clothes hook by means of two pieces of cloth taken from the necks of two new dresses, which had been put in

the ward workbasket. The door leading from the day room to the landing at the top of the staircase and that of the boot room had been left open, but it was not ascertained by whom or when. The Sub-Committee of the Asylum investigated the case and came to the conclusion that there was a lack of proper supervision in the ward at the time, a conclusion in which we agreed. The members of the staff concerned were severely reprimanded.

Long Grove Asylum.—H. A., who was admitted on the 31st May 1912, committed suicide by suspending himself by a sheet which he had taken from a pile of soiled linen and tied on to a hot-water pipe in the brush closet in the sanitary annexe in the Male Hospital. He evaded the attention of the attendant in the dormitory, where he was supposed to be kept under special observation on account of his suicidal tendencies, and mixed with other patients who were entering the lavatory, unobserved by the attendant in charge of them. Here he got into the cupboard, the door of which had been unlocked, in order that the working patients might get cleaning materials.

Northampton County Asylum.—A male patient, E. H., was admitted on the 5th April 1912 suffering from melancholia. It was uncertain whether he was suicidal, but after consideration it was not thought necessary to place him on a special caution card. On the morning of the 10th April he eluded the notice of the attendants and went into a single room, where he was found about half an hour later with his head in a bucket of water. This bucket was a fire bucket which had been standing by a hand fire engine.

The Medical Superintendent realised that it would have been wiser, as events proved, to have placed the patient on a special caution ticket, and it appeared to us that his absence from the day room should have been detected sooner.

In order to diminish the risk of a fire bucket being used for such a purpose again iron rods of sufficient strength have been fixed in the mouths of all buckets.

Derby County Asylum.—C. M., a male criminal patient, admitted to this Asylum on the 6th July 1908, hanged himself on the 3rd June 1912 in a single room in which he was accustomed to sleep. He had attached strips of his shirt, of his sheet, and of his quilt to a tile ventilator over the door, passing the strips out and back through the holes. He was not regarded as having suicidal tendencies.

We recommended to the Committee that to obviate the risk of such a casualty in the future the ventilator in question, and any similar ones, should be protected by galvanised iron wire gauze in a manner corresponding to the recommendations contained in section 62 of our "Suggestions and Instructions to Architects." We were informed, however, that the Committee decided not to take the course we suggested.

Newcastle-on-Tyne Asylum.—F. F., a female patient admitted on 12th July 1911 suffering from melancholia, died on the 10th August 1912 from the effects of drinking "Jeyes' Fluid." A nurse gave the patient the keys of the ward store in order that she might get out an apron. From a locked cupboard in the store she took out a bottle of "Jeyes' Fluid," and drank nearly a pint of it. On inquiry we learnt that there was no regulation in force forbidding an attendant or nurse to hand over keys to a patient, but that an additional regulation to this effect has since been made.

Winson Green Asylum.—E. W., a male patient admitted on the 14th of September last, was regarded as suicidal. On the 8th of October he precipitated himself from a ladder and fractured his skull. The ladder had been left unguarded in the airing court, and on the patients coming out for exercise E. W. seized the opportunity and scaled the ladder, precipitating himself to the ground before he could be reached. Two attendants were considered to blame in leaving the ladder unguarded, but, in consideration of their previous satisfactory service, the Committee only severely reprimanded and cautioned them.

Winwick Asylum.—The circumstances attending the death by drowning of E. B., a male patient at this Asylum, on the 4th October 1912, and the plucky attempt at rescue by an attendant who also lost his life, are fully described on page 82 of this report.

Among the deaths during the year caused or accelerated by accidents or injuries not suicidal in character were two where the patients died from the results of assaults by fellow patients, two from the results of scalds and two in which fractures of jaws had occurred and had not been observed until some time after they must have been occasioned. In one of these cases, that of R. H. at the East Sussex County Asylum, there were also the fractures of six ribs. In this case a sworn inquiry was held by two members of our Board, as we were not in agreement with the verdict of the Coroner's jury that the injuries were probably spontaneous and due to natural disease. In view of the importance of the case, and of the fact that the late employer of the patient has made an application to the Attorney-General for his fiat to apply to the High Court of Justice, under section 6 of the Coroners' Act, 1887, for an order directing another inquest to be held, which application was refused, we have thought right to set out the report of the inquiry in full as a supplement to this report.

Particulars of some of the details of the following cases of accident or injury are selected for record :—

Banstead Asylum.—M. S., a demented female patient, died on the 10th April 1912 from heart failure, following shock from a scald whilst bathing. Two days before her death she was being bathed, with other patients from her ward. The bath was controlled by a mixing tap, which should only have allowed water about 92 degrees to pass. Through a defect in the tap after the water had been turned off, a trickle of hot water continued to run in, and the patient, sitting with her back to the taps, was scalded in the buttocks. The Coroner's jury found that no blame attached to anyone, but were of opinion that the hot-water springs should be taken out of the taps and examined from time to time.

Cardiff Asylum.—B. W., a male patient, died at this Asylum on the 14th February 1912 from heart failure, due to fatty degeneration, death being accelerated by the hot-bath treatment given under the following circumstances. He was admitted on the 31st May 1911, and had been acutely suicidal during the whole time of his residence in the Institution. Sedatives had been tried, but with little effect, and for 14 days in July 1911 he had a course of continuous warm baths at temperatures from 99° F. to 105° F., and also two courses of warm electric baths of 10 days' duration each in July and August 1911. Cold shower baths had also been given to him for a long period daily. No ill-effects had been noticed from these procedures. On February 10th, 1912, all sedatives had been stopped by day, and he had only a sleeping draught of paraldehyde at night. On the 11th and 12th February he was put into a dry pack, but on this proving ineffective, directions were given for the patient to be put into a continuous warm bath from 10.30 a.m. to 7 p.m., with the necessary intermissions. He had this bath as ordered on the 13th; on the next day he was again put into the bath at 7.30 a.m., and the temperature raised at 8.10 a.m. to 104° F. He took about half his breakfast in the bath. At about 9.10 a.m. the attendants present noticed that he had become pale, and he was immediately taken out of the bath, and although artificial respiration and warm rubbing were resorted to, he did not rally, and died. The temperature of the bath when the patient was taken out of it was about 102° F.

The post-mortem examination disclosed the fact that the patient's heart was fatty and degenerated, which was the cause of death.

He had never fainted before, and there had been no indications that the treatment was not a safe one to pursue.

The Coroner's jury found that no blame attached to anybody.

E. A., another male patient in this Asylum, suffering from chronic dementia for nine years, had been for some two years employed in cleaning a corridor near the Asylum stores, and had occasion to enter them from time to time for the purpose of getting water. On December 5th last the quarterly consignment of six bottles of whisky in a case had been delivered and had been left standing on the stores counter. In the afternoon the stores were left in charge of the stores porter, the storekeeper being temporarily absent assisting in the clerk and steward's office with accounts, the assistant clerk's post being at the time vacant. It appears that E. A. took two of these bottles of whisky, and breaking their necks, drank nearly all the contents of both. At 4.15 the stores porter heard the patient singing in the lavatory, which opens into the stores, and on going to him found he had been drinking alcohol. The patient was immediately seen by the Assistant Medical Officer, and put to bed, and kept in the infirmary ward under observation. Although he was treated with strychnine injections and measures were taken to sustain circulation he became comatose, and after once rallying somewhat, he died at midnight on the 6th December from alcoholic poisoning. It is to be regretted that the patient's stomach was not washed out until the evening of the 5th December, the Assistant Medical Officer not considering it necessary to do so earlier, as he did not think the patient had swallowed enough whisky. Steps have been taken that the consignments of whisky shall in future be delivered direct to the Dispensary.

Long Grove Asylum.—G. F.'s death was caused by a homicidal attack made by another patient, J. M., a negro, on the 15th November last. Both patients had been employed in the cowsheds for over four years, and on no occasion had J. M. given any reason for being regarded as a dangerous man.

On the morning of 15th November both patients had been set to work by the farm attendant to clean down a cowshed, and for three-quarters of an hour afterwards had been seen by him working quietly. Shortly afterwards he met the patient J. M. coming into another cowshed, who informed him that he had hit G. F. with a broom. G. F. was then discovered in a cow-stall with his face battered in, and life extinct. The handle of a broom was lying there broken in three pieces. J. M. subsequently stated that they had had a fight, and that G. F. had knocked his pipe out of his mouth. There were no signs of any struggle in the cowshed, or trace of any injury on J. M.

A verdict of wilful murder was returned by the Coroner's jury against J. M., and he was subsequently also committed for trial from the Epsom Police Court. He was found insane on arraignment and was not tried, and is now detained as a criminal lunatic at Broadmoor.

Rubery Hill Asylum.—J. F., a male epileptic patient, at 4 a.m. on the 24th August last had an epileptic fit, and after being attended to by the night attendant appeared to have recovered and gone to sleep. At 6 a.m., on the day attendant coming on duty, he was found lying with his face buried in the pillow, and in the opinion of the Assistant Medical Officer had been dead between half an hour and an hour. At the inquest the jury expressed their opinion that the night attendant had not given proper attention to the patient in failing to observe that he was lying on his face when he went off duty.

Scalebor Park.—The death of M. C., a female patient, suffering from advanced general paralysis, was accelerated by scalding sustained whilst having a bath, such scalding having been caused by the nurse neglecting to use the thermometer to test the temperature of the water in the bath.

For this breach of duty the nurse was at once dismissed.

Wakefield Asylum.—E. S. was a patient admitted into this Asylum in November 1911 suffering from dementia and general paralysis. Owing to her excessively greedy and ravenous propensities she had been fed with sops and her bread was habitually soaked in the tea. On the evening of January 7th, 1912, a nurse placed the bread which was to be soaked in the patient's tea behind the door of the single room in which she was at the time. In the absence of the nurse the patient seized the bread and crammed it into her mouth; a quantity lodging in the pharynx and gullet the patient was choked, and although tracheotomy and artificial respiration were performed did not revive. We were of opinion that there was carelessness on the part of the nurse in leaving some bread within reach of such a patient whose proclivities were known to her. The nurse in charge of the ward at the time of the occurrence was reduced by the Committee to the position of an ordinary nurse.

Warwick Asylum.—A. D. G., a private male patient at this Asylum, met his death at the hands of another private male patient, W. F. B., on the 17th January 1912. The latter, although the certificate and statement of particulars on which his reception order was made contained certain categorical statements as to his impulsive and dangerous proclivities, and to his having felt that he wanted to murder someone, had not after his admission to the Asylum on the 2nd December 1911 shown any tendency to violence or impulse, and therefore was not under special supervision. He was stated to be cheerful, and though inclined to be mischievous, meddled in a good-tempered way with anyone working near him, wanting to do the work himself.

On the morning in question another patient who had been using a broom laid it aside temporarily in the day room near where A. D. G. was. The patient W. F. B. appears to have been seized with an impulse, possibly prompted by hallucination, and to have suddenly rushed forward, and, seizing the broom, to have inflicted eight or ten blows in rapid succession across the head of the patient A. D. G., causing his death.

W. F. B. was subsequently arraigned at the Warwick Assizes for the offence of wilful murder, but was found insane on arraignment and was not tried. He was sent as a criminal lunatic to Broadmoor Asylum.

We were of opinion that there was an error of judgment on the part of the Medical Staff in not laying sufficient stress on the information given in the admission documents as to the propensities of W. F. B., who had therefore been deprived of the constant supervision of which he stood in need.

Zymotic Diseases in County and Borough Asylums.

The incidence of these diseases during 1912 would appear to be very much that to which we have been accustomed in previous years.

No deaths have been reported from *measles*, *scarlet fever*, or *diphtheria*.

Erysipelas was a cause of death in 17 cases; these were supplied by 15 Asylums, and its occurrence was mainly sporadic in character.

Enteric fever has been responsible for 29 deaths, which is precisely the same number as was reported during the year 1911. They were distributed amongst 16 Asylums. Seven of them occurred at Prestwich and 4 at Wakefield, which are the only Asylums that have been visited by the disease in at all an epidemic manner.

At Prestwich Asylum, during the first three months of the year, 30 patients (25 males and 5 females) and a male attendant were attacked. No fresh case has occurred since March—a fact doubtless largely due to the energetic and thorough means of isolation and disinfection that were practised—and prior to this outbreak no case had developed in the Institution during the preceding 11 years with the exception, in the year 1909, of one male case whose blood at the time of the epidemic still reacted in low dilution and from whose urine a motile bacillus could still be grown. From the investigations that were made, it seemed clear that no suspicions need be attached to either the milk or water supply; while it was deemed impossible to assign positively a cause for the outbreak, there emerged the facts that the patient to whom allusion was made above belonged to Ward 6 and worked with what is known as the "closet gang"; also that two of the first four cases occurred in Ward 6 and belonged to a "barrow gang" who removed from beneath the bathrooms of Wards 2 and 3 some soil, which, in the course of repairing the floor, had been found to be in a very foul condition. Supposing that this was the source of the outbreak, how far its spread was due to the existence at this Asylum of the system of earth-closets must be regarded as doubtful; but it is satisfactory to learn that steps to substitute a system of water carriage for the one now in use are being seriously considered.

At Wakefield Asylum 9 cases developed during the year. In 2 males the occurrence was sporadic, but during January and February the female side of the Institution was visited by a small epidemic in which 4 patients and 3 nurses were attacked. Of these female cases, 4 arose in Ward 21 which, as the result of a systematic study of all the patients in that ward by the bacteriologist on the staff, was considered to contain the source of the infection, for there was cause to regard more than one patient as likely typhoid carriers.

Influenza has been reported as one of the causes of death in 30 fatal cases distributed amongst 16 Asylums. It is very improbable, however, that this number represents anything like the true mortality from the disease, as doubtless many of the fatal cases of, for instance, pneumonia, owe their origin to influenza. It is of interest to observe that several Asylums, notably Banstead, Plymouth, and Notts County, experienced diarrhœal outbreaks in January, February, and June, which, in the light of associated symptoms, could with confidence be regarded as influenzal in origin. Somewhat sharp outbreaks of influenza also occurred at Napsbury, Northants, and Wilts Asylums, mostly in the months of January, February, and March.

Dysentery and Diarrhœa.—From the returns furnished to us we find that during 1912, besides 5 cases of dysentery and 4 of diarrhœa amongst the staff, there occurred amongst the

patients in the 95 County and Borough Asylums 1,155 cases of dysentery and 555 of infective enteritis or diarrhœa of uncertain origin, showing a decrease in the former of 301, and in the latter of as much as 471 below the figures for 1911, during which year there was a marked prevalence of intestinal disorders in association with a very hot and dry summer.

Of those patients attacked by dysentery, 501 were males and 654 females. There recovered 838; there died 287; and at the end of the year 30 remained under treatment. The case-mortality for completed cases was, therefore, 25·5 per cent., that for males being 21·5, and that for females 28·5; the corresponding percentages in the previous year were 21·3, 14·8, and 26·4 respectively.

The percentage distribution of each sex as regards the cases of dysentery is 43 males: 57 females, and, as regards cases of dysentery and diarrhœa taken together, it is 42: 58, which proportions may be compared with 47: 53 representing the percentage numbers of males and females in the County and Borough Asylums on the 1st January 1912. Such a comparison suggests that these diseases are slightly more prevalent amongst female than male insane patients.

The Asylums in which the incidence of dysentery was at all epidemic in character were Cardiff (February), Brighton (March), Wakefield (April), Burntwood (August), Croydon (September), and Wadsley (December). In all these, except Burntwood (where in August, besides 55 cases of dysentery, there were 26 of diarrhœa) and Wakefield, the outbreaks were small and no two were in the same month.

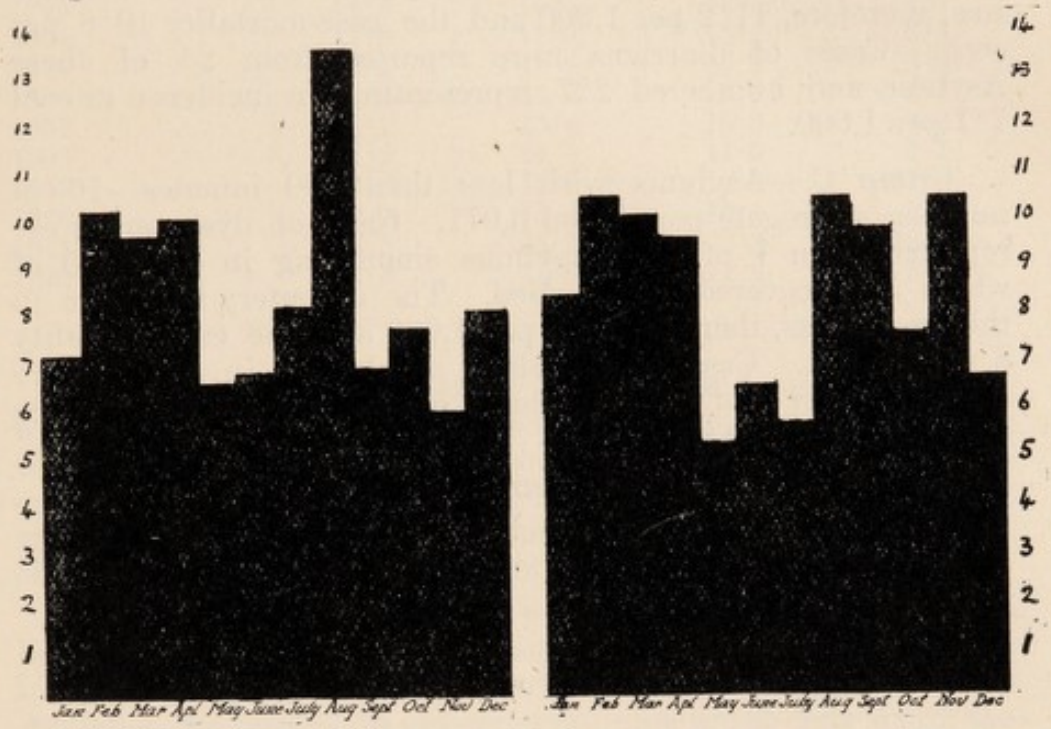
Dysentery prevailed more or less throughout the year in 14 Asylums, viz., Devon, Cheddleton, Colney Hatch, Long Grove, East Sussex, Hants, Parkside, Wadsley, Wakefield, Rubery Hill, Three Counties, Denbigh, Suffolk, and Exeter. It is noteworthy that all except the last three are Asylums in which the number of patients is 1,000 and upwards. They together contributed 649 cases of dysentery and 117 of diarrhœa.

No cases of dysentery are reported from 23 Asylums, in 4 of which—Cornwall, Leicester and Rutland, Northants, and Scalebor Park—the disease has not been notified since 1902 when returns were first made. Newport is also included whence there has been no case returned since the Asylum was opened in 1906. Nine of these Asylums, however, reported a total of 89 cases of diarrhœa.

Bearing in mind the marked tendency to relapse which dysentery is believed to possess, it is surprising to see in the returns only 140 cases, of the 1,155 notified, shown as having had a previous attack. The experience in this respect would appear to vary a good deal; thus, for example, while in 126 cases at Brighton, Burntwood, and Exeter Asylums only 3 are shown as having had one or more prior attacks, no less than 32 per cent. of 237 cases at Cheddleton, Devon, East

Sussex, and Wadsley Asylums had suffered from previous attacks of the disease.

The monthly incidence, per cent. of the total attacks of dysentery and diarrhœa during 1912, is shown in the subjoined diagram.



Dysentery. Diarrhœa.

Monthly Incidence per cent. of total attacks in 1912.

The total incidence of dysentery in 1912 was 11·3 per 1,000 inmates, that is 3·2 lower than the rate for 1911. The diarrhœal incidence was 5·4 per 1,000 as compared with 10·2 in 1911.

It will be seen from Table XI., Appendix B., that, in 35 of the 72 Asylums in which dysentery occurred, the total number of cases during the year was less than 10, in 26 it ranged from 10 to 30, and in 11 it was more than 30, the highest number in any single Asylum being 90.

For purpose of further analysis of the figures, the Asylums have, as in previous years, been divided into three groups, according to their size.

Group A.—Asylums in which the daily average resident number of inmates during the year was 1,000 and upwards, 39 in number, with an aggregate population of 64,533. Dysentery occurred in 34 of these Institutions. The total number of recorded cases was 761, of whom 523 recovered, 214 died, and 24 remained under treatment at the close of the year. The case-mortality was, therefore, 29·0 per cent.; and the incidence rate 11·8 per 1,000 inmates. Cases of diarrhœa were reported from 25 of these Asylums, amounting in all to 287, and representing an incidence rate of 4·4 per 1,000.

Group B.—Asylums with an average of from 500 to 1,000 inmates—40 in number, aggregate population 32,043. Dysentery occurred in 31 Asylums, the cases amounting in all to 359. Of these, 283 recovered, 70 died, and 6 remained under treatment at the close of the year. The incidence rate was, therefore, 11·2 per 1,000 and the case-mortality 19·8 per cent. Cases of diarrhœa were reported from 24 of these Asylums and numbered 227, representing an incidence rate of 7·1 per 1,000.

Group C.—Asylums with less than 500 inmates—16 in number, aggregate population 6,071. Cases of dysentery were reported from 7 of these Asylums, amounting in all to 35, of whom 32 recovered and 3 died. The dysentery incidence in this group was, therefore, 5·8 per 1,000 and the case-mortality 8·6 per cent. Cases of diarrhœa, numbering in all 41, were reported from 6 of these Asylums, equivalent to an incidence rate of 6·8 per 1,000.

The subjoined table summarises the above figures:—

		Cases of Dysentery, 1912.				Total.
		30 and more.	10 to 30.	Less than 10.	No Cases.	
Group A.	Number of Asylums	9	12	13	5	39
	Total Inmates	14,358	21,486	21,665	7,024	64,533
	„ Cases	514	204	43	—	761
	Proportion per 1,000	35·8	9·5	2·0	—	11·8
	Case-mortality per cent.	—	—	—	—	29·0
Group B.	Number of Asylums	2	13	16	9	40
	Total Inmates	1,715	10,637	12,958	6,733	32,043
	„ Cases	107	203	49	—	359
	Proportion per 1,000	62·4	19·1	3·8	—	11·2
	Case-mortality per cent.	—	—	—	—	19·8
Group C.	Number of Asylums	—	1	6	9	16
	Total Inmates	—	360	2,770	2,941	6,071
	„ Cases	—	19	16	—	35
	Proportion per 1,000	—	52·8	5·8	—	5·8
	Case-mortality per cent.	—	—	—	—	8·6
All Groups	Number of Asylums	11	26	35	23	95
	Total Inmates	16,073	32,483	37,393	16,698	102,647
	„ Cases	621	426	108	—	1,155
	Proportion per 1,000	38·6	13·1	2·9	—	11·3
	Case-mortality per cent.	—	—	—	—	25·5

The total incidence rate of dysentery per 1,000 inmates, and that with respect to each of the three groups of Asylums are shown, for each year during which the disease has been notified in the following table:—

Year.	Proportion of Cases of Dysentery per 1,000 Inmates.			
	Total.	Group A.	Group B.	Group C.
1903 - - -	14·7	16·5	14·1	4·0
1904 - - -	11·8	11·0	14·1	6·4
1905 - - -	12·5	11·6	15·2	6·0
1906 - - -	13·3	14·2	13·7	3·1
1907 - - -	11·7	10·4	15·0	7·2
1908 - - -	11·2	11·5	11·5	7·1
1909 - - -	13·2	15·6	10·0	11·8
1910 - - -	12·7	13·4	12·1	9·6
1911 - - -	14·5	15·2	13·3	12·7
1912 - - -	11·3	11·8	11·2	5·8

Its examination gives cause for a certain amount of not unnatural disappointment; because it is apparent that, despite the generally careful efforts made to diagnose and segregate cases of dysentery, the incidence rate from year to year does not vary with any regularity, and there is certainly no evidence yet of that steady decline we should like to be able to record.

Nor does there seem any persistently notable difference between the incidence rates in the largest Asylums and those in the medium-sized ones; but, with respect to the smallest Asylums, the figures do indicate that, during the first six of the years included in the Table, these Asylums have the lowest incidence rates, and it is disquieting to observe a tendency during recent years for them to rise.

As possibly having some bearing upon the explanation of the difference between the incidence rates in the smallest Asylums and those in the other two groups, it may be worth while to consider the ages of the various Asylums in these groups. These can to some extent be seen in the following table:—

Ages of Asylums in Groups.	Group A. (39).	Group B. (40).	Group C. (16).
	Per cent.	Per cent.	Per cent.
Open 20 years and upwards -	75	78	32
„ between 10 and 20 years -	15	10	37
„ under 10 years - -	10	12	31

While it is well known that several of the largest outbreaks of dysentery have occurred in Asylums shortly after their opening, it is difficult to avoid attaching some significance to the wide divergence between the percentages in the third group and those in the other two groups.

In truth, the difficulties that underlie a correct understanding of outbreaks of dysentery and infective diarrhœa in Asylums, remain far from solved. The irregular distribution and incidence of these diseases, for which with our present knowledge it is difficult to assign adequate explanation, seem to demand special investigations on a more comprehensive plan than is now possible; and such might fitly be undertaken under the same auspices as it is now proposed to inquire into tuberculosis.

We append a few memoranda of the experiences, kindly furnished to us by Medical Superintendents, of the occurrence of dysentery and diarrhœa in certain Asylums:—

Banstead Asylum.—The epidemic of diarrhœa in January was confined to D. Ward, containing 175 female patients, chiefly of an excited and degraded class. There is no doubt it was an influenzal affection. The only instances of dysentery during the year occurred in 2 female patients, both of whom were admitted during 1912.

Colney Hatch Asylum.—February and March were the months in which the greatest number of cases of dysentery occurred, there being 9 (6 males and 3 females) in the former and 11 (8 males and 3 females) in the latter month. The male side was free from dysentery during five months of the year, viz., January, April, May, July, and August, and the female side during the months of June and November. The total number of 24 attacks on the male side during 1912 compares with a total of 18 during the year 1911, and the total number of 32 on the female side with 34 during that year. With respect to diarrhœa, there was no epidemic outbreak, and 4 was the largest number of cases in any one month.

Horton Asylum.—The 27 cases of dysentery that occurred were chiefly scattered over the first six months. An extensive laboratory investigation of the cases, carried out at this Asylum, is mentioned in greater detail.

Cheddleton Asylum.—Dr. Menzies writes that—

"During the year 1912 there has been a large reduction in the number of cases of dysentery, viz., from 79 to 37, and this without any change in treatment or local circumstances, except for the fact that old dysentery cases have been kept in a warmer atmosphere and not allowed to go outside in bad weather, and this really seems to exercise a deterrent effect upon relapses in those, probably the majority of cases, who have never actually got rid of the Flexner bacilli. Of the men, 8 cases were relapses occurring in the Dysentery Ward. Of the remaining 6, 2 resided in the Convalescent Ward, where 2 patients lived who had had an attack in 1904, but these are the first two cases which have arisen in that ward since that date. Two were in the Turbulent Ward, where occasional cases have occurred of late years. One, a phthisis case, had lived among the dysenterics before the Phthisis Ward was separated from the Dysentery. The last case had only 4 stools in all, and the attack lasted only one day. Of the women, 13 were old cases in the Dysentery Block. Of the remaining 10, 8 were almost certainly infected by a chronic alcoholic and infirm patient who had suffered since admission from intermittent attacks of unexplained diarrhœa, but had never shown blood, mucus, or fever. Seven of these cases occurred before this patient was segregated in the Dysentery Block, and one after her removal. Another case developed upon the same day upon which 2 children, who are returned as suffering from diarrhœa, developed their attack.

"Among the diarrhœa cases, all were old dysenterics except the 2 idiot children above referred to, and these have now been removed to the Dysentery Block.

"A feature of the deaths was the apparent slightness of the attack which preceded the fatal event, the subjects being mostly debilitated. Three of the male and 5 of the female deaths were first-attack cases, so that not

much relief to the overcrowding of the Dysentery Blocks was afforded. But with the modification of the open-air treatment hitherto applied, and the maintenance of a warmer atmosphere, a coincident recrudescence of tuberculosis in those so affected, but who had improved under open-air treatment continued for some years, was distinctly noticeable."

Devon County Asylum.—At this Asylum there were 85 cases of dysentery, among which were 23 persons who had had previous attacks of the disease. The bulk of the incidence was on the female side, and a part of this side is now reserved for isolating those who have had an attack, so as to prevent the distribution of possible carriers. On the attack being recognised, all patients are sent to the separate isolation hospital—the Sanatorium—and are kept there until free from all obvious signs of bowel trouble, a minimum stay of one month being fixed. The female cases are then sent to Female Block 7, where they are entirely isolated from contact with other patients, and which is reserved for cases returned. A similar place will be arranged for those who have had dysentery amongst the males. In the early stages of the illness the Skiga-Kruse type of organism was, it is stated, found in the mucoid discharge. The treatment was largely individual, but the use of repeated doses of castor-oil in the early stages, followed by a mixture containing opium, ipecac. and ergot was relied on, and during convalescence, tincture of the perchloride of iron was given in large doses.

East Sussex Asylum.—Seventy-eight cases recorded as dysentery, and 21 as diarrhœa occurred in the course of the year. Dr. Taylor writes that throughout the year the examples of dysentery were very mild in type. Almost invariably the patients attacked were those showing the largest amount of mental degradation. All patients who passed mucus and blood, and who had any rise of temperature, were regarded as dysentery and treated as such.

Hants County Asylum.—There were 29 cases of dysentery at this Asylum during the year 1912. Such cases are always isolated in a special dormitory or in single rooms, according to the number of cases under treatment at the time. A special attendant is always told off to look after them.

Rainhill Asylum.—The 20 cases of dysentery recorded during the year occurred in three small outcrops in winter, spring, and late autumn. There was an absence of any tendency to arise in any particular wards. Most of the cases are treated with small and frequently repeated doses of sulphate of magnesia, and in some cases small doses of chinosol were given in addition.

Wakefield Asylum —There were 47 cases of dysentery amongst the male, and 31 amongst the female patients. Diarrhœal attacks were recorded in the cases of 8 male and 4 female patients.

Dr. Bolton writes as follows :—

"(1) The incidence was sporadic on the female side, but must be described as epidemic on the male.

"The greatest number of male cases occurred during the months of April and May (22 and 7 cases respectively). Of the 22 cases in April, no less than 17 occurred in Wards 18 and 35 (the Infirmary Wards), and of the 7 cases in May, 3 occurred in Ward 35.

"(2) In the case of both sexes the attacks were largely confined to inmates of particular wards.

"*On the male side*, Wards 35 (Infirmary), 18 (Infirmary), and 36 (Epileptic and Infirmary) were respectively responsible for 14, 12, and 5 cases. Two cases occurred in another ground-floor ward, No. 1 (Refractory). Thirty-three of the 42 cases thus occurred in ground-floor wards. Ward 35, whilst it is far from being an ideal infirmary ward, contains just the feeble and decrepit type of patient which is likely to be attacked by an infectious disease. Ward 18, which was mentioned in my last year's report as probably the least hygienic of the wards, has of late been ventilated and lightened by the removal

of the trees and shrubs which surrounded it. The remaining 9 male cases arose sporadically in eight wards, one developing in a case sent to the Isolation Hospital for erysipelas.

"*On the female side*, 14 of the 25 cases occurred in ground-floor wards, Nos. 32 (Infirmary), 21 (Infirmary), 22 (Epileptic), and 24 (Laundry), being respectively responsible for 9, 3, 1, and 1 cases. Ward 32, though situated on the highest part of the site of the Chronic Block, is a large and complicated ward full of feeble and decrepit cases.

"One of the wards on the top floor, No. 26, which contains refractory and very dirty patients, was responsible for 5 cases. The remaining 6 cases occurred sporadically in five wards.

"The incidence of the disease was thus largely a ward-incidence, but at the same time the chiefly affected wards contained the least resistant type of patient.

"(3) No relationship between diarrhœal and dysenteric attacks in the same individual has been observed. This is, however, I think, chiefly due to the fact that cases once diagnosed as dysentery continue to be treated as such: and preliminary or intercurrent attacks of diarrhœa are regarded merely as symptoms of the disease, and not as recurring attacks either of diarrhœa or dysentery.

"(4) Acute and severe cases are treated in the Isolation Hospital. Other cases are treated in Wards 18, 21, and 23, all of which have, for a considerable time, been in isolation for the reception of mild or recovered cases.

"(5) Apart from the avoidance of constipation, no special line of treatment is pursued beyond varied medicinal treatment for the checking of severe symptoms, with special dietary and rest in bed.

"(6) Laboratory investigation.—A skilled bacteriologist, with a trained assistant, devotes a large part of his time to the investigation of the cases. Large numbers of specimens of stools are examined, and during the year upwards of 1,000 Widal reactions have been performed.

"(7) Twenty-five cases, 13 males, and 12 females, showed dysenteric lesions on post-mortem examination. In 2 males and 8 females, dysentery was the primary cause of death; and in 11 males and 4 females, it was a secondary cause of death.

"Of the 22 male cases who died whilst suffering from dysentery, 13 showed post-mortem signs of the disease.

"Of the 13 female cases, dysentery was diagnosed ante-mortem in 11. Dysenteric lesions were found in 10 of these, and post-mortem examination was refused in the case of the eleventh. The other 2 cases with dysenteric lesions were not diagnosed ante-mortem."

Wadsley Asylum.—Cases of dysentery occurred to the number of 9 male and 28 female patients and 2 members of the male staff. On the female side 12 of the cases occurred in epidemic form in the month of December. Cases with chronic Bright's disease were found to do badly. Cases of diarrhœa, as well as those of dysentery, are, if possible, at once isolated in case they should eventually prove to be examples of the latter disorder. The treatment, in suitable cases, was lavage of the lower bowel (dilute permanganate of potash) combined with the internal administration of reputed intestinal drugs plus milk diet.

Brighton Asylum.—There were 38 cases of dysentery, all restricted to the female side of the Asylum; 75 per cent. of them occurred in two ground-floor wards, one of the latter being occupied chiefly by epileptic patients and the other by those of the turbulent class. There were also 8 cases of diarrhœa, only one of which was on the male side.

Burntwood Asylum.—At this Asylum, where as many as 69 cases of dysentery and 41 of diarrhœa occurred (73 per cent. of which were in the month of August), the cases were not confined to any special wards or to either side of the Institution, but were almost entirely in patients in a broken-down state of health. It is very remarkable that of the large number of patients attacked only one was known to have had a previous

attack, and that as far back as in 1907. Many so-called remedies were tried, including fermenlactyl, but without encouraging results.

City of London Asylum.—No case of diarrhœa, and only one which might be regarded as dysentery, occurred. The single instance was in the case of a male patient who lived in a detached villa which accommodates 10 patients. Though there were marked lesions in the large intestine, Dr. Steen doubts if the case was one of the infectious asylum dysentery type, and notes the fact that the patient had marked Bright's disease.

Hereford Asylum.—No case of dysentery was reported during the year, but 11 cases of diarrhœa occurred; they were mild in type and characterised by slime in stools for a few days, followed by pale white stools for a week or more. Dr. Morrison writes that he attributes "the decrease of colitis " in this Institution to the provision of separate staircases and detached " covered open closets to sanitary spurs of wards in which the sick, feeble, " and dirty cases are located, which permits all wet and foul linen to be " kept for removal to the disinfector, obviating all foul clothes and linen " from dormitories and day-rooms being carried through the ward to " the laundry."

Suffolk District Asylum.—Here 35 cases of dysentery, in almost equal proportions as to sex, occurred, and 3 male cases of diarrhœa. The manner in which the disease may be imported is illustrated by the fact that during the year 5 men and 3 women were admitted who had suspicious, or definitely colitic, motions within 12 hours after admission. Of these cases, 4 came from two workhouses; 2 were transfers from other asylums with definite history of colitis; and 1 case, a female, who had not been in any institution and could give no idea as to the origin of her illness, told clearly a tale of undoubted colitis extending over many years.

West Sussex Asylum.—In April and November there were respectively 2 and 3 male cases of dysentery, and in the latter month 2 female cases occurred, while in April there were also 2 male cases of diarrhœa. One of the April dysenteric cases had had, in 1908 and 1911, two previous attacks. The small outbreak in November seemed, to Dr. Kidd, to be determined by a snap of cold weather with east winds. During convalescence the patients are given petroleum emulsion with creosote. In one of the 2 fatal cases, besides acute ulceration of the colon, there was similar ulceration of the last two feet of the small intestine.

Ewell Colony for Epileptics.—Two male cases of dysentery occurred, one in January and the other in November. In the second case, which was typically colitic, except that the dejecta had no smell, a specimen of the fæces yielded none of the usual colitis bacilli, but among B.C.C. colonies on a plate culture, there were three of a bacillus in some way resembling Paratyphosus A. In the January case, a previous attack had been recorded in 1911. He recovered from the dysentery, but at his death, which occurred in March, while no healed dysenteric lesions were found, pronounced arterio-sclerosis and its results were observed. Dr. Collins thinks that the diagnosis of dysentery must in this case be considered doubtful, and that the arterio-sclerosis and the kidney changes were probably responsible for the symptoms.

Northants Asylum.—Here 6 male cases of dysentery besides 4 male and 11 female cases of diarrhœa. All the diarrhœa attacks occurred in January and February. Dr. Lloyd Jones states that they were characterised by prostration, vomiting, and headache, suggestive of the gastro-intestinal type of influenza.

Plymouth Asylum.—While only 2 cases of dysentery occurred, 18 of diarrhœa are reported. Of the latter, 10 occurred in June and were associated with catarrh of the respiratory organs. One of the dysentery cases had diarrhœa on admission from the workhouse, and of the cases returned as diarrhœa, 3 were observed to be suffering from diarrhœa at the time of their admission—one a transfer from a county asylum, and two from the workhouse.

Tuberculosis.—It will be noticed, in Table XII. of Appendix B, that advantage has this year been taken of the fact that secondary (or contributory) causes of death are now shown in the general death tables, by including in the table all deaths from tuberculosis whether returned as primary or secondary. As a result a truer picture of the incidence of tuberculosis is obtained. But in securing this advantage, the figures, representing (*a*) the mortality of tuberculosis per 1,000 inmates and (*b*) the proportion of tubercular deaths per cent. of deaths from all causes, for the year 1912 and—if this plan is continued—for future years, cannot properly be contrasted with those for previous years; in other words, this table for 1912 commences a fresh set of figures, and it has in consequence seemed to us advisable to summarise in tabular form the above-mentioned proportions for the previous ten years—namely, 1902 to 1911 inclusive; this has been done in Tables XIIA. and XIIB., Appendix B.

A general review of Table XIIA. suggests that there is no striking difference in the prevalence of tuberculosis, as judged from mortality figures, in the largest and medium sized asylums, but that it is appreciably and persistently less in the asylums where inmates number less than 500; in qualification, however, of such statement, the possible applicability of the remark made as to the age of these smallest asylums, when considering their dysentery statistics, should be borne in mind (p. 55). The figures also illustrate the tendency to a decline in the tuberculosis mortality, to which allusion was made in our last Report, and this again is more definitely noticeable in the smallest asylums.

In Table XIIB. it has not been possible to arrange the institutions according to their size, owing to the fact that several have, in the course of the ten years, had to be shifted from one group into another. It is not practicable in this report to analyse adequately the mass of figures the table contains, but notice may be taken of the following points:—

That the majority of the Asylums manifest wide fluctuations from year to year in their tubercular mortality, when calculated either on the average number of patients resident or as a percentage of deaths from all causes.

That the fluctuations in these two proportions usually exhibit considerable parallelism, but that there are some striking exceptions to this, as, for instance, in the case of the older two of the Staffordshire Asylums.

That certain Asylums show a fairly persistent tendency to a high tubercular mortality, amongst which may be mentioned Derby County, Durham, Glamorgan, Kent (both), Bracebridge, Prestwich, Whittingham, Winwick, Newcastle, Norfolk, Northumberland, Nottingham County, Salop, Suffolk, Sunderland, Wakefield, North Riding, and all three Staffordshire Asylums.

That, on the other hand, others usually show a correspondingly low tubercular mortality, as, for instance, the two Cheshire Asylums, Denbigh, Devon, Dorset, Essex, Hereford, Herts, Kesteven, Middlesex (both), Monmouth, Northants, Wells, Brookwood, Isle of Wight, Ipswich, Derby and Leicester Boroughs, Exeter, Hull, Newport, Brighton, Menston, York, and practically all the London County Asylums.

That from the information before us, which at present is limited to mortality statistics, it is not safe or even possible to draw any conclusions as to the explanation of these variations. Thus, against, for instance, the size of Asylums having any material influence, and despite the figures in Table XIIA., the facts may be cited that while, with one exception, all the London Asylums possess comparatively low proportions, three out of the five Lancashire Asylums yield somewhat high ones, and these Asylums include the largest in the country. Again, in Yorkshire, of the four large West Riding Asylums, the tubercular mortality is high in one, low in another, and in two it is about the average; of the medium-sized institutions, it is high in the North Riding, low in Hull, and average in the East Riding Asylum; while in York City and Middlesbrough, which are two of the smallest Asylums, it is low in the former and about average in the latter. If the age of the institutions is considered, it may be observed, for instance, in the case of Lincolnshire, that while a high tubercular rate exists at Bracebridge, it is low at Kesteven, and that the latter Asylum has only been open since 1902. It is of particular interest to also note with respect to the Leicestershire Institutions that, while at the Borough Asylum the proportions, never very high, fluctuate considerably, those at the County Asylum were especially high until 1908, since when they have been much below the average, and that this fall in the tubercular mortality corresponds with the date when the patients were removed to the new Asylum for the county at Narborough.

The inability to do more than just record such facts as the above, which, while they doubtless possess a certain amount of interest as they stand, obviously call for much more searching analysis, and the fact that the mortality from tuberculosis in County and Borough Asylums in England and Wales is (as indicated in our 65th Report) as much as roughly ten times that in the general population (excluding those below 15 years of age), strongly suggest the desirability of widening our basis of information. We have this matter under consideration also in relation to the valuable information which may be available from asylums in connection with any State-aided scheme of research upon tuberculosis which may be established.

Turning now to the tubercular mortality statistics for 1912, it will be seen from Table XII., Appendix B., that in the

95 County and Borough Asylums, the total number of deaths ascribed, primarily or secondarily, to tuberculous diseases was 1,740, being in the proportion of 17·7 per cent. of deaths from all causes, and of 17·0 per 1,000 persons living (average number resident). Of these deaths 1,398 or 80·3 per cent. were due to pulmonary phthisis.

Group A.—The general death-rate in the 39 largest asylums (1,000 inmates and upwards) in 1912 was 95·3 per 1,000 living, to which tuberculous diseases contributed 17·0; their proportion to total deaths being 17·8 per cent.

Group B.—In the 40 asylums where the number of inmates ranged from 500 to 1,000, the general death-rate was 97·2 per 1,000 living, to which tuberculosis contributed 17·7 per cent.; its proportion per cent. of deaths from all causes was 18·2.

Group C.—In the 16 smallest asylums, where the inmates number less than 500, there was a general death-rate of 89·8 per 1,000 living, of which 12·7 was contributed by tuberculous disease, or a proportion of the latter to the total deaths from all causes of 14·1 per cent.

Research in Mental Diseases.

An asylum, although primarily intended for the segregation, care and treatment of insane persons, is—and as far as possible should be—also utilised, in the interest of the whole community, for the study of insanity in all its phases, with the object of adding to knowledge of its nature and causation and, consequently, of appropriate measures for its prevention and cure. To this end it is important that every institution for the insane should have an adequate medical staff, and also that the scientific spirit, which the young graduate cannot fail to have cultivated during his studentship, should not be allowed to languish when he takes an appointment in the asylum service. It is therefore incumbent on asylum authorities to provide facilities for thorough clinical examination, as well as for pathological investigation, and we gladly recognise the extent to which this is being done in the establishment and equipment of suitable laboratories.

But beyond what may be deemed necessary for exact study and record of the facts of individual cases, there is much scope for the prosecution of original scientific research. The fact that, on an average, every year about 14,000 persons suffering from their first attack of insanity are admitted into our asylums is suggestive of the wide field that lies open for investigation; and that the opportunities thus afforded are not infrequently taken advantage of by medical officers may be seen from the abstracts of their work to be found in the supplements to our Annual Reports. It is gratifying to note that this original work is being done voluntarily, in addition to the routine duties of

office, proving that in many instances the spirit of inquiry pertaining to scientific medicine finds ample scope for its exercise within the walls of the asylum. Everything should be done to foster this spirit and encourage the worker; and we are quite in accord with the aims of the representative meeting held last autumn in the City of London, when the need for State-aid in the prosecution of Mental Research was advocated. There can be no exception taken to the proposal that such aid might take the form of special grants to individuals engaged on approved researches, analogous to the grants annually disbursed by the President of the Local Government Board for investigations bearing on the Public Health. There can be little doubt that if such grants were established much valuable work would be encouraged.

But, if the fullest advantage is to be taken of the unequalled opportunities for investigation which exist, it seems to us that something more than this may reasonably be asked for from the State, in addition to what may legitimately be expended from county and borough funds. Much, for instance, could be said in favour of grants-in-aid to ensure the maintenance and proper equipment of such well-organised laboratories as at present exist in some asylums, where research work is now being carried on; and such grants might, in part, be properly utilised to supplement the stipends of the pathologists in charge of such laboratories, in order that they may be enabled to retain their offices and carry out investigations of a continuous and prolonged character.

An ideal to be aimed at in this connection is that of the establishment of central laboratories or institutes (possibly associated with psychiatric clinics) with each of which several asylums might be affiliated; and since this would involve the co-operation of local authorities, the question of legislative sanction must necessarily arise, as well as that of determining the share which might well be taken by the State in the promotion of a scheme of truly national importance. It would be premature to attempt to detail the methods whereby such a scheme might be carried out, but it may be borne in mind that for the past seventeen years the County of London has maintained a central pathological laboratory for all its asylums, and that, thanks to the munificence of Dr. Maudsley, it will shortly also have under its control a psychiatric clinic. The advantage accruing from the former in the prosecution of research in mental disease has been amply proved, and the knowledge of this should serve to encourage a like concentration of scientific resources in other parts of the kingdom.

The Mental Deficiency Bill, 1912.

In May 1912 the Government Mental Deficiency Bill was introduced by Mr. McKenna into the House of Commons and upon being read a second time on July 20th was referred to a

Standing Committee. The Bill as originally drafted proposed to set up an entirely new body of Commissioners for the care of the feeble-minded under the Home Office. This proposal was withdrawn at an early stage in Committee and in its place was substituted a proposal to establish a Board of Control of 15 Commissioners, 12 of whom were to be paid; of the paid Commissioners four were to be barristers of five years' standing, four duly qualified Medical practitioners, and one at least was to be a woman. The appointment of the Commissioners was to rest with His Majesty on the recommendation, as regards the legal Commissioners, of the Lord Chancellor and, as regards the others, of the Home Secretary. The paid Commissioners in Lunacy were by virtue of their office to become paid Commissioners of the Board of Control, retaining the same tenure and salary. One of the paid Commissioners was to be appointed Chairman of the Board. Power was reserved by Order in Council to transfer to the Board of Control all the powers and duties of the Commissioners in Lunacy under the Lunacy Acts, 1890 to 1911, and the Idiots Act, 1886, and also to transfer to the Board the existing staff of the Commissioners in Lunacy, but without prejudice to their rights.

The general scheme of the Bill was to eliminate from the Poor Law the mental defectives coming within its provisions, to impose on the County and County Borough Councils the duty to make suitable arrangements for their care and to provide out of money voted by Parliament amounts not exceeding 150,000*l.* in any financial year towards the expenses of maintenance of any persons detained under the provisions of the Bill, with the proviso that no obligation to provide suitable accommodation should be imposed on a local authority for any case unless the Government grant amounted to 7*s.* a week (subsequently altered to a sum equivalent to half the cost of maintenance).

The Committee sat for a considerable number of days and made important amendments upon several clauses of the Bill. It soon, however, became apparent that the Government would not be able in the time at its disposal to pass the Bill with its 68 clauses and numerous amendments in the then Session, and on December 2nd the Prime Minister announced its abandonment for the session. The Committee, however, held several further sittings and ultimately reported the clauses they had considered to the House, upon the understanding that it would be found possible to re-introduce the Bill as amended at an early stage of the next year's session.

The Bill, as reported to the House, enumerated the classes of persons deemed to be defectives within the meaning of the Bill, adopting definitions of idiots, imbeciles, feeble-minded persons and moral imbeciles upon the lines of those given in the Report of the Royal Commission on the Care and Control of the Feeble-minded. The compulsory powers of detention

conferred by the Bill were limited to persons who are defectives; and

(*a*) who are found neglected, abandoned, or cruelly treated; or

(*b*) who are found guilty of any offence and who are ordered or liable to be ordered to be sent to a certified industrial school, or who are undergoing imprisonment (under the Debtors' Act, 1869), or penal servitude, or detention in a place of detention by order of a court, or in a reformatory or industrial school, or an inebriate reformatory; or

(*c*) who are habitual drunkards within the meaning of the Inebriates Acts, 1879 to 1900; or

(*d*) in whose case notice has been given by the local education authority under clause 24 of the Bill—[*i.e.*, where a local education authority in the case of any defective child for the education of whom they have made provision under the Elementary Education (Defective and Epileptic Children) Act, 1899, are of opinion that it would be for the benefit of the child to be sent to an institution for defectives under the Bill or placed under guardianship and have given notice to this effect to the local authority. Mr. McKenna in Committee intimated that a Bill would be introduced into Parliament to make the Elementary Education (Defective and Epileptic Children) Act, 1899, compulsory)]; or

(*e*) who are in receipt of poor relief at the time of giving birth to an illegitimate child or when pregnant of such child;

(*f*) in whose cases such other circumstances exist as may be specified in regulations to be made by the Secretary of State as being circumstances which make such persons injurious or dangerous to themselves or to the community.

Registered Hospitals.

There has been no addition for many years to the number of these useful Institutions which represent a valuable form of public benevolence.

They still consist of 14 establishments, built, and some of them endowed, for charitable purposes, generally by subscription, and all of them continuing to do charitable work in a more or less complete manner. In some instances, however, we think that the primary and main objects of the founders of these Hospitals is being somewhat overlooked or disregarded, and that an adequate proportion of their income is not being

devoted to the relief of persons of education but small means, who have, therefore, to be sent to County and Borough Asylums, their friends contributing to their maintenance therein.

The condition of the Hospitals generally, as respects management and the provision of skilled medical treatment and kind and efficient nursing and care, remains satisfactory, and we notice year by year an approach to a higher standard in these particulars.

On the 1st of January 1912, 2,545 patients and 105 boarders were resident in them, and there have been since admitted 918 patients and 228 voluntary boarders, while 677 of the former and 221 of the latter have been discharged, and 188 and 2 respectively have died, leaving on December the 31st the names on the books of 2,598 patients and 110 boarders.

Favourable results of the treatment of patients are shown in 42·4 per cent. of recoveries on admissions and only 7·3 per cent. of deaths on the average numbers resident.

As respects individual Institutions, we have to report the following incidents :—

St. Andrew's Hospital, Northampton.—On the 22nd of August M. J. S., a male patient, received into this Hospital six weeks previously and known to be suicidal and treated as such, cut his throat with a razor behind some bushes in an enclosed garden where he was exercising with 13 other patients, in charge of an attendant. A careful and exhaustive, but inconclusive, enquiry was made, both by the coroner and subsequently by the Hospital Authorities, as to the source from which the patient had obtained the razor. In the result new and satisfactory regulations were made as to the keeping and using of razors by the attendants and others employed in the place, and rooms detached from the wards were appropriated to those purposes.

Bethlem Hospital, London.—C. F. P. G., a male patient resident in this Hospital, as to whom a suicidal caution card had been issued, which required him to be kept continuously under supervision, hanged himself after a seven months' residence.

Having gone to an open lavatory he attached himself to the window by a duster, and by a piece of rope which he had somehow obtained from a pair of steps which should have been kept locked up in a brush closet. The attendant in charge of him was summarily dismissed for carelessness in this matter.

Bootham Park, York.—At the close of the year an important change took place in this Hospital by the resignation, after 30 years' valuable service as its Medical Superintendent, of Dr. Charles K. Hitchcock, to whom, we were glad to learn, the Committee awarded a liberal pension.

He has been succeeded by Dr. George Rutherford Jeffrey, late Senior Physician to the Crichton Royal Institution at Dumfries.

St. Luke's Hospital, London.—There have been three unfortunate suicides at this Hospital, but in none of them does there appear to have been any want of proper care. A lady, not believed to be suicidal, hanged herself by means of a stocking and a strip of underclothing from the window sash of her single room to which she had not improperly been allowed continual access. A man, doubtfully suicidal, returning to the Hospital with his brother from a suburban excursion, threw himself in front of a Metropolitan train ; and another man, having escaped when out walking in the streets with an attendant and one other patient, was found on the same day dead in the Thames.

Warneford Asylum, Oxford.—Valuable improvements have been made in the kitchen at this Hospital, and we have suggested the provision of suitable recreation and dining-rooms for the nurses and attendants.

The York Retreat.—W. L. F., a male patient in this Hospital, committed suicide by severing the blood vessels in his groin with a razor in a lavatory at the York Railway Station.

He was admitted in January on transfer from a Licensed House, and was known to be suicidal, but he gradually improved so much that his liberty was ultimately enlarged, and he was allowed out freely on parole—so that he was able to obtain possession of a razor. He committed suicide, as has so often been the case, when apparently approaching convalescence, and no blame could be attributed to anyone.

Institutions for Idiots.

The Idiot Establishments, to all of which we paid visits during the year, continue to be well conducted and maintained generally in very good order.

They are, however, quite inadequate in number and accommodation for those who would be benefitted by the kind of treatment and association which they provide, but who are at present obliged to be sent to ordinary asylums, or retained under unsuitable conditions in the wards of workhouses.

The number of patients resident in all the Idiot Institutions on the 1st of January 1912 was 2,176. Since that date 265 have been admitted, 192 discharged, and 79 have died, and the number remaining at the end of the year was 2,170.

We desire to draw attention to the following points in respect of particular Institutions :—

Royal Albert Institution, Lancaster.—At the last visit by members of our Board in November new bathrooms with

up-to-date baths and lavatory appliances were found to have been provided, and a detached block for 40 farm patients was in course of erection.

The Institution, generally, was considered to be in excellent order, but there was some overcrowding, and the part of the building in which the least favourable class of male patients were accommodated was in urgent need of improvement. Further means of escape in case of fire from the north wing was required, and there was pressing necessity for a building for the isolation of infectious cases.

Earlswood Asylum, Redhill.—A very good report was able to be made of the state in which this Institution was found when visited in February, and it was doing much valuable charitable public work.

The need of additional funds for the completion of the repair and restoration of the building had, however, again become urgent, and the works had been obliged to be brought to a standstill.

We hope that this difficulty will speedily be overcome and that the work which is so essential to the stability and safety of the buildings will be able to be completed at an early date.

The Royal Eastern Counties Institution for Idiots and Imbeciles at Colchester was reported on favourably at the last visit, when the new wing of the annexe was seen to be in occupation, and affording excellent accommodation for its residents.

The old wooden hospital was shortly to be reconstructed.

State and Criminal Institutions.

State Criminal Asylum, Broadmoor.—In May 1912 this Asylum was reported on very favourably by the two members of our Board who paid the visit of inspection. A great improvement in the cheerfulness and general appearance of many of the wards was noticed, and assurance was given that this process would ultimately and without delay be applied to the whole Asylum. The ventilation of the single rooms, to which attention had been drawn by us, was in progress, and some of the enclosed ward gardens had been brightened by additional planting.

At the time of the visit 853 patients, 624 males and 229 females, were in residence, and there were only vacancies for 1 man and 6 women. Since that date, however, the new Criminal Asylum at Rampton has been partly completed and opened.

The number of admissions had been 55, and that of discharges 27, of whom 3 had been discharged absolutely and 7 conditionally as recovered; there had been 13 deaths, all

from natural causes, ascertained in each case by a post-mortem examination.

The patients were found well and suitably clothed, generally in good health, and for the most part contented and free from complaint.

There had again been no use of mechanical restraint, but seclusion, either at the patient's own requests, to prevent injury, or secure safe custody, or for medical treatment; had been applied to 151 patients for a total of about 38,000 hours.

The general administration of the Asylum was regarded as quite satisfactory, and as evincing an enlightened appreciation of the need of maintaining, in what must necessarily have a prison character, the medical spirit of an asylum for the care and treatment of persons who are suffering from disease.

State Criminal Asylum, Rampton (near Retford).—This new Asylum was visited for the first time in December 1912, and it may be well to give here a copy of the report which was then made by the Commissioners who paid the visit.

"On the 12th instant we paid the first visit by Commissioners in Lunacy to the new State Criminal Asylum at Rampton, near Retford, and made a complete inspection of all parts of it, and saw all the resident patients.

"The Asylum is built upon a level site, 175 acres in extent. It will, when completed, accommodate 800 patients, namely, 590 men and 210 women.

"At present one male and one female block are occupied, and an additional male block is practically ready for occupation. The beds now available are for 96 men and 44 women or 140 in all, and 128 are in residence, leaving vacancies under present conditions for 8 men and 4 women, but we understood that it is not proposed to receive any more patients until the spring of next year.

"The Asylum appears to be well built and upon good lines. The blocks are on three floors.

"The day rooms are very bright, cheerful, and comfortable, and are well and suitably furnished and supplied with books, pictures, and some other objects of interest which will no doubt be multiplied as time goes on. There are two good billiard tables and also pianos and games.

"The sleeping rooms are comfortable and the beds and bedding were in good order. We thought that the ventilating openings in these rooms were dangerous, and that beneath the gratings, which would admit at present of the attachment of a strip of sheet for suspension, should be inserted strong wire gauze galvanized after being shaped.

"The w.c. pipes in the attendants' lavatories should be cased in to prevent danger in the event of patients obtaining access to them.

"All the rooms and corridors were well heated by means of waste steam from the pumping and electric lighting boilers, and the ventilation struck us as working very satisfactorily. Electric light is laid on everywhere.

"The kitchens, laundry, and other domestic offices are of adequate size, light, airy, and well arranged, and both kitchens and laundry are equipped with the best modern appliances. The mangle straps in the laundry are in need of protection, and the iron trestles which stand in the middle of the washhouse to support the machinery shaft should be filled in with perforated zinc to prevent their use as ladders and means of precipitation.

"A complete installation of water pumping, electric supply, and heating, machinery is provided in a central power station, and there are commodious and convenient stores.

"Fire hydrants, both within and outside the building, have been provided and are connected with a store of water in the tower which can be forced into the mains by special force pumps. There are also fire alarms in every part of the buildings and an engine man is on duty at night. There is a regular fire drill.

"An ample and pure supply of water is derived from a well 1,005 feet in depth. It is of considerable hardness, which is reduced by a modification of the Porter Clarke process, from 15 or 16 to less than 6 degrees of hardness.

"The sewage is treated by bacterial filtration about half a mile away from the Asylum.

"Blocks of 20 semi-detached cottages for attendants and others have been built on the estate, and 10 of them are now occupied. We understood that it is proposed to duplicate this provision.

"The present chapel is a temporary wooden structure, but a new and suitable chapel, and a separate recreation room, are presently to be erected.

"The airing courts are of fair size and the walks have already been asphalted. The courts are enclosed in exceedingly ugly walls constructed of concrete slabs, the joints of which give a patchy, and the colour a dull and particularly depressing, appearance.

"We hope that when the 15-feet wall, in which it is proposed to enclose all the buildings ultimately, is erected, as we hope, of brick, it will be found possible, as it will certainly be desirable, to substitute an unclimbable iron fence for these unsightly walls. At present the airing courts are separated in places by an open iron fence which is easily climbable and has sharp spikes which might inflict serious injury upon patients attempting to scale them.

"There is a large and commodious workshop common to the use of carpenters, upholsterers, tailors, and shoemakers.

"It should be divided by three glass screens so as to separate the different workers and their respective tools, while not interfering with their easy supervision.

"The house for the Medical Superintendent, who is at present only temporarily accommodated, will be built in a convenient position in the grounds.

"The Assistant Medical Officers will have quarters in the main building.

"In our progress through the various rooms and offices we gave full opportunity to every patient to speak to us, but we received no complaints. They were very quiet and free from excitement, for they have been carefully selected as non-refractory, while preference has been given to North Country people whose previous homes and friends were more or less in the district of this Asylum. None are epileptic, general paralytics or suicidal.

"We saw 10 patients at work in the laundry, 6 in the kitchen, and 3 in the sewing room, and we were informed that 89 are employed altogether, either in needlework at the shops or assisting in the wards.

"Two men only were in bed, one of them for excitement and the other recovering from an attack of pneumonia. The general health appeared to be excellent.

"The dietary is liberal and varied.

"The dress was neat and good. We think that it would be an advantage if Sunday suits were provided for the men.

"The Asylum was opened on the 1st of October last, on which day 20 women were transferred from Broadmoor. Since then 108 patients have been admitted and all are still here, for there has been no discharge or death.

"There has been no employment of mechanical restraint, and only 1 patient has been secluded, twice, and for a period of 18 hours in all.

"No cases of zymotic disease have occurred and there have been no serious casualties.

"The maintenance charge is 17*s.* 6*d.* per head per week.

"The Medical Staff consists of Dr. Sullivan, the Medical Superintendent, previously Medical Officer to the Holloway Prison, and formerly the Assistant Medical Officer at the Richmond Asylum, Dublin; and Dr. Lloyd, who has been transferred from Broadmoor.

"Eighteen male attendants and 13 nurses were drafted here from Broadmoor, and there have been no resignations or dismissals among them since their arrival.

"We noticed with much satisfaction that Dr. Sullivan's endeavour appears to be, as far as possible, to cultivate the Asylum spirit in his management, while not neglecting the safe custody of those who have been committed to his charge. We

hope that this spirit will prevail more and more in the administration of the Asylum."

State Criminal Asylum, Parkhurst.—This Asylum, when visited in July, was found to contain 55 patients. Since the previous visit 42 had been admitted and 40 discharged, of whom 3 had recovered ; and 3 had died from natural causes.

Three patients had been mechanically restrained to prevent self-injury, and seclusion had been made use of no less than 3,163 times and for a total of 56,428 hours, much of it being due to a deficiency of adequate attendance, and the therefore necessary absence of half the attendants at one time during two hours in the middle of the day—a practice to which we have more than once expressed our strong objections.

The Asylum generally was in good order, and there was no reason to doubt that the patients were treated with kindness ; but the outdoor space is limited and the means of occupation and amusement were scanty, while the prison element was far too prominent.

We are glad to report that since the close of the year the use of this building as an asylum has been discontinued.

Royal Military Hospital, Netley.—Block D. of this Hospital, which is devoted to the care and treatment of insane officers and soldiers, was visited by us during the year and found in excellent order.

There were in residence only 18 patients, but as many as 183 had been admitted since the previous visit, 184 discharged, of whom 61 had recovered, and 2 had died from natural causes.

The various rooms in the block were comfortable and well supplied with means of occupation and amusement, and many minor but useful improvements had been made.

Royal Naval Hospital, Yarmouth.—This Hospital continues to be well managed and to afford excellent and comfortable accommodation and treatment for insane naval officers and seamen. When visited in February it contained 158 patients, who appeared to be contented with their treatment and made no complaints. Eighteen were confined to bed, all but one for general paralysis, but there was no bedsore among them—and this Hospital thus continues to maintain the honourable record which it has sustained for very many years past of having no patient with a bedsore.

The number of admissions since January of the previous year was 27, that of discharges 9, of whom 7 had recovered, and that of deaths 20, all from natural causes.

Licensed Houses generally.

At the beginning of the year we issued the following circular to Clerks of the Peace throughout the country for the information of the Justices in Quarter Sessions:—

Lunacy Commission,
66, Victoria Street, S.W.,
February 1912.

Sir,

I am directed by the Commissioners in Lunacy to write you on the following matter for the information of the Justices sitting at Quarter Sessions.

It has come to the knowledge of the Commissioners in Lunacy that various institutions have been established throughout the country for the care of imbecile and idiot persons, and the Commissioners have been advised by the Law Officers of the Crown that notwithstanding section 207 of the Lunacy Act, 1890, restricting the granting by Justices of new licences in respect of houses for the reception of lunatics, the jurisdiction established by 8 & 9 Vict. c. 100 in regard to the licensing of houses for idiots and imbeciles still exists and remains unaffected.

In view of these and for other considerations the Commissioners consider that the time has arrived when they, as the body responsible for the administration of the Lunacy and Idiots Acts, should take such steps as they may deem necessary to see that the provisions of the Idiots Act, 1886, are carried out and enforced.

As a result of this decision by the Commissioners, applications may be made to the Justices for licences under section 17 of 8 & 9 Vict. c. 100 with a view to subsequent application to the Commissioners for registration under section 7 of the Idiots Act, 1886, and the Commissioners have thought it desirable to intimate the foregoing to the Justices so that they may have present to their minds the reason and necessity for any such applications for licences being made to them.

I am, Sir,
Your obedient servant,
O. E. Dickinson,
Secretary.

The Clerk of the Peace.

Following upon this circular, "Heath House," Hayward's Heath, was licensed at the East Sussex Quarter Sessions in October for the reception of 3 male idiot or imbecile patients, and was registered by us as an institution for the care, education, and training of idiots and imbeciles under the Idiots Act, 1886.

Another house, called "Wellington," Rodney Road, New Malden, Surrey, was also licensed in October at the Surrey Quarter Sessions for the reception of not more than 8 male idiots or imbeciles, and was subsequently registered by us as an idiot institution under the same Act.

Before being registered these houses were visited and inspected by members of our Board, and, subject to suggested alterations, reported as suitable for their purpose.

No changes have occurred during 1912 in the number of houses licensed for the reception of lunatics.

At the date of this report there are therefore 21 Metropolitan Houses licensed by us, and 44 Provincial Houses licensed by justices for the reception of lunatics under the Lunacy Acts and one Metropolitan and 3 Provincial Licensed Houses registered under the Idiots Act, 1886.

In the following table will be found the total number, classification, and distribution of the patients who were detained in these houses (other than those in the four registered as institutions for idiots) on the 1st of January 1913 :—

—	Males.	Females.	Total.
In Metropolitan Licensed Houses :—			
Private - - - -	557	896	1,453
Pauper - - - -	26	64	90
In Provincial Licensed Houses :—			
Private - - - -	448	854	1,302
Pauper - - - -	214	262	476
Total - -	1,245	2,076	3,321

These figures show a decrease of 10 in the Metropolis and an increase of 47 in the Provinces, due entirely to an increased number of paupers received at Fisherton House, Salisbury.

In addition to the patients detained in these houses on reception orders there were 60 persons residing there as voluntary boarders, namely, 15 in the Metropolitan and 45 in the Provincial Houses.

The proportion of private patients and voluntary boarders in these houses is 28 per cent. and 35 per cent. respectively to the total number of private patients detained under the Lunacy Acts and of voluntary boarders residing in institutions for lunatics.

As a result of inspection of these houses we feel we are justified in reporting that they continue to be maintained and conducted so as to secure the comfort and well-being of their inmates.

In Appendices A. and B. further statistics will be found with regard to the patients in Licensed Houses ; in Appendix I. copies of reports made upon them by members of our Board visiting during the year ; and Appendix L. gives a list of these houses and their licensees.

Three deaths from suicide were reported to us during the year. In one instance the suicidal act was committed while on

leave of absence, in the second after escape, and in the third case details of the act and of the heroic attempt at rescue by a nurse are given elsewhere in this report (page 83).

We refer to in the following paragraphs such matters as seem to deserve mention with regard to particular institutions.

Metropolitan Licensed Houses.

Hendon Grove.—At the beginning of 1912 the licence of this House was transferred into the sole name of Mr. H. L. de Caux, and the licence has since been renewed to him.

Newlands House.—The name of Mrs. Sergeant, wife of Dr. Sergeant, has been added to the licence of this House.

Northumberland House.—Dr. Bernard Hart, late Assistant Medical Officer of the London County Asylum, Long Grove, has succeeded Dr. King as resident Medical Officer, and his name has been included in the licence in place of that of Dr. King.

Peckham House.—Dr. H. C. Halstead, for many years Medical Officer of this House, retired in June 1912, and was succeeded by Dr. F. R. King, who was at Northumberland House.

Provincial Licensed Houses.

Brislington House.—Heath House, a part of this Institution, has been enlarged by the provision of a nurses' sitting-room and five bedrooms for the staff. In the main building on the ladies' side a new verandah and observation bedroom have been provided in accordance with plans approved by our Board.

Heath House, Hayward's Heath.—A licence for the reception of 3 male patients, all of whom were to be strictly confined to the idiotic and imbecile class, was granted at the Michaelmas Quarter Sessions for East Sussex to Miss Evelyn Heylin Quinn, and it was subsequently registered by our Board under the Idiots Act, 1886.

Grove House, All Stretton.—The licence of this House was granted in June last to Dr. J. McClintock and his wife and Miss Anne Thompson, the names of the Misses Mary H. McClintock and Frances R. McClintock being omitted.

Kingsdown House.—A music room for associated entertainments has been constructed in the yard between the gentlemen's side and Dr. MacBryan's house, and plans for additional bedroom accommodation have been approved by us.

Laverstock House.—In January 1912 Dr. Stanley Haynes, who was co-licensee of this House, died, and in December the licence was transferred to Mr. Edgar Curnow Plummer, M.R.C.S., on Dr. D. C. Monnington giving it up.

Littleton Hall.—Extra rooms on the second floor of this House have been appropriated for the patients' use and certain smoke screens have been fixed in accordance with our recommendations.

Malling Place.—Dr. Claye Shaw has been associated with the management of this House, and has paid monthly visits, giving Dr. Adam the benefit of his advice on the treatment of the patients.

Plans for important additions to the accommodation in the Ladies' House have been approved by us.

Periteau House.—We regret to have to record the death of Mrs. Skinner, for many years the resident licensee of this House, on the 25th of March 1912. The licence was then transferred to Miss E. H. Dalgleish until the Quarter Sessions held on 2nd of July, when the licence was granted to Dr. Harvey Baird as sole resident licensee.

The Pleasaunce.—Dr. A. W. Llewelyn Jones is now the sole licensee of this House.

Plympton House.—Plans were submitted and approved by us for the addition of a two-storied building at the N.E. corner of the House containing three bedrooms and lavatory accommodation on each floor. This has been carried out with a view to improving the accommodation generally, and especially to provide more single rooms.

Redlands.—Plans for a new kitchen, scullery, and pantry have received our sanction.

St. George's Retreat.—Plans were submitted to us for the erection of a detached house at "The Lees," St. Augustine's, Brighton, the branch of this House, and have been approved by us. The accommodation to be provided is for 10 convalescent patients.

Shaftesbury House.—The licence of this House was varied in April 1912, so that the number of gentlemen to be received at any one time may be 25.

Springfield House.—Plans were submitted for the extension of the kitchen and for a new dining hall. These were approved by us, and the work has been carried out.

At the beginning of the year Dr. Bower added 110 acres of land to his estate, so as to prevent his grounds being overlooked. The estate now consists of 150 acres, over which the patients have the right to walk.

Stretton House.—The names of Mr. James W. W. Adamson, M.R.C.S., and Mrs. Annie Prudence Adamson, his wife, have been included in the licence in the place of Dr. and Mrs. Barnett.

Plans for certain additions and alterations were submitted to and approved by us.

Wellington, New Malden.—At the Quarter Sessions for Surrey held on the 15th of October last a licence for the reception of 8 male idiots or imbeciles was granted to Miss Frances Mary Deck, and on the 13th of November the House was registered by our Board under the Idiots Act, 1886.

Witham Retreat.—At the Epiphany Quarter Session for the county of Essex the licence of this House was varied so that ladies may be received as well as gentlemen, the numbers to be not more than 7 gentlemen or 5 ladies, or a total of 10 in all.

Single Patients.

It will be seen from the following table that the number of patients who have been placed in single care during the year 1912 again shows an increase on the figures of the previous year, the actual increase being 19 as against 29 in 1911.

				Males.	Females.	Total.
Number on 1st January 1912				209	431	640
Add those registered in 1912				106	200	306
				315	631	946
	M.	F.	Total.			
Deduct those discharged and removed	79	171	250			
Died	18	19	37			
				97	190	287
Number on 1st January 1913				218	441	659

These numbers include 120, viz., 54 males and 66 females, who have been found lunatic by inquisition and none of whom have been visited by us. The others have been seen at least once, but in many instances and wherever considered advisable, twice by some member of our Board.

In certain types of mental disease this more homelike treatment answers admirably, and although there are occasional instances where we are not entirely satisfied with the surroundings of the patients, we can say that in the main the arrangements which have been made for their care are good and suitable and that their treatment is tactful and kind.

No incidents in connection with these patients have occurred during the period under review which in any way call for special mention in this report.

Lunatics in Workhouses.

The pauper lunatics detained in Workhouses, Workhouse Infirmaries, and the Metropolitan District Asylums on the 1st of January 1913 numbered 19,330, showing an increase, as compared with the previous year, of 168 patients, this increase being almost entirely confined to the ordinary Workhouses and Workhouse Infirmaries.

The patients were distributed as follows:—

—	Males.	Females.	Total
In ordinary Workhouses and Workhouse Infirmaries.	5,465	6,593	12,058
In Metropolitan District Asylums	3,567	3,705	7,272
Total - - -	9,032	10,298	19,330

During the year we have officially visited 288 of these institutions, including the Metropolitan District Asylums, and seen in them a total of 16,566 patients.

The reports of our visits to the Metropolitan District Asylums are set out in Appendix K. It will be noticed that the Metropolitan Asylums Board has now started the scheme to which we referred in our 66th Report whereby Darenth Asylum has been converted into an industrial Colony for all classes of the improvable feeble-minded, including children and adolescents, who by reason of defective intellect could not properly be trained with children in ordinary schools, and who had hitherto been received in homes and schools under the control of the Children's Committee. All classes of the feeble-minded are now placed in the hands of the Asylums Committee and it is hoped that many advantages will accrue from the co-ordination of the work. The pavilions have been separated from the rest of the Colony and are occupied solely by feeble-minded cases. The members of our Board who visited Darenth during the year were very well satisfied with the initial working of the scheme, but we agree with them in questioning whether there is at present any legal power to detain against their will in the Colony feeble-minded inmates who do not wish to remain. The unimprovable cases were removed from Darenth early in the year to the Fountain Hospital, Tooting Bec, with accommodation for 624 beds, of which Dr. E. B. Sherlock, senior Assistant Medical Officer at Leavesden, has been appointed Medical Superintendent. The use of the Hospital for its present purpose was originally sanctioned by the Local Government Board for one year and has now been extended to a second. Our Colleagues, after their first visit, reported favourably of the arrangements made for the accommodation of the helpless imbeciles now nursed in the Hospital, but drew attention to the insufficient means of

escape in case of fire, the inadequacy of the sanitary accommodation, and the absence of any day-room accommodation.

The ordinary Workhouses and Workhouse Infirmaries generally continue to be well maintained. We regret, however, that we are unable to report any change as regards the condition of their pauper lunatics, in the Workhouses of the Lancashire Unions to which we referred in our last Report. Nothing has as yet been done to relieve their overcrowding or to facilitate the prompt admission into the County Asylums of cases requiring asylum treatment, or the removal from the Asylums of cases which could be suitably looked after in the Workhouses.

Prosecutions.

The following prosecutions, undertaken on our order, were successful:—

R. v. *Aldridge and Aldridge.*—Mr. and Mrs. A. E. Aldridge, of Lyndhurst Lodge, Whitehorse Lane, S. Norwood, on the 2nd day of March 1912, appeared before the Justices sitting at Croydon in answer to two summonses charging them with having in contravention of the provisions of section 315 (1) of the Lunacy Act, 1890, for payment, taken charge of, received to board or lodge, or detained M. J. T. and C. P., two lunatics in an unlicensed house without reception order or certification. There were also other summonses against them under subsection 2 of the said section 315 for receiving and detaining two or more lunatics in a house not an institution for lunatics, or a workhouse unlawfully, and not in accordance with the provisions of the Lunacy Act.

The proceedings were instituted consequent upon a report made by Dr. Campbell Thomson after visiting the premises and examining certain persons residing there and alleged to be lunatics, under an order, made in pursuance of section 205 of the Lunacy Act, 1890. Mr. W. H. Leycester, who appeared to prosecute, stated the circumstances giving rise to the proceedings, and that no allegation of cruelty or illtreatment was made against the defendants, and having called Dr. Campbell Thomson in support of the charge, the hearing was, at the instance of Mr. R. T. Clark, who represented the defendants, adjourned. On the summons being called on at the adjourned hearing on the 10th day of May, Mr. Clark informed the court that since the adjournment he had come to the conclusion that it was hopeless for his client to try and upset the evidence of Dr. Campbell Thomson. He had therefore advised his clients to plead guilty (as they did) in these two cases. In mitigation, he stated that both defendants were experienced nurses, and that a medical man visited the house once and sometimes twice

a week, so that the house was conducted on proper lines. Mr. Aldridge having made a statement to the Bench, the magistrates, after some discussion, fined the defendants 15*l.* and 20 guineas costs. In view of the course adopted by the defendants, no evidence was offered on the other summons.

R. v. *Keen.*—Information having been laid before us that persons apparently of unsound mind were residing with, or detained by, Mr. Joseph Keen at No. 7, The Parade, Folkestone, under such circumstances as to constitute an offence against the provisions of section 315 of the Lunacy Act, 1890, an order was obtained from your Lordship's predecessor, directing Dr. Fitzgerald, the Medical Superintendent of the Kent County Asylum at Chartham, to visit and examine the said persons and to inspect and inquire into the state of the said house.

As a result of Dr. Fitzgerald's report, Mr. Keen was, on May 3rd, prosecuted before the justices sitting at Folkestone for unlawfully taking charge of and receiving for payment, C. H. B. and C. W. C., without reception order and certification in an unlicensed house, contrary to the provisions of section 315 of the Lunacy Act, 1890.

Mr. Seaward Pearce explained to the court the nature of the complaint which he, on behalf of the prosecution, made against the defendant and, having called certain evidence in support of the charges, Mr. De Wet, who appeared for the defence, raised a technical objection in reference to the initiation of the proceedings which was overruled. Evidence was then directed on both sides as to the real issues, viz., whether the persons referred to in the summonses were, at the time of their residence with the defendant, in fact, of unsound mind and certifiable under the Lunacy Acts, and whether they had been received by Mr. Keen for payment. After a prolonged hearing, the Chairman of the Bench said they had come to the conclusion that the first-named person was decidedly of unsound mind and was being retained in Mr. Keen's home for profit. It was a difficult case and considering everything they would simply inflict a fine of 5*l.*, including costs. In the second case they considered the circumstances to be rather worse, for although the patient was detained for a short period, he was undoubtedly of unsound mind. In their opinion Mr. Keen knew it. He would be fined 10*l.*, including costs, in that case. There was another summons against Mr. Keen under the same section of the Act, but no evidence was offered in support and it was accordingly withdrawn.

R. v. *Hunt.*—In pursuance of an order made at our instance by your Lordship, Dr. Moore, the Medical Superintendent of the Holloway Sanatorium, St. Anne's Heath, Virginia Water, on the 27th June 1912, visited the house of Mr. William Hunt, situated at Pine Hill Road, Crowthorne, Berks, and examined

one C. W. C., alleged to be a lunatic, and inspected and inquired into the state of such house and duly reported thereon to your Lordship.

In view of his report, proceedings were taken against Mr. Hunt, and he was charged at the Wokingham Police Court, on the 23rd of July 1912, with an offence under section 315 (1) of the Lunacy Act, 1890, in that he had for payment taken charge of the said C. W. C., a person of unsound mind, without reception order or certification. After the close of the case for the prosecution, the defendant gave evidence stating, he did not consider the patient insane, but in cross-examination admitted he was suffering from symptoms of general paralysis. The chairman in giving the decision of the magistrates, said, he was glad that nothing was brought against the defendant's character or the way in which he had treated the patient. The magistrates thought the defendant had been considerate to him in every way. At the same time the defendant had broken the law which must be enforced, and a fine of 15*l.*, inclusive of costs must be inflicted.

R. v. *Edmunds.*—The defendant, Ralph Edmunds, an attendant at the Kent County Asylum, Barming Heath, was, on the 23rd of July 1912, convicted by the Justices sitting at Maidstone of illtreating a patient by striking him. The defendant, who had been in the service of the Asylum since 1901, had been dismissed from his employment, and the Justices having taken into consideration his previous good record imposed a fine of 2*l.*

The following prosecutions undertaken at the instance of Visiting Committees of Asylums were successful:—

R. v. *Wakefield.*—Mary Beatrice Wakefield, lately a nurse at the West Riding Asylum, Wakefield, was on the 3rd of May charged at the Police Court, Wakefield, with assaulting two patients, E. W. and U. F. She was convicted on the first summons in reference to the assault on the patient E. W. and fined 2*l.* and 2*l.* 2*s.* 6*d.* costs. With respect to the alleged assault on U. F., the Bench suggested that, as the defendant had been convicted in the first case, the prosecution would probably be satisfied. The summons in the second case was accordingly withdrawn on the defendant paying the costs, amounting to 18*s.*

R. v. *Hutton.*—The defendant, Clement George Hutton, a farm labourer at the Cardiff Asylum, was, on the 29th July, convicted at the Llandaff Police Court of striking a patient and was fined 5*l.* and costs or one month's imprisonment. He had been suspended from his employment on July 17th and was dismissed from the service on July 30th.

R. v. *Marr.*—Robert Marr, Head Cook at the Kent County Asylum, Chartham, was on the 7th August convicted by the Justices sitting at Canterbury of striking and kicking a patient. The patient had not received any severe injury, and a fine of 40*s.* and costs was imposed. The defendant had on June 29th been suspended by the Medical Superintendent, and discharged by the Committee of Visitors on July 9th.

Heroic Conduct of an Attendant and Nurse.

We have always recognised that the duties of those associated with the care of the insane are of an arduous and trying nature, and are often performed under circumstances of such great provocation at the hands of the patients as to severely test the forbearance and temper of their attendants. It says much that, notwithstanding the watchful observation which is at all times kept on them, there are but few instances where it is deemed necessary to take proceedings in regard to misconduct and the illtreatment of those under their charge. That there are some who forget themselves and are not fitted for the work is evident from the facts disclosed in some of the foregoing prosecutions. Whilst, therefore, we give prominence in our report to such cases, with a view to their acting as a warning to and a check upon those whose duty it is to protect and kindly watch over the welfare of those under their care, we think it well to give a like prominence to the names of those who, by their courage and devotion to duty, stand out as examples for the guidance and emulation of their fellows. With this object we desire to bring before your Lordship the following facts in reference to the brave conduct of an attendant and nurse which we venture to think are well worthy of notice and publication.

Lewis Thomas, late *Attendant at the Lancashire County Asylum, Winwick.*—On the afternoon of Friday, October 4th, 1912, a demented epileptic patient, E. B., who had previously exhibited no suicidal tendencies, was, with 75 other patients and under the charge of six attendants, taking walking exercise within the Asylum estate. When passing opposite a place known as the Claypit, situated outside the boundaries, which was full of water and was protected by a barbed-wire fence, he suddenly and without warning broke away from the party, scaled the fencing, and walked into the water. The attendant in charge of the party, Lewis Thomas, instantly followed him, and though unable to swim, attempted his rescue by plunging into the pond. The attendant's head was seen for a few seconds, but he and the patient sank almost immediately. Several of the patients attempted to climb the fence, so that the other attendants were of necessity compelled to give their attention to preventing escapes or further mishaps, but the

alarm being given, some members of the medical and clerical staff at once ran to the pit, and diving into the water, made repeated attempts at rescue, but without avail, and the bodies were only recovered at the expiration of 40 minutes by means of grappling irons. Artificial respiration was applied for over an hour, but unfortunately without success. An inquest was held, when the following verdicts were returned :—

> " That the death of the patient, E. B., was due to drowning in a clay-pit and that the patient committed suicide whilst of unsound mind.
>
> " That the death of the attendant, Lewis Thomas, was due to drowning when making a heroic attempt to save the life of the patient, and that the death was accidental."

We requested the Medical Superintendent of the Asylum to convey to the relatives of the dead attendant our sincere condolences for the loss of his life when making a heroic attempt to save the life of a patient in his charge.

Nurse Elizabeth Holley, Kingsdown House, Box.—On Friday 23rd November 1912, Nurse Holley left Kingsdown House in charge of a patient, L. G. D., with the intention of taking her to Bath by train in order to be present at an afternoon concert. The patient who had been melancholic and of suicidal tendency, had lately improved so much that, it was considered a change and relaxation of this nature would prove beneficial. On reaching the station and whilst awaiting the arrival of the train, the nurse, having hold of the patient's jacket was walking with her on the platform when in a moment, she broke from control and sprang forward and on to the down line. Nurse Holley, though she saw that an express train was rushing into the station (it was, in fact, the down express from Paddington travelling at 60 miles an hour) without hesitation jumped after and at her, hoping by the force of the impact to throw her over the rail and on to the space between the up and down lines. In this she failed, but in a momentary struggle with the patient, who clung to the rails and was intent on death, she endeavoured to tear her from her hold and from before the train, then almost on them. This heroic attempt was in vain, and nurse Holley just slipped out of the down four-foot way as the engine passed over the unfortunate patient and killed her.

At the inquest the jury in returning their verdict added a rider that nurse Holley showed great bravery and that her act should be brought to the notice of the Royal Humane Society.

We, in communicating with the Medical Superintendent of Kingsdown House, expressed our sympathy in the tragic and unpreventable circumstances of the patient's death, and requested him to express to nurse Holley our unqualified admiration of the courage and bravery displayed by her on the occasion in question.

On the 7th February 1913 the King decorated Nurse Elizabeth Holley with the Albert Medal of the 2nd Class for the act of gallantry above described.

The Royal Commission on Divorce.

During the sitting of the above Commission application was made to us that representatives of our Board should give evidence on its behalf, especially with reference to the question of the inclusion of insanity among the grounds for divorce.

After careful consideration it was decided to request the three Medical Commissioners to volunteer, each on his own account, to give his personal views on the subject before the Commission, and in due course this was done.

The evidence given by the three Commissioners, without previous consultation, was practically unanimous against the inclusion of insanity among the grounds for divorce, although the hardships and inconveniences which it necessarily entails were fully recognised and appreciated.

Their objections to its inclusion were briefly as follows:—

(1) That it is a disease, and scarcely more disturbing of social relations than several other organic chronic diseases which incapacitate some of them entirely.

(2) That to make it an exceptional ground for divorce would add a new terror to the present stigma of insanity, both as respects the public view of that disease and the effect upon the minds of a certain class of probably recoverable insane persons themselves, so diminishing their prospects of recovery.

(3) That it would be impossible to fix a time limit to recovery and declare that all cases outside it were incurable, and that if this is so, a supreme injustice would be done to a patient recovering after divorce on such grounds, and to his or her offspring permanently.

The majority of the Royal Commission reported that they were "satisfied that it would be to the interests of the parties affected by cases of lunacy, and to the interests of their children and of the State and morality, that insanity should be introduced as a ground of divorce subject to the following limitations."

"That the insanity which should form a ground of divorce should be certified as incurable, and that the insane spouse should have been continuously confined under the provisions of the Lunacy Acts for the time being in force, for not less than five years."

"That the insanity should be found to be incurable to the satisfaction of the Court, and that this ground should only

operate when the age of the insane person is, if a woman, not over 50 years, and, if a man, not over 60 years, and that in all cases of a suit for divorce on the ground of insanity the initial proceedings shall be served on the King's Proctor, who shall thereupon communicate with the Lunacy Commissioners, who may, in their discretion, instruct him to take such steps, if any, as they think desirable to see that the case is properly defended, and to bring before the Court any material matters."

The minority in their report adopted the opinion expressed as above by the Medical Commissioners, in which opinion we as a Board entirely concur.

By Order of the Board,

(Signed) WALDEGRAVE,
Chairman.

(Signed) O. E. DICKINSON,
Secretary.

Supplement to Report.

SCIENTIFIC RESEARCH WORK IN ASYLUMS IN 1912.

I.—*From the Pathological Laboratory of the London County Asylums.*

A.—Investigations published during 1912.

B.—Work ready for publication.

C.—Work in progress.

1. Heredity and Insanity (Dr. Mott).
2. Propagation of the Insane in relation to Hereditary Transmission (Dr. Mott).
3. The Neuropathic Inheritance in relation to General Paralysis (Dr. Mott).
4. Syphilis and the Central Nervous System (Dr. Mott).
5. The Biochemistry of the Neurone (Dr. Mott).
6. The Wassermann Reaction in the Insane (Dr. Candler and Mr. Mann).
7. The Condition of the Ovaries in the Insane (Dr. Laura Forster).

II.—*From the London County Asylum, Banstead.*

Mental Disorder in Child Bearing (Dr. Geoffrey Clarke).

III.—*From the London County Asylum, Hanwell.*

1. Treatment of General Paralysis by Neo-Salvarsan (Dr. Wyard).
2. Puerperal Insanity (Dr. Daniel).

IV.—*From the London County Asylum, Claybury.*

(*a*) A Case of "Washing Mania" (Dr. Ewart).
(*b*) A Case of Katatonic Stupor (Dr. Ewart).

V.—*From the Lancashire County Asylum, Lancaster.*

Report on Laboratory Work in 1912 (Dr. R. G. Rows).

VI.—*From the Lancashire County Asylum, Rainhill.*

The Brain in a Macrocephalic Epileptic (Dr. G. A. Watson and Dr. Wiglesworth).

VII.—*From the Lancashire County Asylum, Prestwich.*

Report on Pathological Work, 1912 (Dr. J. L. Stephenson).

VIII.—*From the Lancashire County Asylum, Winwick.*

Laboratory Researches by Drs. Rodgers, Brunton, Hopwood, and Boyd.

IX.—*From the West Riding Asylum, Wakefield.*

1. The Cyto-architecture of the Cerebral Cortex in Human Fœtus (Drs. Bolton and Moyes).
2. The Wassermann Reaction in Mental Diseases (Dr. Nabarro).

X.—*From the Essex County Asylum.*

1. On Two Cases of Amaurotic Idiocy (Dr. J. Turner).
2. The Classification of Insanity (Dr. J. Turner).

XI.—*From the East Sussex County Asylum.*

Syphilis and Congenital Mental Deficiency (Dr. W. Rees).

XII.—*From the Cheshire County Asylum, Chester.*

Report on Laboratory Work (Dr. G. H. Grills).

XIII.—*From the Dorset County Asylum.*

Report on Laboratory Work (Dr. Macdonald).

XIV.—*From the Cardiff City Asylum.*

1. Report on Laboratory Work (Dr. Goodall and Dr. Schölberg).
2. Report on Research in Chemical Laboratory (Dr. Stanford).
3. Various Investigations (Dr. Barton-White).

I.—From the Pathological Laboratory of the London County Asylums.

A.—Investigations published during 1912.

Dr. Mott:—

Sanity and Insanity. (A lecture delivered to the Royal Sanitary Institute, April 24th, 1912. "Journal of the Royal Sanitary Institute," 1912.

Heredity in Relation to Insanity. (An address delivered to the Members of the London County Council, May 1912.)

Is Insanity on the Increase? (A contribution to the Sociological Society, delivered October 29th, 1912. "Sociological Review," 1912.)

The Bio-physics and Bio-chemistry of the Neurone. (Opening discussion at the British Medical Association, Physiological Section, Liverpool, August 1912.)

Introduction to Discussion on Syphilis and Public Health: Congenital Syphilis and Feeble-mindedness. ("Proceedings of the Royal Society of Medicine," 1912.)

The Page May Memorial Lectures on the Structure and Functions of the Cerebral Cortex—which were attended by a large number of persons interested in psychology and nervous and mental disease.

Dr. Candler and Mr. S. A. Mann:—

1. The Reliability of the Wassermann Reaction on Cerebro-spinal Fluids and Serums obtained Post-mortem. ("British Medical Journal," March 9th, 1912.)

2. The Wassermann Reaction in General Paralysis with Special Reference to the Serum Reaction. ("Proceedings of the Royal Society of Medicine," 1912.)

Dr. W. Edmunds:—

The Changes in the Central Nervous System resulting from Thyro-parathyroidectomy. ("Proceedings of the Royal Society of Medicine," 1912.)

B.—Work ready for publication.

A number of communications have accumulated for publication in Vol. VI. of the "Archives of Neurology and Psychiatry," which it is hoped will be in print during the next few months. These include:—

1. *Dr. F. W. Mott and Dr. Brun:—*

The Microscopical Examination of the Nervous System in three cases of Myxoedema. Hypothyroidism with Mental Symptoms.

2. *Dr. Fortuyn:—*

The Cortical Lamination of the Brains of Rodents.

3. *Dr. M. B. Baines:—*

The Microscopic Investigation of the Brain Tissues of cases of Insanity occurring at the Involutional Period of Life.

4. *Dr. E. Schuster:—*

(1) Hereditary Resemblance in the Fissures of the Cerebral Hemispheres.

(2) Systematic Anatomical Examination of the Brain of a Malay.

5. *Dr. W. A. T. Lind:—*

The Systematic Microscopical Examination of a case of Huntingdon's Chorea.

6. *Dr. A. M. Penny:—*

Systematic Examination of the Spinal Cord and Posterior Spinal Ganglia of a case of Rheumatoid Arthritis.

7. *Mr. S. A. Mann and Miss G. Miall-Smith, B.Sc.:—*

A Chemical and Histo-chemical Examination of the Suprarenal Gland in the Insane.

8. *Dr. Nina Cotton:—*

The Systematic Examination of the Nervous System in a case of Alcoholic Insanity.

9. *Dr. H. W. White:—*

The Investigation of a number of Family Histories of Insane Residents of the Manor Asylum.

10. *Dr. de Freitas:—*

The Microscopic Investigation of two cases of Cerebral Syphilis.

C.—Work in Progress.

Dr. Mott:—

1. *Heredity and Insanity.*—A considerable amount of time has been expended during the past year in continuing this research, and a number

of papers on the subject have been delivered to medical and lay societies. The collective investigation of relatives in the London County Asylums has been continued, and the bureau of such cases now contains the records of nearly 3,500 cases. The relationships are as follows :—

TABLE I.

Analysis of 3,485 *Related Cases* (*Instances of Two of a Family Insane*).

	Pairs.	Cases.
Mother and daughter	174	348
Mother and son	108	216
Father and daughter	112	224
Father and son	83	166
Brothers and sisters	241	482
Two sisters	227	454
Two brothers	150	300
Husband and wife	76	152
Offspring and grandparents	29	58
Other relationships, collaterals, &c.	224	448
Total	1,424	2,848
160 instances of 3 of a family insane		480
27 „ 4 „ „		108
6 „ 5 „ „		30
2 „ 6 „ „		12
1 „ 7 „ „		7
Total		3,485

Total, 3,485 cases made up from 1,620 families.

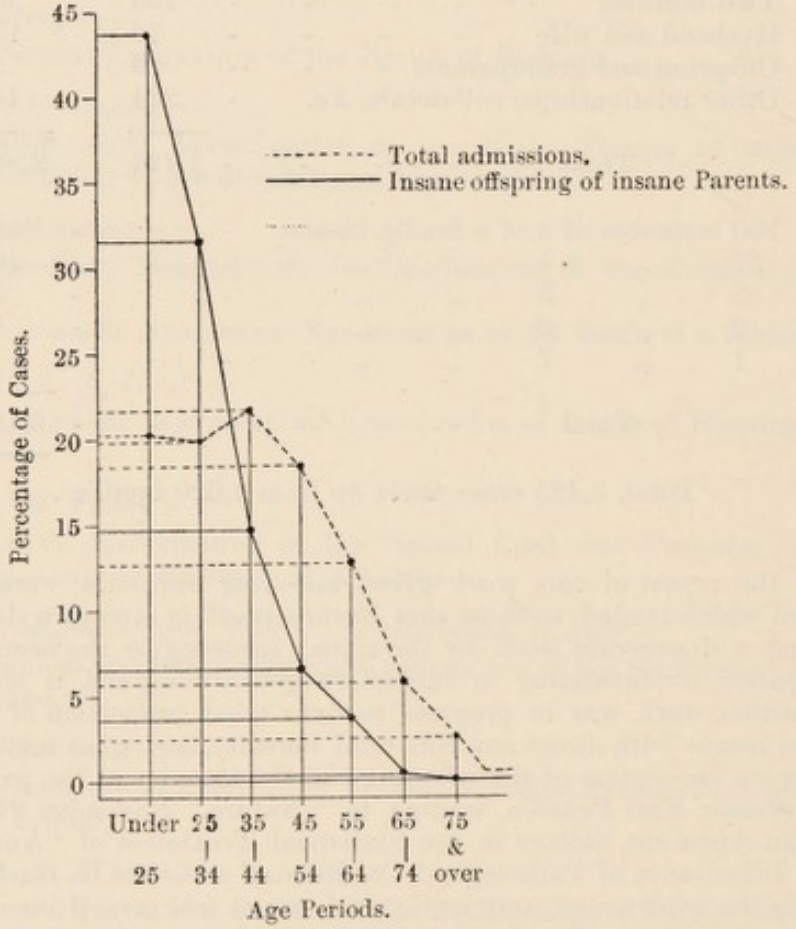
In the report of this work given last year statistics were brought forward which tended to show that Nature itself is always trying to end or mend a degenerate stock by the signal tendency to the occurrence of anticipation or antedating in successive generations, and it was stated that further work was in progress to show what proportion of offspring become insane with direct and collateral heredity, and what relation there is between conception of the offspring and the insanity of the parent.

Professor Karl Pearson, writing to "Nature," November 21st, 1912, "On an Apparent Fallacy in the Statistical Treatment of 'Antedating' in the Inheritance of Pathological Conditions," criticises on mathematical grounds the evidence of anticipation. I do not feel myself competent to reply to the opinion of such an eminent authority on mathematics applied to biometrics, but it does not militate against my conclusions, nor explain away the fact that a large proportion of the insane offspring of insane parents are affected with imbecility or adolescent insanity ; for granting the assumption that there is no antedating at all, we might rightly expect the ages at onset of the insane offspring of insane parents to be comparable with the ages at onset of all the admissions to the asylums during the same period. This is by no means the case, for amongst the insane offspring there is a far greater proportion affected in early life, as is shown by the following figures :—

TABLE II.

Comparison of the Age at the time of onset of Insanity in the Insane Offspring of Insane Parents, and the General Admissions to the London County Asylums.

—	9,579 Male and Female direct Admissions during last 4 years. Showing percentage incidence of Age at onset of Insanity.	508 Insane Male and Female Offspring of Insane Parents. Showing percentage incidence of Age at onset of Insanity.
Under 25 years	20·1	43·7
25–34 years	19·9	31·3
35–44 „	21·7	14·9
45–54 „	18·2	6·5
55–64 „	12·7	3·3
65–74 „	5·8	0·2
75 years and over	1·5	—



Included in the above 9,579 male and female direct admissions, there are, of course, a number of insane offspring of insane parents, and these naturally help to swell the percentage of those whose insanity occurred early in life. If these were eliminated there would be an even greater difference in the figures for the direct admissions and the insane offspring of insane parents considered alone.

I may say that the examination of pedigrees first led me to regard antedating as nature's method for eliminating the unfit, and the pedigrees, which are numerous, that I have since obtained all strengthen the opinion. I hope shortly to publish a large number of these pedigrees and further

elaborated statistics on the question of antedating, obtained from a further collection of data since the above figures were obtained.

Professor Pearson, in one way, does not deny the fact that there is a tendency for an insane stock to be either ended or mended, which is really an important practical point we have to decide, for he says : "In "the case of insanity, is the man or woman who develops insanity at an "early age as likely to become a parent as one who develops it at a later "age? I think there is not a doubt as to the answer to be given ; those "who become insane before the age of 25, even if they recover, are far "less likely to become parents than those who become insane at later "ages ; many, indeed, of them, considering the high death rate of the "insane, will die before they could become parents of families."

Mr. Nettleship has shown that antedating occurs in other diseases, notably diabetes, and it was he who called my attention to the probability of my being able to show antedating in insanity, because I remarked that I seldom found insanity occurring in pedigrees beyond three generations ; there was a tendency to elimination of the unsound members by early death.

Each pedigree is a study in itself, and therefore any endeavour to frame statistics regarding the influence of a particular inheritance is full of fallacies ; nevertheless I have endeavoured to frame statistics from a number of pedigrees which have been collected ; naturally these pedigrees are of unequal value, and therefore the results can only be regarded as purely approximate. Still, admitting these fallacies, they may serve as a general indication regarding probability of transmission of insane inheritance. The much greater incidence when there is a dual inheritance over a single inheritance is quite in accordance with expectations, but many pedigrees prove that this is by no means invariably so in every individual case. Again, in the comparison of insanity in the offspring where there is direct or collateral inheritance the statistics accord with expectations, but here again many pedigrees show remarkable exception to this general rule of the much greater incidence in the former.

These figures, however, may serve to afford further proof of the segregation and coalescence of the unsound elements of the germ plasm. The pedigrees which I have so far collected do not prove that Mendelian proportions exist, and this is not surprising seeing how many and varied are the exciting causes entering into the production of insanity feeble-mindedness, and epilepsy. Moreover, I have examined a number of families in which one parent was an insane epileptic, and yet in some instances none of the offspring were affected with epilepsy or insanity, and I could discover no certain evidence of Mendelian proportions. The epileptics in the London County Asylums may be of a different type to those in the Asylums under the charge of the Metropolitan Asylums Board, for I find that as a rule feeble-mindedness does not figure largely in their pedigrees ; not more than other forms of insanity.

Single compared with Dual Neuropathic Inheritance.

(1) The analysis of families with a double inheritance, represented by insanity, epilepsy, suicide, nervous disease, in both paternal and maternal antecedents, direct or collateral, within two generations.

Twenty-five families examined :—

No. of Children.	No. died young.	Insane, Suicide, Nervous Disease.	Apparently Normal.
154	20	46	88

34·3 per cent. of the offspring reaching adult age were affected.

(2) The analysis of families in which there was an inheritance on one side only.

One hundred and ninety-three families examined :—

No. of Children.	No. died young.	Insane, &c.	Apparently Normal
689	52	43	594

6·7 per cent. of the offspring reaching adult age were affected.

Direct compared with Collateral Neuropathic Inheritance.

(1) The analysis of families with a direct inheritance, represented by insanity, &c. in the parent.

Sixty-three families examined :—

No. of Children.	No. died young.	Insane, &c.	Apparently Normal.
304	27	61	216

22 per cent. of the offspring reaching adult age were affected.

(2) The analysis of families with a collateral inheritance, represented by insanity, &c. in the maternal or paternal aunts and uncles.

Ninety-one families examined :—

No. of Children.	No. died young.	Insane, &c.	Apparently Normal.
354	28	12	314

3·6 per cent. of the offspring reaching adult age were affected.

2. *Propagation of the Insane in Relation to Hereditary Transmission.*

As a leading article in the "British Medical Journal" of May 11th, 1912, refers to the question of the investigations upon anticipation tending to the ending or mending of a degenerate stock being used as an argument against measures being taken to prevent the propagation of the unfit, I particularly desire to emphasize the fact that I have always laid a great stress upon the necessity of *segregating congenital imbeciles* now that nature by man's aid does not kill them off, as formerly. Moreover, it is highly desirable to follow up those members of the family who are sane, and particularly those who are discharged as cured, in order to see whether nature has really mended that particular degenerate stock.

One of the great arguments advanced for sterilization has been that recurrent cases of insanity breed lunatics in the intervals of readmissions to the asylums. In the following table I have endeavoured to ascertain some facts relating to this question.

The following figures represent an analysis of the female admissions to three Asylums during the year 1911 :—

Hanwell -	-	164	female admissions,	32	recurrent cases.	
Claybury -	-	259	„	„	64	„ „
Cane hill -	-	219	„	„	52	„ „
Total -	-	642	„	„	148	„ „

Further investigating these recurrent cases the following figures are obtained :—

—	Hanwell.	Claybury.	Cane Hill.
Single - - - - - -	10	23	21
Married, but no children born during lucid intervals, involutional insanities, &c. - -	10	25	13
Married, children born during lucid intervals -	10	10	12
No history obtainable - - - -	2	6	6
Total - - - - -	32	64	52

Of 642 female admissions, 148 were recurrent cases, of whom 32 (21 per cent.) had children between their respective dates of admission. Dr. Spark has forwarded me a list of 33 cases (18 per cent.) from a total of 185 recurrent female cases examined, who had also given birth to children during their lucid intervals.

The inference that can be drawn is that about one-fifth of the recurrent cases or approximately one-twentieth of the female admissions have children after their first attack of insanity, and of 31 such cases examined, 73 children were born after the first attack of insanity in the parent. A number of these cases were puerperal insanity. I am unable to give the exact figures as to the fate of these children, but a good proportion of them died in infancy, and the majority of them would be too young to decide which might become insane.

Recurrent insanity and epilepsy with which it is closely allied, in relation to hereditary transmission, offer one of the most important problems for scientific investigation by complete family histories and construction of pedigrees, and I can conceive no more important work on the relation of heredity to insanity than the following up systematically of the history of children born in the sane intervals of cases admitted several times to the Asylums.

From the statistics of relatives a computation has been made of the proportion of offspring who were born after the first attack of insanity in the parent. The figures are as follows :—

Five hundred and ninety pairs of parent and offspring investigated from 529 insane parents with 581 insane offspring.

Mother and daughter pairs,	17	children	born after	first attack.
Mother and son	„ 9	„	„	„
Father and daughter	„ 11	„	„	„
Father and son	„ 9	„	„	„
Total - -	46	„	„	„

Forty-six offspring out of 581 were born after the first attack of insanity in the parent, *i.e.*, 7·9 per cent.

That is to say, in the case of 529 insane parents *the birth of only one-twelfth of their* 581 *insane children would have been prevented by sterilization or life segregation of the parent after the first attack of insanity.*

These figures refer to the offspring which become insane, *but there are a large number of offspring which do not become insane and these would be cut off if life segregation or sterilization were adopted.*

3. *The Neuropathic Inheritance in relation to General Paralysis.*

It is generally admitted that in the pedigrees of general paralysis of the insane the "neuropathic taint" is not found to anything like the extent that it is in the pedigrees of patients suffering from neuroses, psychoses, and feeble-mindedness. This is not surprising if we regard general paralysis as an organic disease due like tabes to the action of the syphilitic organism.

I have endeavoured to investigate this question by comparative statistics of the incidence of general paralysis occurring in the 3,000 odd relatives who have been admitted to the London County Asylums and the incidence in the admissions of the total population; also by comparison of deaths from general paralysis among these two classes of individuals, and I think my remarks bear out the premise that the neuropathic taint does not enter as a large factor in general paralysis. I will summarize my researches in this subject as shown in the accompanying tables.

Whereas in the total resident population of the London County Asylums the proportion of female general paralytic patients to male general paralytic patients is 1·1 per cent. to 3·9 per cent. among the resident population of relative cases numbering 1,508, it is 0·8 per cent. females to 2·6 per cent. males; there is, therefore, considerably fewer males and females *pro rata* among the relatives resident.

TABLE III.

Incidence of General Paralysis amongst Residents in Asylum Population, 1911 *Report*, *Table E.* 2.

——	Males.	Females.	Males and Females.
Total population - - - -	8,591	11,475	20,066
General paralytics - - -	334	128	462
Percentage - - - -	3·9	1·1	2·3

Incidence of General Paralysis amongst Resident Related Cases.

——	Males.	Females.	Males and Females.
Total related cases - - -	616	892	1,508
General paralytics - - -	16	7	23
Percentage - - - -	2·6	0·8	1·5

If a comparison be made of the number of deaths from general paralysis during the last five years in all the London County Asylums it will be found that 21·3 per cent. of the total deaths were general paralytics. Our relative cards refer to 749 deaths, and of these, as Table IV. shows, there were 158 cases of general paralysis, a total death rate of 21·1 per cent. Again, comparing the deaths from general paralysis in 2,000 post-mortem examinations at Claybury I found 23·0 per cent. of the total died from general paralysis; the slight increase no doubt might well be due to diagnostic error during life.

TABLE IV.

Incidence of General Paralysis amongst Total Deaths occurring in the London County Asylums during the last Five Years.

———	Males.	Females.	Males and Females.
Total deaths - - -	4,126	3,980	8,106
General paralytics - -	1,385	349	1,734
Percentage - - -	33·5	8·7	21·3

Incidence of General Paralysis amongst Related Cases that have Died.

———	Males.	Females.	Males and Females.
Total deaths - - -	370	379	749
General paralytics - -	142	16	158
Percentage - - -	38·3	4·2	21·1

The relatively fewer females and the larger number of males *pro rata* among the relatives compared with those of the total population will be observed. There is half of the percentage of females, and 4 per cent. more males, although the total incidence is almost identically the same (21 per cent.). I would explain this as due to two causes.

(1) The relatively fewer general paralytic cases occurring among the relatives is probably due to the fact that a considerable number of women admitted to the asylums suffering with general paralysis are derived from a class of female who is more likely to have suffered with syphilis than any other; they are euphemistically described as of "no occupation." The prostitute either has no friends to visit her or she is disowned by her relatives, and therefore she is far less likely to appear in the relative cards.

(2) The difference among the males is not so great and may be of no consequence, or the slight increased incidence of general paralysis among the relative cases may indicate that the neuropathic taint does play a small part in the production of general paralysis amongst these cases. The slight increase may also be due to the comparatively large number of brothers affected.

I found 18·7 per cent. of pairs of brothers affected with general paralysis.

Statistics of General Paralysis in Relatives.

The incidence of general paralysis in families where *two* members have been in the London County Asylums is as follows :—

Mother and Son.—96 families : 8 families in which general paralysis figured—in 1 the mother was affected, in 7 the son was affected, and in none were both affected.

Mother and Daughter.—157 families : 3 families in which general paralysis figured—in 1 the mother was affected, in 1 the daughter was affected, and in 1 both were affected.

Father and Son.—78 families : 13 families in which general paralysis figured—in 5 the father was affected, in 8 the son was affected, and in none were both affected.

Father and Daughter.—103 families : 12 families in which general paralysis figured—in 10 the father was affected, in 1 the daughter was affected, and in 1 both were affected.

Brothers.—140 families : 32 families in which general paralysis figured—in 26 one brother only was affected, and in 6 both were affected.

Sisters.—211 families : 8 families in which general paralysis figured —none in which both were affected.

Brother and Sister.—212 families : 18 families in which general paralysis figured—in 17 the brother was affected, and in 1 the sister was affected.

Grandparent and Offspring.—24 families : 1 family in which the grandparent was a general paralytic.

Collateral Pairs.—186 families : 24 families in which general paralysis figured—in 2 families both male cousins were affected, in 2 families both uncle and nephew were affected, in 5 families 1 male cousin was affected, in 3 families the aunt alone was affected, in 6 families the uncle alone was affected, in 5 families the nephew alone was affected, in 1 family the niece alone was affected. As general paralysis is fatal within a year or two of admission, difficulties arise in regard to pairs of paralytics being known, unless one of the pair has been resident since the card system was initiated. Thus, to my knowledge, during the last 15 years there have been 3 or 4 cases of husband and wife and several of father and son.

Now it may be asked why should there be relatively such a high percentage of brothers affected if the neuropathic tendency did not play an important part in the production of general paralysis. Its explanation is possible in three other ways.

I am of opinion that the ardent and ambitious sexual temperament has much to do with the production of both tabes and general paralysis. A temperament is even more likely to be inherited than the "neuropathic taint." If we admit, as we must, the possibility of the existence of such a temperament in two brothers, then we can explain the frequency of the incidence by a temperamental inheritance favouring the onset of general paralysis. But it is probable that two brothers might get syphilis from the same source ; there is evidence indicating that there may be a specific virus for these parasyphilitic affections. Lastly, I would suggest as a cause of this greater liability of brothers to general paralysis the possibility of an inherited *immunity hypersensibility* to react to the specific organism of syphilis. In favour of this argument I advance the following premises.

The great majority of cases of general paralysis suffer with very mild primary and secondary symptoms ; tertiary signs in the form of gummata are rarely met with, and I base this statement upon the post-mortem examination of over 500 general paralytics. The average time after infection is 10 years, and it matters not whether the patient has been treated with mercury or not. Specific remedies, arsenic as well as mercury, have no curative effects. The Wassermann reaction is very pronounced in both the blood and the cerebro-spinal fluid, which I regard as evidence of an increased immunity hypersensibility. An excitable neurotic man who is also erotic is more liable if he has this immunity hypersensibility to suffer from a premature primary decay of his nervous system, ending in tabes or general paralysis.

4. *Syphilis and the Central Nervous System.*

At the forthcoming international Medical Congress a report on "The Nature of the Condition termed Parasyphilis" is to be given to the Neurological Section, a summary of which is as follows:—

(1) It is generally recognised by neurologists and psychiatrists that whatever other contributory factors may co-operate in the production of tabes and general paralysis, congenital or acquired syphilitic affection is an essential factor.

(2) Tabes and general paralysis may be regarded pathogenetically as one and the same disease. The spinal lesion of tabes may precede or be associated with the cerebral lesion in a number of cases, about 10 per cent.

(3) The existence of the specific organism found by Noguchi and Moore in 12 cases out of 70 of general paralysis indicates its probable existence in the spiral or other forms in every case of general paralysis, as the trypanosoma gambiense is existent in every case of sleeping sickness; but even this comparatively large and more easily recognizable organism can only be found with great difficulty in the brain tissues; it is therefore not surprising that the spirochaete should have eluded observation in the majority of Noguchi's cases.

(4) Reasons have been given by analogy and experiment for the possible existence of a granule or other intracellular form in latent syphilis.

(5) It has been asserted that the organism quite early after infection, either by a chance metastasis or an acquired specific elective disposition, invades the subarachnoid space and penetrates the tissues by the canalicular system containing the cerebro-spinal fluid, as in the case of the trypanosome of sleeping sickness, the lesions of which closely resemble those of syphilis and general paralysis. Whereas every case of human trypanosomiasis ends sooner or later by the invasion of the subarachnoid space with its consequent chronic meningo-encephalitis, the fact that approximately only 3 to 5 per cent. of cases of syphilis terminate in this way may be due to the greater penetrative power of the trypanosome.

(6) The fact that mercury, arsenic, and antimony preparations have proved practically useless in sleeping sickness finds its parallel in general paralysis, and probably for the same reasons, viz., these drugs cannot pass the choroidal epithelium to destroy the parasite.

(7) The obvious symptoms of tabes and general paralysis do not occur on the average for 10 years after the infection, which suggests that the organism is latent and only able to develop when the specific energy of the neurones is reduced by an exhausting metabolism, brought about by two causes, excessive *stimulation* by environment and excessive *reaction* to the virus. The fact that the interval elapsing between infection and the onset is the same on an average whether the patient has been treated with mercury or not is explained on the assumption that the infection of the nervous system takes place early and the drugs never reach the parasite.

(8) Against this hypothesis it may be asserted that in gummatous meningitis, which usually affects the whole cerebro-spinal axis, early treatment has a most pronounced curative effect. It may be explained, however, by assuming that in such cases the organism is in the lymphatic sheath of Robin and is shut off by the cell reaction from the subarachnoid space and the canalicular system of the tissues containing the cerebro-

spinal fluid which functions as the lymph of the brain. It may be mentioned that I have met with several cases in which general paralysis has followed syphilitic meningitis and Straussler has recorded several cases.

(9) It is pointed out that the neurones by this special provision of nutrient supply are shut off from participating in the Wassermann reaction unless they are directly sensitised by the escape of the chemical virus into the cerebro-spinal fluid. Consequently this offers an explanation why the cerebro-spinal fluid gives as a rule a negative reaction in cases of cerebral or spinal syphilis and a positive reaction in practically all cases of general paralysis. Moreover, although the blood in cases of syphilis of the nervous system generally gives a positive reaction, the fluid does not, and this agrees with the fact that in 30 cases in which I have obtained the fluid by lumbar puncture and from the ventricles at post-mortem, the former gave a positive reaction from 2 to 10 times as strong as the latter, which indicates that the fluid, as it is secreted by the choroid plexus does not permit the globulin which is the cause of the reaction to pass ; consequently it is derived from the nervous tissues. In tabes, on the one hand, only about 60 per cent. of cases give a positive reaction in the fluid, in general paralysis, on the other hand, the fluid and the blood give a positive reaction in practically every case, persisting even in spite of treatment. Clearly there is some difference ; moreover, in tabes the reaction on the blood may disappear with treatment, and I venture to offer as an explanation of these facts that in tabes the latent foci of specific organisms which emit the sensitising chemical virus may not be in the nervous system but connected with it by the lymphatics of the posterior spinal protoneurones. My experience tends to show that cases of tabes which give a marked positive reaction on the blood and fluid are more likely to develop tabo-paralysis.

The term parasyphilis applied to these affections in consequence of recent discoveries is likely to be replaced by the term parenchymatous syphilis.

5. *The Bio-chemistry of the Neurone.*

The living nerve cell has been examined by the ultra-microscope. It presents the picture of a viscous homogeneous colloidal spongio-plasm containing an enormous number of minute oval or round granules, which appear highly refractile on the dark ground, the nucleus with nucleoli is seen in the centre of the cell dark and less refractile. When the isotonic medium (cerebrospinal fluid) is replaced by water an endosmosis takes place and the refractile granules escape ; these remain discrete and exhibit a Brownian movement, but do not coalesce. It is probable that each granule consists of a colloidal fluid substance surrounded by a delicate membrane of (? lipoidal) substance. No Nissl granules are seen, nor fibrils, but when the cell dies the former appear, and the nucleus stains deeply.

Staining by Ehrlich's vital methylene blue *in vitro*, shows that each of these refractile granules in the nerve cell is surrounded by a membrane which has an affinity for oxygen. It is probable, therefore, that these granules represent an extensive surface of oxidation encompassed in the small space of the living cell.

The results described must be regarded as of a preliminary nature, for on account of difficulties of technique and failure with many methods that have been tried, successful results of staining have only quite recently been obtained, although the work has been in progress more than six months, and a large number of animals have been used. The animals were in most cases guinea-pigs, used for the Wassermann reaction.

6. *Dr. Candler and Mr. S. A. Mann.*

The Wassermann Reaction in the Insane.—A considerable amount of work has been done on this subject during the past two years, and the test has been performed on 1,500 specimens of serum and cerebrospinal fluid.

Regarding the tests made on the cerebrospinal fluid, we have been able to confirm the result by post-mortem examination and microscopic investigation where necessary, in 187 instances, and have found the Wassermann diagnosis to be correct in 98·4 per cent. of the cases.

Wassermann Reactions on C.S.F. controlled Post-mortem:—

Positive results on C.S.F. confirmed by autopsy -	- 161
Negative „ „ „ „ -	- 23
Negative results returned as G.P.I. at autopsy -	- 3
	187

Percentage of correct Wassermann reactions, 98·4 per cent.

In a paper given in the discussion on syphilis (Royal Society of Medicine) we directed our attention especially to the examination of the blood serum of cases of general paralysis. We did so because the serum reaction is of great importance from the point of view of diagnosis, and because there appears to be considerable difference of opinion as to the percentage of positive results obtained with these cases. Plaut has obtained a positive reaction on the blood serum of general paralytics in 99 per cent. Boas examined the blood serum of 139 cases, and obtained a positive result in *every* one. The experience of Carl Browning and Mackenzie is that the blood gives a positive result in 96 per cent., while other observers have only obtained positive reactions in 60 to 70 per cent. of the cases. We have examined the serum as well as the cerebrospinal fluid in 109 cases of general paralysis.

The results obtained may be summarised as follows:—Number of cases examined, 109; number of positive results with cerebrospinal fluid, 109; number with serum, 107. The number of cases giving a positive result on the cerebrospinal fluid includes two cases which gave a slightly positive result on the cerebrospinal fluid when first tested; this positive result, however, was not obtained on subsequent examination. One of these patients has since died, and the case has been shown microscopically to be one of general paralysis. The number of cases giving a positive result on the serum include 5 cases, which on first examination gave a negative result, but which on subsequent examinations gave positive reactions. *Altogether a positive reaction on the serum in general paralysis was obtained in* 107 *cases out of* 109, *i.e.*, 98·1 *per cent.;* but if we deduct the 5 cases in which the serum at one time gave a negative result, the percentage incidence of positive cases is 93·6 per cent.

All the cases in which the serum gave a negative result were given special attention, and the tests were repeated after further inactivation and the use of increasing doses of serum (in some cases up to twice the usual amount), but with a similar negative result, except in one case, in which some degree of inhibition was observed when a slightly larger dose of serum than usually employed was used in the test.

We therefore do not agree with the statement that the blood serum of *every* case of general paralysis will give a positive result, and, further, we are of the opinion that in cases of suspected general paralysis in which a negative reaction is met with in either fluid, it is advisable to repeat the test on one or more occasions.

We further urged the adoption of a uniform technique following the original method of Wassermann, with a standard antigen, as on the efficiency of this reagent the accuracy of the test mainly depends. This has probably been found in the artificial antigen made from heart muscle extract and cholesterol, which in our hands has given uniform and reliable results.

A comparison of the intensity of the reaction in the cerebrospinal fluid obtained post-mortem from the spinal canal and from the lateral ventricles in 30 cases of general paralysis has been made. We have found that in each case the lumbar fluid gives a more intense reaction, and that the intensity varies from twice to ten times as much as with the ventricular fluid.

A considerable number of tests have been made at the laboratory on the blood serum in cases of epilepsy. Drs. Cribb, Littlejohn, and Wootton have been responsible for the cases examined from Cane Hill Asylum, Dr. Vivian for those at Claybury, and Dr. Stoddart at Colney Hatch. Dr. Stoddart has also examined the blood serum of the idiot boys at Colney Hatch. This work is still in progress, and the results will be published at a later date.

7. *Dr. Laura Forster:—*

A complete examination by serial section of 60 out of 100 pairs of ovaries of women dying between puberty and the climacterium.

The object of this research is to determine if there is a correlation between any type of insanity and morbid changes of the female sexual gland. It will also be of value in ascertaining whether early involution of the ovaries is associated with the onset of insanity. A comparison with the ovaries of normal women dying from disease or accident is being carried out simultaneously. Schedules have been prepared relating to the form of insanity and the clinical symptoms, especially in regard to the functions of the reproductive organs. As soon as the 100 cases are completed, an attempt will be made to correlate the pathological findings with the clinical symptoms.

II.—From the London County Asylum, Banstead.

Mental Disorder in Child Bearing. By Geoffrey Clarke, M.D. Abstract of a paper read at S.E. Division of Medico-Psychological Association, October 1st, 1912 ("Journal of Mental Science," January 1913).

The mental states of 75 cases of insanity occurring in connection with child bearing were examined and classified, and the conclusions arrived at were:—

(1) That almost any form of mental disease may be met with during pregnancy or lactation, but by far the commonest varieties are the acute confusional and the manic-depressive psychoses.

(2) That in these two forms of mental disease the prognosis is as a rule good, but in other forms occurring at this time the outlook is not nearly so hopeful.

(3) That except in some cases of acute delirium there is no reason to think that toxic or hæmic conditions are important factors, but that the mental breakdown may be looked upon as a temporary failure of the mind to adapt itself to physiological but unusual conditions.

III.—From the London County Asylum, Hanwell.

During the year 1912, the following research work has been carried out :—

Dr. Wyard :—

An investigation on the result of treatment of cases of general paralysis by neo-salvarsan. The results obtained gave no hope of the efficacy of this method. The Wassermann reaction both of the blood and cerebro-spinal fluid was not affected. The results were not published.

Dr. Daniel :—

An investigation on the bacterial infection of the uterus in puerperal insanity with treatment by vaccines. Not yet completed.

IV.—From the London County Asylum, Claybury.

1. *Case of "Washing Mania."*—At a meeting of the Psychiatrical Section of the Royal Society of Medicine held at Claybury Asylum, Dr. Ewart in showing a case of "Washing Mania" said : (1) We have inherited from our prehistoric ancestors the three cardinal instincts—self-preservation, nutrition and sex—therefore it is possible to believe that some persons may also inherit from them a super-normal sense of smell capable of discerning an odour not recognisable by the ordinary individual. It is a well-known fact that the power of hearing the scream of a bat is possessed only by one man in twenty.

The future will probably teach us far more as to the relation between chemical composition and psychological results, and just as it is possible to construct hypnotics which have a predictable action upon that portion of the nervous system concerned with sleep, so it will be possible to invent particular odours with such particular actions on the olfactory apparatus, that in the case of hallucinations or illusions of smell, there will be some hope of using an odour to cure the mental defect caused by another odour.

It must be remembered that touch and smell are historically and evolutionally connected in that contact is a necessity for their action. They are not like the eye and ear affected by ether waves of light and sound.

(2) Have we ever analysed the feminine motives in wearing exquisite clothing ? Two women may love to wear beautiful clothes and both may be put down as vain, yet, in the one case the motive impulse may be vanity—a mere desire for self display—in the other the impulse is due to the true æsthetic sense—a love of the beautiful and the delicate.

The first woman can be readily distinguished from the second by the fact that she is a slattern when no one is there and that the unseen part of her apparel is of an entirely different order from that seen. The second woman becomes more and more particular about her clothing the more intimate its relation to her body. In both cases you find an emotional accompaniment of elation. If the patient belongs to the æsthetic type, the soiling of her linen or the ever present disagreeable odour would tend to produce feelings of pain, disgust, abhorrence, depression, unworthiness, and lead to instinctive actions which would tend to substitute the thrills of delight which accompany pleasure for the feeling-attitude of repulsion which is linked with that of pain. The one brings joy to the utmost recesses of our faculties, the other creates a feeling of dread disgust and shame which weakens and depresses.

We ourselves look upon ourselves from different standpoints according as to whether we wear evening dress, pyjamas or golfing attire. The Salvation Army officer is capable of better work in his regimentals, the hospital nurse acts up to her uniform, even a "bus" conductor becomes more civil when he is in his robes of office.

Emotions and instincts are as much the fundamentals of the mind as the skeleton, the lungs, the circulation, are the fundamentals of our body organisation. They are the springs of our being and the pulse of the machine. The patient apprehends cleanliness as the beautiful, therefore to her æsthetic sense it gives pleasure and she strives for it. The "Washing Mania" is but a motor-response to a sensory-experience, just as the rhythm of the music of a waltz compels certain definite muscular movements. As to what is beautiful depends on "Herd instinct" which means that you form your opinions according to the class or community to which you happen to belong.

2. *Case of "Katatonic Stupor."*—Dr. Ewart also showed a case of "Katatonic Stupor" associated with amenorrhœa on which he made the following remarks:—The view I take is that the germ plasm might be thought to represent a gun, loaded in the case of predisposition, but unloaded in the case of immunity. The particular toxin to which the individual was susceptible would take the place of the finger pulling the trigger. In the so-called "alcoholic insanities" it does not require a large amount of alcohol to produce those changes in the nervous system which would necessitate incarceration in an asylum. I also attempted to show that a similar result occurred in amenorrhœa. One woman would resist this form of auto-intoxication and, as her insanity would not be due to the cessation of the flow, its re-establishment would have no direct effect on the mental state. Some other women, not being resistant, would readily succumb mentally to the toxin, and this being the cause of the insanity, the recurrence of menstruation would establish recovery. I look upon the patient as an amenorrhœic case and shall be greatly disappointed should she not recover in three months after menstruation has been regularly established.

Had the case of alcoholic insanity refrained from alcohol, he would never have been insane. Had the case of amenorrhœic insanity continued to menstruate regularly, she would never have broken down mentally.

I would but ask these questions—Why do the few alcoholic cases, who have sufficient self-control to resist drink, not relapse after discharge? Why are the others, who do not so refrain, continually passing in and out of asylums?

V.—From the Lancashire County Asylum at Lancaster.

Report of the Scientific Research done in the County Asylum, Lancaster, in the year 1912. By Dr. R. G. Rows, Pathologist to the Asylum.

During the year 1912 the work done in the laboratory in this Asylum has consisted in examining the results produced in a series of experiments carried out by Dr. Orr, of Prestwich Asylum, and myself.

In previous years, attention has been directed to the inflammatory reactions found in the sheaths of peripheral nerves, by placing a celloidin capsule containing a broth culture of micro-organisms in close proximity to them. In this last series, the results produced in the spinal cord by placing similar capsules on the dura mater, covering the spinal cord or close to an intervertebral foramen, were examined.

The experiments again fell into a subacute and acute series. In the acute series, the conditions were indistinguishable from those which have been described by Wickman, as characteristic of acute poliomyelitis and to those produced by Römer and others, by injecting into monkeys material taken from victims of this disease. The inflammatory reaction in our experiments could be traced from the seat of infection along the peripheral nerves and spinal roots to the pia mater, and thence along the septa and the blood vessels to the central portions of the cord. These results were published in September last, in a paper written by Dr. Orr and myself.*

In that same paper we discussed the origin and morphological characters of the cells of reaction which we had found in the acute and subacute series of experiments, in which the irritant had approached the central nervous system by the lymph stream flowing along the peripheral nerves and spinal roots. We concluded that the morphological appearances of the cells of the inflammatory reaction varied with the intensity of the irritant; further, that when the inflammatory process had advanced to the stage of destruction of the nerve tissues, these same cells developed and assumed other morphological forms, viz., those of the epithelioid cell and the compound granular corpuscle. The origin of all the cells of reaction could be traced to the cells of the adventitial sheath of the veins and capillaries, among which an active proliferative reaction was taking place. A reaction of the neuroglia cells also was observed.

Besides the work already mentioned, much attention has been given to the application of the principles derived from the results of the experiments to clinical cases, and comparison has been made between the conditions found in the experiments and the lesions produced in man when a local focus of septic infection and intoxication has been present. The path of the inflammatory reaction has been the same and the characters of the cells of reaction have shown an extraordinary similarity to those of the experimental series. These results will be published in a short time.

VI.—From the Lancashire County Asylum at Rainhill.

Dr. G. A. Watson, Pathologist, furnishes the following Report of the work carried on in the Pathological Laboratory in 1912 :—

(1) A paper in collaboration with Dr. Wiglesworth is now almost ready for publication dealing very fully with the macroscopical and microscopical appearances of the Brain in a case of Macrocephaly occurring in an epileptic. The patient before he developed epilepsy was of quite average intelligence with considerable musical ability. The encephalon, unstripped of its membranes, weighed 2,130 grammes, and is one of the largest of which there is any authentic record. It is also of good general shape, is remarkably complex in its convolutional pattern, and the sulci in most regions are of at least average depth. The large size of the brain cannot be accounted for by any pathological appearances. In all of the many regions examined microscopically the cerebral cortex appears to have been originally quite normally developed, and although certain degenerative and other changes are present these are only such as are commonly seen in cases of long standing epilepsy.

---

* "Subacute and acute inflammatory reactions produced in the spinal cord by infection of its lymph stream." "Review of Neurology and Psychiatry," September, 1912.

Other papers are in course of preparation upon the following subjects :—

(2) *A Histological Study of the entire Cerebral Cortex in Microcephalic Idiocy.* This is now approaching completion.

(3) *The Morbid Histology of Epilepsy* (jointly with Dr. Reeve).

VII.—From the Lancashire County Asylum, Prestwich.

Report on Pathological Work, 1912. By *Dr. J. L. Stephenson.*

The following cases, in which pathological processes were present in the central nervous system, have been specially examined in order to trace—if possible—the path by which that system became involved :—

(1) Carcinoma of the œsophagus with spinal and basal meningitis.
(2) Psoas abscess with spinal meningitis and myelitis.
(3) Tubercular disease of pleura with spinal meningitis and myelitis.
(4) Bedsore with neuritis and spinal meningitis.

Generally speaking, the most marked changes have been found in the connective tissue and endothelial cells of the nerves, and in the adventitial sheath of the blood vessels.

It is hoped by the examination of these cases to be able to further differentiate lymphogenous from hæmatogenous infection of the central nervous system.

For this inquiry a large number of cases have been examined, and a considerable amount of material remains to be investigated.

VIII.—From the Lancashire County Asylum, Winwick.

An account of the work in progress in the Laboratory of the Lancashire County Asylum, Winwick.

(1) Dr. Rodgers and Dr. Brunton, in conjunction with the pathologist, have been engaged in a research upon the cerebro-spinal fluid, in which some of the newer methods have been employed. Owing to the lack of fixing, the differential staining of the cells in the Widal method is very poor, and for a thorough study of the cells of the fluid the method cannot be compared with that of Alzheimer, which has been employed in the present research. In this method the cells are fixed by the addition of absolute alcohol, which at the same time coagulates the protein present. This coagulum is centrifuged until it forms a firm compact mass, in the midst of which are the cells. The mass is embedded in celloidin and the sections stained with Pappenheim's pyronin-methyl-green. The various types of cells seen in such a condition as general paralysis can be differentiated in a way quite impossible with the Widal method. The protein content has been investigated by the Noguchi and Ross-Jones tests. A quantitative estimation has been effected in the Noguchi test by the method suggested by Greenfield; the test is performed in a graduated centrifuge tube, which is allowed to stand for 12 hours, at the end of which time the depth of the deposit is read off. In the normal fluid the number is ·05 to ·2, in general paralysis the average is ·2 to ·6.

The Ross-Jones test has also been used for a quantitative estimation of the protein content. The fluid is diluted, and that dilution noted with which a ring can just be obtained with a saturated solution of ammonium sulphate. The glyco-tryptophane test for showing the presence of minute quantities of blood serum in the fluid has been used; such serum is an indication of the presence of a definite irritant, and the results promise to be of considerable interest.

(2) A clinical investigation is being conducted into the condition of the sympathetic nervous system in mental disorders. The subject is a difficult one, and the field very wide, but considerable progress has been made. The reaction to pilocarpine and the production of adrenaline glycosuria, both of which subjects bear a close relation to the present research, are being investigated.

(3) The histological examination of a brain in which there was complete destruction of the temporal lobe of the left cerebral hemisphere, with the exception of the tip of the temporal pole and the transverse gyri of Heschl, is being conducted by Dr. Boyd and Dr. Hopwood. The chief clinical feature of the case was the absence of all auditory symptoms.

(4) Dr. Hopwood is engaged in a research on the subject of acidosis in the urine of patients suffering from mental disorder. The results obtained so far are promising, the majority of cases suffering from depressive conditions appearing to show marked acidosis.

(5) A paper on the "Occurrence of a Gram-negative Micrococcus in the Blood and Cerebro-spinal Fluid of a case of Mania," by Dr. Boyd and Dr. Brunton, is ready for the press, and will be published shortly. The total number of gram-negative cocci is small, and the micrococcus isolated from the present case differed to a marked extent from the gonococcus, the meningococcus, and the micrococcus catarrhalis in cultural characteristics and fermentation reactions. The fact that the same organism was isolated during life from both the blood and the cerebro-spinal fluid is worthy of note.

IX.—From the West Riding Asylum, Wakefield.

Dr. J. Shaw Bolton reports as follows :—

During the year the following papers have been published :—

(1.) By *Dr. J. S. Bolton* and *Dr. Moyes* on "*The Cyto-architecture of the Cerebral Cortex of a Human Fœtus of* 18 *weeks.*" ("Brain," Vol. xxxv. Part I. 1912.)

Summary :—

By the histological examination of the cerebrum of a fœtus of 18 weeks we have arrived at the following results (amongst others) :—

(1) Considerable progress has already occurred with regard to the specialisation of cortical areas and the differentiation of neuroblasts.

(2) The Betz-cells are well developed, and the relatively very large Betz-cell area can be accurately mapped out.

(3) The visuo-sensory area can be defined with accuracy. In the case of this area, however, specialisation of the cortex and differentiation of the neuroblasts are both less advanced.

(4) The pre- and post-central cortices and the visuo-sensory area already possess the adult relationships to the Rolandic and calcarine fissures respectively.

(5) The pre- and post-central cortices are remarkably well evolved in comparison with the rest of the cortex.

(6) The cingulate cortex is of poor quality, but is relatively well advanced in development.

(7) The anterior frontal cortex, on the other hand, is throughout its depth extremely embryonic in structure.

(8) There is very definite evidence that, in the complex of phylogenetic and ontogenetic factors which subserve the process of evolution the latter from a very early period play a predominant part.

(9) The cleavage of the developing neuroblasts of the cortex into upper and lower portions, which enclose between them the precursor of the inner line of Baillarger, takes place at a much earlier period than we have hitherto supposed. This is clear, since this line (L. IV.) is indicated in the rudimentary anterior frontal cortex, and since the Betz-cells which are contained in it in the pre-central region are so well developed.

(II.) By *Dr. Nabarro* on "*The Results of the Wassermann Reaction in 150 cases of Mental Disease.*" ("British Medical Journal," November 23rd, 1912.)

Conclusions :—

The following conclusions may be drawn from these observations :—

(1) That in a considerable number of cases of general paralysis the blood and cerebro-spinal fluid may give a negative Wassermann reaction, even on repeated examinations. I am therefore unable to agree with McIntosh and Fildes, who state in their monograph on syphilis that "a negative reaction in serum in a suspected case of general paralysis "will render this diagnosis improbable"; and again, that "a negative "reaction in the cerebro-spinal fluid of a general paralytic is unusual."

(2) That a negative Wassermann reaction is more likely to be obtained in the case of a female general paralytic than of a male.

(3) That the blood is negative rather more often than the cerebro-spinal fluid in the case of male patients, but the reverse obtains in the case of female patients.

(4) That at least 0·1 c.cm. of serum should be used for the test, and, where practicable, 0·2 c.cm. should also be used, but is not absolutely essential.

And lastly, that at least 0·5 c.cm. of cerebro-spinal fluid must be used, and, if possible, also 0·8 c.cm., otherwise a small percentage (about 4 or 5) of positive results may be missed.

In addition to scientific investigations, a good deal of routine and educational work has been done.

The most notable departure during the year has been the carrying into practical effect of the newly instituted Diploma in Psychological Medicine of the University of Leeds.

Three Assistant Medical Officers of Wakefield Asylum, namely, Drs. Moyes, Waldron, and Babington, were successful in both parts of the examination, and obtained the diploma.

A change in Pathologist, through the resignation of Dr. Nabarro and the appointment of Dr. Gettings, caused considerable dislocation of the work of the department ; but this was again proceeding smoothly during the latter part of the year.

Owing to a miniature epidemic of typhoid fever during the first two months of the year, and to a serious increase in the incidence of dysentery —78 cases of which occurred during the year—the practical needs of the Institution caused much extra work to be thrown on the department with the result that relatively little time was left for original research.

Upwards of a thousand Widal reactions have been carried out, and upwards of a hundred samples of fæces have been dealt with as part of this "routine" work.

The study, by modern bacteriological methods, of Asylum dysentery, *which, as may be seen in our records, has existed in this Institution for* 90 *years*, is, I think, likely to be a lengthy matter. I believe that persistent "routine" work, with the gradually increasing knowledge of the intestinal bacterial fauna which will follow, is the only method by means of which results of practical value will be attained. *Precautionary measures against infection*—which I fear merely closed the stable door after the horse had been stolen—*were first carried out in Wakefield Asylum in* 1828.

From that date to the present dysentery has alternately disappeared and reappeared ; even from within a few years of the first outbreak its incidence has alternately been denied and exposed. I trust that this disease will now be regarded as a necessary and existent evil until we are able to knowingly eradicate it, or at any rate to knowingly control it.

The study of the Wassermann reactions in relation to mental disease —the personal contribution to which, of Dr. Nabarro, has already been published—is being carried on by Dr. Gettings. Certain of my Colleagues are assisting me with the clinical and pathological investigations which necessarily form the precedent and consequent portions of this work.

This again is a subject to which years of work will probably be devoted before the final results are attained, unless such should first be reached by other workers.

X.—From the Essex County Asylum.

Dr. J. Turner—Two cases of Amaurotic Idiocy or Tay-Sach's Disease ("British Journal of Children's Diseases," May 1912).—After giving a detailed account of the clinical and pathological features of the cases, the paper concludes as follows :—

"The histological features of Tay-Sach's disease are pathognomonic, so that although in neither of my cases was there evidence of the disease affecting more than one member of the family, and in neither were the

eyes examined for the characteristic cherry-red spot on the macula lutea, we may have no hesitation in accepting them as instances of this disease on the histological findings alone.

"So far, according to the recent article of Carlyll and Mott in the 'Proceedings of the Royal Society of Medicine,' March, 1911, although there is a record of over a hundred cases, no genuine instance of the disease has been recorded in any but a Jewish child. At first I thought both my cases were exceptions to this rule, but inquiries elicited the information that the father of Case 1 was a Christian Israelite, and, in spite of my informant's—the patient's brother's—unwillingness to admit his Hebrew extraction, I think we must regard this case as no exception to the rule. The other, however, occurred in the son of an Essex man, who assures me that neither he, his wife, nor any of their forbears, so far as he knows, have, or have had, any Jewish blood in them. So that we may fairly certainly conclude that Case 2 is an exception to the hitherto unbroken rule, that only Jewish children suffer from the disease. This fact alone would amply justify me in publishing the case, but there are also other points of interest to be noted in both, in respect of the age of the patients, the pathological appearances as seen by special staining, and the ætiology of the disease.

"As regards the age, both were far beyond the limit generally assigned to this disease. Carlyll, in the paper just quoted, states that it is justifiable to tell parents that children with this affection will not reach the age of three years. My first case was fourteen when she died from an intercurrent complaint; my second was over five years.

"Mott takes exception to the name of 'idiocy' applied to the disease; but his objections lose their force when this name is applied only to cerebropathic states in infants either before, at, or shortly after birth. This is the sense in which many, including the writer, now use the term. So that instead of idiocy being only a severe form of imbecility, it has no connection with imbecility, and lies at the opposite extreme in the classification of insanity, that is to say, among the traumatic (using this term in its widest sense) insanities. And the very lack of developmental defects, on which Mott rests his objections to the term 'idiocy,' become strong evidence why the disease from the cerebropathic point of view should be termed 'idiocy.' However, it should be noted that Case 2 did show certain features, which might be looked upon as stigmata of degeneration—to wit, absence of thumbs and dilatation of the central canal of the cord.

"Gliosis, using the term as connoting an overgrowth of neuroglia in contra-distinction to other glia cells (mesoglia), is evidently not an essential feature of the disease. It was present to only a slight pathological extent in both my cases, and was absent in all the cases described by G. Holmes,* and indeed it has, with very few exceptions, been absent or inconsiderable in all the cases so far reported.

"I look upon the mesh-like fragments seen on the swollen cells and their dendrites as golgi nets, and I have produced evidence† that these nets are a derivative from the mesoglia cells which occupy the pericellular space. If the accumulation of nuclei in these spaces are nuclei of mesoglia cells, then an increase of this tissue is, if not an essential, at all events a very common or constant feature of the disease. The abundance of beaded neuro-fibrils in the cortex in Case 2 is of interest, considering the very extensive condition of alteration in the ganglion cells. This

---

* "Brain," 1906, xxix, pp. 180–208.

† *Ibid.*, 1904, xxvii, pp. 64–83; "Rev. Neur. and Psych.," 1905, iii, p. 773.

may to some extent be accounted for by the lesser participation apparently of the intercalary or darkly stained cells in the diseased process, if, as the writer believes, these beaded neuro-fibrils are given off by these cells.

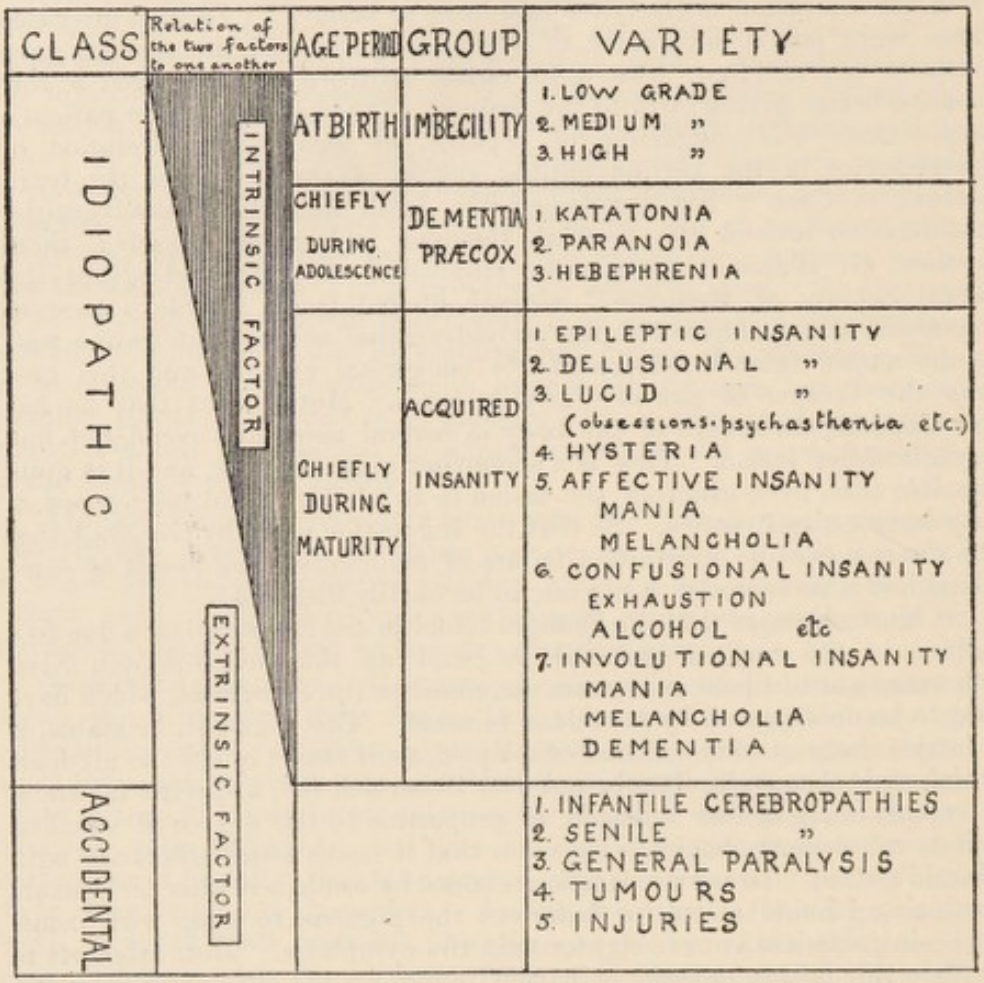
"A word as to the ætiology. Can syphilis be so certainly excluded from the causation as Carlyll would have us believe? In both my cases there were points suggestive of syphilis. In Case 1 the mother gave birth to ten children, who were either stillborn or only lived a few months, before giving birth to the patient. The character of the patient's bone-lesions was suggestive of syphilis, as also the proliferation of lymphocytes in the peri-adventitial spaces of the vessels of the brain cortex; in Case 2 the small, peg-like teeth and the peri-adventitial proliferation around the cortical, thalamic and caudal vessels; then, further, G. Holmes, in the same number of the 'Proceedings of the Royal Society of Medicine'* already quoted from, records a case of amaurotic idiocy, where also the peri-adventitial cellular infiltration was, as the author remarks, suggestive of congenital syphilis, and this case was the brother of one of Carlyll's cases. Mott states that he has examined all the tissues of the body in several cases and could not find any glandular lesion. This is a somewhat gigantic task, and it is quite possible that, even granting the lesion to be visible to the microscope, it may have escaped notice. So that the suggestion made by Gordon,† that the disease owes its origin to a failure of metabolism, the result of some gland lesion or anomaly, is not one to be hastily discarded.

"Mott supposes that the changes found in the nerve-cells are due to a failure in the nuclear material to build up the nucleo-protein Nissl substance out of lipoid substances contained in the cytoplasm, which have first to be decomposed by a nuclear ferment. The pigment, he states, is a fatty substance of the nature of a lipoid, as it stains by all the methods which stain the myelin sheath, and with Scharlach red, a specific fat stain, it colours more or less intensely in proportion to the degree of swelling and morphological change. He notes that it stains *unsatisfactorily* with Marchi's stain. In my preparations stained by osmic acid after bichromate hardening I found an entire failure of the pigment to stain with osmic acid—in parts it was even lighter than the cytoplasm. Mott attempts to explain this failure to stain, or partial failure (in his cases), by assuming that the process of decomposition of the lipoid into glycero-phosphoric and oleic acids is incomplete. Mott's hypothesis is ingenious, though how far his efforts to account for the unsatisfactory staining of the pigment with Marchi in his cases are convincing is a moot point. I should like to accept them, but find it difficult to believe that if, as he supposes, there is a process of decomposition going on, at least in places it would not have arrived at the stage when the pigment would be in a condition to react to osmic acid in the way characteristic of non-phosphorised fats. But granting his explanation to be substantially correct, it is still most compatible with a failure in metabolism due to some gland deficiency or anomaly, and if so, then amaurotic idiocy must be ranged alongside the idiocy produced by defective thyroid secretion, and perhaps, like this, it will eventually yield, in part at least, to therapeutic measures."

Dr. J. Turner.—The Classification of Insanity ("Journal of Mental Science," January 1912).—In this paper the attempt is made (following the idea of Tansi and others) to classify insanity on an anatomical basis. It is assumed that in every case (excluding accidental insanity) there is some initial or inborn structural defect of the nervous

* "Proceedings," 1911, iv, pp. 199–204.
† "New York Med. Journ.," 1907, lxxxv, p. 294.

system, and it is held that for this supposition we have justifiable grounds. The accompanying chart gives in a diagrammatic form an outline of the idea of classification embodied in the paper.



Dr. J. Turner.—Changes in our Conception of Insanity, being the Presidential Address to the East Anglian Branch of the British Medical Association ("Brit. Med. Journ.," 13th July 1912).

XI. From the East Sussex County Asylum.

Syphilis and Congenital Mental Deficiency.—Dr. W. Rees Thomas, Pathologist and Senior Assistant Medical Officer, has been engaged in investigations upon the incidence of syphilis among the congenitally deficient, who were resident in the Asylum during the whole or part of the year.

The blood of 163 patients was examined (table subjoined), 91 males and 72 females; of these 12 males and 15 females also suffered from epilepsy. A positive Wassermann reaction obtained in 8 cases. Of these 3 suffered from epilepsy, 1 from mania, 1 from melancholia, and 1 was an imbecile by deprivation.

The question of the infection being congenital or acquired can only be gathered from physical signs on the body or by the age at which they were segregated

Five cases were certified as suffering from congenital mental defect, they being committed to an Asylum at the ages of 14, 10, 9, and 8 respectively. Acquired infection may be practically excluded in these cases.

Two of the others were first detained at the ages of 72 and 25 years respectively. In these cases we cannot exclude acquired syphilis.

The eighth case shows definite signs of old interstitial keratitis. She is completely blind and deaf, and though undoubtedly suffering from congenital lues, her mental deficiency is secondary to the special sense affections.

Considering only those cases in which the mental defect existed from birth, and in which acquired syphilis may be excluded, we have 5 cases, or 3 per cent., among 163 imbeciles or idiots, the occurrence of syphilis in whose parents may have been a causative factor in the production of these congenital morbid mental states. Of these 5 cases it is worthy of note that 2 suffer also from epilepsy.

Age of Patients in decennial periods.	1–10.		11–20.		21–30.		31–40.		41–50.		51–60.		61 and over.		Totals.		
Sex - - -	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
Form of mental disorder :																	
Imbecility or Idiocy	6	2	20	12	14	11	21	13	10	12	5	4	3	3	79	57	136
Imbecility or Idiocy with Epilepsy.	1	2	3	3	5	3	3	3	–	3	–	–	–	1	12	15	27
Negative Result -	7	4	21	13	18	14	19	16	8	14	5	4	3	3	81	68	149
Partial Hæmolysis -	–	–	–	–	1	–	3	–	2	–	–	–	–	–	6	–	6
Positive - - -	–	–	2	2	1	–	1	–	–	1	–	–	–	1	4	4	8

XII.—From the Cheshire County Asylum at Chester.

Dr. G. Hamilton Grills, Medical Superintendent, writes :—

During the past year the work in the laboratory has progressed steadily. It has, however, taken more the form of clinical work in conjunction with work in the wards than of research work.

The bacteriology has been of service in cases of carbuncles, abscesses, furuncles, and erysipelas, in many of which cases vaccines were made, and were notable in bringing the cases to a rapid state of resolution often even without the intervention of the knife. The benefit derived from autogenous vaccines was strikingly exemplified in several cases in which little or no headway was made with stock vaccines.

The cases of tubercular infection have all been treated with tuberculin preparations, either Koch's T.R. or Spengless Bovine preparation, according as the opsonic index indicated a human or bovine bacillus to be the invading factor. The results were on the whole encouraging.

The estimation of the leucocytosis in certain cases of the acutely insane is being pursued systematically. In cases in which the leucocyte reaction is considered unsatisfactory, artificial means of stimulating it are tried, such as the injection of nuclein solution or terebene.

The character of the leucocytosis occurring in certain acute cases, particularly mania and melancholia, is of real clinical value from a prognostic point of view, and in a large proportion of those cases which

react well to the leucocyte stimulating injections a favourable turn of the mental symptoms is commonly observable.

In certain cases of melancholia the injection of sodium cacodylate is being tried as a means of stimulating a metabolic reaction in the hope of fattening the patient. So far the results have not been very encouraging. Modifications are, however, under trial. Some research work has recently been commenced in connection with cases of dysentery.

XIII.—From the Dorset County Asylum.

Dr. Macdonald reports that during the past year steady work has been carried on in the new and fully equipped laboratory. The work has consisted almost entirely in the investigation of material obtained in post-mortem, as well as in the carrying out of tests for the purpose of clinical diagnosis.

XIV.—From the Cardiff City Asylum.

1. *Drs. Schölberg and Goodall's Report:—*

Drs. Schölberg and Goodall have for some months made systematic weekly examinations by the Wassermann method of the blood and cerebro-spinal fluid from cases illustrative of all kinds of mental disdisorder, in pursuance of similar work reported by them in the "Journal of Mental Science," April 1911. They propose to report in detail on their further observations this year. The observations upon mental cases have been systematically checked by parallel observations upon cases of syphilis in different stages from the Cardiff Infirmary, and others from private practice; and on this account it is believed that the results have an exceptional interest. They show that a higher proportion of positive reactions in the blood-serum is obtained in cases of florid syphilis (including cases in the secondary stage) than in those of general paralysis. By systematically working with three strengths of amboceptor it is shown that in some cases of general paralysis a positive reaction can be obtained with higher concentrations of amboceptor when such is not obtainable with the usual (a procedure recommended by Nonne, Holzman, and Eichelberg). This applies to the serum as well as to the cerebro-spinal fluid, but more especially to the latter; the reason probably being that amboceptor is present in lesser quantity in the latter. Different strengths of amboceptor were in like manner used in cases of insanity other than general paralysis, with the result that a negative reaction sometimes became positive in the serum and the cerebro-spinal fluid with increased amounts, though not so frequently as in general paralysis as far as the latter fluid is concerned. Nevertheless it is evident that the delicacy of the reaction is diminished when amounts of amboceptor above $\frac{2}{10}$ths c.cm. of a solution of 1 in 10 are employed. This observation casts doubt upon the propriety of employing the higher concentrations of amboceptor. These further observations bear out the reliability of the Nonne-Apelt protein test, and show, on the whole, that pleocytosis is less constant in general paralysis than increase of protein.

Further work has consisted in the continuation of observations upon the agglutinating and opsonic properties of the blood-serum of cases of acute mania and melancholia upon the intestinal anaërobes, B. putrificus and B. enteritidis sporogenes (Klein). The work shows that no agglutinins

are formed in respect of these organisms, and the cases exhibit a lower opsonic index than do control cases. This latter fact may be merely a special illustration of a general tendency to reduction of opsonic power of the blood-serum in these cases, not by virtue of their mental disorder, but on account of mere reduction of vitality. There is not sufficient experience yet available as to the opsonic index in respect to the more common pathogenic organisms in cases of insanity to allow of a definite statement on this point. Incidentally this work has brought out an interesting fact as to the relative powers of ingestion of organisms by homologous and heterologous (*i.e.*, in respect to the serum employed) leucocytes, which will be reported in full elsewhere, and which is certainly of much therapeutic interest theoretically.

Dr. Goodall (recently with the aid of Dr. D. L. Jackson, Junior Assistant Medical Officer) has continued his observations upon the qualitative leucocytal count in various phases of general paralysis, and the results have clearly confirmed the preliminary observations communicated by him in the Presidential Address to the Section of Neurology and Psychiatry, British Medical Association, Birmingham, 1911.

Briefly, there is lymphocytosis during the remission period, broken by polynucleosis upon relapse, a phenomenon highly suggestive of a recurring toxic process. Dr. Jackson is continuing these observations, and supplementing them by like ones carried on concurrently in respect to the liquor cerebro-spinalis.

Drs. Schölberg and Goodall have made a considerable number of experiments upon rabbits with a view to determining the presence or otherwise of specific precipitinogen in the serum and cerebro-spinal fluid of specific kinds of insanity ; which experiments are still in progress.

They have also prepared leucocytal extract from exudate produced artificially in the pleural cavity of rabbits for the purpose of inoculation in cases of mental disorder (not general paralysis) which may be presumed to have a toxic origin. This is an application of the experience of Hiss and Zinsser, in cases of disease of known toxic origin, such as pneumonia, to cases of mental disorder. A good deal more work is necessary before results of value can accrue.

2. *Account of Research carried out in the Year* 1912 *in the Chemical Laboratory, Cardiff City Mental Hospital.* By R. V. Stanford, M.Sc., Ph.D., Research Chemist.

The chief lines of investigation which have been pursued during the past year comprise the further study of the phenomenon of the appearance of indigo-producing substances in the urine of the insane, the perfecting and testing of the new dilution colorimeter referred to in last year's Report, and, in particular, a series of researches on the cerebro-spinal fluid of the insane.

In regard to urinary indigo, attention was principally directed to the isolation of the indigo-producing substances, which, as was mentioned in last year's Report, is interesting from many points of view, and is absolutely necessary for the establishment on a sure basis of the quantitative method which I have devised and which I hope eventually to apply to the systematic analysis of the urine of the insane. Unfortunately, the isolation of these substances by methods which, in the past, have proved equal to the task of isolating similar compounds from the urine of animals in which the amount of indigo had been artificially increased is impossible in human urine, both by reason of the much smaller concentration of the indigo-forming substances, and because of their much greater instability, which has already been described in former reports. This instability has, in fact, prevented so far the

isolation of these compounds, and the result of much laborious investigation has only been the devising of a new and convenient method for their extraction from urine, an advance which is nullified by the spontaneous decomposition of the extracted substances in the course of a few hours. This problem is, therefore, still under investigation.

In collaboration with Dr. E. Barton White, the action of several common intestinal bacteria on media containing indole has also been studied. In no case was the production of any indigo-forming substance observed, and this is an additional argument against the common assumption that "indicanuria" is necessarily connected with excessive intestinal putrefaction.

Exhaustive tests of the new dilution colorimeter have shown it to possess the advantages claimed for it in last year's Report.

The principal occupation of the year has been the study of the cerebro-spinal fluid in cases of mental disease. The original object of the work was a re-examination of the disputed question as to the occurrence of choline in the cerebro-spinal fluid in general paralysis. This has been affirmed by Donath, Mott, and Halliburton and others, and denied by Kauffmann and others. With the aid of fluid collected post-mortem for some two years previously, a repetition of the experiments of previous workers was undertaken, and the result of these and other experiments proved that choline is not to be found in the cerebro-spinal fluid of general paralytics or of other individuals. The statements as to its occurrence were shown to be due partly to confusion with ammonium chloride, and partly to the production in the fluid, after removal from the body, of a substance which gives many of the alkaloid reactions shown by choline.

The application of new methods to the analysis of cerebro-spinal fluids obtained during life has enabled me, however, to differentiate between the cerebro-spinal fluids of general paralytics and those of other patients, and the regularities observed promise to afford means of diagnosing that disease in doubtful cases. Although a considerable number of cases have been examined, no incongruous results have yet been obtained. These and other researches (which are now in progress) may throw light on the progress of mental disease also in cases other than those of general paralysis.

Most of the results referred to in this Report will be published during the year in the *Zeitschrift für physiologische Chemie* and elsewhere.

3. *Dr. E. Barton White*, Senior Assistant Medical Officer, reports as follows :—

(1) The examination of the blood and cerebro-spinal fluid in several obscure cases of pyrexia with meningeal symptoms.

The five cases were in the same ward. Three were epileptics. Blood was taken by sterile venesection from the arm in all cases, and spinal fluid in three of the five. A gram positive streptococcus was isolated in two of the five bloods, and in one of the three spinal fluids. One case died, during convalescence, in status epilepticus. The spinal cord and meninges were healthy.

(2) The isolation of the different intestinal bacteria to determine, if possible, the relationship between indole and the indigo-producing substance, with Dr. Stanford.

In conjunction with Dr. R. V. Stanford this investigation was undertaken with the object of determining whether the indigo-forming substances of urine can be produced from indole by intestinal bacteria, since it is generally assumed that urinary indigo arises chiefly in this way.

Pure cultures of b.pyocyaneus and b.coli were isolated and grown on a variety of media of known composition and degree of alkalinity, to which small quantities of indole had been added previously. In no case was any indigo-forming substance obtained, so that the assumption mentioned above receives no support from these experiments. The work is being continued with other intestinal bacteria, including the anaërobic ones, which are being isolated and identified.

(3) The collection of urine under sterile conditions to test the relative stability of indigo in sterile and infected urine. In conjunction with Dr. Stanford. (In progress.)

(4) The cultivation of bacteria from the urine of general paralytics (five cases).

In one case of the five the urine was sterile. In one other case b.coli was isolated. The patients' serum had no agglutinating power on this organism. A vaccine was made and injected.

In the remaining three cases a large coccus was isolated ; but in one of these there was a possible source of contamination during the technique of collecting the urine.

REPORT OF INQUIRY HELD BY THE COMMISSIONERS AT THE EAST SUSSEX ASYLUM (*see ante*, p. 48).

Office of Commissioners in Lunacy,
66, Victoria Street, S.W.
18th June 1912.

On the 10th and 11th instant, by direction of our Board, we held an inquiry at the East Sussex Asylum, Hellingly, into the circumstances in which a male patient named Richard Howe died in that institution on the 3rd of May last from "septic pneumonia, general paralysis, and mania," associated with fracture of six ribs and fracture of the lower jaw.

Mr. Osborn, Chairman ; Mr. Godwin, Vice-Chairman ; and Dr. Hayes Newington and Dr. Willett, members of the Visiting Committee, and Mr. Blaker, Clerk to the Visitors, were present either throughout or for a portion of the inquiry, which was also attended by Dr. Taylor, the Medical Superintendent, by Mr. Simmons, a former employer of Richard Howe, by a member (name unknown to us) of the Board of Guardians of the Hailsham Union, to which authority Howe was chargeable, by Howe's father and sister, William Howe and Elizabeth Emma Baker, and by the latter's husband, Alfred Baker.

Mr. Catt, Clerk to the Hailsham Board of Guardians, was given the opportunity of attending the inquiry, on behalf of the Guardians, but through some misapprehension of the Asylum officials, was not admitted into the room, and left before we knew he was there.

Some members of the press wished to be present, but we, in accordance with the usual practice of our Board, declined to admit them.

All those who attended the inquiry were given an opportunity of putting questions through us to the witnesses.

We had before us—

(1) A copy of the depositions taken before the Coroner at the inquest held by him on the 7th of May, when the Jury returned the verdict that "Richard Howe died from the mortal effects of empyema and septicæmia "occurring in the course of general paralysis of the insane and com- "plicated by the fracture of several ribs and one jaw-bone probably "spontaneous and due to disease."

(2) Letters from the Coroner, Mr. Catt, Mr. Simmons, and Mr. Alldred, expressing more or less dissatisfaction with the case or with the verdict. The letter from Mr. Alldred, who wrote from Brighton, also contained an allegation that "the attendants are mostly of a rough class," but his reply to a letter sent from our office asking for his assistance in clearing up this charge was not received till too late to be of service to us at the inquiry.

(3) The diaries of the Wards in which Howe was located during his residence in the Asylum, from which the accompanying entries relating to him have been extracted. These entries indicated that the diaries had been kept with care by the day and night attendants responsible for them.

(4) The medical Case-Book and the post-mortem Note-Book.

We examined upon oath the following, namely :—

Dr. Taylor (M.D., B.S. Lond.), Medical Superintendent.

Dr. Fennell (M.D. Oxford), Senior Assistant Medical Officer.

Dr. Thomas (M.D. B.S. Lond.), Assistant Medical Officer.

Mr. Kirwan (L.R.C.P.S.I.) who was an Assistant Medical Officer from 1st February to 10th or 12th of April of this year, but who is now practising in Ireland, whence he had to be brought.

Dr. Sills (M.D. Toronto), who was acting Assistant Medical Officer from April 9th to May 17th of this year.

Mr. Williams (M.R.C.S. and L.R.C.P. Eng.), who was at the Asylum during Dr. Fennell's absence from April 22nd to May 16th, and who had to come from Wales.

Dr. H. S. Gabbett (M.D. Dublin, M.R.C.P. Lond.) of Eastbourne, and Pathologist to the Princess Alice Hospital of that town, and who had been called in by the Coroner to examine the body of the patient after the general post-mortem had been made.

Mr. Ackerman, chief male attendant of the Asylum since its opening nine years ago.

The following day attendants—the period placed against each of whose names indicates the time they have been in the service of the Asylum—namely :—

Albert Cripps (nearly 9 years), charge attendant of G. 1 Ward ; Cyril Moss (3 years), second attendant G. 1 Infirmary Ward ; Septimus Charles Somerville (7 years) charge attendant J. 2 ; William Sidney Smith (over 3 years), second attendant J. 2 ; Robert Booth (nearly 8 years), charge attendant H. 1 ; Mr. Jolly ($7\frac{3}{4}$ years), chief male night attendant.

The following night attendants, namely :—

William Blackmore (nearly 9 years), deputy chief night attendant ; Charles Piper (between 7 and 8 years), G. 1 Ward ; Albert Ernest Watts (nearly $2\frac{1}{2}$ years), J. 2 ; James Marks Breed (nearly 8 years), J. 1 ; Frederick Robert Daws (nearly 5 years), relieved Attendant Piper in G 1 on four nights between March the 13th and May the 2nd ; Edward Williams, relieved attendant Watts in J. 2 on some nights during the same period.

Henry William Messer, who was second attendant in H. 1 while Howe was in that ward, but has since, after a service of nearly 3 years, left the Asylum to take up farming ; William George Brown, who was an attendant in G. 1 Ward all the time Howe was there, but has since, for personal reasons, left and gone as an attendant to Brentwood Asylum.

Henry Chandler and Walter Butler, labourers on the Asylum estate.

Mrs. Elizabeth E. Baker, Alfred Baker, and William Howe, the before-mentioned relatives of the deceased patient.

James French, a labouring man employed by Mr. Simmons.

We also examined, but not on oath, the following patients, namely :—

Richard Chambers (J. 2 Ward) ; J. W. F. Johnson (J. 2 Ward), who was stated to have struck Richard Howe while he was in bed on the evening of April 6th ; but the blow, so far as we could gather was not a severe one ; John H. Nash (H. 1 Ward), and Walter Dawson (G. 1 Ward), but as their statements did not throw light on the subject of our inquiry, beyond indicating that the attendants generally treated the patients properly, their evidence is not again referred to.

We had full-written notes taken of all the evidence tendered, and these are presented with this report.

Before proceeding to take evidence we visited the wards in which Howe was located during his residence in the Asylum, with the exception of the Acute Hospital where he was for a few hours only on the day of his admission. These wards were as under :—

No. of Ward.	No. of Patients.	Class of Patients.	Usual No. of Attendants.	Period Howe was warded there.	Names of the Attendants (so far as we obtained them) who were in these Wards with Howe.
G. 1	38	Infirm and sick.	6	From 13th to 16th March, and from 20th April to day of death. Slept there as well during these periods.	Charge-attendant Cripps ; 2nd attendant C. A. Moss ; attendants Puttick, Brown.
J. 2	38	Epileptic and demented.	3	16th of March to 18th April. Slept there as well during this period.	Charge-attendant Somerville ; 2nd attendant W. S. Smith ; attendant Fletcher, attendant Robinson (relief).
H. 1	41	Turbulent and violent.	usually 5	18th of April to 20th April ; but during this period slept in J. 2.	Charge-attendant Booth ; 2nd ex-attendant Messer ; attendants John Roberts, Puttick, James.

We reviewed the patients in these wards and selected from among them four, whose names have already been mentioned as those who appeared most likely to be able to afford us useful and reliable information. We saw where Howe slept and the single room in H. 1 Ward where a very violent struggle hereafter referred to occurred between him and the attendants.

Howe was 38 years of age, single, a general labourer. He was admitted into the Asylum on the 13th of March 1912. He died at 1.25 a.m. on the 3rd of May, and the same day and, as we think, unfortunately, before the post-mortem examination was made, the notice of death was forwarded to our office and to the other persons to whom it had to be sent. We say, unfortunately, for there was no difficulty in this instance in complying with No. 27 (1) of the Commissioners' Rules (which requires that in case of the death of a patient such notices shall be sent within 48 hours of death) after the post-mortem examination, as permission to hold it had been given by the relatives on the afternoon of the day of the patient's death.

The apparent cause of death was set forth in the "statement" as "septic pneumonia, general paralysis, and mania"—there were said to be no unusual circumstances—and "whitlow on thumb and finger of the right "hand. Surgical incision for abscess at left angle of lower jaw. Very "slight abrasions over sacrum" were mentioned as the known injuries.

On the 9th of May a copy of the verdict of the Coroner's jury was forwarded by the Clerk of the Asylum to our office. It was unaccompanied by any comment or report from Dr. Taylor, an omission regarded as unsatisfactory by our Board, for which he has already expressed regret, and explained that it arose from a misconception on his part of our requirements.

On the receipt of the Coroner's verdict inquiries were as far as possible made from our office into the circumstances by correspondence, but when the result of these was reported to the Board the inquiry to which this report refers was directed to be held.

As the result of the correspondence and of the evidence we have taken we now proceed to give particulars of Howe's mental and physical condition while in the Asylum, and of the circumstances connected with his care and treatment there, and of the injuries discovered at the post-mortem examination.

We obtained distinct evidence that at least on four occasions his chest was examined, more or less fully, both back and front, by a Medical Officer. The first of these was on his admission by Mr. Kirwan; the second was later on in the same day by Dr. Thomas; the third by Dr. Sills on the 18th of April after there had been a very severe struggle between Howe and the attendants; the fourth occasion being on the 27th of April by Dr. Sills, when he thought the patient had septic broncho-pneumonia. On one occasion Dr. Taylor examined the back of Howe's chest after he (Howe) had developed pneumonia. On none of these occasions was fracture of any of the ribs discovered.

Dr. Thomas examined Howe's jaw both from within and from without the mouth on the 26th of April and stated positively to us his belief that it was not fractured then.

Howe when admitted on the 13th of March was suffering from general paralysis and was in a somewhat feeble condition. At first he was dull and confused, but from the time of his admission was frequently pulling at his jaw. On the 3rd of April he became restless and tried to pull his tongue out with his fingers and handkerchief. On April the 10th he further tried to injure himself by poking his fingers into his eyes and also by pulling at his testicles. On this date he was visited by his sister, Mrs. Baker, and she stated to us that she had a conversation with him during which he seemed to speak sensibly, but kept rubbing the left side of his face, which was not then swollen. She asked him what was the matter, and he replied that one of the attendants had knocked him down and, he also said, either had kicked him or trodden on him (she could not be sure which), and had thus loosened his teeth, and that he had to stop in the Asylum until they had pulled them all out. She did not ask him the name of the attendant, nor did she then speak to any of the doctors about what he had said, but she told her father, who said "Let it go on till we see him again." On April the 12th he became resistive and noisy, and about this time several small septic sores developed round his finger nails, and his mouth also was in a very septic condition.

On the 13th of April he had a tooth extracted. Dr. Sills, who extracted it, said, as far as he could remember, it was one of the upper molars, and that he extracted it because it was decayed and the patient had a septic mouth. The tooth was firmly set in the jaw, and it was not extracted because it was loose.

On the 15th Dr. Fennell, who was acting Medical Superintendent, extracted two more teeth, or stumps, on the left side of Howe's jaw, but whether from the upper or lower jaw is not clear, because an abscess had developed there.

On April the 18th, at 9.15 a.m., Howe became very excited and troublesome, tried to kick and strike the other patients, and when approached by attendants Smith and Robinson he became very violent, trying to throw them down. Charge-attendant Somerville and attendant Fletcher went to their assistance, and at that moment Mr. Scott, one of the head attendants, entered the ward. He went and reported the condition of the patient to Dr. Sills, and a telephone message was sent to attendant Somerville to take him to H. 1 Ward, where he was to be put to bed. He was taken thither by attendants Somerville, Fletcher, and Smith, and on the way he was again very violent, trying to break away and strike and kick. In the corridor of H. 1, charge-attendant Booth came to their assistance, and helped to take the patient to a single room. Here, when he was undressed and quite naked before being put in bed, he again broke out, and another very severe struggle ensued, and Mr. Ackermann, the chief attendant, who had been sent for by charge-attendant Booth, and had come into the ward, directed his removal to the padded room, and this was done at about 10.30 o'clock, under his (Mr. Ackermann's) supervision, by attendants Booth, Messer, James, and Bish. The evidence all tended to show that the struggles were of exceptional severity. They were immediately reported, and we have no reason to think that during them more force than was necessary was used by any of the attendants. After he was placed in the padded room Howe went round and round the room thumping the pads with his fists, but after 11.40 he became quiet, and between that hour and noon he was examined by Dr. Sills, who "found no injuries whatever." He made no complaint of any pain or injury. Dr. Taylor told us he was quite capable mentally of doing so, but charge-attendant Booth told us Howe was incoherent all the time he was in his ward. Howe does not appear to have been violent again, and on the evenings of the 18th and 19th he walked quietly up to J. 2 observation dormitory to sleep, and during the two days he was in H. 1 Ward he did not evince any evidence of pain to the attendants, and ate the ordinary diet, cut up into small pieces, without difficulty.

On the 19th of April the whitlows on the first finger and thumb of the right hand were considerably worse, and were freely opened by Dr. Sills, who also on this day extracted a fourth tooth. This tooth seems to have been the first bicuspid on the left side of the lower jaw. It was taken out because pus was discharging; it was quite loose and came out, so Dr. Sills told us, without any effort. He did not think the fracture of the jaw existed at this time, as he considered if it had done so, the putting of the forceps on the tooth would have revealed the fracture.

On the 20th of April he was sent to G. 1, the Infirmary Ward, his finger was thoroughly opened, and his hand ordered to be placed in a boracic bath. On this day he was put to bed in a dormitory and remained there until he died. During that period he was said to have been resistive and restless, but not violent. He was never taken to the watercloset, but was given a bed-pan, and we obtained no history of a fall or of anything in the shape of violence being used towards him. His temperature was raised, and he was, so Dr. Taylor informed us, on account of this placed on slop diet.

About five days before he died, attendant Cripps noticed that there was difficulty in his breathing. On the 22nd, Mrs. Baker, having had a letter from the Asylum saying he was ill, again visited her brother. She found him very ill, unable to say much and with "a great lump on the left side of his face," which he told her was where he had been hit. On

the 23rd she visited him again and found him too ill to say a word. She saw one of the doctors and told him she thought he brother had been ill-treated, and that she had heard outside the Asylum that he had been ill-used. The doctor told her "he had not, and that he had everything he wished for."

Mrs. Baker lives only about three miles from the Asylum, at Ginger's Green, Hurstmonceux, Hailsham, and she informed us that her husband had told her that on Sunday, 20th April, he had had a conversation at the "Red Lion" public-house with Henry Chandler and Walter Butler, in the course of which they had told him (Alfred Baker) that Howe had been ill-used; but both Chandler and Butler denied to us that they had ever made any such statement.

Mrs. Baker told us that her brother had never complained to her of pain in his chest.

On the 24th of April the cellulitis of the hand had become so much worse that the question of amputating above the wrist was discussed by Dr. Taylor with his medical officers. On the 26th, Howe's lower jaw was, as already stated, carefully examined, in Dr. Sill's absence, by Dr. Thomas and Mr. Williams; and in the evening the abscess was opened, and a considerable quantity of pus evacuated. We were told by Dr. Taylor that after this Howe seemed much easier, and that the wound followed a natural course, and that the abscess was almost healed before death.

For the last six days of his life, Howe had the signs of pneumonia. He gradually grew worse and died on the 3rd of May.

Dr. Taylor told us that after the 20th of April he personally saw Howe two or three times a day on account of the severity of the cellulitis of the hand, and that he was present at the post-mortem examination and saw everything there was to see.

The following is the substance of the evidence Dr. Taylor gave us as to the injuries found, and his opinion respecting their causation, &c.:—

On the right side the fifth and sixth ribs were fractured about 1½ inches from the cartilages; the fractured ends were free in an abscess cavity which lay in the chest wall and confined to this part, and contained, perhaps, 2 ozs. of pus. On the left side the third, fourth, fifth, and sixth ribs were broken about 2½ inches from the costo-cartilaginous junction. The sixth rib showed a second fracture about half an inch from its junction with the cartilage. The pus which had surrounded the fractures on this side had burst into the pleural cavity and formed a small empyema. The jaw was fractured on the left side; the fracture was complete and ran from just behind the left canine tooth backwards to about three-quarters of an inch in front of the angle of the jaw. There was no inflammation of the bones where the surfaces met and the edges were quite sharp, but the bone near the sockets of the teeth was congested. We were also told there was no pus round the broken ends of the bones and that the abscess had practically healed. Dr. Taylor said it was impossible for him to define the age of the fracture; he thought it was occasioned before death, but could not say for certain that it was. Asked how such a fracture could have occurred after death, the only suggestion he had to make was that it was in moving the body. Asked what led to the discovery of the fracture of the jaw, he said he did not know, as he was not in the post-mortem room at the moment, but on Dr. Thomas, who made the post-mortem examination, being asked the same queston, we were told that having found the fractures of the ribs, he examined the jaw, which would seem to us to suggest that he at once associated the abscess in the face with a possible injury to the jaw.

Dr. Taylor stated that he had had no experience of fractured ribs in asylums, and could not say whether or not they were usually associated with external bruising. He further told us that the ribs were abnormally brittle and that there was no effort whatever at repair round the broken ends, and that the fractures appeared all to be of about the same age ; but he could not give us any idea as to what that age probably was ; he said he thought it was possible they might have been occasioned post-mortem, but would not express a definite opinion. At the same time he stated that the cancellous tissue in the broken ends of the ribs was somewhat hollowed out.

Finally, in answer to the questions we put to him, he said that, in view of the condition of the ribs, the existence of the abscesses and the serious struggles that were known to have occurred, he should have thought it more probable that the injuries were occasioned during the struggles rather than post-mortem, but he was unable to reconcile such a view with the facts that after the struggles the patient went round and round the room striking the pads, and that subsequently when he became quiet and was stripped and examined by Dr. Sills, no injury was found, that no marks subsequently appeared, and that Dr. Thomas, as the result of his examination on April the 26th, was positive no fracture of the jaw then existed.

Howe did not come under Dr. Fennell's notice except when he extracted the two teeth on the 15th of April and we did not ask his opinion as to the fractures.

Dr. Thomas, who came to the Asylum in November 1910, and who told us that he had not, previous to that date, had experience of the ribs of general paralytics, expressed the opinion that Howe's ribs were certainly more brittle than normal. He could not say how long the ribs had been broken but thought that the fractures, including the specimen of the only one that was available for our inspection, might have occurred post-mortem, and that the abscesses (for reasons which he gave in a written statement which accompanies this report) preceded the fractures.

Mr. Kirwan, who had left the Asylum some days prior to the struggle on the 18th April, could throw no light on how the injuries were occasioned, and was not examined as to the condition of the fractures.

Dr. Sills, who was present at the post-mortem examination and examined Howe on the 27th April when he thought he had septic broncho-pneumonia, said that he could not imagine such injuries as those to the ribs escaping detection if they had existed then, and that he thought the fracture of the jaw occurred before death.

Mr. Williams, who with Dr. Thomas carefully examined Howe's jaw for dead bone on the 26th April, expressed a positive opinion that no fracture of the jaw existed at that date, but he was not examined as to the condition of the fractures.

The only evidence tendered to us and remaining to be mentioned is that of Dr. Gabbett, the Pathologist called in by the Coroner to examine the body. The following is what he said :—

" I have given special attention to pathology.

" I examined the body of Richard Howe at the Coroner's request.

" The general post-mortem had already been made.

" There were no external marks of injury on the body that I saw. My examination of the jaw did not allow me to express an opinion as to the age of the fracture, except that there was no attempt at repair.

"The fracture was complete and clearly behind the lower canine tooth on the left side—which is a usual position. I am not quite sure if the fracture went below the masseter muscle.

"The anterior part of the jaw was freely moveable on the posterior fragment. The fracture was one which should have been easy of detection. I had heard that teeth had been extracted. I thought it possible there was a relation between the extraction of the teeth and the fracture of the jaw. I asked why the teeth had been extracted, and was told they were septic stumps.

"I examined the fractured ribs. I cannot assign any age to the fractures. It is possible the fractures were post-mortem, but I do not think it probable. I consider the fact that the fractured ends were encased in abscesses might point to the fractures having existed for some considerable time, but if so, I should have expected more changes in the ends of the bones, such as some attempts at repair and some exudation of callus. The bones were abnormally brittle, as is frequently associated with general paralysis. The outer casing of the bones was very thin. I have not previously examined the ribs of general paralytics.

"The ribs might have been fractured by pressure applied in front. They were sufficiently brittle to have been fractured by the patient being held down by three or four men when violently struggling. I should have thought they would easily have been detected by an examination of the chest. The injuries would have been more difficult of detection if the patient had refused to assist the examiner.

"I have had no experience in dealing with lunatics.

"The fractures would in some measure have been masked by their being enclosed in an abscess cavity.

"It was possible that the fractures might have been spontaneous, but not probable.

"The shortest age of the fractures, if they had occurred during life, would have been four or five days before death. I think it possible that there was some suppurative process outside the chest, further weakening already fragile bones. I do not understand why pus should have formed in connection with a simple fracture. It is quite possible that as this man was in a septic condition the suppuration developed at the seat of the fractures as the result of the irritation and necrosis of minute spiculæ of bone, but it is very rare to have suppuration round a simple fracture.

"I am not in a position to say, as I did not dissect the jaw, whether the abscess that was opened was connected with the necrosed teeth or with the fracture.

"It is possible that the fracture of the jaw was caused post-mortem, as by very rough usage of the body.

"I agree that a post-mortem incision over the fracture would render the fracture slightly more mobile, but in any case it was not difficult to detect."

After carefully reviewing the evidence and considering the various documents before us we are of opinion that the evidence in support of the contentions that the fractures of the ribs and the fracture of the jaw occurred either spontaneously before death or in moving the body after death was wholly unconvincing, and that the injuries cannot be accounted for in either of these ways. We are unaware of any recorded case of spontaneous fracture of the jaw, while spontaneous fracture of the ribs, as the result of some involuntary action, such as a violent fit of coughing or sneezing, though acknowledged, is, even when the bones are much wasted, as is often the case in general paralytics, very rare. But Howe's

ribs, judging from the only one we had an opportunity of examining (and which we requested should be preserved) though not up to a normal standard of strength, was not by any means a typical example of a wasted rib of a general paralytic, and we have seen many specimens that were much more fragile. The appearance of the fractured end of this rib, with its smoothened edge and face, indicated to us that the fracture had probably occurred at least ten days or a fortnight before death, and this, taken in conjunction with the fact that injuries such as existed could only have been caused during the removal of the body by such careless roughness and want of respect for the dead as is inconceivable in a well-ordered institution like the Hellingly Asylum, seems to us to negative the theory that the injuries were occasioned after death.

The view expressed by Dr. Gabbett regarding "some suppurative process outside the chest, &c.," by which we understand him to mean that the abscesses around the ribs preceded and did not follow the fractures, does not commend itself to us, for we regard it as most unlikely that such a similar condition would have existed on each side of the chest unless the abscesses followed on the injury, as was undoubtedly the case in two previous instances of corresponding conditions which have come under our notice. Again, the inference to be drawn from the absence of any attempt at repair of the fractured ribs would be weakened by the fact that the process of repair in such a case as Howe's would be very slow or almost nil and would be delayed by the abscesses. Like Dr. Gabbett, we were at some disadvantage in being unable to examine the condition of the fractured jaw. In the absence of any history of a fall, or other violence, except the blow by the patient Johnson, to which, as already mentioned, we do not attach importance, we are led to the conclusion that the fractures, both of the ribs and of the jaw were all occasioned during the very severe struggle on the 18th of April. If this view be the correct one, it may be said that it involves the medical officers concerned in considerable blame for failing to detect the injuries. But this is not necessarily so, as experience has shown us in other cases. Owing to the absence of bruising; to the patient's mental state, rendering him less able to draw attention to his condition; to his probable insensibility to pain, and to his probable inability to afford requisite assistance during examination by taking breath, &c., as a sane person would have done, the difficulty of diagnosing the injuries would, from the time of their occurrence be greatly increased, while, in the later stages of his illness, the symptoms arising from the fractured ribs were probably obscured by the pus surrounding the broken ends and by the symptoms arising from the broncho-pneumonia that existed. It may be also that latterly the grave condition of the patient's hand to some extent diverted attention. At the same time, we feel strongly that the responsibility of detecting injuries ought not to rest solely on the assistant medical officers, and we think it would have been more satisfactory if after the severe struggle that occurred on the 18th of April the Medical Superintendent had himself made an early and complete examination of the patient.

With regard to the absence of bruising, and to the ability of the patient to go round striking the pads after the struggle and to take food apparently comfortably, we would point out that in our experience external bruising of the chest wall is more often absent than present in cases of fractured ribs, even when many of these bones are broken, and that we have known of insane patients who without giving evidence of the fact have had injuries or been affected with serious illnesses which in sane people would have caused intense pain and prevented movement.

The following quotations taken from the writings of a surgeon of high authority on fracture of the jaw have particular bearings on the case :—

"Fracture of this bone is apt to be overlooked. It is most common just in front of the mental foramen, *i.e.*, near the canine tooth.

"It is broken only by great violence, which is generally direct, in the form of blows or kicks.

"Teeth that are much loosened are generally best removed."

It may be said that in Howe's case there is no history of a definite blow sufficient to cause fracture of the jaw. That is so, but in a struggle of the character that occurred on the 18th of April it would be quite possible for the patient to have struck his chin a sharp blow on the floor or wall of the single room where the worst part of the struggle occurred (and when, it should be borne in mind, he was quite naked, which must have made it much more difficult to hold him at all steadily) without anyone being aware of the fact.

It will be remembered we had it in evidence that the tooth which was extracted on the 19th of April, the day after the struggle, and which we understood to be the first bicuspid tooth on the left side of the lower jaw, was quite loose, as might be expected having regard to the site of the fracture. There is no evidence that Howe had any loosened teeth before the day of the struggle except his own statement to his sister to that effect on the 10th of April, which might have been a delusion dependent upon pain occasioned by the bad teeth, as he seems at one time to have had the idea there were wires in his mouth.

The attendants who appeared before us seemed an intelligent and reliable set of men, and most of them had been a considerable time in the service of the Asylum. With one exception they gave their evidence in a straightforward manner, and we have no reason to think either that anyone withheld anything from us or that more force than was necessary had at any time been used towards Howe. The attendant whom we except was James Mark Breeds, and his evidence did not bear directly on the causation of the injuries but on an alleged conversation about Howe's death and that of another patient which took place outside the Asylum between him and James French.

In conclusion we wish to say that we have no doubt whatever as to the lively interest taken by Dr. Taylor and his Assistant Medical Officers in the happiness and welfare of the patients generally.

In expressing the opinion that the formal notice of death ought to have been delayed till after the post-mortem examination we must not be taken as suggesting that the relatives of a patient should not in all cases have full opportunity, after his or her death, of objecting to a post-mortem examination. Such opportunity can be given either through personal inquiries, as in Howe's case, or by a private letter.

Part II. contains—

Appendices A and B.—Statistical Tables.

„ C.—Entries by Commissioners at Asylums.

„ D.—Minor alterations, &c. at Asylums.

„ E.—Entries by Commissioners at Registered Hospitals and Idiot Institutions.

„ F, G, and H.—Reports of Visits to Criminal and State Institutions.

„ I.—Entries by Commissioners at Licensed Houses.

„ K.—Reports of Visits to Metropolitan District Asylums.

„ L.—List of Asylums, &c.

INDEX to the Report.