tion into the Government prisons, and the number removed to invalid prisons during each year. I can only include in this table the seven years 1862-8.

Table IV.

Year.	Daily average number of male prisoners.	Total number of invalids removed to invalid prisons.	Suffering from phthisis.			From other diseases, etc.		
			Existing on reception at the prison whence removed.	Not existing on reception.	Total number removed.	Existing on reception at the prison whence removed.	Not existing on reception.	Total number removed.
1862	5775.2	454	52	28	80	210	77	365
1863	5999.2	415	49	42	96	233	57	319
1864	6153.5	444	65	24	90	215	118	354
1865	5983	342	20	27	51	138	132	291
1866	5941.3	248	19	15	49	34	78	153
1867	6095.2	443	40	10	50	266	127	393
1868	6592	439	40	13	53	351	35	386
Mean of seven yrs.	6077.05	397.8	40.7	22.7	68.2	206.7	89.1	323

A great deal of time and labour has been spent in endeavouring to distinguish diseases which existed previously to conviction from those which began when under sentence. I am, however, obliged to give only approximate returns on these points. The removals to invalid prisons are to a certain extent regulated by the accommodation of those prisons; and consequently, there are feeble and invalid prisoners in almost all the prisons. During the long sentences of penal servitude, prisoners are also of necessity frequently transferred to the different convict prisons, and the medical officer of each prison has been obliged hitherto to record in his annual returns the condition of the prisoners on the date of reception at the prison of which he is in charge, without any reference to the state of health on first transfer to the Government prisons. Hence has arisen the difficulty of distinguishing diseases which originated during the sentence from those which began prior to the sentence. The totals of invalids removed, given in Table IV, are correct; but the columns "existing on reception, and not existing, etc.," represent those men only whose condition of health was recorded when received from the county and borough gaols.

The tables of the annual returns have recently been so arranged as to record the health of every prisoner on first reception into the convict prisons. I am not, however, sanguine of any practical benefit from this change. I have long been convinced, and I have repeatedly stated the conviction, that an annual medical report is wanted which shall embrace the sanitary condition of the seven thousand convicts in the aggregate; and which ought to distinguish all diseases, fatal or otherwise, arising in the prisons during the year, from diseases which are not consequent on, and which do not originate during, imprisonment. Detached medical reports cannot give a valuable annual record of the diseases of these prisoners; nor can they furnish that aid to the general management of the prisons which sanitary science ought to give.

Before concluding this paper, I am anxious to state a few facts in reference to the deaths in the prisons from phthisis pulmonalis and fevers. The large number of deaths from phthisis given on the tables will be sure to arrest attention. I have purposely given prominence to the columns set apart for the records of this disease. These deaths in prison occur mostly to habitual criminals—men and women who have lived in crime from childhood. During 1869, I obtained permission to examine into the previous history of the men and women who died of consumption in the convict prisons during the seven years 1862-8. There were 295 deaths from this disease during that period—men, 245; women, 50. Seventy-two of these prisoners had no record of previous convictions; the remaining 223 had received 1,211 sentences.

The deaths from consumption in the convict prisons have been, I believe, less than half the number per 1,000 yearly, during the last thirteen years, than they were twenty years ago. During the time I was in medical charge of Milbank Prison with the late Dr. Baly, the mean mortality in that prison from consumption for the three years 1847-9, was 18.6 per 1,000 men.

With reference to fever: the condition of the prisons as regards deaths from fever is very marked when compared with former years. During the period above named (the three years 1847-9), the deaths of men from fever yearly in Milbank were 9.9 per 1,000; and for the four previous years—1843-6—4.37 per 1,000; or, respectively, 99.0 and 43.70 in every 10,000; whereas during the last thirteen years (Milbank included), the deaths were in the proportion of—men, 1.50; women, 1.20, in every 10,000.

THE REGISTRATION OF SICKNESS.

By EDWARD T. WILSON, M.B.Oxon., F.R.C.P.,

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THE Royal Sanitary Commission has just pronounced in favour of a national registration of sickness—partial and incomplete, it is true, but at any rate the principle is affirmed; and it will now be for sanitary reformers to show the extent to which such a record can be carried without becoming a burthen to the rates or a serious tax upon the Exchequer.

The importance of a registration of sickness is acknowledged by all who feel any interest in the public health, or in the etiology, prevention, and treatment, of disease; but very much remains to be discussed and settled before the full bearings of such a measure, especially on medical practice, are realised or well understood. It is hoped that the following paper on the historical aspects of the question may be a help to those who wish to give it fuller consideration.

The lineage of an idea is perhaps as difficult to trace as the descent of a physical defect or a family feature. Links in the chain will always be wanting. Still the attempt may be made to note the salient points at which a prevailing thought, sometimes at long intervals, comes to the surface and appears in the literature of the day. For more than a century the desirability of a registration of sickness has been constantly present to men's minds in England, and numerous schemes have been proposed with a view to carrying it into practice. It formed a prominent feature in an "Essay towards the improvement of physick, in twelve proposals, by which the lives of many thousands of rich as well as the poor may be saved yearly. Humbly dedicated to the Parliament of Great Britain by John Bellers. London: 1714." A few years later, in 1732, Dr. Clifton, physician to the Prince of Wales, in his *State of Physic*, urges that "three or four persons of proper qualifications should be employed in the hospitals to set down the cases of the patients there from day to day, candidly and judiciously, without any regard to private opinions or public systems, and at the year's end publish these facts just as they are" (p. 171).

The reports of Willan in 1801, and of Bateman in 1819, on the diseases of London as affected by the changes of weather, were the types and forerunners of a long line of papers in the present century, which perhaps owe their immediate origin to the Association of which, in its more developed form, this JOURNAL is the organ and mouthpiece.

At the inaugural meeting of the Provincial Medical and Surgical Association in 1832, Sir Charles (then Dr.) Hastings, the founder of the Society, mentioned "increased knowledge of the medical topography of England, through statistical, meteorological, geological, and botanical inquiries," as one of the chief objects to be aimed at. "We are left," he says, "with little more than the bills of mortality from which we can extract any information on the state of the public health of a vast proportion of our most populous cities and countries"; and he urges "the investigation of the modifications of endemic and epidemic diseases in different situations and at various periods, so as to trace, so far as the art will permit, their connections with the peculiarities and occupations of the people" (Address of Dr. C. Hastings, *Transactions of the Provincial Medical and Surgical Association*, 1833). The immediate result of these words may be traced in a series of papers on medical topography which have no rivals in our literature: that on the Hundred of Penrith, by John Forbes, M.D.; and that on Bristol, by Andrew Carrick, M.D., and John Addington Symonds, M.D., in the year 1834, may be quoted in illustration. Would that the race had not died out! Passing to the year 1836, the close and inevitable connection between medical relief to the poor and a practicable scheme for the registration of sickness, is, for the first time, alluded to in "Some observations on the present condition of medical relief for sick paupers, with recommendations for an altered and improved system, by Nathaniel Rumsey of Beaconsfield, Robert Ceely of Aylesbury, and H. W. Rumsey of Chesham" (*Transactions of the Provincial Medical and Surgical Association*, vol. v). It is here urged that a report of all cases of disease treated by Poor-law officers shall be compiled and published periodically by a medical board.

The year 1842 was memorable for Mr. Chadwick's Report to the Poor-law Board on the sanitary condition of the labouring populations of England and Wales—a report based upon Poor-law records as well as registers of cases in dispensaries, hospitals, and other public institutions—not, be it remarked, on the mortality or causes of death.

Mr. Baker, in his Report on Leeds in 1843, expresses his sense of the

extreme value of a record of disease. "Of what immense advantage it would be", he says, "to have all medical charities placed under sanitary regulations, and responsible to the Home Office for their returns of cases admitted within their walls. . . . Such an universal register would in a few years render a first-rate service to everything relating to longevity, whether as connected with trades or occupations, of local influences and climate; and, as it would be quite inexpensive, the opportunity is lost without excuse." (*Local Reports on the Sanitary Condition of the Labouring Population of England*, p. 406.)

Before Lord Ashley's Committee on Medical Poor Relief in 1844, Dr. Walker of Huddersfield and Mr. H. W. Rumsey brought forward the most convincing arguments (Evidence, 9154-9155) in favour of an annual report of sickness in charitable and public practice, to be drawn up in each Poor-law union by some medical authority, but without avail: nor did a practical and suggestive paper by Mr. J. Liddle, "On the Connection between Medical Poor-law Relief and the Sanitary Condition of the People" (*Journal of Public Health*, Feb. 1848) appear to have produced more effect. It contains strictures, true now as they were then, on the injurious working of our Poor-laws, as well as amended forms for the weekly reports of the Poor-law officers, in which the details of disease, its nature, duration, and issue, were to find a prominent place.

In the year 1850, the study of epidemic disease derived considerable impetus from the formation of the Epidemiological Society. Statistics were collected respecting the outbreaks of cholera and diphtheria; and in October 1853 the subject was warmly taken up by certain members of the British Medical Association, to whom we owe the first practical effort, on an extended scale, to connect meteorological phenomena with the progress of disease. For three years a weekly summary of sickness and meteorological observations was obtained from certain fixed stations throughout the country. These stations were Wakefield, Haverdham, Grantham, Bedford, Uckfield, Exeter, Ryde, and Guernsey. (*ASSOCIATION MEDICAL JOURNAL*, October 7th, 1853.)

In the year 1854 another effort was made to ascertain "the progress of the chief epidemic diseases at given points of latitude and longitude, their prevalence according to season, the relative duration of each form of disease, and the order in which each epidemic followed another". (*Facts and Suggestions on the Registration of Disease*, by Benjamin W. Richardson, M.D.; *Social Science Transactions*, 1861, p. 535; also papers on the same subject before the Epidemiological Society, 1855, and in the January number of the *Sanitary Review* for 1858.)

Through the pages of the *Sanitary Review*, Dr. Richardson was enabled to open communication with busy medical practitioners in all parts of the country, and to avail himself of the valuable information which they could collect. Commencing with twelve informants in 1854, he was in 1858 receiving reports quarterly not only on the occurrence of certain forms of epidemics, but also on the meteorology, diseases in the lower organisms, and general sanitary conditions, of no fewer than forty-four stations, extending from the Shetlands to the Scilly Isles (*Sanitary Review*, vol. 1, p. 55.) The expense of transmission and printing was of course considerable, and led to their abandonment in 1858; but so impressed was Dr. Richardson with their value that he again and again, in the articles above referred to, urged their being continued through the agency of the Poor-law medical officers; and a scheme was matured, which will be noticed further on, for a complete registration of epidemic disease, and, later, of all diseases throughout the whole of England.

The idea of utilising the vast storehouse of facts relating to private practice had occurred to Dr. W. Farr in 1845 (*Annual Report of the Registrar-General*, 1845), and a suggestion on the subject accompanied the Statistical Nosology, which was distributed to the profession in that year. It was again urged in the pages of the *Sanitary Review* for 1855, by Dr. Robert Druitt (On the Daily Registration of Facts by Medical Practitioners, *Sanitary Review*, vol. 1); and it is stated to have been carried out successfully in Philadelphia, according to the suggestions of Dr. Henry Hartshorne, without breach of professional confidence or violation of domestic privacy.

In the following year (1856) a masterly review of public health organisation in England appeared in Mr. H. W. Rumsey's *Essays on State Medicine*; and among the chief desiderata is mentioned "public registration of disease, a record which would apply equally to sporadic attacks and to epidemic visitations, which would include all the local and physical circumstances connected with sickness. The corps of district medical officers is in most respects, and might become in all points, excellently qualified for forming the basis of a state registration of disease." (*Essays*, p. 278.)

Thus far there had been no attempt at any systematic record of cases of disease. Public information had been acquired by sporadic and necessarily imperfect inquiries, such as have been already noticed, from private sources and from the mortuary records, on which "Jack o'Lan-

tern figures legislative enactments affecting the comfort, health, and liberty of millions of people are based." (*On Certain Fallacies of our National Mortuary Returns*, by Alfred Aspland, 1857.)

The officers of health, however, wanted more. Early intimation of infection was essential to the effective adoption of preventive measures. Comparative tables alone could give the true measure of preventable disease. To this want we owe the admirable tables issued weekly and quarterly during the years 1857-58 by the Metropolitan Association of Medical Officers of Health, a body which quietly and unostentatiously has done more for Public Health in England than Societies with greater names and louder pretensions.

During the first quarter of 1858, 127,722 new cases of disease occurring in public and charitable institutions in London were recorded by the voluntary co-operation of no less than two hundred medical contributors; but the expense of publication proved too great for private effort, and the plan was abandoned.

From the year 1859 to the present time, a national registration of sickness has claimed the unremitting attention of those Societies which concern themselves with the Public Health. In two valuable and suggestive papers read before the Social Science Association at Bradford in October 1859 (The Right Use of Records founded on Local Facts), Dr. Rumsey gave shape and form to that which was uppermost in the minds of many, and obtained a Committee for the consideration of our registration system, with especial reference to returns of disease. This Committee passed resolutions that (Resolution 1) "it is desirable to combine with the superintendence of the registration of births and deaths that of sickness attended at the public expense, and as far as possible that of sickness attended at public institutions"; that (Resolution VII) "a quarterly summary of the deaths and sickness in the district shall be published by each superintendent registrar for the instruction of the local and public administrative bodies;" and that (Resolution X), "in local reports of mortality and sickness, it is important that the returns should specify age, occupation, and class." These resolutions were, in May 1868, adopted by the Council of the Association, and urged upon Government as the soundest basis for the system of registration then about to be inaugurated in Ireland.

An influential deputation was also appointed to open communications on the subject with the Government, the Registrar-General, and the Poor-law Board; but these efforts seem to have produced little effect beyond drawing public attention to a national want, and giving shape to a demand which cannot much longer remain unsatisfied. The sympathetic pen of Dickens was also enlisted in the cause, and joined "in the demand for a registration of sickness that has not a fatal end, as well as for a more effective registration even of the births and causes of deaths themselves; let us have lists of the killed and of the wounded too." (*All the Year Round*, No. 86, p. 228.)

In 1861, "The Statistics of Disease among the Pauper Population of England and Wales" formed the subject of a memorial addressed by the Epidemiological Society to the Right Hon. C. P. Villiers, M.P., President of the Poor-law Board; and the importance of monthly reports to the Poor-law Board and to the Privy Council was strongly urged, on the grounds that insanity and idiocy were the only chronic ailments and incurable infirmities which render the poor chargeable to the rates, of which we have any knowledge; whilst it seemed established that at least three-fourths of all actual paupers become so, directly or indirectly, by disease.

In 1862, the British Medical Association returned to the charge with eleven resolutions proposed by Mr. H. W. Rumsey and seconded by Dr. B. W. Richardson, which had a direct bearing on an Act for the Registration of Births, Deaths, and Diseases in Ireland; and the Social Science Association, in a resolution proposed by Dr. W. Farr and seconded by Dr. Milroy, urged that "in England measures should be adopted for obtaining the same information respecting the civil population as is now obtained respecting the diseases of the army and navy; and that the Council of the Association be requested to bring the resolution under the notices of the Colleges of Physicians and Surgeons, as well as Her Majesty's Government."

Meanwhile, voluntary efforts were being made in more than one direction to secure for limited areas what the State persisted in denying to the country at large. The Manchester and Salford Sanitary Association commenced a series of weekly returns, including epidemics and acute diseases, in 1861 (their first Annual Report appeared in 1862)—a series which has completed its first decade without break or blank in the returns, to the infinite credit of all who have contributed to the result (*BRITISH MEDICAL JOURNAL*, December 3rd, 1870); and a little later, in 1864, the Northumberland and Durham Medical Society adopted a somewhat similar plan, which, under the able supervision of Dr. Philipson, has met with marked success. [I regret to find, by Dr. Philipson's last Report, that this very complete system of sickness-

registration has failed, as others before it have done, from want of funds and want of support.]

In the year 1866, the Committee of the British Medical Association on the Observation and Registration of Disease reported in favour of voluntary Associations for the purpose—such as were stated to be already established at Manchester, Newcastle, St. Marylebone, Liverpool, Preston, and Birmingham; and urged the adoption of some common form of report to be sanctioned by the Parent Association. (BRITISH MEDICAL JOURNAL, Aug. 25th, 1866.) Such form was issued without delay, and adopted by the Societies at Newcastle and St. Marylebone. My inquiries respecting Birmingham and Preston have, unfortunately, been without result.

In Liverpool, the health-officer, as I learn from Dr. Trench, receives daily and weekly reports from the vestry-clerk, from dispensaries and private practitioners, of the occurrence of certain classes of disease; but a systematic classification of sickness is unknown, if we except a very admirable report drawn up annually from the district returns of the Training School and Home for Nurses, an institution which for nine years has carried on its work of usefulness among the sick poor, supplementing medical aid with skilled advice and material assistance when it was found to be required.

In the same year (1866) occurs Dr. W. Farr's memorable proposal for the appointment of registration medical officers to supervise the mortuary returns (Twenty-seventh Annual Report of the Registrar-General)—a proposal which was at once adopted by the Committee of the British Medical Association, who assured him of their hearty co-operation in pressing it to a successful issue. At the same time, it was suggested—and this met with Dr. Farr's cordial approval—that the same officer would be the suitable "authority for collecting and publishing periodical returns of disease obtained by local Associations; and that the districts for the registration of disease should be based on the divisions of the country for the registration of births, deaths, and marriages." (BRITISH MEDICAL JOURNAL, Nov. 3rd, 1866.)

Passing to the year 1868, the British Medical and Social Science Associations are found uniting in a Joint Committee on State Medicine, and presenting with their common memorial a memorandum, drawn up, it is understood, by Dr. Rumsey, in which periodical reports on all cases of disease "treated at the public expense, with their causes and results, and more minutely and frequently during outbreaks of epidemics," find a prominent place. (Memorandum to be submitted to Her Majesty's Ministers and to Members of Parliament by those who are promoting an organisation of skilled Medical Officers of Health and Medical Jurists in Districts for purposes of State Medicine—April 1868.)

The answer to this memorial has but just appeared in the Report of the Royal Sanitary Commission. By repeated discussion, the subject had become narrowed, and the aims of its promoters more definite. The Poor-law Board had come to be regarded by all parties as the chief agent in any registration scheme, but the frequency of the returns, their destination, form, and even their object, were to be hotly disputed by the champions of rival systems.

In November 1869, a deputation representing the St. Andrew's Medical Graduates' Association, the Medical Society of London, the Metropolitan Association of Medical Officers of Health, and the Poor-law Medical Officers' Association, waited on the President of the Poor-law Board with a memorandum "on the advantages to be derived from a registration of disease, and on the mode in which such a record can be obtained". The memorandum was based on the scheme already propounded by Dr. B. W. Richardson in 1856 (BRITISH MEDICAL JOURNAL, November 13th, 1869). The official reply was encouraging, but negative in immediate results.

Early in 1870, the subject was again brought into prominent notice through a paper read by Mr. James Lewis, of the Registrar-General's Department, before the Metropolitan Association of Medical Officers of Health, in which Dr. Richardson's plan was severely criticised, and a very practical scheme put forward, which, in a form subsequently modified and expanded to meet certain suggestions by Dr. Rumsey and others, has met with general acceptance.

At the Newcastle Meeting of the British Medical Association, much attention was given to the National Registration of Disease; and the Report of a Committee advising weekly returns was adopted. Since then, the medical journals have discussed the subject in a fair and practical spirit, whilst the very general feeling of Mr. Simon and others, as expressed in their evidence before the Royal Sanitary Commission, in favour of sickness-registration, leaves little doubt that in some form or other this great boon will very shortly be granted to the country (Evidence, Royal Sanitary Commission, vol. i, Q. 1910).

The last public effort to move the Government on the subject of a registration of sickness was in October of last year, when a joint depu-

tation from the British Medical Association and the Poor-law Medical Officers' Association waited on the President of the Poor-law Board, and pleaded their cause. Mr. Goschen's reply was extremely favourable, but the whole subject was deferred until the Royal Sanitary Commissioners had published their report.

NOTES ON A CASE OF ACUTE ATROPHY OF THE LIVER.

By GEORGE CLEMENTS, Esq.,

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ACUTE atrophy of the liver being a disease rarely seen in this country, I propose briefly to enumerate the symptoms observed during life, together with the *post mortem* appearances, of a case which came under my observation some time since.

In May 1865, a girl aged 17 presented herself in the medical out-patient rooms of the Manchester Royal Infirmary, being at that time deeply jaundiced, and complaining of drowsiness, mental depression, and general exhaustion. She informed me she had always enjoyed good health, had lived tolerably well, and had not been subject to over hard work. There was no history of syphilis, and she had been regular within a short time previous to the commencement of her present illness. A fortnight before I saw her, she experienced the first symptoms of the disease, and observed a yellow tinge in her skin and conjunctivæ. These appearances followed almost immediately after a *severe fright*. From the commencement of the attack the bowels had been very much constipated, the urine also being thick, and loaded with bile-pigments.

On examination, the liver did not extend to its usual limits, while there was some amount of tenderness over the hepatic region. She was ordered mild mercurials, together with aperients, and an application of equal parts of extract of belladonna and mercurial ointment to the hypochondrium.

On her next visit she expressed herself better. The jaundice was not so marked, and the drowsiness had to some extent disappeared. The bowels acted daily, the evacuations containing small quantities of bile. She was ordered to continue the treatment as before, with the addition of small doses of nitro-muriatic acid twice a day. At this time there was no perceptible change in the size of the liver.

She came again the day following, when it was evident that her condition had altered considerably for the worse. There was no apparent cause for this sudden change, the mother having informed me she had adhered most closely to the rules laid down for her guidance. On this occasion the jaundice was of a much deeper colour; she had persistent vomiting, the stools were very hard and clay-coloured, and she was somewhat delirious.

She was taken home and immediately put to bed, when violent symptoms rapidly supervened. The jaundice became more and more marked, and vomiting continued; constipation and delirium of a very furious character followed. The hepatic dulness was now noticed to be less than at the last examination, and its limits were marked out, so as to detect any further diminution. The urine at this time was very concentrated, and contained a large amount of biliary elements. Microscopic examination revealed numerous and most perfect crystals of tyrosine. All the symptoms above mentioned became intensified, and the patient died in a state of coma on the third day after the active stage set in.

The necropsy was performed the following morning. The rigor mortis was well marked, and the body everywhere deeply jaundiced. All the organs were perfectly healthy except the liver, and this was so altered in appearance that one could scarcely recognise it. Considerably reduced in size, and weighing only thirteen ounces, it closely resembled a piece of stale meat. The capsule was opaque, and the parenchyma flabby and atrophied. All the bile-ducts were quite free from any obstruction; and the gall-bladder, although reduced in size, contained a small quantity of thick dark-coloured bile. On subjecting the liver to a microscopic examination, not a single perfect hepatic cell could be detected. Here and there a cell in process of absorption could be seen, but all traces of true hepatic structure had disappeared. The rectum was full of hard clay-coloured fæces, and the bladder contained a small quantity of thick urine, similar to that passed during life.