

## ISOLATION HOSPITALS IN RURAL DISTRICTS.

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IN the country the percentage of cases that require removal is much smaller than in towns. The population is scattered, and while there will be many cases which cannot be effectually isolated if left in their own homes, yet there will also be a considerable number of cases which can be left at home without much risk of spreading infection. Again, the population within removal distance of a country isolation hospital is not large, and the hospital will not infrequently be vacant for considerable periods.

Further, the rateable value of a country-district is small compared with that of a town, and the incidence of rating less fair. An undue proportion of the rates in rural districts is borne by those engaged in agriculture; and the rural governing bodies are largely composed of the ablest men of this class. Hence local expenditure is more carefully scrutinised, and more reluctantly granted in the country than in towns.

For these reasons the type of hospital which the Local Government Board endeavour to force on country districts is a type which the country districts will seldom voluntarily agree to erect. The Board will, for the purpose of a loan, only approve of a stone building constructed in an exceedingly substantial manner, and so contrived as to admit of two kinds of infectious disease being treated at the same time without risk of inter-infection, and with offices for staff planned on the basis of continuous occupation. The Board also make the further condition that the hospital shall under no circumstances be used for isolating cases of small-pox. In short, they say to every rural area, however small and poor, "we will not permit you to borrow money to provide an isolation hospital unless you put up one that is suitable for a populous and wealthy town; that will cost anything from £300 a bed upwards."

I will now give an account of an isolation hospital of a different type erected in a rural district in North Somerset thirteen years ago.

A case of small-pox occurred in 1893 in the capital of the district, a county town of 3,000 inhabitants. The Sanitary Authority erected as

rapidly as possible an iron block with kitchen and nurses' room, and two wards designed for six patients each, w.c.'s and bathrooms; a detached iron cottage, and a third building (also detached) to house a steam disinfecter and ambulance, and to serve as a mortuary. Gas and water had to be laid on from some distance, and sewage disposal was effectually provided by sub-irrigation; solids as well as slops being thus dealt with. At first six beds for patients were provided; and the total cost was £732, which included road-making and fencing. There was no payment for land, this was already the property of the guardians. Soon afterwards a small iron building for laundry purposes was erected, and from time to time beds were added until the number reached twenty. These brought the cost to about £900, or about £45 per bed.

As there have frequently been considerable periods during which the hospital has not been used, the permanent staff consists only of a caretaker and his wife, who occupy the cottage above mentioned, together with garden ground, and receive a small weekly wage. While the hospital is empty, the man looks after it, doing painting and small repairs and keeping it in readiness for immediate use; he also disinfects in the steam disinfecter all articles sent to be so treated. When the hospital is occupied, he maintains communication between it and those outside, and his wife is employed in cooking and washing, the wages being increased. Arrangements are made with a local medical practitioner to give medical attendance at a fixed weekly fee during such periods as the hospital may be in use; and it has been found practicable to obtain a nurse or nurses without delay when cases are sent in. The cost of maintenance when the hospital is not in use thus averages but little over twenty shillings weekly.

Within six months of its erection it was instrumental in stamping out three introductions of small-pox, the disease being in each instance confined to the first case and cases which had been actually infected from the first case before notification. Since then the hospital has been of great value in preventing the spread of several outbreaks of diphtheria and scarlet-fever; notably, in 1896, when scarlet-fever patients were removed to the hospital from five parishes in the district; and in 1901, when forty-six cases of diphtheria were treated there, and the district medical officer of health, while pointing out its shortcomings, stated in his annual report that it had been invaluable.

The number of cases of infectious disease in the district, but for the means of isolation thus provided, would have been more numerous. It is certain that much sickness, suffering, and premature death have been prevented, resulting not only in the saving of expense throughout the

district on these heads, but also in the prevention of losses which are not assessable in terms of money. Further, the benefits of this hospital are not confined to this district, for the district exports to Bristol and other large cities considerable quantities of milk; and the hospital, by reducing infectious disease, reduces also the possibility of the milk becoming a carrier of infection.

The question of encouraging district councils to establish and maintain isolation hospitals is thus of importance.

Encouragement can be given under the existing law. In the first place the Local Government Board might grant loans for short periods for the erection of such hospitals as I have described. After all, they do their requisite work of providing a safe place for isolation. No death has yet occurred in the hospital I have referred to, though it has been occupied in winter as well as in summer. It is unnecessary to purchase land for a hospital of this type. A lease for twenty-one years will about last the life of the building, and will be easier to obtain, for a landowner would often be willing to grant a lease for a comparatively short term while he would not be willing to part with the land in perpetuity; and is there not some advantage in the perishable character of the building? The ideal hospital of to-day will not satisfy the ideals of to-morrow. There is no standing still. Medical science progresses fast, and the structural requirements of the ideal hospital vary accordingly. A costly stone building, up-to-date in every detail, may well be found antiquated, inconvenient, and in need of considerable structural alterations, after a quarter of a century; the bricks and mortar, the joists and roofs, may be as sound as the day the hospital was opened, and yet the value of the building as a hospital may have dwindled seriously.

Secondly, a county council may give pecuniary assistance: the Isolation Hospitals Act, 1893, allows county councils to contribute both to the structural expenses and to the establishment expenses of isolation hospitals.\* Now it is as important to contribute to the establishment charges as to assist in the erection of the hospital. The hospital above-mentioned has been erected thirteen years, and in five of those years it has not been opened at all; the Medical Officer of Health has always had to make out a strong case of urgency to induce the district council to open it. There have been several occasions when he has thought it desirable to open it, but has failed to obtain the sanction of the council

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\* The Act, for some reason difficult to understand, does not allow county contribution to the patient's expenses, but these are defined to consist of food and medicine; medical attendance and nursing are establishment charges.

to do so on account of the expense, often considerable. The feeling of reluctance on the part of district authorities to incur the expense of removing cases to hospitals might be materially decreased by the adoption of a liberal scale of grant; the principle would not be a new one; grants have now to be made by county councils to many of the district expenses, workhouses, pauper lunatics, salaries of district medical officers of health, and inspectors of nuisances.

It may be desirable to have means of dealing with outbreaks of small-pox independently of the provision of isolation hospitals for other infectious diseases. A possible method of preparation would be to secure, by annual payments, the right to erect in suitable localities temporary hospitals; the spots selected might be twenty miles apart, for small-pox patients can be taken ten miles to hospital. If a serious outbreak occurred temporary buildings could be erected in a very few days. The most troublesome thing of all, the obtaining a site, would have been accomplished before the outbreak, instead of after it. The provision of such sites might well be undertaken by and at the expense of the county.

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[*This Discussion applies also to the paper by Mr. T. W. ALDWINCKLE, page 504.*]

MR. A. SAXON SNELL (London), referring to the Pasteur Hospital, said the isolation did not appear to be thorough, and it was difficult to see how air could be prevented passing from one room to the other by means of the corridor. It was noted with respect to the Children's Hospital at Paris that the dividing partitions are kept two inches off the floor. It would scarcely seem that these partitions would prevent air travelling from one room to the other. If Mr. Aldwinckle were erecting a new building, would he not rather adopt the principle shown in the Walthamstow hospital?

DR. NEECH (Halifax) referred to defects in the present system, and stated that in his opinion the cellular system was a step in the right direction, though he doubted if even that method would be successful in stamping out scarlet fever. Return cases had been referred to and were stated to be comparatively few, but his point was that if a patient returning home is able to infect persons in the home, he would be also able to infect others.

MR. JOHN PEARSON (Folkestone) said he was not in favour of isolation hospitals, as wherever they had been built it had led to the attack rate of scarlet fever being doubled, and they had been the cause of nearly all the diphtheria, by creating post-scarlatinal diphtheria, as throughout the Midlands and the north diphtheria was practically unknown until isolation hospitals were introduced.

Referring to Gorton, the cost last year of home isolation of scarlet fever was only £68, but had 80 per cent. of the cases been removed to isolation hospitals, as had been done in the surrounding districts, the cost would have been £1,360; and with the home isolation a lower attack rate was experienced than in the other adjoining districts with hospitals. In Mid-Warwickshire the districts without isolation hospitals had an attack rate from scarlet fever of 2·6 per 1,000, while in districts with hospitals it was 4·8. In Stockton-on-Tees, before the isolation hospitals were built, the cost of scarlet fever and all other infectious disease did not exceed £200 per annum, diphtheria was practically non-existent, and the cases of scarlet fever were about 100 a year. Since the isolation hospital had been built, it had been enlarged three times, the cost was now £2,900 a year, scarlet fever cases were now from 400 to 700 per annum, and diphtheria had increased a hundredfold. At Leeds the attack rate of scarlet fever had doubled in ten years with hospital isolation; and this was the result all over the country. Home isolation was much cheaper and gave far better results.

MR. CHARLES BROWNRIDGE (Birkenhead) considered that the Local Government Board should, in the case of corrugated iron buildings, grant a loan for their erection for a reasonable number of years. Present hospitals could be adapted to the cubicle system by the provision of suitable screens and all the advantages of the system gained thereby.

DR. F. W. MARTIN (Brighouse) said that isolation hospitals were chiefly provided for the working classes, who by their aid were afforded in many instances means of continuing their work and so supporting their families. Return cases had been very few in Brighouse during a period of eight years. He was of the opinion that these hospitals were necessary for the benefit of the middle and working classes, especially in factory towns.

DR. T. H. A. VALINTINE (Dept. Public Health, New Zealand) said as regards the alleged failure of hospitals to limit the spread of scarlet fever, an analysis of some 4,000 cases in New Zealand showed that the incidence rate was greatest in those districts where hospital accommodation existed. On the other hand, the mortality rate was greatest in districts unprovided with hospitals. In one large health district the mortality rate was over eight per cent. On those grounds the Health Department was advising the erection of small temporary hospitals for those few cases which would require hospital treatment. The life of such buildings was regarded by architects as thirty years.

DR. J. J. WEAVER (Southport) said that he agreed with the last speaker in his views as to the need of improved administration of existing hospitals, especially as to preventing overcrowding. He agreed also that there was much to be said both for and against isolation hospitals, though in some towns, such as health resorts, it seemed to him an absolute necessity to provide these hospitals;

otherwise it would mean financial ruin to large numbers of their inhabitants who owned boarding houses, whenever an infectious case broke out in them. He had also found that districts often differed markedly in the incidence of scarlet fever, independently of whether there was an infectious diseases hospital or not; so that it was ridiculous to assume that the number of cases in a town was always connected with the presence or absence of an infectious diseases hospital. In Southport and Birkdale, for instance, two adjoining and similarly situated townships, and both with infectious diseases hospitals, there was always a considerably greater number of cases of scarlet fever in Southport than in Birkdale, yet as far as he could see there was nothing in the hospital arrangements to explain this difference. Referring to Mr. Aldwinckle's paper, he thought many of the arrangements in modern hospitals were of a rather fancy character. For instance, while elaborate arrangements were made to prevent a nurse soiling her fingers with a water-tap, the overall that the doctor wore was left hanging up in the infected hospital atmosphere. He thought possibly home isolation was the really ideal method, but if they were to have it they must see that every house was provided with a spare room for isolation, and that every family was financially able to provide a trained nurse to look after the patient. Until they got that, they must be content with hospitals.

MR. W. F. BIRD (Midsomer Norton) suggested that the Local Government Board should be urged to grant short loans for temporary isolation hospital buildings in rural districts, subject to approval of sites and plans of structure.

MR. ALDWINCKLE (London), in his reply, said that many of the points raised in the very interesting discussion were of a strictly medical character with which he, as an architect, did not feel competent to deal. He should, however, like to say a word as to the question raised by Mr. Snell and Dr. Neech as to the relative suitability of single bed wards or cubicles for the purposes of the isolation which was needed for the scheme under discussion. The primary object of this isolation was to prevent the spread of a secondary disease from one patient to another, and it was the opinion of those medical superintendents most competent from their experience to judge, that the isolation afforded by cubicles was practically sufficient, it being considered only necessary to prevent the personal contact of the patients (together with complete asepsis on the part of the doctor and nurse) and to ignore the very remote risk of aerial conveyance of infection. It was therefore unnecessary to employ "cellule" or closed-in single-bed wards, which were more costly and less capable of being ventilated. The cubicle was easily fitted up in any ordinary existing ward, at a small cost, it involved no structural alteration to the ward, and adapted itself to the ventilation of the ward. In this climate through ventilation by means of windows on opposite sides was the most natural and effective system to use, as there were usually over three hundred days in the year when the windows in a ward could be kept open without injury to the patients. He quite endorsed the views of

Mr. Cooke Hurle as to the advantages of lightly constructed buildings for isolation hospitals in rural districts. So long as care was taken to have the buildings of a non-inflammable character, lightness of construction was no disadvantage. Not only was the cost very much less than that of brick or stone buildings, but the rapidity with which they could be erected was of great value in cases of emergency. He gave this opinion as the result of his experience in connection with some 1,800 beds provided in buildings of this nature, both large and small, erected under his supervision.

[*The Proceedings of the Congress will be continued on page 517.*]

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## NOTES ON LEGISLATION AND LAW CASES.

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**UNSOUND FOOD.**—*Offences—Article “liable to be seized”—Article in possession of Purchaser—Liability of Vendor—Public Health (London) Act, 1891 (54 & 55 Vict. c. 76), s. 47, sub-s. 3.*

The respondent, a wholesale dealer, sold to a retail pork butcher a quantity of pigs’ plucks, one of which was unsound, unwholesome, and unfit for the food of man. The unsound pluck was seized in the purchaser’s shop by the appellant, a sanitary inspector, who obtained an order for its destruction. In proceedings against the respondent under s. 47, sub-s. 3, of the Public Health (London) Act, 1891, for selling an article liable to be seized and condemned under the section, the magistrate found that the unsound pluck was not exposed for sale, and would not have been sold or offered for sale by the retail shop-keeper until the sanitary inspector had passed it, and he accordingly, without calling upon the respondent, dismissed the summons, holding that no offence had been committed under sub-s. 3:—

*Held* that the magistrate was wrong in stopping the case; that a *prima facie* case had been made out against the respondent calling for an answer; and that the case must go back to the magistrate to be proceeded with.

*Per* Lord Alverstone C.J.: Sub-s. 3 of s. 47 is intended to deal with the case of the vendor of an article intended for the food of man, which in fact at the time it is sold by him is in such a condition that it is liable to be seized, that is, in the condition of being unsound and unfit for the food of man.

*Per* Channell J.: The words “any article liable to be seized” in sub-s. 3 means any article *prima facie* liable to be seized by reason of its condition.

*Reg. v. Dennis* [1894] 2 Q.B., 458, considered.

GRIVELL v. MALPAS, Div. Ct., Vol. II., K.B., 32.