My acknowledgments are due to those in England, Scotland, and Ireland who have thanked me for having made the matter public, and to you, Sir, for the use of your columns. To have done what I have has cost me some friendships; but a medical man has higher duties than the retention of friendships when human suffering and human life are concerned. I remain, Sir, yours faithfully,
Wokingham, Berks, Feb. 14th, 1884. J. G. BARFORD.

To the Editor of THE LANCET.

SIR,—The controversy upon the endemic diseases at this school having so far exhausted itself, I may perhaps be permitted to add a few words from personal observations made in regard to one fatal case which occurred in a master's house attached to the school. Whether these diseases may have been due to a malarial origin or to more local circumstances of an insanitary nature, it is to be observed that both Mr. Barford and Mr. Baldwin Latham are more or less agreed in being "dissatisfied with most of the sanitary arrangements" and facilities upon the College estate which were in use prior to the recent improvements. Yet one cannot but feel the force of Mr. Baldwin Latham's assertion—presumably indisputable—that out of the twenty-five years the College has been in existence throat ailments have had prevalence only during the past two years. Thus preponderance of argument points to insufficiency in sanitary arrangements and facilities. And certainly this is borne out in that throat ailments are of common occurrence in places similarly situated in regard to sanitary circumstances, without any suspicion of malaria. To whom responsibility may attach that acknowledged sanitary insufficiencies should have prevailed for two years is a question which calls for decision. It is anomalous that a form of sanitary administration should have been perpetuated on the College estate, in the face of manifest (and preventable) urgency, which would scarcely be tolerated in any sanitary district in the kingdom.

In April, 1882, a young friend and connexion (*not* the son of a nobleman) died of pyæmia. To determine the origin of the cause of his death, together with his father I made an inspection of the master's house, in which he had resided; and in my investigations I received much courtesy and some assistance from both Mr. Barford and the head of the house. My report opens by saying, after referring to this particular death, "That a death from a similar cause had occurred within the precincts of the College in June last, and that during the winter term of last year (1881) and the last (or Lent) term of this year, the zymotic diseases, measles and scarlatina, had undue prevalence, together with a series of ulcerated sore-throats, are the further reasons why an inquiry into local circumstances, as a probable cause of this death, was deemed necessary." This somewhat extends the period of endemic infection beyond the given one of two years. The ventilation of the sewer drains was not considered adequate. But what called for particular remark was the system of earth-closets and their scavenging. These closets were situated in the main building (not separated by disconnecting passage) at the foot of a staircase which was in communication with the dormitory. The closets discharged into vaults which were closely sealed up, and which had no opening for ventilation but into the closets, and thus into the building. The soil, on removal from the vaults, was carried into an unprepared and uncovered yard, where other house refuse was shot, there to accumulate for about three months. This yard was situated at about four yards' distance from the house, and on to it opened the dormitory window of the "cubical" occupied by the deceased boy. The water-supply of the house was drawn from a deep well sunk under the house, and situated about twenty yards from the "soil" accumulation, and about five and ten yards from vaults on either side, other drains and soughs being in its vicinity. The result of an analysis of a sample of this water by Dr. Campbell Brown shows "that it contains the oxidised remains of organic matter of animal origin, showing that somewhere about 10 per cent. of the water has at one time been polluted before it percolated through the ground to the well." A brother of the deceased being at the Crowthorne School, an inspection was also made of these premises, where also earth-closets were in use. And here it was particularly noticeable with what scrupulous care and attention the minutest details of scavenging were performed. Distinct and separate

as these two schools are, there was but little or no communication between the boys of the two schools, each school having its own playground and chapel. Thus the influence of infection in spreading diseases, as throat ailments, from one school to the other was minimised.

From the foregoing details, which carry their own comment, the fact that practically the College and Crowthorne are subject to the same atmospheric and tellurial influences; that the College boys have for a long period had diseases of blood-poisoning amongst them, whilst the younger (and more susceptible) boys at Crowthorne have not; that the sanitary circumstances in these two schools so materially differ; from these it is reasonable to infer that the blood-poisonings which had prevalence took origin from, or were due to, the sanitary surroundings of the premises in the College grounds.

I am, Sir, your obedient servant,
Denbigh, Feb. 12th, 1884. J. LLOYD-ROBERTS, M.B.

To the Editor of THE LANCET.

SIR,—Having read Mr. Barford's letters, allow me to say that I agree with every word in them. Indeed, he might have made his case stronger. Those who run may read. Look at the Wellington boys as one meets them in the grounds or on the road. I have said over and over again to persons who have been with me, "Those boys are suffering either from overwork, insufficient food, or bad sanitary surroundings." I am the medical officer of health for the district adjoining that of Wellington College, was for some time medical officer to the Poor-law District in which the College is situated, and have had other work which for about twelve years past has brought me to Crowthorne and the district, at least three or four times a week. Under these circumstances you will, perhaps, kindly find room for this letter. Mr. Armstrong could not have been serious when he questioned Mr. Barford's diagnosis.

Yours faithfully,
Blackwater, Feb. 7th, 1884. C. J. DENNY, L.K.Q.C.P.I., &c.

To the Editor of THE LANCET.

SIR,—As one interested in the welfare of the Wellington College, I hope you will allow me space to suggest that it would greatly alleviate the anxiety of parents who have sons at the College if the authorities would publish for the next twelve months a periodical (say quarterly) report showing the number of sore-throats among the boys which have been treated in the intervals. I am certain that this course would have a good effect in allaying the alarm which has naturally ensued in consequence of the late correspondence in a journal of such high authority on the subject as THE LANCET.

I am, Sir, yours &c.,
February 11th, 1884. COLONEL.

OVERWORK AMONG PUPIL TEACHERS.

To the Editor of THE LANCET.

SIR,—In the interesting annotation entitled "Mr. Muddella in Scotland," which was contained in a recent issue, it is said:—"He recognises, too, that the pupil teachers, and especially the females, are themselves victims of overpressure to an extent even worse than the children." Judging by the number of pupil teachers who break down in health, it is unquestionably quite time that the fact of overpressure was not only recognised in official quarters, but was also followed by some active steps. It is really necessary now to inquire whether the occupation, as at present defined by the code, exerts an unfavourable influence upon health; or whether the army of teachers receives into its ranks individuals whose physique is below the requisite standard of strength. Both of these will probably be found to be the case. To exemplify the unfavourable influence upon health of the work and worry, I may quote the words of a young teacher now under my care for consumption. She says: "I may safely say that I never left school at the close of the day without feeling worn out in body and mind, and quite unfit for the evening work which had to be accomplished if I wished to pass the examination creditably, and fit myself for the retaining of my appointment." Again, as one illustration of the very unsatisfactory results of the present mode of selection of pupil teachers, there occur to me the cases of no less than six young teachers suffering from

phthisis, who were no doubt quite unfit to enter upon such a trying occupation, inasmuch as a clear family history of consumption existed in every instance. The full discussion of the matter would occupy too much of your valuable space. Briefly, however, it may be said, first of all, that a more efficient system of selecting pupil teachers is required. The school-master's tendency to engage for this avocation the child who is quick, bright, quiet, and good, must be narrowly watched, because such qualities in the young are too often the outcome of scrofula or want of rude health. The very prevalent notion among parents that a teacher's life is a suitable one for a child who is not strong must be counteracted; and no excuses should be listened to from managers of country schools who may experience difficulty in obtaining pupil teachers. The rigid medical certification of every candidate should be insisted on. The present instructions with regard to the medical certificate are not nearly precise enough, and the tabulated requirements do not give good or sufficient criteria of the strength of a young person. Nothing short of a list of detailed questions, based on the lines of an insurance certificate, will effect the object. It would be much better, also, to have all forms filled up by specially appointed impartial and paid officials; and no one is more fitted for this duty than the medical officer of health of each district.

The next point is that, having secured healthy young persons, proper care should be taken of their health. Managers' certificates on this matter are absurd; they ought to be altogether superseded by the periodical medical supervision of the medical officer of health, who should also display a keen interest in proper ventilation of schools, breaks in school hours, a due amount of exercise, the provision of seats, especially for young female teachers, and kindred matters appertaining to school life. There is often great need for inquiring into the circumstances and surroundings at home of pupil teachers. Then the number of scholars allotted to each teacher needs to be reduced and restricted. The Education Department considers a pupil-teacher equal to taking charge of forty children; and, although this number is too large, as a matter of fact it is often nearly doubled. The hours of continuous teaching are excessive, especially when it is recollected that daily private study has also to be carried on, in all the anxiety of preparation for the stringent annual examinations imposed by the code. The work of pupil teachers must be lightened, whether this be done by spreading the work over an apprenticeship of five years instead of four; or by shortening the school hours so that fewer hours need be spent in the intellectual labour of teaching and studying; or by the employment of a supernumerary teacher to relieve each of the pupil teachers a few hours a week in turn. Many persons perceive that pupil teachers are being virtually crushed by the claims made upon them from two quarters. On the one hand, they have to face the oppressive demands of the official code upon their scholars and themselves; on the other, they have to meet the eager strivings after large grants of over-economical managers, who seek great results but employ a wholly inefficient staff of teachers. The general question of over-pressure upon pupil teachers is a prominent and a national one; and it might form a profitable subject for another LANCET Inquiry Commission. Meanwhile, all medical men may assist by exercising the strictest vigilance when they are called upon to certify a candidate as medically eligible for the laborious occupation of pupil teacher.

I am, Sir, your obedient servant,

JAMES M. WILLIAMSON, M.D.

Ventnor, Isle of Wight, Feb. 4th, 1884.

NON-CONTAGIOUSNESS AND LOCALISATION OF CHOLERA.

To the Editor of THE LANCET.

SIR,—As a medical officer of health of great experience in India, I think it desirable to give some of the personal observation which has inclined me to regard cholera as non-contagious. Indeed, I have never seen anything to lead to a contrary suspicion. Once, while encouraging the vomiting by copious draughts of cold water, I had the vomit forcibly ejected against my face and some of it into my mouth, without any ill effects. Nor can I consider the atmosphere of a hospital infected simply because cholera is being treated in it. I have lived much in such an atmosphere, and under-

gone long-continued anxiety and fatigue in close attendance upon the cholera patients; nor have ever known a case show itself there unless the subject had been admitted but a short time before, or the hospital was unquestionably within the range of the disease. I have strong reasons for believing that cholera affects definite localities, and that removal even to a short distance from the infected place will often withdraw a person from its influence. I have found such removal completely successful, and that, too, with large bodies of men; the single exception being with the 12th Native Infantry, but then vacant space would not admit of the regiment's position being shifted beyond the immediate neighbourhood of its lines. Besides, there was a strange peculiarity about this outbreak well marked in other respects. All the Hindoos attacked were flesh-eaters, and they, with the Mussulmans and Jews, were indiscriminate victims, the rice-looking vomit holding large quantities of tapeworm. This immunity of the vegetarians, of whom there were many, was the more remarkable, as in all the many other outbreaks I have seen among the natives, Brahmins, the most rigid abstainers from flesh, fowl, and fish, were as often attacked and killed by the disease as were persons of any other caste or class. The first experiment of changing the locality was tried in 1841 at Ahmednugger, where cholera had broken out in the gaol, and the prisoners were, at my suggestion, removed some distance, with a result which obtained for the assistant judge in charge a most flattering recognition from the Supreme Court of Judicature in Bombay. Once, when on tour as the superintendent of vaccination in the Deccan, I happened to be at Nassick, a very hotbed of Brahminism, during a most prevalent and fatal outbreak of cholera. The disease was confined to the town-side of the Godavary, and it was only when the numerous cotton-carriers from Kandish had crossed the half-dried bed of the river that they first got cholera or met with it on their route. A circumstance that occurred during the last Burmese war connected with the steam frigate *Moozuffer*, of which I was then the surgeon, may here be mentioned. We were lying off Rangoon, and had sent five of our boats to reinforce Captain Tarleton, R.N., at Pantano, two days' row up the river. On the eve of returning five men of the crew of one of the boats were suddenly seized with cholera, all of whom died. Three lived to reach the ship, and one, a case of febrile reaction, was several days under treatment on board; and yet we had no other case. A more striking circumstance still, attending the wreck of the above-named vessel off the mouth of the Irrawaddy some months afterwards must not be omitted. We had been lying on a quicksand for six days, with the water reaching the orlop deck, when the vessel suddenly settled down, and we were rescued with much difficulty by the boats of the steam frigate *Zenobia*, after being five hours in the rigging, and nearly washed away by the tremendous rush of a spring tide and a rough sea. At the time we grounded we had cholera on board, and while on the wreck we were enveloped in a muggy atmosphere from the steam of moistened grain and other provisions; so that whereas there was not, nor had been, any cholera on the *Zenobia* when we reached her, two cases showed themselves there the next morning, and these were those of our purser, Stockham, and Assistant-Surgeon Hunter (now Surgeon-General, and employed as Government reporter on the cholera in Egypt), the former of which proved fatal. Nevertheless, these were the only cases that occurred on the *Zenobia*, although she received and entertained for more than a fortnight all our officers and crew, including our assistant-apothecary, convalescing from cholera, who, with the rest of the sick, had been removed before the ill-fated vessel settled down. It was therefore evident that no infection was transferred from the one ship to the other, but that whatever there was must have been located in the *Moozuffer*.

I am, Sir, yours faithfully,

HENRY DUNN GLASSE,
Substantive Deputy Surgeon-General,
H.M. Bombay Army, retired.

Guernsey, Dec. 15th, 1883.

To the Editor of THE LANCET.

SIR,—Your article of this week on cholera contains the following sentence:—"Dr. Hunter has no hesitation in asserting that cholera is not a contagious disease." Will you allow me to lay before your readers a short account of an experience of fifty years ago, which, in my opinion,