an admission and discharge book so filled up any clerk can make out a classified return of diseases: Infective diseases, malignant diseases, diseases of the various systems that are not either infective or malignant, are compelled to fall into proper order, and a bracket to define the sections is all that is necessary to complete the return. The first page of the form furnished to the hospitals under the superintendence of the Dublin Hospital Board is reproduced, as it furnishes an illustration of how the system works. On it the number of infective cases, of malignant cases, of injuries, etc., are seen at once.

I would ask representatives of hospitals to give this system their consideration, and if they approve of it to try and introduce it into the institutions with which they are connected. I have said it is in use in the Army Medical Service, and it may be in more general employment than I am aware of; it is for its universal adoption that I plead. Why should not each disease carry a like number in every land?

THE DENTAL NEEDS OF THE POOR OF LONDON,

WITH SPECIAL REFERENCE TO SCHOOL CHILDREN AND THE EDUCATION (ADMINISTRATIVE PROVISIONS) ACT, 1907.

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For this inquiry the poor of London may be taken to mean all who are unable to pay £2 for an upper or lower denture (or £4 for both upper and lower), 2s. 6d. for a filling or scaling, and 1s. for extraction without anaesthesia. To arrive at an idea of their number and needs we may proceed somewhat on the lines of the quantity surveyor, who estimates the cost, say, of a new county council palace, and finds his original figures doubled before the building is complete, only with far less certainty of data and greater liability of underestimation.

In accord with the scope of this inquiry, the poor may be divided into those of 14 years of age and under, of whom about 900,000 are school children, and adults, or those over 14. The number of these latter is not easy to estimate; from a study of the housing figures for 1900 in Mr. Charles Booth's *Life and Labour of the People of London*, and of the very poor in "General" Booth's *In Darkest England*, it may be taken that 1,000,000 adult "poor" is well within the limit, especially having regard to the fact that many whose occupation entails a show of "respectability" must be included in our "poor." We may, then, try to take out the needs of 1,000,000 adult poor. Any dentist conversant with hospital or dispensary practice knows that the "perfect set" is remarkable only for its rarity; the imperfect, and badly so, is the rule; imperfect referring not only to carious teeth, but to pyorrhoea alveolaris, tartar, discharging sinuses, and all that is included under "oral sepsis," leaving a mouth offensively foul, and often practically uncleanable. Allowing that each of these 1,000,000 has five teeth fit for and needing filling (this is probably an underestimate), and that each filling takes half an hour to do, we have 2,500,000 hours' work. Allowing that each requires two sittings of half an hour each for scaling and treatment of pyorrhoea (many will require more), we have 1,000,000 hours' work. Allowing that each has five teeth needing extraction (again an underestimate), and allowing three minutes for each extraction, we have 250,000 hours' work. Allowing that a quarter of these 1,000,000 requires a denture in the upper or lower (including a double set as an upper or a lower to each of two people), and allowing two hours' personal attention to the patient for each denture, we have 500,000 hours' work. Thus we have:

Fillings	...	...	2,500,000
Pyorrhoea and scalings, etc.	...	...	1,000,000
Dentures	...	...	500,000
Extractions	...	...	250,000

4,250,000 hours' work.

Allowing that a dentist can work five eight-hour days per week for fifty weeks=2,000 hours a year, we need

5

2,125 dentists working whole time, leaving out of account the mechanical assistants. Allow 10s. 6d. per hour for the dentist's time=£2,125,000; deduct £500,000 for dentures and £62,500 for gas, at 6d. per anaesthesia, on which items no profit except time is allowed to the dentist=£1,562,500, and one-third of this for working expenses=£1,041,667 for 2,125 dentists=£490 per year per whole-time dentist. £2,125,000 would be capital expenditure, that is, the cost of the first year's work, but entirely apart from equipment of surgery; current expenditure, that is, for "repairs" to these 1,000,000, and attention to the 90,000 school children annually becoming adult, might be estimated at a quarter of this sum=£506,000: 531 dentists. Indeed, the carpenter would shed many a bitter tear at the labour! and there are not enough dentists for the work; nor would any governing body entertain half such a proposition.

We may also take out the quantities from a physiological aspect, measuring the needs by the disease potential. To estimate the actual number of days lost through dental trouble is impossible, nor can we get any clear idea of the amount of sickness from this cause till a more general recognition of the clinical signs of oral sepsis leads to its due and more frequent incrimination. We can only schedule the possibilities. Want of masticatory power, the most popularly recognized, is the least of all the evils of bad teeth. The whole range of gastric complaints, from simple indigestion to incurable dilatation; catarrhs of the biliary and pancreatic ducts and their sequelae; blood diseases, from chlorosis to malignant endocarditis; new growths, from a granuloma to a cancer; and the whole category of septic diseases, may be traced to a foul mouth as the source of evil; every general disease must be unfavourably influenced, and tubercle may be specially mentioned; a mother may poison or starve her babe, suckling or unborn; the mouth may act as a carrier of the germs of epidemic diseases. Measured either quantitatively or qualitatively, the dental needs of the adult poor of London are overwhelming.

To meet these needs there are in London County, beyond the three special dental hospitals (the Royal Dental Hospital, the National Dental Hospital, and the dental department of Guy's Hospital), some ninety hospitals and dispensaries to which dentists are attached. A circular letter was sent to each inquiring as to the number of dental surgeons and clinical assistants working in connexion with the institution, and their days and hours of attendance; the existence of a separate dental department always available for dental use; the number of new cases per working day; the use of anaesthetics; kind of work done—whether extractions only or also fillings; whether, in view of the new Act, it were possible to expand the dental department. Replies were received from 69 of these (some I have been unable to thank, and take this opportunity of doing so), and from them a fair conclusion as to the provision there exists in London to deal with the dental needs of the poor, and as to the use it is put to, may be drawn.

Answers received from 69 institutions may be summarized thus (since there are 90 institutions employing dentists, about one third must be added to these figures to get true numbers):

Eighty-one dentists are employed at 69 institutions; 7 clinical assistants at 4 institutions, one having 3 and one 2 clinical assistants; 13 attend patients at home; 12 attend as required; 56 attend at the institution, averaging 73 attendances per week, with an average of 13 new patients a day (hours of attendance 9 a.m. or 2 p.m., except one case of 5 p.m.); 5 have special dental departments used for no other purpose, and 15 can expand in view of the Act; all use anaesthetics; 25 do filling work, 10 at home, but the total number of fillings is only a few hundreds; 22 of the institutions are dispensaries.

The total number of new patients attended at 40 institutions giving returns under this head is 42,523 per annum. These patients include adults and children. To get at the total we may practically double this number=85,000, and to arrive at adults deduct a quarter=64,000 new adult patients seen per annum.

Returns from the special dental hospitals show that probably another 48,000 patients are seen per annum at these institutions, of whom about one-sixth are children=40,000 adults. Total 104,000 adults per annum—one-third at the special dental hospitals and two-thirds at the general—or about one-tenth of those needing attention.

The actual work done for these patients is chiefly extractions. At the special dental hospitals some 800 are annually fitted with dentures, and another 200 may be added as being done at general hospitals—1,000 in all; on a similar basis probably 10,000 are attended for fillings, scalings, and pyorrhoea—a mere nothing compared with the needs.

If the needs are overwhelming, they are as certainly unrecognized—ignored indeed by the sufferers themselves, as those who live in poverty ignore the squalor of their surroundings, scarcely realizing the hope of better things, and fearful even of the change that could ameliorate their lot.

The problem now becomes how to induce a fuller expression of the true needs, and what means should or need be taken to meet any increase of patients.

The elements of repression are fear, lack of time, ignorance often of the very existence of means of relief. Fear can partly be met by increased use of anaesthetics, but must always remain a potent factor among the ignorant.

Lack of time may be met by opening the dental department during the evening, following the example of some of the special hospitals.

Ignorance can only be met by education, and this is a task which is more often left to the advertiser, who sucks thereout no small advantage. In France every notice-board was lately placarded with bills calling attention to the disastrous results of the use of absinth; and in so important a matter as dental disease we might well follow this example. Let there be selected from the list of diseases due to teeth those most calculated to appeal to the public—cancer, tubercle, indigestion and anaemia, and all the list of symptoms beloved of the patent-medicine man—neuralgia, headache, backache, listlessness and melancholia, inability for work, loss of appetite; let mothers be warned of the danger to their offspring; let prevention and cure be attractively set out; and let the whole be worked into a popular brochure, lurid if need be, and with special emphasis on the fact that foul teeth are worse than none at all, and given to each hospital patient and placarded on every official notice-board. The churches and the social organizations with their mothers' meetings, working men's clubs, and general facilities for close personal contact could confidently be invited to assist; and the large provident societies might in self-defence spread a knowledge of the evils of bad teeth among their members.

But teachers must look to themselves in the matter. No single part of the body has such far-reaching capacity for ill, and yet a man who can minutely describe the scaphoid bone of the carpus is generally unable to tell the number of his teeth. A short course of dental surgery should be made compulsory by the examining bodies, and when that is so the teacher's initial difficulty of interesting a man in a subject which is not in the curriculum will be gone, and the little more that means so much will be added to the practitioner's usefulness.

What steps should be taken to meet a fuller expression of the needs? The returns made work out at an average of 13 new patients each attendance day at institutions other than the special dental hospitals. This means that except at these special hospitals which are already working at full pressure on a special *clientèle* of their own creating, educated by force of example and having time at disposal, and at the London Hospital where the patients are largely aliens, the work done might without inconvenience be doubled.

The figures above quoted show there are 107 dentists and 9 clinical assistants, and those working at the special dental hospitals, attending the expressed needs of one-tenth of those actually needing attention per annum and capable of attending one-fifth. A quarter of the actual needs may be taken as representing the current needs which should be provided for yearly; 531 whole-time dentists or clinical assistants are wanted to deal with these current needs, assuming that fillings and dentures are part of their work. These numbers are beyond the benevolent capacity of all the dentists of London together, or the accommodation and funds of charities. There may be seven institutions having special dental departments used for no other purpose, and twenty capable of expansion (see figures given above); the rest

lack both accommodation and funds. Indeed, both the charitable public and hospital managers need educating as to the importance of dental troubles. There is no romance in a dental surgery, no patient suffering of the poor in clean hospital linen; only panic-stricken, unashamed humanity fighting the hand that would help it, and utterly forgetful of gratitude. A dental department is for the many, and is comparatively cheap; but it is unlovely. Finest light, x-ray, physical exercise departments, etc., are for the few and are costly; but they have an element of romance and are not filled with refractory patients, and hence are well fitted to be the pet children of philanthropy and to catch the eye of a managing committee. A bed costs £100 a year, and serves the needs of 12 patients; for this sum a dental department could deal with as many hundreds, and even prevent their need of the bed. It is time, indeed, to revise our ideas of relative values. In every scheme of hospital building and management a self-contained dental department, ready for use at all times, should be a primary necessity. The department should be open in the evening, as well as morning or afternoon as at present is general, and under the charge of an honorary dental surgeon (if necessary, one might be appointed for each day of the week), under whose direction paid clinical assistants might work at scaling, fillings, and dentures—the more arduous part of the work which take the "blood and bones" of the dentist—as well as extractions; though, if only extractions were done, it is to be remembered that nine-tenths of the battle lie in rendering the mouth aseptic—in extractions. More extended provision would need to be made for the use of "gas," and a large amount of work would be thrown on the almoner's office to decide as to fitness for free fillings or assisted dentures. It has just been surmised that the needed 531 dentists and clinical assistants are beyond the charitable capacity of the dentists of London. This does not mean there are none to do the work—it means that a large number of young men who might be classed as clinical assistants would gladly accept a small payment, and may fairly expect it. There need be no false pride in accepting such a post—a pathologist is none the less valuable for being paid; money is the obstacle, and will be till the supreme importance of "clean teeth in all our cities" is recognized.

Outside the hospitals a certain amount is being done to induce the poor to self-help in dental matters, but such a body as the Hearts of Oak finds dental aid the exception; Oddfellows and Foresters are at present content to work in this direction through the Hospital Saturday or Sunday Funds, and these in their turn lay under contribution the special dental hospitals, or make a working agreement with a registered dentist. The Metropolitan Provident Medical Association, with nine dispensaries and nine dentists seeing patients at their own surgeries, guarantees the cost of dentures at £2 apiece, working in conjunction with specially appointed dentists; the St. John's Wood and Portland Town Dispensary pays 1s. 6d. out of each 2s. 6d. fee for fillings; and a few other dispensaries work on a part-payment system. The total number so helped is impossible of estimation; last year the Hospital Sunday Fund assisted 1,012 dental cases, and the special hospitals supplied about 800 dentures; perhaps 2,000 dentures are supplied free, or partly free, per annum, and a few hundreds are induced to pay a small fee for fillings.

The system of part-payment might be greatly extended, or a scheme adopted analogous to the workgirls' feather clubs, by which each member gets a return for just what she puts in, but at cheaper rates for quantity. These very girls might learn that the beauty of their smile depends more on health and pretty teeth than on a feather; but dentists should by no means let themselves be saddled with clubs on the lines of the present medical clubs, or they will as surely find the beneficiaries assuming the position of taskmasters.

Shortly summarized, we want:

Education as to the evils of bad teeth and as to the means of prevention.

To increase the *personnel* and accommodation of existing dental departments of hospitals and dispensaries.

To persuade the poor to self-help, while arranging that they shall get the greatest benefit for their outlay.

SCHOOL CHILDREN.

So far we have considered only the adult poor, and with no very hopeful outlook. But here we find a far more cheerful prospect. There is still time to prevent, and children are teachable and amenable to discipline. At the earliest school age—5 years—no permanent teeth are yet cut, and though the temporary teeth be practically destroyed by caries, cleanliness will preserve the permanent. For practical purposes no disease of the human body has a simpler etiology or more obvious prophylaxis—dirt, cleanliness! In these facts lies the hope for the 90,000 new scholars annually joining the London County Council elementary schools at the age of 5. They may be cleansed, taught cleanliness, and inspected to enforce it.

The Brighton report on the teeth of over 7,000 school children gives 76 per cent. as having carious temporary and permanent teeth at the rate of 2.12 per child; the British Dental Association report gives 86 per cent.; German statistics 98 per cent.; and one report from Northamptonshire 100 per cent. The number of carious temporary or permanent teeth increases with age at the rate, roughly, of 1 per child per annum, causing an overlap at the time of the change of the teeth, when the number of carious teeth is higher than immediately before or after. The Brighton estimate begins with children of 7; allowing, then, a rebate for the two years from 5 to 7, we may take 2 per child as an average of decay on joining at 5. In the report, 10 per cent. of these are classed as fit for and needing filling—that is, among 90,000 children there are $\frac{10}{100} \times 90,000 = 9,000$ teeth needing filling.

Experience of work done at the Cambridge school dental clinic gives an average of three fillings per hour; 18,000 fillings at 3 per hour = 6,000 hours' work = 3 whole-time dentists at 2,000 hours per annum. (The difference between a 3 per hour average and a 2 per hour average adopted in the estimate for adults is accounted for by the fact that we are here thinking only of simple fillings.) Of the remaining 182,000 carious teeth, 10 per cent. again need immediate extraction as causing evident sepsis (this estimate is taken from Mr. C. E. Wallis's experience at the Feltham schools) = 18,200; at 2 per child, and allowing 3 minutes for attention to each child = 405 hours' work = one-fourth of a whole-time dentist.

Doubling these numbers to get the work done in six months—dental caries is rapid in young teeth, and six months suffices for the complete destruction of a tooth—there are wanted $6\frac{1}{2}$ whole-time dentists to attend to in six months the reasonably urgent needs of 90,000 children of 5 years of age annually joining the London County Council schools, leaving the other half of the year to be carried on to the next account—six-monthly inspection, and attention to urgent cases among the general body of the children.

The Education (Administrative Provisions) Act, 1907, imposes on the local authority the duty of inspection, leaving treatment permissive. As just explained, on account of the rapidity of dental caries, inspection with a view to treatment to be of any use must be frequent, six-monthly. Any other dental inspection is mere waste of time; voluntary labour has shown us the alarming proportions of the evil and of its results (incidentally it may be noted that probably most starving children starve on account of bad teeth). Useful inspection can only be carried out by the dentist who treats the children, and any scheme providing for less than biannual inspection falls in its object. We must then estimate the time needed for dental inspection of 900,000 school children, the approximate number of London County Council elementary school children. In such an inspection all that need be noted is "clean" or "unclean," teeth to be extracted, teeth to be filled, "urgent." Using cards of the form suggested below, already filled in with the particulars of the patient, and denominating the permanent teeth from the central incisor to the third molar by the numerals 1 to 8, and the temporary teeth from the central incisor to the second molar by the letters *a* to *e*, and having the use of a writer, it will be found possible to inspect two children per minute.

This may not be an ideal dental inspection, but it is quite sufficient for our purpose; 900,000 children twice a year at half a minute each = 15,000 hours' work = $7\frac{1}{2}$ whole-time dentists.

Suggested form of card:

Name		Age	
Address		School	
R.	Fill	L.	
R.	Extract	L.	
Clean.	Unclean.	Urgent.	

Erase or retain clean, unclean, urgent, as required. Use the numerals 1 to 8 to denote the permanent teeth and the letters *a* to *e* to denote the temporary.

On the basis of one-fourth, a whole-time dentist to attend to the urgent extractions of 90,000 children, and allowing 900,000 school children, we shall need $\frac{1}{4} \times 9 = 2\frac{1}{4}$ whole-time dentists to deal with the urgent extractions of the remainder.

Allowing a total of 16 whole-time dentists, we have so far allocated $2\frac{1}{4}$ whole-time

$$7\frac{1}{2} \\ 6\frac{1}{2} \text{ half-time} = 3\frac{1}{2} \quad "$$

13

leaving 3 whole-time dentists who could fill 18,000 teeth or extract the less urgent teeth of another 120,000 children.

Two smaller points are worth noting in this estimate: Anaesthesia has not been asked for, in sharp contrast to the importance attributed to it in the "adult" estimate, and it may be considered under the mark.

In practice both in Germany (at Strassburg) and in this country anaesthesia has been found unnecessary; and, as a matter of fact, the softness of young bones allows extractions to be done far nearer painlessly in children than is generally believed.

As to under-estimation, time has been allowed both for inspection and extraction; in practice it might be possible to extract at the time of inspection—moreover three minutes per child is an estimate which could well be reduced by efficient nursing attendance, etc. A much larger saving of time would be effected by filling only permanent teeth. Four-tenths of the teeth classed as fit for and needing filling in the Brighton report were temporary teeth, and the need for their preservation is far less pressing than is the preservation of the permanent teeth. If instead of 16 whole-time dentists 64 quarter-time dentists are employed, the operators will be far fresher and fit for quick work than if occupied by the same routine day in, day out. Lastly, with education in prevention, the work should be a decreasing quantity.

Teachers and the nurses employed at the school clinics should work in conjunction with the dentists by means of simple and oft-repeated lessons on mouth hygiene, and by supervision of actual use of the tooth-brush. Every child on joining might be given a tooth-brush, and it might be made compulsory on the parents to provide two new brushes a year for each child. Teaching and supervision of the use of the brush might be made the duty of a special nurse attached to each school.

The cost of equipment and maintenance of such a service would not be great—in comparison with the possibilities for good, no other scheme of expenditure comes near.

Sixteen dental surgeries at £100 = £1,600, would be the capital expenditure (this sum includes a share in a lease or freehold which would need to be acquired for a general school clinic); 64 quarter-time dentists at £120 a year each = £7,680; upkeep and nurse, per annum £100 = £1,600; tooth-brushes for 90,000 children, at 4d. each = £1,500: that is, for a capital expenditure of £1,600 and a current expenditure of £10,780, or a rate of $\frac{1}{10}$ d. (4d. rate = £40,000 to £45,000), a far-reaching system of dental aid and prevention could be established for London County children.

Where is this dental service to be conducted? The only answer to this question seems to be—at special school clinics. There are many obvious and considerable advantages. The children would still be under school control, and the morale of a well-conducted school would be of great assistance to a dentist; it would be possible to check and control the child's attendance without calling on the parent to accompany it each time; attendance at a school clinic could be recorded so as to count as an attendance to the teacher; inspection and treatment would be carried out by the same man. The charity-supported institutions—hospitals and dispensaries—are the only other direction in which we can look.

The figures given above show that perhaps 18 of these can enlarge the dental service in view of the Act, and of these only 1 is a children's hospital. The special dental hospitals attend about 8 000 children a year for about 3 500 fillings and about 12 000 extractions, and perhaps 25 000 are seen by the general (including children's) hospitals for extractions only. But we want 18 000 fillings done and 81,000 children seen for extractions, showing a difference obviously beyond the expansile powers of 18 institutions. Moreover, all the resources of general charities will be needed for the adult poor if any awakening is achieved. There is a farther objection that an institution already heavily rated will not be likely to increase its accommodation (and rateable value) to relieve the rates of the rest of the district; or to accept payment which might lead to a chance of outside control of its affairs.

Whence is the money to come? From the parents, from charitable endowments, from the State, or from the rates? Unfortunately, experience, both in Germany at Ulm a/d. and in this country at Kettering, has shown that parents will not pay even the modest fees asked at a school dental clinic. The matter is too urgent to await philanthropy. Though much might be said for a State, or a State-aided, scheme, Parliament appears to find it more expedient to pay the bread bill of the aged than to equip the young for the service of the State. The rates alone remain. We have noted that the rate would be but $\frac{1}{4}$ d. for London County; prevention is much less costly than cure, and in a few years the decrease in sickness of dental origin may reasonably be expected to lead to a substantial decrease in poor rates, and to set free for more useful purposes a large amount of charity now used up in the attempt to rehabilitate the wrecks of humanity.

THE ADMINISTRATION OF OPERATING THEATRES IN HOSPITALS.

SEPARATE OPERATING THEATRES

In another column (p. 1479) an interesting note by Mr. George Hamilton is printed, giving an account of the system of separate operating rooms for each surgeon which was introduced into the Liverpool Royal Infirmary. The same system is in force in London at Guy's Hospital, the London Hospital, and St. Thomas's Hospital. Each surgeon has a separate operating theatre, which is used also by the assistant surgeon corresponding with him.

The London Hospital affords a good example of this system, and the accompanying plan indicates how six operating theatres are placed on one floor, with an anaesthetizing room for each operating theatre and one general sterilizing department.

ANAESTHETIZATION AND TRANSPORT OF PATIENTS.

In the large general hospitals of London the patients are anaesthetized for operation by one of the hospital anaesthetists, and this is carried out in a room adjoining the operating theatre. The patient is accompanied to the anaesthetic room by the Sister of his ward, and she remains with him until his return to the ward. At all the hospitals great care is taken that the patient is well protected against chill before leaving the operating theatre, hot water bottles and blankets being provided for the purpose. At Charing Cross a special cradle is placed over the stretcher, and by means of hot-water bottles the patient breathes warm air till he returns to his bed. In order to avoid any possible chance of the transit of the patient being delayed in the corridor, care is taken that he is not taken from the theatre until the lift is open and ready. At Westminster Hospital there is an ingenious arrangement close to the operating theatre

by means of which the blankets for the patient are warmed. At St. Bartholomew's Hospital the patient after operation may be transported across the quadrangle, so in addition to blankets and hot-water bottles there is a supply of waterproofs handy. There is no evidence that any harm has occurred to patients in consequence of this transportation across the quadrangle, but this method of conveying the patient back to his ward will not be required when the new buildings at St. Bartholomew's are finished, as the operating theatres will then be in proximity to the wards.

STERILIZATION.

The sterilization of instruments and apparatus, speaking generally, is in the large general hospitals in London entrusted to a theatre Sister who is responsible for the equipment and cleanliness of the theatre and the sterilizing room adjoining in which the process of sterilization is carried on. At the Middlesex Hospital a certain amount of sterilization is carried on in the theatre itself, but this is due to want of space and not by reason of choice. At St. Mary's Hospital the sterilization is carried out in an apartment in the basement under the care of an official known as the "Surgery Bedell." At the London Hospital the instruments for each operating theatre are sterilized by a theatre attendant, who must be a qualified chemist, and is in charge of the operating theatre. The instruments are sterilized in the theatre itself, but there is a well-equipped sterilizing department on the same floor as the theatres, which is in charge of a special officer, who is under the direction of the superintendent of the theatre department, who also has control of the male attendants in charge of the theatres. In each theatre a book is kept in which every operation is entered, the time it occurs, and the name of every one taking part in it; full details are also recorded of the material used at the operation. In the event of suppuration occurring a court of inquiry is held, and by means of this organization all concerned are able to offer the fullest explanations. The bacteriologist of the hospital tests at irregular intervals the materials used at these operations.

SPECTATORS.

The admission of spectators to operations in the large London hospitals is at present under the consideration of some of the hospital authorities, and the question whether spectators should not wear overalls and special foot-gear is being discussed. At Charing Cross spectators are admitted to a gallery of marble, and between them and the operating table there is a glass screen fixed. At University College Hospital spectators are rallied off, and there is a thick linen shield rising to the height of the rail. At St. Bartholomew's Hospital spectators are placed on side stands, and the advisability of screening them off from the operator is now occupying attention. At St. George's visitors are accommodated with raised platforms provided with steps. At St. Mary's Hospital there is a specially raised dais for spectators, and at the London Hospital movable platforms are in use. At Guy's Hospital the custom in some of the operating theatres is to require visitors to wear overalls and caps, and this precaution is also observed at the London Hospital.

The use of sterilized overalls is demanded in all the London hospitals in the case of those assisting at an operation, and at some hospitals any one on the floor of the theatre must wear an overall.

Gloves for operations are worn in all the London operating theatres in septic cases. At Westminster, University College, and St. Bartholomew's the teaching is that it is possible to cleanse the skin of those who operate thoroughly enough to safeguard the patient in aseptic cases. At University College one of the leading surgeons requires dressings in the ward and in the out-patient department to be done with gloves so as to preserve the skin of those assisting him from any chance of infection and in that manner he insures, as far as possible, surgically clean hands for his work in the operating theatre. At St. Bartholomew's it is not unusual in an aseptic case to see the surgeon without gloves while those assisting him wear gloves. At St. George's Hospital the use of gloves is general for all connected with an operation. At Middlesex Hospital gloves are worn by some of the surgeons systematically, others wear them occasionally, and, speaking generally, every one assisting wears gloves. At St. Mary's Hospital gloves are used for septic cases but not at all