tant with chronic exhausting diseases, such as tuberculosis, and it is in all probability the same with leprosy. In leprosy sweating often follows the severe chills during the febrile attacks when the patient is certainly in a low physical condition.

Chills. The patient may at irregular intervals suffer from true chills, as has already been mentioned, and at such times as active inflammatory changes take place, and tissues break down, and ulcers occur. It is possible to consider such chills as the result of the softening and breaking down of nodules and other areas of infiltration and that the bacilli, or their toxic properties, are then set free and taken into the blood stream with the resulting disturbance. Chills with septic infection, typhoid and malaria, are of course well known, and the analogy here is not at all far drawn. These chills are often severe, with great systemic disturbance, the patient is prostrated, the temperature may rise three or four degrees or suddenly drop to subnormal, with the pulse essentially agreeing with the temperature. The chills last from a few minutes to the greater part of an hour, and may occur as often as four or five times in twenty-four hours; or again there may be a single chill, without recurrence for months.

Apart from the occurrence of true chills, chilliness is often a complaint, and more marked with the patients who are anemic. Chilliness may be complained of on the brightest and sunniest days and when the patient is free from all other symptoms and is not associated with digestive or intestinal troubles. The question of the blood picture during true chills will be dealt with in another note. In the anesthetic cases here, no chills or feeling of chilliness has been noticed, it being most noticeable in the far advanced tubercular leprosy patients.

NOTES AND CONCLUSIONS.

A. When the disease is advanced the patient's health varies daily; he feels exceptionally well one day and the next presents every symptom and appearance of a seriously sick person.

B. In comparison to the severe symptoms and general appearance of the patient, physical examination will reveal nothing. Lungs and abdomen are normal, and with the exception of a soft systolic murmur over the precordia, the heart is normal.

C. During eruption the skin is usually hot and dry.

D. Extreme mental depression at irregular intervals and nervousness are characteristic of every case.

E. Ulcers may heal rapidly and continually, or, as is seen in one or two cases, they become chronic and refuse to respond to treatment. Medicinal treatment varies in each case; in leprosy this fact is particularly accentuated.

F. The clinical symptoms of leprosy, although somewhat confused and often indefinite, are, nevertheless, correct symptoms of the disease and in the care and treatment of leprosy patients, are to be carefully observed and seriously considered. The consideration of the pulse, temperature and blood are so important and instructive, that a more careful study is being made and will, in all probability be reported in the future.

In conclusion I wish to thank Dr. Frank H. Parker, superintendent Penikese Island Hospital, for his kindly advice and criticism in the preparation of this paper.

INSTITUTIONAL DENTISTRY: METHODS: RESULTS. REPORT NO. 2.

BY FREDERICK A. KEYES, D.M.D., BOSTON.

IN the issue of the BOSTON MEDICAL AND SURGICAL JOURNAL of July 25, 1912, there was printed an article entitled "Institution Dentistry: Methods; Results," in which I submitted to the medical profession a report of dental work done at St. Vincent's Orphan Asylum, Boston, and its relation to the infectious diseases of childhood. This statistical report, showing the great decrease of infectious diseases at the orphanage after the establishment of a dental infirmary, amazed even the most enthusiastic propagators of oral hygiene.

Owing to the frequent inquiries regarding the progress of the work since the publication of this article and the many urgent requests for further information, I have deemed it expedient to submit the following report of the last 18 months' work.

The number of children at the	
Asylum January 1 1912.....	227
Children received during the year	76
Children cared for by the Home	
during the year.....	303
Children taken out by relatives...	121
Children in Asylum Jan. 1, 1913..	182

The system of dental work remains the same. The inspection of the children monthly to see that they are keeping their mouths clean and the admonition of the few that are negligent in this respect has been rigidly observed. The tooth brush brigades, led by the older girls, are accomplishing the desired results, *i.e.* teaching the younger children how and when to brush their teeth, so that the habit thus formed in childhood may continue throughout life. A nitrous oxide oxygen apparatus has been installed and found to be a most valuable, though expensive, adjunct in the elimination of pain.

The following statistics contain the record of work done for the past 18 months. For those who have not read the first article, statistics for the first 18 months are included,—with a partial account of the money expended for materials necessary during that period:

	Nov., '10 to May, '12	May, '12 to Nov., '13
Total number of different patients examined	349	303
Total number of cleanings	272	350
Total number of cement fillings	25	45
Total number of amalgam fillings	72	76
Total number of cement amalgam fillings	69	60
Total number of temporary fillings	130	180
Total number of oxphas cu. fillings	9	57
Total number of teeth extracted (temporary)	290	102
Total number of teeth extracted (permanent)	131	51
Total number of abscesses opened	42	21
Total number of gums cut for permanent teeth	19	9
Total number of plastic operations	3	0
Total number examined and treated	1421	1254
Total number of fillings (including temporary)	315	418
Total number of teeth extracted (including temporary)	421	153
Total time spent (hours)	210	190

Account of Expenses.

Initial cost (chair, engine sterilizers, brushes, etc.)	\$125.00
Supplies for 18 months	66.63
Nitrous oxide oxygen apparatus (initial cost)	\$86.15
Supplies for 18 months, including gas and oxygen	75.00
Totals	\$191.63 \$161.15

A study of the above tables will show the great number of teeth filled and the few extractions necessary in the last 18 months in comparison with the preceding 18 months. It is hoped that, after all cavities in the mouths of the permanent inmates of the Asylum are filled, the future work will be solely prophylactic treatment (cleaning). But every year there is an influx and exit of from 75 to 100 new children. Therefore, extraction and filling will necessarily be the first important factor. After filling and extraction are completed, the cleaning of the teeth every three months by the dentist and daily by the patient is expected to prevent future caries in the children's mouths. Contrary to the usual routine, dental repair work is done on the older girls in preference to the younger ones, since the older girls are liable to leave the Asylum first and it is our desire to send them out into the world with mouths free from all carious cavities. Odonalgia has been practically eliminated.

Below is printed a table containing the number of infectious diseases occurring at the Home in the last 36 months, together with statistics of previous years.

RECORD IN REGARD TO INFECTIOUS DISEASES.

	1907	1908	Nov., 1909	Apr., 1910	May, 1911	May, 1912	Nov., 1913
Diphtheria	6	2	1	0	0	0	1
Mumps	8	3	10	4	0	0	0
Scarlet fever	17	8	12	8	0	0	0
Pneumonia	3	5	4	6	0	0	0
Measles	24	50	40	25	0	0	6
Tonsillitis	19	16	8	3	0	0	0
Whooping cough	7	2	2	0	0	0	0
Chicken pox	15	17	10	6	0	0	0
Typhoid	0	0	0	0	0	0	0
Croup	4	0	0	0	0	0	0
Spinal meningitis ...	0	0	0	0	0	0	0
Scarlatina					0	0	0
Bright's (acute) ...						0	0
Hemorrhage							0
Tuberculosis of eye..					1		
Tuberculosis of lungs					1		
	103	103	87	52	2	0	7

From the above data it may be seen that in the last 36 months only 7 cases of infectious diseases have occurred at the Asylum. Of these 6 were measles, one of which was contracted before or immediately after admittance to the Home. The disease spread to 5 children, permanent inmates of the Asylum. The mouths of all six patients were carefully examined and found to be in need of dental treatment. Whereas in previous years 40-50 children were stricken down with measles this year only 5 children contracted the disease. The one case of diphtheria also occurred in a new girl. Examination of her mouth showed great need of dental work.

What is the cause of this elimination of disease from St. Vincent's Orphanage immediately after the beginning of dental work and the continuing of this immunity for a period of three years? Dentists need no longer claim to be great prophylactic agents in the field of medicine; for the above statistics demonstrate convincingly the immunity acquired from infectious diseases of childhood after the proper treatment of the child's oral cavity.

For many years dentists have spent much time and effort in compiling and presenting statistics showing the relation existing between carious teeth and infectious diseases of childhood. In many large cities these efforts are bearing fruit. It is, however, hard to understand why there should be so much delay in some parts of this country, especially in Boston, in meeting this problem. At present there exist in other municipalities many methods of handling the public school question, most of which are still in the experimental stage but are nevertheless accomplishing a great deal of good. In Boston, however, the dental question is most unsettled. Spasmodic attempts, most of them theoretical, to remedy this defect in the past have been unsuccessful. At present, even with the new Forsyth Dental Infirmary, the results predicted will be merely scraping the surface. The

Forsyth Dental Infirmary in full working order will be able to handle only a part of the carious cavities now existing in the mouths of the Boston public school children. The good that is to be obtained from this great philanthropy cannot be over-estimated; but without the co-operation of the City of Boston and the medical profession the desired results will fall short.

Establishment of school dental clinics working harmoniously with the Forsyth Dental Infirmary, to my mind, is essential in handling the 100,000 children in the Boston public schools. The 64 chairs at the Forsyth Institute are inadequate to meet the needs of the public school children.

Paid dental inspectors should be appointed by the City after competitive examinations similar to those now in vogue for the school physicians. To permit school nurses to act in the capacity of dental inspectors is indeed a sad commentary upon the importance of this great field of medical science. Nurses are no more competent to judge between dental conditions needing immediate care than they would be in diagnosing adenoid or tonsillar diseases.

Paid dental inspectors are necessary to handle the public school question. Even though the time has not yet come when school dental infirmaries are to be established necessitating dental inspectors in the public schools, even now under the present conditions the Forsyth Institute is in dire need of inspectors in the schools to send them cases needing immediate treatment.

Dentists are very apt in their over enthusiasm upon this subject to momentarily offer their services free to the municipalities. But no work of any great value requiring all a man's working hours was ever well and properly done without monetary compensation.

Progress in school dentistry must come. Further agitation should not be necessary. Physicians should co-operate with dentists and school authorities to demand that steps be taken to eliminate the present conditions existing in the mouths of the public school children.

A FURTHER REPORT ON THE MAYO-GILLIAM OPERATION FOR RETROVERSION OF THE UTERUS.

BY HAROLD W. BAKER, M.D., BOSTON,

Surgeon to Out-Patients, Free Hospital for Women, Brookline, Mass.

As pointed out in a previous paper,¹ the best method for the treatment of retroversion of the uterus, is the operative treatment, wherein the Mayo modification of the Gilliam technique is used. The steps of this operation have been gone over in the previous paper, and we do not need to refer to them again.

The three classes of operations performed by the best authorities for retroversion, may well be described here with their results. They are:—

1. Hysterorrhaphy, which may be divided into two classes, namely

- a. Suspension.
- b. Fixation.

2. Intraperitoneal shortening of the round ligaments.

3. Extraperitoneal shortening of the round ligaments.

By suspension, we mean the mere suturing of the uterus to the peritoneum. This method has proved by long and extensive use to have too many recurrences to justify the continuance of this attempt to cure. This fact was shown in the first paper¹.

By fixation, we mean the suturing of the uterus to the abdominal fascia. This procedure, on the other hand, has demonstrated that it actually does accomplish the purpose for which it is done. The objection to fixation is not failure to do what it purports to do, but that complications from it² are too serious and numerous to warrant doing it during the child-bearing period. There is a fault common to both suspension and fixation, in that they are not anatomically justified, for the uterus is normally a movable organ, and they both attempt to immobilize the uterus.

We believe that the intraperitoneal shortening of the round ligaments, as done by Baldy⁴, Webster,⁷ Coffey³, and others, is giving much better results than it did five to ten years ago, when we saw a recurrence in thirty-one out of thirty-five cases¹. We object to this procedure, however, as it utilizes the weakest part of the ligaments to do the heaviest part of the work. The chance for recurrence is still very great.

The extraperitoneal shortening of the round ligaments, the Alexander type of shortening², is good, but it has a moderately high percentage of failure. The reason for this percentage¹, is due in all probability to the fact that adhesions of the uterus are not easily recognized even when the patient is fully anaesthetized. The operation utilizes the strongest part of the ligaments, and it does not interfere with the normal motility of the organ. There is one distinct disadvantage to this operation, and that is that the surgeon is unable to examine the other abdominal organs.

We have begun to emigrate from the old idea that the best surgeon is the one who makes the smallest incision, and who does the least exploring. The patient is apt to embarrass her surgeon, a year or two later, if she comes back to him (or to another), with other abdominal trouble which might have been found and relieved by abdominal exploration at the time of the former operation. We prefer to know that the abdomen is completely negative, rather than to go on any assumption. The knowing adds nothing to the risk of the operation, and it adds much to the mental comfort of the patient, and