

A clean mouth is necessary for good health. Unhygienic conditions in the mouth may go along apparently unnoticed for years, and then suddenly show their result in some severe disorder.

A seed of some poisonous weed lies dormant, then sprouts, grows to blossoms, then to seeds, which in turn scatter far and wide and each takes root.

Oral neglect is like the poisonous weed. It would have been easy to destroy the first seed, but impossible to root out the great crop of weeds.

To you nurses I leave this message. Each day drop some little word of advice or teaching as to the care of the mouth.

Do not wait until some deed of greatness you may do.

Do not wait to shed your light afar.

To the many duties ever near you now be true,

Clean up the corner where you are.

During the discussion that followed Dr. Jordan's paper, the question was asked as to the necessity for repairing first teeth. To this Dr. Jordan replied:

The first permanent molar, the most valuable of the second set of teeth, is in position some time after the fifth year, and by the laity is most frequently thought to be a deciduous tooth, that is, a temporary tooth, and for that reason it is lost very frequently. In the examination of the mouth for the army they can only demand one tooth on each side in the clearing of the three molars involved on each side, because of this loss being so common among the line of men who apply. The deciduous teeth next to this tooth remain until the child is twelve. Now a cavity in a child's tooth will form and the pulp will be destroyed in a very short period. I have often seen the pulp dying in a tooth that, three months before, showed absolutely no sign of a cavity. So you can see that for six years the danger to the first permanent molar is very great and that accounts for the frequent loss.

The discussion included reports of dental work in schools in various cities and of the better care being now given to the teeth of patients ill in hospitals where formerly there was none.

## THE ERADICATION AND PREVENTION OF BUBONIC PLAGUE IN NEW ORLEANS, LA.

By ASSISTANT SURGEON C. V. AKIN

*United States Public Health Service*

The presence of bubonic plague was first made known to the public of New Orleans on June 27, 1914, when Dr. Blue, Surgeon General of the United States Public Health Service, was notified of the existence

of a case of human infection, in a telegram from the President of the Louisiana State Board of Health. The case reported was that of C. L., a Swedish laborer, residing at 713 St. Joseph Street, the patient dying in the Charity Hospital on June 28, 1914.

The surgeon general at once proceeded to New Orleans and after confirming the diagnosis was invited by the state and city officials to assume charge of eradication measures. The Secretary of the Treasury Department thereupon directed Dr. Blue to apply such measures as he thought necessary. Having been placed in command, plans were formulated for the regular service organization to take charge of the situation.

On Monday, July 6, 1914, Assistant Surgeon General Rucker arrived in New Orleans, following which the surgeon general returned to Washington. For the purpose of hastening the work of ridding New Orleans of this menace to the health and prosperity of her people, other service officers were ordered to proceed at once to this city and report to Dr. Rucker for assignment to duty. A definite plan having been agreed upon at a conference between Assistant Surgeon General Rucker and state and city health authorities, the actual campaign of plague eradication was begun on July 7, 1914.

Immediately following the first case of human plague, that of C. L., a second was discovered, that of R. W. W. Both men lived at 713 St. Joseph Street, a large rooming house managed by the Volunteers of America, and worked at 424 Notre Dame Street, the latter building being occupied as a stable and as a collection point for refuse paper and rags. R. W. W., case No. 2, was employed as a hostler, and C. L., case No. 1, for the purpose of collecting and assorting rags and paper. The proximity of this place of business to the river front and the immense amount of rat harborage afforded by the character of storage, no doubt played a direct part in the infection of these men.

Notwithstanding the discovery of human plague in June, 1914, no rodent plague was demonstrated until July 16, 1914 when, a rat trapped at 1914 Magazine Street, on July 11, 1914, was declared plague infected.

While it is not possible to state absolutely when and how bubonic plague entered New Orleans, it is well to bring to your attention certain factors, which may have played a part in its inception. New Orleans, one of the largest ports in the country, engages in extensive trade relations with Cuba, England (Liverpool), and the Canary Islands, all of which have been plague infected at one time or another. Ships clearing from such points with heterogeneous cargoes of food-stuffs and other products, on arriving in New Orleans make use of her

wonderful docking facilities and tie up at one of the wharves. The rat, an animal with an insatiable spirit of Wanderlust, even though it be plague infected, forsakes the ship, hoping to find a more comfortable and more permanent home on land. Having no inclination to tarry long in one place the rat travels light, but carries with it always its quota of fleas. Being favored by a low stage of the river, the rat lands without difficulty and takes up a temporary abode beneath or within the walls, being assured of a plentiful supply of food. The length of its stay in this place is determined to a great extent by the height of the water, as with a rise of the river the rat is forced inland. Always in hopes of bettering itself and of finding a more satisfactory place in which to breed and feed its young, it continues its line of march into and across the city. Having the human instinct of gregariousness, it meets and consorts with other rats. Possibly the visiting rat is plague infected. If so, the fleas which have used it for a host and served it as traveling companions, are also contaminated. In its travels through the city, associating as it must with other rats, it may indulge in the polite sport of "swapping fleas." Even though the fleas be so loyal that they refuse to leave the visiting rat so long as it is alive, for a new host, yet, if the rat die of the infection, they will listen to the "call of the blood;" it being understood that the call they hear is that of warm circulating blood. In such a way non-infected rats become storehouses of plague infection and consequent propagators of its spread. In such a way might New Orleans have become a "Plague City."

As bubonic plague is unquestionably a disease of rodents, it is unnecessary to emphasize the fact that the two human cases before mentioned were not its first appearance in the city. How long the rodent plague had existed in New Orleans before the human infection was demonstrated will never be known, but it is believed that no great space of time had elapsed between its primary inception and the occurrence of these cases because of the rapid extension of rodent infection throughout the "clean areas" of the city during August and September, 1914.

Upon assuming charge of eradication measures Assistant Surgeon General Rucker assigned to duty the various officers under his command, the three divisions of duty being field work, laboratory examination of rodents and out going quarantine. In carrying out the plan of campaign adopted both general and special measures were employed.

For administrative purposes, the city was at first divided into seven districts, each in charge of a service officer and subject to the command of headquarters. District officers were provided with centrally located offices and with sufficient clerical force to handle the various re-

ports required by headquarters. At first attention was centered on the trapping of rats and mice, the officers in charge being assisted by foremen and trappers. To facilitate this work each district was subdivided, the divisions being known as "squad districts." To each squad district were assigned a number of trappers, chosen both for their mental and physical qualifications, and one especially efficient man was made foreman, whose duty it was to see that the trappers did not shirk their duty. In addition to this the foreman keeps a record of the daily rodent catch of his squad, which he submits to the supervising inspector of trappers. It is the duty of the inspector to maintain discipline in the trapping force, to see that the orders from the district officer are promptly executed, and to submit to the officer the foremen's daily reports after he has checked them over to determine their correctness.

Each rat and mouse caught is tagged so as to definitely locate the premise in which it is trapped. On being brought to district headquarters all rodents are dipped in coal oil to kill fleas, thus obviating the possibility of the transmission of plague, provided they are infected. All rodents are sent to the laboratory where they are carefully examined by experts. The tagging of rodents is necessary for locating plague foci and trappers are required to inscribe the tags carefully and legibly. When the laboratory reports the finding of a plague infected rat, the district officer, acting on orders from headquarters, proceeds to apply such measures as are deemed advisable to stamp out the infection and prevent its spread. The intent is to kill not only the rats, but at the same time to destroy the excess flea population resulting from their death. The same treatment is applied to a premise whether the infection be human or rodent. The building is first fumigated with sulphur, following which it is sprayed with a 2 per cent solution of coal oil emulsion. The most valuable eradication measure without question is the immediate removal of rat harborage from a known focus of infection and the destruction of the existing rat population at such a place. Intensive trapping is always resorted to but in more than one heavily rat infested premise in which plague had been discovered only a few rats were captured until their hiding places had been destroyed. In this work it is customary to remove all plank floors which are on or near the ground and to open up shallow wall spaces which afford rat protection. The resulting material is either removed entirely from the premises or if retained is elevated on racks 2 feet above the surface of the ground. It is noticeable that the rat catch is always increased after the destruction of harboring places, which is a logical and most desirable result.

Coincident with trapping operations and the location of plague foci, other men were employed as building inspectors. It is their duty to visit each premise in the portion of the district allotted to them and by means of inspection cards to submit to district headquarters complete information as to the structural conditions and rat-proof status of buildings. The data collected on these cards is transcribed to notices drawn up in legal form and made out in duplicate. The original is sent to the owner, instructing him to comply with the requirements of the rat-proofing ordinance, while the duplicate is retained in the district files for reference. Following the receipt of this notice it is customary for the owner to request a personal inspection of the property, in company with the medical officer in charge of the district or an inspector. The custom is encouraged, for not only is the owner more willing to comply when the necessity for such work is carefully explained, but the rat-proofing requirements are carried out more effectively because of his clearer understanding. Much depends on the personality of the inspector, for his deficiency in tact and lack of patience will be exemplified in a lessened efficiency and poorer grade of rat-proofing.

Aside from a summary destruction of rodent harboring places the most successful measure for the eradication of bubonic plague from any city is rat-proofing. Its greatest value lies in its permanency. In order to compel property owners to so change the structural condition of the building under their control as to have it conform with the requirements for rat-proofing, it was necessary to enact an ordinance defining such change. Service officers, together with representatives of the legal and health departments of the city, drafted ordinances providing for the rat-proofing of all buildings, for the handling and disposal of garbage and for the measures to be observed by ship owners and agents when their vessels were in port. These ordinances were accepted and the city authorities have played an active and valuable part in their enforcement.

For the purpose of rat-proofing, buildings are divided into three classes, A, B, and C. In the first class, are placed all buildings used in the preparation, storage or sale of food products. The presence of a large amount of food in a building naturally encourages rats to seek entrance and great care is necessary to prevent this. All such buildings are required to have concrete floors surrounded by a wall of concrete or brick laid in cement mortar of such thickness as will insure its stability, which extends below the ground level not less than two feet in order to prevent rats burrowing under the wall and consequently establishing harboring places beneath the paving.

Dwellings and all other buildings not included in classes A and C, except stables, may be rat-proofed in either of two ways. The floor covering of wood may be retained and the building as a whole be considered as conforming with the requirements of the ordinance provided it be elevated at least eighteen inches above the surface of the ground on piers, and the spaces between the piers left open on three sides. If the elevation be insufficient the owner is given the alternative of elevating the building to the required height or surrounding it with a marginal wall of concrete or brick laid in cement mortar, the specifications for which are the same as were described under the heading of Class A construction.

Class C comprises buildings used for the wholesale storage of non-food products or of food products in hermetically sealed containers. A tar-cinder composition floor with a surrounding foundation wall of concrete or brick laid in cement mortar is permitted for this class.

Stables, because of the large amount of unprotected foodstuffs, are paved and surrounded with a marginal wall as is provided for buildings in class A, but are not considered as falling in that class because of special requirements demanded.

Coincident with rat-proofing, rat-trapping and other measures which provided directly for the elimination of the rat as a menace to the public health of New Orleans, other measures were undertaken in order to more thoroughly acquaint the people with the reason and necessity for the work. At the beginning of the campaign the support of various city organizations was solicited and many meetings were held for the purpose of disseminating information as to methods in which the individual citizen could cooperate. These meetings were addressed by service officers, resident physicians of the city and by others who were interested in and had a knowledge of the work to be done. Whenever possible the talks were illustrated by stereopticon views of service operations in other cities, and these served to bring home to the people the vital necessity for structural change and the removal of insanitary collection of debris which constituted rat harborage.

Since the beginning of service operations the strictest measures have been enforced to prevent the spread of infection through out-bound vessels. Ships are required to be breasted off from the wharves at least eight feet, to protect lines leading from ship to shore with large metallic rat guards and to have gangways raised at night. Before leaving port, ships are fumigated for the purpose of destroying all rats on board. The gases variously used for fumigation are sulphur-dioxide, carbon-monoxide and cyanide gas. Early in the campaign all freight cars out-bound with cargo were required to be rat-proof and in addi-

tion to this were inspected at the time of loading to prevent the introduction of rodents in the merchandise. A large force of inspectors was employed to watch the loading, to see that it was done only in the day time and to attend to the proper sealing of the cars when the loading was completed.

Rat-proofing progressed under the ordinances first drafted until June, 1915, when they were declared unconstitutional because of certain technicalities. This decision of the Supreme Court retarded the work to a slight extent, but it was never discontinued, the better class of citizen believing rat-proofing to be a good measure and having no doubt but that it would be continued to completion. The ordinances were re-drafted to conform to the court decree and were enacted by the Commission Council. The work as commenced has continued and at the present time it is believed that the people of New Orleans are more heartily in sympathy with the measure than ever before.

While plague infected rats are still captured from time to time, no case of human plague has occurred since September 8, 1915. The tenacity of rodent plague infection is possibly explained by the existence of a type of plague among rats known as "Quiescent" or "Resolving." Because of an innate high resistance certain rats, though plague infected, recover from the disease, yet, carry in their bodies infectious material which makes possible the continued transmission of plague from rat to rat or from rat to human being through the medium of the flea.

It is impossible to calculate the worth of the eradication of plague to the city of New Orleans in dollars and cents, yet there has been no measure operative in the city or state in its entire history which has been more productive of good. Not only has it safeguarded the health of the individual citizen, but it has saved them from a commercially ruinous quarantine. Had it not been possible to certify vessels and trains leaving New Orleans as clean and free from rat infestation, no other city in the country or in the world would have received them without burdensome, or indeed prohibitive restrictions. Business, big and little, would have stagnated and the people would have been compelled to live on a siege basis. Thousands of dollars have been saved directly by the destruction of rats, as it is authoritatively stated, that it costs not less than one dollar and eighty cents per year to feed each rat. A large amount of money has been spent by the property owners in an effort to make their buildings conform with the requirements of rat-proofing, but every dollar has been well invested. The buildings treated have been benefited, not only structurally but also in appearance. This has had a natural tendency to stimulate in owners and tenants a sense of civic pride. In a large majority of cases, the one

in control continues the improvement even after all the requirements of the ordinance have been complied with. Many buildings which would have been left to decay and possibly to collapse through structural neglect have been demolished, and thousands of others have been saved from this fate by timely repair. The physical characteristics and geographical situation of the city assist the natural process of decay. By elevation and by the installation of concrete floors and proper foundation walls many buildings have been saved and years added to their life of usefulness.

Several million dollars have been put into circulation as a direct result of the campaign and this money has been spent in New Orleans by New Orleans people. Aside from the employees paid by the government, hundreds of mechanics and builders have been afforded occupation, who otherwise would have been out of employment. In spite of the hard times so widely advertised by the "calamity howlers," it has not been necessary to institute a "bread line" in New Orleans as was the case in other cities during the fall and winter of 1914.

The people of New Orleans, both rich and poor, are to be complimented on the wonderful spirit of coöperation exhibited by them. Without such help the united efforts of city, state and federal governments would have gone for nothing, and instead of being one of the cleanest ports in the world, she would still be as she was, a plague ridden city discriminated against by other uninfected ports.

At the close of Dr. Akin's paper a rising vote of thanks was given the speakers of the morning. The convention then went into business session.

Miss Sly read the revised clause last under discussion in regard to membership and then the whole membership clause. The question of requiring registration as a qualification for membership was discussed. It was explained that if adopted the law would not be retroactive, that associations need not drop those members who were not registered, it would only apply to new members. There would also be time until 1918 to work out the matter. After full discussion the clause requiring registration was adopted and, later, the full membership clause. In the midst of the discussion Miss Noyes asked the delegates to consider including the JOURNAL in their association dues and reported that at one of the round tables held by Miss Sly, delegates from seventeen states had promised to take home the idea and present it.

The by-law regarding permanent members was then discussed. Miss Sly read the proposed amendment which would strike out the



clause providing for permanent members. "The idea is to retain the permanent members we now have, but cease to create any more after a certain time, and this amendment provides for that." The reason for the proposed change was given as simplifying the membership and preventing duplication. It had been found also that it would be necessary to elect these members delegates at-large at each convention for the ensuing one, which would be a complicated procedure. After full discussion the amendment was adopted which reads:

Amend by striking out "any graduate nurse having once served as a delegate may become a permanent member at any subsequent meeting by the presentation of credentials from an organization affiliated in the American Nurses' Association and upon payment of dues."

Later Miss Johnson moved that "these changes in the by-laws affecting the organization shall go into effect in 1918," meaning at the close of the convention in 1918.

The report of the Committee on National Pin, prepared for last year's convention and not presented then, was read by the secretary in the absence of Miss Walsh. This committee, the Board of Directors and the Advisory Council all recommend giving up the idea of having a national pin. Miss Golding moved that the idea be abandoned. The motion was carried and after it a vote of thanks was given the Committee on National Pin and especially to its chairman for the large amount of work it had done so willingly.

A letter was read from Helen Teal of Cincinnati, who had received one of the Robb scholarships, thanking the members of the association for the opportunity it offered her.

The secretary read an appeal from Lady Aberdeen for help for the children of Ireland. Contributions may be sent through Blanche Swainhart, Visiting Nurse Association, Cleveland, Ohio.

A question from the question box was presented as to whether "nominating ballots" should be signed. As the question was not quite clear and the sender was not present, it could not be answered satisfactorily.

Miss Eldredge asked that a night letter be sent Miss Palmer expressing regret at her absence. This was approved.

TUESDAY AFTERNOON SESSION, MAY 2, 1916

## SUBJECT: LEGISLATION

## REPORT OF SUB-COMMITTEE ON LEGISLATION

This committee, consisting of three members, commenced its work immediately on appointment. As proposed, the work taken up for this year was to obtain and tabulate data from all the states having registration laws, concerning their requirements for accredited training schools, with the view of working towards a more uniform standard in the United States. The work was divided equally and the states distributed into three sections—eastern, middle west and western. A response was received from all states with the exception of Delaware, West Virginia, North Dakota, Texas, Washington, Kentucky and Tennessee. The report is, therefore, based on the findings of thirty-two states and is as follows. The arrangement agreed upon was to follow ten points which seemed most pertinent to the work in hand:

I. Whether the schools were incorporated, their capacity and the daily average number of patients. II. What services were required. III. Superintendent of nurses to be registered. IV. Educational entrance requirements; length of course; class term; probation; age of admission; physician's certificate. V. Teaching equipment (class room, demonstration room, laboratory, diet kitchen). VI. Theoretical subjects. VII. Experience required. VIII. Affiliation required. IX. Student's record to be filed with Board. X. Subjects for examination.

*Recommendations.* This Committee after due consideration of the points of this report respectfully recommends the following:

*Point 1.* That all schools shall be required to be incorporated for the purpose of authorization to issue diplomas, with the exception of those connected with a public body.

*Point II.* That superintendents of training schools shall be required to be registered nurses.

*Point IV.* That at least two years of high school shall be required for admission to schools of nursing. That applicants to training schools shall submit evidences from their school showing the amount of education received.

*Point V.* The Committee desires to emphasize that teaching equipment enumerated under this point is highly essential and even indispensable. It believes that teaching by demonstration is equal to, if not better than text book teaching and that every opportunity should

be given for demonstration work with a careful inspection of notes taken at the demonstration and also supervision of practical work.

*Point VI.* Attention is called to the fact of the inequality in the hours of instruction on almost every subject. The method of estimating the amount of instruction given in every subject by the number of class periods is in some respects inadequate for it cannot take into account the scope and intensity of the work. There should be, however, a certain equality in the number of periods considered essential.

*Point VII.* Recommends that the minimum amount of experience to be given by the schools be laid down by the Board to include all essential subjects. Advises that statistics giving the number of patients per pupil and the ratio of employed graduate nurses to pupil nurses be incorporated in the points to be employed in surveys made by the Central Committee for State Board inspection.

*Point VIII.* Recommends that affiliation be required where requisite experience is not obtainable in the home school.

*Point IX.* That a standard form for the permanent record of each pupil nurse be adopted.

*Point X.* Recommends that uniformity of subjects for examination shall be adopted in order to give definite meaning to reciprocity, also that there should be the same passing grade for examination in all states, otherwise a nurse who fails to pass in one state may be passed in another for the same quality of work and might be enabled to register in her own state by reciprocity.

This committee wishes to emphasize the value of practical work in examinations. The poor student who is yet strong on practical nursing has a chance to show her ability and help up her average.

In conclusion, this committee desires to express the opinion that the present status of requirements for training schools, as shown by this survey is essentially lacking in uniformity, both in theoretical instruction and in practical instruction. It urges that a vigorous and systematic attack of the question be made in the belief that through the power of the Boards of Examiners the standard of what constitutes the requirements for the training of nurses can be established. These powers should be exercised to their utmost capacity and machinery instituted in each state that will bring about a coöperation and articulation with the existing machinery of public instruction and public health.

Therefore, this committee respectfully requests that a committee be appointed which, after careful deliberation, shall draw up a general plan of requirements for accredited training schools and a curriculum

of instruction in theory and practice that may be recommended to Boards of Examiners to serve as a working basis, looking towards a greater degree of uniformity in the education of nurses in the United States.

ANNA C. JAMMÉ, R.N., *Chairman*,  
LAUDER SUTHERLAND, R.N.  
MARY B. EYRE, R.N.

The report was received with interest and the Committee was asked to carry on its work for another year. Miss Jammé was then asked to preside during the rest of the session.

Miss Jammé stated that it was fifteen years since legislative work was begun and that we have not yet reached the point where the status of the nurse is defined. Last year the machinery by which the boards were operated was considered and the outcome was a feeling that the boards should be in closer coöperation, hence the sub-committee and its work.

#### STANDARDIZATION OF STATE REQUIREMENTS OF TRAINING SCHOOLS FOR NURSES

By MARY BROOKS EYRE, R.N.

*(Read by Miss Sutherland in the absence of Miss Eyre.)*

In everyday language, this title says to us today, "Come, let us get together to select such points as we all agree are necessary for the state to insist upon in maintaining schools for the training of nurses; and those points upon which we all (or most of us!) agree, we will call our 'standard.'"

Time forbids our following up this fascinating invitation, at the present session. We may, however, plan the campaign.

In some states, the laws define pretty explicitly what the requirements shall be; in others, much is left to the discretionary power of the Boards; and in the latter case, equal requirements may be formulated, and presented to the schools, with the authority of the state behind them.

In setting any sort of a standard, we are at once confronted by three aspects:

First, The ideal.

Second, The thing that is desirable, but uncertain.

Third, The practical thing, that can be made possible of accomplishment at present.