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EDITORIAL

A FEDERAL HEALTH DEPARTMENT.

This important subject was up in the House of Commons recently. During the debate Dr. Sheard, of South Toronto, is reported as having spoken as follows:

"The establishment of a Federal Department of Health should meet with strong support. I cannot conceive of any department which could be of greater value than one which cared for the physical well-being of the community. It would, of course, have to be rightly administered. Immigrants were coming into the country and bringing with them disease. Mental defectives found their way from crowded cities of Europe into Canada and increased and multiplied as time went on because no Federal department existed to subject them to a rigid inspection.

"The epidemic of influenza, which had taken such a toll of Canadian lives, illustrated quite forcibly the need for a Federal Health Department. If, at the beginning of the epidemic, cases had been brought to the attention of such an organization, preventive measures might have been taken immediately, and many lives saved. Another field such a department could enter upon with great advantage to the community was that of quack medicine. There were now on the market medicines advertised to cure all the ills that man was heir to, and their makers preyed upon the public. It was time that these nostrums were subjected to the tests of Dominion laboratories before they were sold to the public.

"I have been informed by the provincial health authorities that they had expressed their willingness to manufacture salvarsan, the remedy for certain venereal diseases, in their laboratories, but when they applied for a distribution license it was refused by the Dominion Government. Their applications, said Dr. Sheard, had evidently been opposed by those who were interested in manufacturing quack remedies for the cure of

venereal diseases. The man who used such nostrums very often found himself in a worse plight than he was before their use.

"One thing which the speaker laid particular emphasis on was that if a public health department was established it should be under the control of a medical man, and one who was fully qualified to deal with matters which would come before him."

Dr. Michael Steel, of South Perth, spoke on the subject also. He has on former occasions strongly urged the creation of a Health Department and the appointment of a Minister of Health. He said, in brief:

"He had brought this matter to the attention of the House for two years, and he was much gratified that action was at last to be taken. The Government, he declared, would have to give more attention to social problems in future. We could not create a great nation without healthy people, as the physical condition of the people determined to a great extent their mental and moral standing. If it was desirous to enlighten the load of taxation he could suggest a most effective method. It had been estimated in the United States that the cost of sickness per year to a family was one hundred and ten dollars. This cost came heaviest on the working man. In Canada the loss in wages through sickness to workingmen in a single year was thirty-five millions. Added to this was the cost of sickness, deaths, etc. Every year in Canada there were fifty thousand unnecessary deaths, and thousands of babies died annually of preventible diseases. If Canada thought it worth while to apply the principles of conservation to her natural resources was it not more important to apply them to her human life?"

The Canada Lancet has advocated this movement for many years. If it comes into effect, it will be one of the most valuable pieces of legislation in Canada.

THE CARE OF THE FEEBLE-MINDED.

"An ounce of prevention is better than a pound of cure" is an old adage that has stood the test of time. In no department of medical science can it be said with greater emphasis that this holds good than in the case of the feeble-minded.

Mr. Justice Hodgins held several sessions at which he heard a vast amount of evidence upon the causation, prevention and treatment of this class of defectives.

Dr. Helen MacMurchy contended that there are 10 feeble-minded persons in every 1,000. She was not altogether in favor of the plan

of community treatment, though it had accomplished much good where it had been properly carried out. She was decidedly more favorable to the institutional system. She favored periodical examinations of the inmates so that those who had recovered to such an extent as to be allowed out, arrangements could be made for suitable work for them. The institution should keep a guardianship over them. She advocated sending as many as possible of these cases to farms. Marriage should be prevented in all such cases.

Dr. C. H. Hincks stated that many of these young feeble-minded children did criminal acts of the adult, and seemed pleased in such achievements. He said that he and Dr. Clarke had found where two such children had poisoned the minds of one hundred others. Out of 234 unmarried mothers there were 86 under 15 years of age.

Dr. Mary MacKenzie Smith, one of the lecturers for the Women's Institute, declared that she and two others examined 17,000 children in one rural district. Along physical lines many were found deficient mentally.

"I didn't find as large percentage in Peel country as up in Kenora section," said the doctor. "I found one in Oxford, where one boy had contaminated the whole school morally."

Rev. Father Bench said that one of the most difficult of problems was how to deal with the feeble-minded girl, as they became such easy prey for designing persons. The only safety lies in having girls cared for in an institution where work is supplied to them and by which she can earn her living. Great care must be taken not to allow them out too soon, or before the authorities are satisfied that these girls have learned self-control.

Father Bench drew attention to the fact that not all children classed as "deficient" were mentally incapable. There were many who were of normal intelligence, but with undeveloped will power that left them unable to do the right thing, though they were able to distinguish between right and wrong. He believed that for these children moral instruction, the simple Christian doctrine, would develop will power. To a question by the commissioner Father Bench said that he advocated religious instruction for all mental defectives.

Dr. Charles Hastings, Medical Officer of Health for Toronto, told the commissioner of the complete physical examination of every child in the Toronto schools. This, he said, would be of little value, however, unless it was followed up. The Government considered that it was its duty to punish the criminal, and it should equally regard as its duty the prevention of increases to the criminal ranks. The fact that most criminals were mentally sub-normal made that duty plain.

Dr. Hastings contended that children should be kept out of the courts. They should be reached before they become criminals, and taken from home if necessary.

The learned commissioner was most painstaking in hearing the evidence and will no doubt give it very careful study. It is to be hoped that we will soon have passed the stage of discussion and investigation, the hearing of evidence and the drafting of reports, and reach the stage of action. Enough, and much more than enough, evidence has been submitted to justify the Government in taking action. One feeble-minded child with immoral habits may cost much more in the end by allowing it its freedom than it would have cost in the first place to have been put into some institution. The cheapest of all wars is war against war. Get hold of the feeble-minded before they are immersed in crime.

“THEY SAY. WHAT SAY THEY? LET THEM SAY.”

These words, found over the door of the University of Aberdeen, will serve as our text. Of late the irregulars have been busy. They have been writing letters to the press, and advertising their systems, and sending broadcast circulars. If there is one thing clearer than another it is that the people are not capable of judging for themselves. Those who patronize an osteopath or a chiropractic know nothing of the errors lying at the very foundation of the beliefs of these schools of practice.

No government would engage any one to build a bridge for it who did not believe in strength of steel to carry a certain weight, and who cast aside all that research had done along this line. A man with such crude ideas might construct a very faulty bridge. Then, again, take the people. They will go into a train and cross the Niagara or the St. Lawrence Rivers on the bridges spanning these waters, without a particle of thought or knowledge that these bridges are strong enough for the load. Some one built the bridge and this ends it for them.

In the treatment of disease they are equally ignorant. Some one comes along and claims to be an herbalist; and many follow the fad. He will advertise that he does not use the deadly poisons found in the mineral kingdom, regardless of the fact that some of the most deadly poisons come from the vegetable world.

Another will say, “I am a magnetic healer.” He tells the people that he possesses some strange power that enables him to cure disease by the laying on of his hands; and some believe him and take his treatment.

Yet another will say that all systems heretofore are wrong; but that

he has found out the true way. Mrs. Eddy, in her combination of deceit, ignorance and hysteria, formulates a gross travesty on Christianity and palms it off on the world, and some accept it and follow her ravings.

Then the osteopath or the chiropractor crops up with his wild, yes, mad, spinal column displacement theory. Here, too, one can find disciples, not knowing that the only things in this treatment is some manipulation of the body and a certain amount of credulity on the part of the patient.

Now, when one comes to treatment he has to face a very large problem. Treatment may be divided into a number of divisions:

(1) Those aids given at the girth of a child. This covers the ground of the obstetrician.

(2) Those directions as to foods and drinks in health and disease.

(3) All instructions regarding the surroundings of the person that may improve his chances of health. This is sanitary science.

(4) All mechanical and instrumental means that may be employed for his cure or relief. Here we have the whole domain of surgery.

(5) All those agents that are called drugs. The people often think, and the osteopaths and chiropractors encourage this view, that medical men regard this as the chief end and aim of all treatment.

(6) Rubbing and manipulation constitute another line of treatment. This is a portion, and a very small portion, of the field of treatment or therapeutics.

(7) Further, we have the influence of one person over another. This embraces psychotherapeutics, suggestion, faith healing, mental treatment.

The preëminence of the regular physician is that he recognizes the place and the value of all these means of treating sickness and injuries. On the other hand, the irregulars limit themselves to some one of these plans of treatment, and lose the benefit of the others. The wise surgeon will straighten the deformed limb, will give an anodyne to ease the pain, will apply a proper apparatus to keep the member in its proper position, will tell the patient what to eat, will order a suitable aperient to regulate the bowels, will direct the judicious rubbing and manipulation of the affected part, will give the patient hope founded upon knowledge of the case, and he will regulate the hygienic conditions of the home or room.

No man dare undertake the treatment of disease and say he is an air physician, or a water physician, or a faith-cure physician, or a manipulation physician. No man is competent to be a physician who is not

able and willing to make use of any or all of these means of benefiting his patient. The regular medical profession makes use of every known means whereby he may attain his end—the cure of disease.

But this is far from the whole case. The regular practitioner makes use of all these agencies after first having acquired a knowledge of the anatomy and physiology of the human body, after long and arduous study of disease with the object of becoming able to recognize what ails any given patient, and after much training and practise on the use of instruments and drugs. The Christian Scientist boasts that all this is useless, yea, even harmful. The more ignorant of and disbelieving in disease the better he can treat it. The osteopath and chiropractor go on to state that all disease is the result of some displacement of tissue, and in the vast majority of cases this is in the spine. This is entirely wrong, and people holding such views should not be permitted to practise, even though the manipulation they make use of on occasions may be helpful. Their utter lack of knowledge may lead to wrongful use of the manipulation and rubbing.

Modern medicine is a very extensive science, or rather, group of sciences. With all the training that a medical student receives during his five years in college, and the experience he acquires in practice in after years, he will find it a very difficult task to make correct diagnoses in all his cases. How can the poor chiropractor hope to do so! At great expense, the people have erected and are maintaining hospitals. In the country are to be found medical colleges and universities, each representing much wealth and thought. Why impair the work of these by recognizing spurious and fraudulent imitations?

There is one duty, and one only, for the Premier of Ontario, his colleagues and the members of the Legislature, to follow. That course is to make all who would seek to treat the people and derive a revenue therefrom to take the full course and pass the highest test. All this cry about drugless physicians is only another way of naming imperfectly trained physicians, short-cut physicians, in other words. They are those who wish to reach the goal without playing the game. It is for the Premier and his colleagues to say if this shall be so.

THE SUPPRESSION OF VENEREAL DISEASES.

Justice Hodgins has presented his second interim report on the results of his inquiry into the venereal disease problem. Since his first interim report, an Act has been passed as recommended, making some

important provisions on the subject. In that report it was stated that while such a law was necessary as the foundation for complete action, it should be supplemented in order to secure its successful operation. Justice Hodgins now submits the conclusion to which he has come, as to the steps which it is needful to take in order to reach that end. They are:

“That there should be appointed by the Lieutenant-Governor-in-Council a committee to be known as the Ontario Social Hygiene Committee (or some other similar name).

“That this general committee should be large enough and representative enough to permit it being divided into sections devoted to special departments of propaganda.

“The duty of this committee should be, in the first place, to initiate a province-wide movement for the suppression and cure of venereal disease and for the education of the public, young and old, in regard to it; and, in the second place, to undertake such other work in the future as the social conditions of the province seem to demand if requested to do so by the Lieutenant-Governor-in-Council.

“That from the committees so appointed there should be nominated by the Lieutenant-Governor-in-Council an executive committee whose chairman should be the chairman of the Provincial Board of Health, and whose duty it should be to supervise and direct the activities of the general committee and to frame regulations for its guidance and to define its powers.

“That there should be also named by the executive committee, various sub-committees from among the members of the general committee to take charge of special departments of the work under the direction of the executive committee. Such departments might be: (a) literature; (b) lectures, speakers and films; (c) propaganda; (d) work among employees of industrial plants; (e) education of the young; (f) education of medical students; (g) protection of girls; (h) law enforcements.

“That the Lieutenant-Governor-in-Council should grant, upon the recommendation of the executive committee, such money as, in the judgment of the executive council, might be necessary for (a) literature, (b) travelling expenses of the secretary, lecturers and speakers, (c) the salary of an all-time secretary, (d) such other sums as may be necessary to meet unforeseen or necessary expenditure, which cannot well be borne by private subscription, including the travelling expenses of members of the executive committee only.

“That the executive committee should be charged with the duty of finally approving of the literature, posters and so forth, which shall be issued or published, and none should be circulated without such approval. The executive committee should also be the clearing house for co-ordinat-

ing the activities of all sub-committees, so as to prevent overlapping, and also to stimulate and promote effort along the most approved lines.

"I further recommend that the Dominion Government should be approached, and, if possible, in connection with other provinces who are stirring in this matter, and asked to take steps to (1) form a Federal Department of Health, (2) to extend and enlarge the present military hospital for venereal disease, so as to admit civil patients, and to permit instruction to students and others to be given therein, (3) to erect detention houses for those infected with venereal disease, and who are either dangerous to public health or incorrigible, (4) to make a grant to each of the provinces interested equal to the amount provided by a province in carrying on its campaign against venereal disease, including therein the cost of clinics, (5) to provide a sufficient supply of salvarsan, or its equivalent, free of cost, and permit its manufacture under proper supervision by either provincial agencies or private individuals or companies, (6) to appoint an official with military rank, with the approval of the Lieutenant-Governor-in-Council who should be an official of the Provincial Board of Health, to take charge as secretary of the propaganda under the direction of the executive committee, and to pay one-half of his salary. He to act also as license officer with the military authorities in connection with their hospitals for venereal disease.

"That a survey should be made of the provisions of the Criminal Code and the Statute Law of the province in order to see whether amendment or addition is required to be made thereto so as to permit the full benefit of the campaign against venereal disease to be reaped and to lay before the Legislature and the Minister of Justice results of such survey so that necessary legislation may be passed without delay. That special attention should be paid to the matters referred to in this report, namely, the offence of soliciting, the care of young and working girls, and the advisability of enacting an abatement and injunction law, and one requiring certificates of health before the issue of marriage licenses and the inspection and regulating of rooming houses.

"That the establishment of a proper and compulsory course in the medical faculties of the universities in venereal disease for medical students, and a post-graduate course for medical practitioners, should be required, and also that this subject should be included in the instruction at the nurses' training schools.

"That the Crown Attorney and all officials concerned with the administration of the law should be reminded of the necessity of having laws touching sexual immorality and venereal disease rigidly adhered to and properly administered and that an effort should be made to bring uniformity of decision.

"That juvenile courts should be set up in all the large cities and in the chief border towns.

"That clinics, pay and free, should be established in all important municipal centres under such regulations as may be laid down by the Lieutenant-Governor-in-Council, and that a definite grant should be given to all municipalities setting up these clinics in order to secure their continuance. This grant to be proportionate to the amount voted or contributed in the municipality.

"That such of the above recommendations as properly fall within the purview of the general committee should be taken up by it and the results of the deliberations should be formulated by Governmental action, wherever that is needed to make their conclusions effective."

"Ontario is the first province to enact a law which can be made the background for practical work in stamping out or lessening the ravages of disease," he says, and I desire in this second interim report to outline and recommend the steps which I think can and should now be taken to enable the province to complete its work so far as Governmental action is expedient in this direction."

Referring to immigration, Justice Hodgins says: "It ought not to be difficult in the present state of public opinion in Great Britain to arrange for proper inspection at the port of departure. In regard to Allied countries, the matter may not be so easily arranged, but if a sufficiently firm attitude is maintained by the quarantine offices, backed up by appropriate legislation, it will be so much in the interests of the steamship companies themselves to carry none but approved emigrants that action may be expected, wherever they embark, to prevent those who could not pass inspection in Canada from sailing from any civilized port.

"Salvarsan, a medical necessity under various names, in dealing with venereal disease, is protected by a German patent. In Canada only two licenses to manufacture it have been granted, and five per cent. of the gross sales has been reserved, presumably for the ultimate benefit of the German owners. Only one licensee, the Synthetic Drug Company, has made any progress in producing it, although the licenses were granted in 1915, and the Patent Commissioner has refused to allow the Provincial Board of Health in Ontario to manufacture it. The reasons for this refusal are stated in the judgment of the Deputy Commissioner of Patents, dated 12th July, 1917, as follows:

"In view of the public service rendered by the Synthetic Drug Company the curtailment of their market by the granting of an additional license at the present time would be an injustice to them and public interest would not be served thereby. It was apparent at the hearing that the present application for a license was for the purpose of enabling

the applicant to control the prices charged rather than for the purpose of enabling him to manufacture the product.

"The result of so dealing with this indispensable drug has been that this essential remedy for a national evil can only be obtained on the terms of a royalty reserved as above stated, and at a price fixed by one firm who have a practical monopoly in manufacturing it.

"This consideration for the patentees is no doubt a matter of State policy, but the refusal of a further license, in view of the present great demand for Salvarsan, is a national mistake, unless the Federal Government is prepared to undertake its production on a large scale."

This report cannot receive too strong praise. It is wholly in the right direction and should be given the loyal support of every medical practitioner. We urge upon our readers to give the report careful study, and then to act with energy in its support.—Editor, *Canada Lancet*.

TUBERCULOSIS FROM THE PUBLIC HEALTH STANDPOINT.

Hawes of Boston has made an attempt to collate the points of view of leading tuberculosis clinicians on the important question or when does a tuberculosis individual become a proper object of attention for boards of health, and when should he pass from under their observation.

Hawes summarizes, as a fair and average statement, the various views expressed as follows:

1. Every case with recently demonstrated bacilli in the sputum should be reportable.
2. In addition, the physician should report every case that he honestly believes to have active tuberculosis.
3. The board of health has a right to request information concerning every case of tuberculosis, even though there may not be marked signs of activity. This attitude must be determined by the circumstances attaching to each individual case.

A patient ceases to be a board of health problem when:

1. The sputum, upon repeated examination, has been negative for at least one year.
2. When the board of health has knowledge, satisfactory to itself, that the patient's own intelligence and precautions and the supervision of the patient's physician, are such as to no longer render him a menace to public health.—*American Review of Tuberculosis*, Vol. 2, No. 10.

ORIGINAL CONTRIBUTIONS

SERUM IN INFECTIOUS DISEASE.*

By M. B. WHYTE, M.D.

THE employment of an antitoxin has long been recognized as a specific remedy in the treatment of diphtheria. Its administration subcutaneously is effective in the majority of cases, but there are two types of diphtheria in which, without question, the intravenous method is indicated, namely, in laryngeal and nasopharyngeal cases.

The occurrence of a nasopharyngeal case is dependent upon one of two factors or both. Extensive membraneous formation in both the nose and throat indicates either a neglected case of from three to five days' duration, or a case in which virulent organisms are multiplying rapidly in a person with low resisting power. This type is the most deadly of all forms of diphtheria, not excepting the laryngeal variety, and the only hope of recovery lies in the immediate introduction of antitoxin into the blood stream.

W. H. Park, of New York, has shown that a subcutaneous injection of antitoxin results in antitoxic units appearing in the blood stream in a gradually rising curve until the maximum is reached on the fifth day. An intravenous injection of the same amount of antitoxin, of course, showed the maximum amount of antitoxin in the blood stream shortly after administration, with a gradually falling curve, as the serum was excreted or used up. These two curves crossed one another on the third day. In other words, on the third day after an intravenous injection, approximately the same amount of antitoxin disappears from the blood stream, as is absorbed into the blood stream following a subcutaneous injection. With these facts in mind, therefore, it is considered wise to combine the two methods, giving an intravenous injection, which tends to keep the desired amount of antitoxin in the blood stream throughout the acute stage of the illness.

The same procedure is recommended in laryngeal cases, especially in children under two years of age. The mortality in children of this age may be as high as 85 per cent., and if the case is so far advanced that intubation is rendered necessary, the outlook is always extremely serious because of pulmonary complications. If these cases are seen early and treated intravenously, as suggested, intubation will seldom be necessary, and a good recovery may be expected.

* Read in the Section of Medicine, Toronto Academy of Medicine, 8th Oct., 1918.

In 50 per cent. of the large series of cases treated intravenously at the Isolation Hospital, the following phenomena were observed within one hour after the injection: A chill occurred, followed by an elevation of temperature of from 1 to 5 degrees, an elevation of pulse rate of from 10 to 30 per minute, and the respirations, while labored in many cases, were only increased by from 2 to 4 points. Within from 12 to 24 hours conditions returned to the level obtaining previous to the injection, with no apparent permanent ill effect. White blood counts made before the intravenous injection ranged from 13,000 to 25,000. One hour after the injection a drop of from 2,000 to 19,000 was observed, and this was followed later by an increase of from 5,000 to 11,000 above the original count. The polymorphs were relatively fewer during the drop in the count and relatively higher during the ultimate increase, while the lymphocytes were the reverse.

This reaction, which at times appears serious, is the only objection to the use of antitoxin intravenously. Various efforts have been made to ascertain the cause of the reaction and to eliminate its occurrence. It has been suggested that it is due to hæmolysis. With Professor Hunter's supervision, tests were made to demonstrate the presence of urobilin and hæmatoporphyrin in sufficient amounts in the urine to indicate hæmolysis. Negative results were obtained and no change was noted in the red blood picture. Williams and Patterson, of Buffalo, have suggested that it is due to the agglutination of red corpuscles, and since agglutination would only be effective in producing the reaction through the ultimate breaking up of the agglutinated corpuscles, it would seem that this explanation might be dismissed in view of Professor Hunter's negative findings in his search for evidence of hæmolysis. Vaughan's explanation that the reaction is due to the splitting of foreign protein into a poisonous and non-poisonous element by the presence in certain individuals of a ferment developed through a previous sensitization seems the most ingenious and most acceptable theory. This theory is given support by the fact that the reaction is not nearly so frequently observed in young children as in adults, and especially is this so in children under two years of age. Children of this age are sensitive to comparatively few proteins and we know that in young children a reaction seldom follows an intravenous injection of serum, all of which tends to give credence to Vaughan's explanation.

Under Major Fitzgerald's direction an attempt was made to desensitize the patient with minute amounts of serum before using the full amount, but reactions occurred with the desensitizing dose. Administering the serum slowly has also been tried with no beneficial results, in fact efforts to eliminate the untoward reaction have proved so discouraging

that I have come to the conclusion that where the severity of the case of diphtheria indicates the necessity for an intravenous injection of serum, it should be given regardless of the chill which may follow. Caution should, however, be observed in cases where the heart muscle is already seriously damaged by the toxin of the disease, and in patients with an unstable nervous system.

GALL-STONE DISEASE COMPLICATING PREGNANCY.

AIME PAUL HEINECK, M.D., Chicago, Ill.

DURING gestation, women are subject to many surgical conditions. The safety of the product of conception, the safety of the mother, demand that our knowledge of these surgical ailments be increased. Definite and accurate conclusions should be formulated as to the most opportune, most appropriate, and therefore the most scientific, treatment of any and all surgical states complicating pregnancy. In previous contributions, we stated that every case of ectopic pregnancy, irrespective of type or stage of development, calls for the immediate ablation of the ectopic ovum. Immediate operative removal of the ectopic ovum terminates the gestation and protects the mother from the morbidity and fatality incident to extra-uterine pregnancy.

In other contributions, also published in these columns, we urged that every case of appendicitis complicating pregnancy be subjected to operation during gestation. Appendicitis is a surgical disease: when it complicates pregnancy, it calls for the immediate operative removal of the inflamed appendix, irrespective of the type of inflammation, irrespective of the age of the pregnancy. In women, previous to and during the child-bearing period, the non-operative treatment of appendicitis invites disaster, immediate, remote, or both. The timely removal of the inflamed appendix to a great extent protects the mother from the complications and sequelae, from the morbidity and mortality, incident to appendicitis. Operative removal of a diseased appendix does not interrupt gestation, does not exert any unfavorable influence on delivery.

The frequency of cholelithiasis makes this condition one of great practical interest. In the collective statistics of nineteen European and American authors, 80,802 necropsies, the frequency averaged 5.94 per cent. (Hesse.) As the manifestations of gall-stone disease are often unrecognized, misinterpreted, or misdiagnosed, its incidence is greater than is supposed, is far greater than the number of reported

cases would lead us to believe. It occurs in both sexes and at all ages, in the fat, in the lean, in the weak, and in the strong. The older the patient, the more liable is he or she to have gall-stones.

Gall-stone disease is of common occurrence during pregnancy, during the puerperium, during lactation. In fact, its greatest incidence is in the child-bearing period. Statistics have established beyond dispute that gall-stone disease, latent or manifest, is more common in women than in men. Out of 655 patients laparotomized for gall-stones, 536 were women, 119 men. (Kehr.) Of 1,244 women operated upon for uterine myomata at the Mayo Clinic, 92, or 7.1%, had gall-stones.

Unquestionably child-bearing has something to do with the frequency of gall-stones in that state. Cholelithiasis may complicate a pregnancy otherwise normal: it has been found associated with ectopic gestation. It occurs in primiparae, deuteriparae, and in multiparae. Manifestations of cholelithiasis may precede, coincide with, or follow an abortion or a premature labor. Gall-stone disease may become manifest and necessitate operative relief at any period of gestation. In a large number of cases, the initial symptoms first occur during the child-bearing period. (Rudeaux.) Many women date their first cholecystic disturbances from a pregnancy. In many cases, there is a distinct aggravation of symptoms during pregnancy. "Seventy-five per cent. of gall-stones are found in women, and in 80 per cent. of these patients, the symptoms developed during pregnancy." (Torrance.) Gall-stones are more commonly found in women who have borne children than in those who have remained sterile. It is well for medical attendants to keep in mind that fever during the puerperium can be due to causes other than puerperal fever; appendicitis, gall-bladder disease, etc.

Greater familiarity with the symptomatology, clinical course, and treatment of cholelithiasis complicating pregnancy will qualify us to combat successfully the various manifestations of gall-stone disease, and lessen the number of fatal terminations. I have analyzed and studied all the cases of undoubted gall-stone disease complicating pregnancy, reported with sufficient data, thirty cases in all, in the French, English, and German medical literature, during the years 1900-1918, inclusive. Supplementing the study of these cases by our personal clinical experience in allied cases, we offer to our medical confrères the considerations which follow. In each case the diagnosis was verified either at the time of operation or at the autopsy.

ETIOLOGY.

The cause of gall-stone disease is not definitely known. Numerous theories have been advanced; not one has, as yet, been found worthy of

general acceptance. The following three factors, owing to their frequency previous to or during the existence of gall-stone disease, impress one forcibly as being important predisposing causes. In the individual case, one, two, or all of these three favoring influences may be operative.

- a. Conditions associated with, favoring, or causing biliary stasis.
- b. Inflammatory states of the biliary tract, primary or secondary to local disease, or to some general febrile state.
- c. Regimens or diatheses favoring or causing hypercholesterinaemia.

Cholesterine, the principal component of gall-stones, is derived from the bile. Simple bile-stasis can, through the precipitation of cholesterin, lead to cholesterin-stone formation. Precipitation is prone to occur in inspissated bile, and the elements thrown down may lead to stone formation. In the latter months of pregnancy, the abdominal muscles and the diaphragm contract feebly, and the bile being inefficiently expelled, stagnates in the gall-bladder.

Stasis, in addition to separating out the essential constituents of gall-stones from the bile, favors the growth of bacteria in the residual fluid. According to Sherrington, bacteria cannot enter the bile ducts, as long as the bile is expelled at regular intervals. Bile is not an antiseptic; it does not prevent the development of bacteria; left exposed to bacterial contamination, it undergoes putrefaction. Obstruction to the bile outflow may be due to foreign bodies present in the gall-bladder, or in the larger bile ducts, may be determined by inflammatory or other degenerative changes involving the gall-bladder or the bile ducts, or may result from such pathological states of contiguous organs as lead to impingement of one or more of the latter upon the bile ducts. Obesity, sedentary life, constipation, tight clothing, such as ill-fitting and improper corsets, etc., are held by some to be predisposing factors. Miyake believes that the non-wearing of corsets by Japanese women is one of the principal reasons why gall-stones are so infrequent among them.

Bacterial organisms are said to be the most essential cause in the majority of cases of gall-stones. In this connection, one should not ignore the relation of mouth and teeth infections to appendicitis and cholecystitis. In some cases, supplementing the noxious influence of bile stasis, in others, acting independently, in many, acting conjointly, there is present a bacterial inflammation of the mucous membrane of the gall-bladder, of the bile ducts, or of both. If the stone be of aseptic origin, the abnormal elements lies in the composition of the bile; if the stone be of inflammatory origin, the pathological condition is the cholecystitis or catarrh of the gall-bladder.

A history of acute cholecystitis first observed within a few weeks or months of parturition is given by many of the patients operated upon for gall-stone disease. Both pregnancy and the puerperium are not infrequently complicated by acute exacerbations or recurrences of cholecystitis. (Bettmann.) The gastro-intestinal disturbances and constipation that attend the pregnant state no doubt favor the migration of the bacillus coli to the gall-bladder.

Although infection and retarded bile outflow predispose to gall-stone formation, they are not all-sufficient. Occlusion of the cystic or of the common duct may co-exist with an infected gall-bladder, and yet no gall-stones form. In order to produce calculi, infections of the gall-bladder must be of low type:—colon bacillus, bacillus typhosus, staphylococcus, etc. Typhoid fever is considered an important etiological factor; it occurs in all lands and among all races, still gall-stones are very uncommon in the tropics; typhoid fever is less prevalent than formerly, but there seems to be no decrease in the number of patients having gall-stones.

Diathetic conditions can so alter the composition of the bile as to favor, suitable local conditions existing, the production of calculi. The supposition is that gall-stones are deposited as a result of error in metabolism (over-concentration of cholesterin in blood and bile). Aschoff's theory of gall-stone formation can be stated briefly, as follows: cholesterin is a normal constituent of the bile and of the blood, its amount therein depending upon the amount of cholesterin in the food. A diet rich in fats and albuminous foods raises the cholesterin content of the bile. There is a distinct cholesterin diathesis. Persons with this diathesis, even upon an ordinary diet, retain their lipoids; an increased cholesterin content of the blood and of the bile results, and sooner or later, a sudden precipitation of the bile cholesterin in the form of gall-stones may occur. Stones are often present in patients with no excess of cholesterin in their blood—the cholesterin shower having occurred at some previous time. The cholesterol increase becomes manifest during the latter half of gestation. (Slemons and Curtis.)

The sedentary life of the pregnant woman and the encroachment of the enlarging pregnant uterus upon the liver and its biliary passages favor bile stasis. The normal obstetric patient eliminates less, during the entire period of gestation, than the normal non-pregnant woman. There is no well recognized line of demarcation between normal and pathologic pregnancy. During pregnancy, the foetal metabolism throws extra work upon the maternal liver; this may determine a temporary impairment of function, an hepatic insufficiency, evidenced by urobilinuria, alimentary glycosuria, moderate icterus, etc. This added stress

also predisposes the liver to local changes, evidenced by "the liver of pregnancy", icterus gravidarum, acute yellow atrophy of the liver, etc. The factors enumerated above, taken in connection with the fact that the bile and blood of pregnant women contain more cholesterin than the bile and blood of men or non-pregnant women, explain in part the greater frequency of gall-stones in child-bearing women, explain in part the undeniable etiological influence of pregnancy in gall-stone formation.

PATHOLOGY.

One, two, three, or more biliary calculi may be present in the same patient. In reporting his case, Davis says the calculi were "too numerous to count." In many of the cases, where numerous, the calculi were pea-sized.

Gall-stones usually develop in the gall-bladder, rarely in any other portion of the biliary tract. In their wandering, they may lodge in the hepatic duct, in the cystic duct, including the ampulla of Vater. Stones may precede the presence of inflammatory changes in the gall-bladder, may be associated with and be the cause or effect of inflammation, slight, moderate, or severe. The inflammation may be limited to the gall-bladder (cholecystitis), to the larger ducts (cholangitis), it may spread to the finer radicles of the biliary tract (diffuse cholangitis), or may be diffuse, involving the gall-bladder and the biliary passages. Cholelithiasis may result from a cholecystitis, and, one established, it becomes a factor in the maintenance of the cholecystitis, in the causation of recurrent attacks of cholecystitis. Inflammation of the gall-bladder and bile ducts is acute or chronic, ulcerative, perforative, or adhesive, catarrhal, phlegmonous, suppurative, or gangrenous. It may be limited to the mucous membrane, or involve part, or the entire thickness of the gall-bladder wall. In the latter case, adhesions are very liable to form between the gall-bladder and one or more contiguous organs. The exudate accompanying these inflammations is mucous, serous, sero-fibrinous, or purulent in nature. If perforation or rupture of a gall-bladder occur, the stones therein present may escape, either into the peritoneal cavity, or into a mass of adhesions, or into the liver substance. Should the inflamed gall-bladder become adherent to a neighboring viscus, the resulting adhesions may cause functional impairment, or an internal fistula may result, through which the gall-stones may escape; if the gall-bladder become adherent to the abdominal wall, the inflammation may involve the latter, and lead to the formation of an inflammatory mass, from which, ultimately, an external biliary fistula may result.

Impaction of a stone in the cystic duct may lead to:

1. Dilation of the gall-bladder, and a resulting:—a. simple hydrops (the wall of the gall-bladder may be greatly thickened; may be paper-thin; may be almost transparent), b. empyema.
2. Acute or chronic cholecystitis; catarrhal, serous, sero-fibrinous, suppurative, gangrenous, phlegmonous, ulcerative, perforative, adhesive.
3. Sclerosis of the gall-bladder; atrophic, hypertrophic.
4. Calcification of the gall-bladder.

If the calculus becomes impacted in the common duct there may result any of the fore-mentioned complications or a distention of the common duct, with or without a cholangitis. Inflammation in the common duct involving contiguous tissues may produce a thrombo-phlebitis and thus interfere with the circulation through the liver, may extend to the head of the pancreas, changing it to a firm tumor.

SYMPTOMS.

Moynihan, Mayo, and many other careful clinical observers are of the opinion that gall-stones do not exist without producing symptoms; they state that the vague term "indigestion" is used variously by patients to indicate all the several forms of distress which are the fore-runners of a crisis of acute biliary colic. Parks claims that the statement "may not cause symptoms" is an admission of inability to recognize incipient symptoms.

Gall-stones produce symptoms by irritation, by migration, by obstruction. Pain and tenderness are most constant and most important symptoms of cholelithiasis, being described by the patients under a variety of terms: a. discomfort, b. deep soreness, c. biliousness, d. dyspepsia, e. gastric distress, f. neuralgia. The pain, usually limited to the region of the gall-bladder, radiates quite often to the epigastrium, subscapular region, neck, shoulders, arms, etc.

What causes this pain? Various factors, chief among which are: a. the calculi themselves; b. the inflammation present in the gall-bladder and in the biliary tracts; c. adhesions of inflammatory origin binding the gall-bladder, cystic or common duct to adjacent organs. These adhesions can also determine severe functional disturbances of stomach and intestines.

"The most characteristic and constant sign of gall-bladder hypersensitiveness is the inability of the patient to take a full inspiration when the physician's fingers are hooked up deep beneath the right costal arch below the hepatic margin. The diaphragm forces the liver down until the sensitive gall-bladder reaches the examining fingers,

when the inspiration suddenly ceases as though it had been shut off. I have never found this sign absent in a case of calculus or in infectious cases of gall-bladder disease."—Murphy.

The meteorism, localized tenderness and rigidity of the abdominal wall may be such as to make satisfactory palpation difficult or impossible. In a few cases, however, a gall-bladder distended by calculi, or by fluid, mucous, purulent, etc., in nature, or by both calculi and fluid, can easily be mapped out. A gall-bladder contracted by inflammation does not give rise to a palpable tumor.

JAUNDICE.

In the diagnosis of gall-stone disease, too much significance has been attached to the symptom jaundice. It is an important sign, but is not to be considered essential to diagnosis; like hemorrhage in duodenal ulcer, it ought not to be waited for. Jaundice may not occur at all, it may be inconspicuous, it may be late, it may be inconstant. In some cases each attack of gall-stone colic is followed by transient jaundice. The jaundice is accompanied by its usual concomitant manifestations, digestive disturbances, beer-brown urine, clay-colored stools.

In diseases of the biliary passages, icterus is of two forms; it is of inflammatory or of lithogenous origin. The cause of the first is an inflammatory swelling of the mucous membrane of the biliary passages. In gall-bladder infections, the swelling of the mucous membrane may extend and involve the common and hepatic ducts and thereby obstruct the bile flow. The mechanical occlusions, partial or complete, of the common duct by a calculus, causes lithogenous jaundice. Icterus is frequently due to both inflammatory and calculous obstruction.

As long as a calculus remains in the gall-bladder, or in the cystic duct, jaundice is not likely to appear. In a large number of the cases in which jaundice is observed, there is present, with or without other calculi, a common duct stone. In a lesser number of cases, the provocative causes are a compression of the common duct or of the extra-hepatic part of the hepatic duct by a large stone in the cystic duct, by swollen lymph-glands, by inflammatory exudates, by adhesions compressing or kinking the ducts, etc.

COLIC.

As stated before, gall-stones cause pain through the irritation, infection, and inflammation that result from their impaction in the neck of the gall-bladder or in any part of the bile-ducts. They also cause a characteristic lancinating pain, agonizing in nature, by meandering through the bile ducts for a shorter or longer distance and setting up a spasm of the muscular wall behind the stone. This latter pain is in-

tense, is designated as biliary colic, and is usually accompanied by chills, frequent vomiting, white lard-like stools, and bile-stained urine.

Gall-stone colic can be caused by: 1. an adherent, inflamed gall-bladder containing calculi, or having contained calculi; 2. an inflamed gall-bladder distended by fluid or stones, its cystic duct being occluded by inflammation or by a calculus, or calculi; 3. the entrance into, or attempted passage through some part of the ducts of a calculus, altered bile, mucus or other irritating foreign body; 4. the transit of a stone through the bile-passages; 5. impaction of a stone in a dilated inflamed common duct or in any of its tributaries. All the cases with stone in the common duct gave a history of biliary colic.

DIAGNOSIS.

If the symptoms are typical, the diagnosis of gall-stone disease is easy. In addition to recognizing the condition of cholelithiasis, the surgeon should, if possible, determine the exact location of the calculi and note what pathological conditions or changes may be present. Digestive disturbances are undoubtedly the cause of most failures to recognize early gall-bladder symptoms. Cholecystitis or cholelithiasis, owing to their reflex symptoms, are often mistaken for disease of the stomach.

By keeping in mind that much of the dyspepsia of pregnancy is from unrecognized gall-stone disease, and that gastric disturbances in pregnancy should receive careful consideration and not be regarded simply as concomitant features of the pregnant state, many diagnostic errors will be avoided. The discovery of calculi in the feces is evidence of their previous existence. It is not proof that any remain. X-ray pictures taken and interpreted by expert roentgenologists are of paramount importance in the diagnosis of biliary, renal or ureteral calculi. The absence of any roentgenographic shadow does not prove the absence of gall-stones. "X-ray revealed outline of gall-bladder filled with stones."—Peterson.

Things of importance to arrive at a diagnosis are:—1. an exact history, including the record of previous attacks of hepatic colic; 2. the location of the tenderness and pain and the nature and radiating character of the latter; 3. a thorough examination, including a careful inspection and palpation of the abdomen, especially of the hypochondriac region; 4. the exclusion of such pathological conditions as simulate gall-stone disease; lead colic, renal colic, duodenal ulcer, nephrolithiasis, chronic appendicitis, movable kidney, infection of the genital tract. Cholecystitis is frequently diagnosed appendicitis and vice versa. Gall-stone disease and appendicitis are frequently present in the same patient. Cholelithiasis may co-exist with other pathological states.

TREATMENT.

There is a wide difference of opinion as to which operation, cholecystostomy or cholecystectomy, is indicated in gall-stone disease. Some operators almost invariably perform a cholecystostomy; others equally competent believe that cholecystectomy is the most universally applicable operation for the cure of cholelithiasis. Others do as KümmeI, who says, "we remove the gall-bladder when we must, we save it when we can." It is well to select the operation which can be performed in the shortest possible time consistent with the existing conditions of the biliary passages. After cholecystectomy, redrainage of the biliary passages may prove extremely difficult and dangerous. The advocates of cholecystectomy claim that the removal of the organ takes away the possibility of stones being left behind, being reformed, that it removes an inflamed organ.

It is agreed that cholecystectomy is attended with more technical difficulties than cholecystostomy. It requires greater care to avoid injury to the bowels, vessels and the main bile ducts. It is wiser to choose the safer operation until the technic of the more complicated one has been mastered.

Cholecystostomy is the operation of election:—

1. Whenever the patient's condition is so bad that the difficulties attending a cholecystectomy render its performance unsafe.

2. When the gall-bladder is not seriously damaged and when the cystic duct is not ulcerated or narrowed by stricture. It is believed that the gall-bladder has some other function than that of a mere receptacle of bile.

3. When the common duct is strictured.

4. If jaundice and pancreatitis complicate the gall-stone disease. Cholecystectomy is indicated:—

1. For very thick, acutely inflamed, or gangrenous gall-bladders in which a stone is impacted in the cystic duct.

2. For chronically thickened gall-bladders. A thick-walled gall-bladder which has become functionless should always be removed. When the gall-bladder becomes thickened and hardened from long-continued inflammation, it is manifestly impossible that it should dilate no matter what obstruction there may be in the common duct.

3. For large gall-bladders distended with clear fluid and resulting from the impaction of a stone in the cystic duct.

4. For the "strawberry" gall-bladder (chronic thickening with ulceration).

5. For a calculous gall-bladder adherent to the stomach, intestine, or omentum.

6. When the walls of the gall-bladder are so modified by disease that neither the storage nor the expulsion of bile is possible.

SUMMARY.

1. Gall-stone disease occurs with far greater frequency in women than in men; with far greater frequency in women that have borne children than in women that have remained sterile. Its period of greatest incidence is the child-bearing period.

2. Gall-stone disease, alone or associated with one or more other related or non-related pathological states, not uncommonly complicates a pregnancy otherwise normal or abnormal.

3. The first manifestations of cholelithiasis may date from the existing gestation or from a previous pregnancy; may precede, coincide with or follow an abortion or premature labor, accidental or induce.

4. All conditions that are associated with, that favor or cause: a. bile stasis; b. inflammatory or degenerative changes involving the gall-bladder or bile tracts; c. pathological alterations in the composition of the bile, such as hypercholesterinaemia, etc., predispose to gall-stone disease.

5. Pregnancy is an important etiological factor in the causation of cholelithiasis.

6. The pathology of gall-stone disease complicating pregnancy is the pathology of gall-stone disease occurring in the non-pregnant. There may be present: a. an inflammation of the gall-bladder or bile ducts in which one, two, or many calculi are lodged, or impacted; b. a distention of the gall-bladder or bile ducts by mucus, pus, or calculi; c. a pericholecystic inflammation, calculous in origin, leading to adhesion formation, to fistula formation, etc., and corresponding disturbances of function; d. changes in the liver; e. changes in the pancreas.

7. Some of the symptoms of gall-stone disease are due to the irritation inherent to the present of gall-stones, to their migration through, or impaction in the bile ducts or neck of the gall-bladder. Other symptoms are due to the concomitant inflammation of the gall-bladder, bile ducts and neighboring organs, causative of or resulting from the presence of calculi.

8. Rupture of a gall-bladder distended by calculi, fluid, mucous or purulent in nature, can occur during gestation or during or immediately after labor.

9. In the differential diagnosis of this condition one should bear in mind:

a. that not infrequently gall-stone disease originates during or may complicate pregnancy;

b. that cholelithiasis and cholecystitis, owing to their reflex symptoms, are often mistaken for gastric disease;

c. that appendicitis and gall-stone disease frequently co-exist;
d. that digestive disturbances associated with acute pain and tenderness in the right hypochondriac region, with or without jaundice, with or without symptoms of biliary colic, are in themselves ample justification for operative exploration of the gall-bladder and ducts.

10. Cholelithiasis is a surgical disease; it calls for operative relief. Medical measures in this disease are merely palliative; appropriate surgical measures are curative.

11. Gall-stone disease in itself is never an indication for the artificial termination or pregnancy.

12. Whenever, for some cause or other, the abdomen is opened in women of the child-bearing age or past the child-bearing period, the gall-bladder and larger bile ducts should be examined if it can be done: a. without or with only slight traumatizing of the tissues; b. without exposing the patient to too much additional risk; c. without contaminating clean peritoneum. Should the patient give a history of chronic digestive disturbances, the indication is absolute.

13. Women exposed to pregnancy, suffering from calculous cholecystitis, or any other form of gall-stone disease, should be operated, the calculi removed, and the gall-bladder drained.

14. Pregnancy does not contra-indicate operations upon the gall-bladder or bile tracts. Peterson reported only 3 miscarriages in 23 reported operated cases. In only one (Roith) of the cases which we considered, did abortion follow the operation.

15. It has been repeatedly demonstrated that the operative relief and cure of cholelithiasis does not unfavorably influence gestation, does not unfavorably influence parturition. Icterus, whether acute or chronic, is a constant menace to the foetus.

16. Early operation is now, in proper hands, a safe procedure. It is an effectual cure of the symptoms produced by gall-stones; it has a low mortality and guarantees against serious complications in the future.

17. Cholecystostomy, cholecystectomy, and choledochotomy have been successfully performed upon pregnant women for the relief of gall-stones. After these operations, drainage is to be employed until the bile ceases to flow spontaneously through the wound, until complete subsidence of whatever degree of cholangitis existed.

18. The prognosis of operative intervention is not unfavorably influenced by the existence of pregnancy.

19. In persistent gall-bladder disease, trouble changes in the urine manifested by the presence of casts and albumen are not uncommon and are not necessarily a bar to operative interference.
1809 S. Trumbull Ave., Chicago.

PERSONAL AND NEWS ITEMS

After seeing service at Salonica as commanding officer of the University Base Hospital, and later in England as deputy director of the medical services of the C.E.F., Col. J. A. Roberts, C.B., has returned to Toronto. Col. Roberts spoke highly of the efficiency of the British medical services, and told of the great number of men whose limbs had been saved owing to the science of new treatments.

The question of building an addition to the Woodstock General Hospital is at present being considered by the local hospital trust. Of late the building has been too small to accommodate the patients seeking admittance, and during the recent epidemic not hafe of those desiring hospital attendance were able to get it.

Clemenceau, the Premier of France, who has been nicknamed "The Tiger," is not a lawyer by profession, but a physician. Not only so, but this "greatest young man in France" is the son of a physician, the grandson of a physician, the great-grandson of a physician, and so on back for 300 years. Every one of his direct ancestors in the male line for three centuries belonged to the medical profession. This unique record of continuity was broken for the first time when the Premier's only son, Michel, elected to become an engineer rather than study medicine. In this democratic age, the young man was allcwed his choice. His father and all the previous Doctor Clemenceaus were compelled to conform to the family tradition, whether willing or not.

Ontario is not yet ready for legislation requiring the contracting parties to a marriage to produce certificates of mental and physical fitness for the wedded state. The special committee of the Legislature appointed last session to consider the Marriage Act Amendment Bill of Dr. Forbes Godfrey, of West York, came to this conclusion after listening to the views of representative men and women upo nthe matter, and exchanging their own opinions.

Word has been received that Lieut.-Col. Clifford Reason, of London, commanding No. 3 Stationary Hospital at Doullans, France, will shortly return home. Dr. Reason had charge of this hospital when it was bombed on May 29 last, some 30 or more of the staff and patients losing their lives.

Two cases of smallpox developed in London, and strict precautions were being exercised to prevent the spread of the disease. A soldier from Military District No. 2 developed the disease soon after his arrival in the city and he was at once isolated from his comrades. The second case was that of a civilian, who was also from an eastern point.

One of the most important matters of discussion before the annual conference between members of the staff of McGill University and the Faculty of Medicine of the University of Toronto, in the Medical Building, was the six-year course to be inaugurated in Toronto in the fall. Recently it was announced that all students must take this course in the future, with the exception of men who have served overseas. Men who have been overseas, upon entering the medical college in the fall will come into the five-year course in recognition of their war service.

So much opposition developed from the medical profession that the bill in the House to allow the legal practice of osteopathy in the Province was killed. The osteopaths say they will come back year after year with their bill for recognition.

Returns from the Toronto cemeteries show that during the month of February 447 were interred, as follows: Mount Pleasant, 108; Necropolis, 15; Prospect, 123; St. James', 28; St. John, 92; Mount Hope, 40; St. Michael's, 6; Hebrew, 35. This is somewhat less than during the month of January.

Acting upon information that a large quantity of opium was en route to Toronto from over the border, Plainclothesmen Sullivan and Marshall visited a large downtown hotel recently and seized 37 cans of opium, each can valued at \$100, or a total approximate value of \$3,700.

Dr. Angus A. Campbell, eye, ear, nose and throat. Resident, 880 College Street. Phone, Col. 6687. Office, 96 College Street. Phone North 771, Toronto.

In a strong address on his work as chaplain overseas, principally on the Island of Lemnos, Major Harry Frost, before a large audience in the Methodist Church, Cobourg, paid a high tribute to the work of the nurses and their devoted attention to duty in the face of great difficulties. He told of several hundred patients being brought in and cared for in their hospital, which was equipped to accommodate only two hundred and fifty.

The awarding of two scholarships in medicine is announced at Queen's. They are the Hoffmann scholarships for research, the one in surgical pathology, won by Dr. C. D. Gallagher, of Kingston, and the other in surgery, won by Dr. L. H. Appleby, whose home is at Carleton Place, Ont. Dr. Gallagher is at present in Victoria, B.C. The scholarships are of recent foundation, having been established in 1917 at the request of the late Dr. G. C. Hoffman, of Ottawa, an honorary graduate of Queen's, and for some years assistant director of geological survey.

Mr. Arthur Hewitt headed a deputation before the Board of Control which requested a grant of \$5,000 for the Victorian Order of Nurses. Mr. Hewitt said the nurses had over 35,000 visits to homes and handled

one-eighth of all maternity cases in the city last year. This year the work would be heavier, and he requested that the annual grant be increased from 2,000 to \$5,000. Although he was supported by Mayor Church, the request was refused.

At the recent Health Convention the following resolution was adopted re venereal diseases: "Compulsory notification; compulsory treatment; standardized treatment; authority to examine persons suspected of being affected with venereal disease; prevention of quack treatment, quack remedies and the advertising of such treatment and remedies; right of entry of public health authorities; prevention of infection, etc., etc., etc."

Major Brefney O'Reilly, M.D., has done excellent work on the Military Hospitals Commission, and at the Royal Flying Corps headquarters, and for these services he has been awarded the Order of the British Empire.

Lieut.-Col. J. H. Wood has returned. He was among the first to go overseas and was on the staff of Stationary Hospital No. 2, under Col. Shillington. He won the Croix de guerre and the D.S.O. O

Dr. E. A. Lebel, Lieut.-Col. in the C.A.M.C., and in command of the Canadian Hospital at St. Cloud, France, was recently stricken with apoplexy.

Major John F. Burgess, M.B., of Owen Sound, has been made an officer of the British Empire. He won his promotion while in France. He was wounded in October.

Capt. Howard B. Jeffs, M.C., son of Dr. W. H. Jeffs, of North Toronto, has been appointed chief medical officer in charge of the disembarkation of Canadian troops at Portland, Me.

Lieut.-Col. George Clingan, M.D., M.P.P., of Virden, Man., has returned home. He went overseas with the 79th Battalion, which was formed in Virden in 1916. He held a number of hospital appointments in England and France.

Lieut.-Col. D. King Smith, M.D., on leaving the Davisville Hospital, was presented by the men with a pocket knife and a table cigarette case.

Major E. C. Cole, M.D., of Toronto, has been appointed to the command of the Military Hospital at Witley, England.

Col. (Dr.) H. A. Bruce was married on 4th February, at Upminster, to Miss Angela Hall. Dr. Bruce and his bride are both in Toronto and located in Dr. Bruce's home on Bloor Street East.

Capt. Joseph R. Lamar has left the Universities of Harvard, Columbia and Johns Hopkins \$6,000,000 to \$10,000,000 for the purpose of aiding the study of the cause and prevention of disease.

Dr. Orok, formerly interne of the Winnipeg General Hospital, and who was engaged in the laboratory work of the institution, died of pneumonia. He was a graduate of Manitoba University.

Many medical men of Alberta have issued a statement that they are not opposed to municipal hospitals, but they wish efficiency.

The proposed new hospital at Bowness, Alberta, is estimated to cost \$400,000. The Provincial Government is to furnish one-half the sum.

Dr. Seymour, the Provincial Health Officer for Saskatchewan, is urging upon the farmers that they should take the advice of the officials of the health bureau when building houses in order to secure the best sanitary conditions.

The teachers of Saskatchewan have sent a memorial to the Government urging that medical inspection of schools be adopted.

A suitable presentation was made to Dr. McNeil, of the Battleford Hospital, for the great efforts he had made for the relief of influenza patients during the epidemic.

Capt. (Dr.) C. S. Cox, of Saskatoon, has been permanently attached, as medical examiner, to the local board of Pension Commissioners.

Dr. Andrew Croll, after four years' active service abroad, has settled in practice again in Saskatoon. He was connected with the Canadian Hospital No. 2, in France.

It is urged that a new hospital be erected at Moose Jaw, as the present one is quite too small.

The Invalid Soldiers' Commission propose establishing a hospital of 200 beds in Saskatoon, as the present accommodation is too limited.

Up to a recent date 25,000 cases of influenza were reported in the city of Quebec; the number of deaths was 441, and the cost to the hospitals and institutions was about \$25,000.

Dr. P. V. Faucher has been appointed professor of materia medica in Laval University.

McGill University is planning a memorial hall for her fallen graduates, at a cost of about \$150,000.

It is urged in Montreal that the city should do much more than it has done for baby welfare work.

A ruling has been made in British Columbia that unless a doctor is registered as a licensed practitioner he has no legal right to issue prescriptions for druggists to fill, and that druggists are not called upon to fill such prescriptions.

The Government of British Columbia is giving \$15,000 to go along with a similar sum from the city of Vancouver for the purpose of erecting an emergency hospital.

Dr. C. H. Vrooman, for eight years at the head of the sanatorium for tuberculosis at Tranquille, B.C., has resigned to accept the management of the tuberculosis clinic in Vancouver.

It was announced that Dr. C. K. Clarke had been asked to go to Ottawa to help to draft the Federal Health Act and another probable development would result in sending representatives from Canada to Europe in connection with the medical examination of immigrants before embarkation. Dr. Clarke and Dr. Hincks are likely to go to Europe late in the summer for this purpose.

Dr. F. S. Minns wishes to announce that in future he will devote his entire time to diseases of the respiratory organs. His office is at 14 Bloor Street East, Toronto.

STEREOROENTGENOGRAMS OF THE INJECTED LUNG.

W. S. Miller publishes an important paper from the Tuberculosis Laboratory of the Johns Hopkins Medical School and Hospital, showing that by means of differential injection masses the relation of the pulmonary blood vessels to the bronchi and to each other can be demonstrated in stereoroentgrams of the lung. This method of study also possesses the advantage of showing the relation of the bronchi and blood vessels to the lobation of the lung, a point not always brought about in corrosion preparations.

In its gross distribution the pulmonary artery is situated posterior (dorsal) and slightly lateral to the main stem bronchi, while the pulmonary vein is situated anterior (ventral) and mesial to the main stem bronchi. In their ultimate distribution the branches of the pulmonary artery are closely associated with subdivisions of the bronchial tree, while the branches of the pulmonary vein are situated as far as possible from the bronchi. The interweaving of the artery, bronchus, and vein which takes place along the periphery of the lung is to be differentiated from the hazy, smoky areas which are present in the early stages of tuberculosis.

Attention is called to the apparent change in the relation of the artery and vein to the bronchus due to the natural curvature of the lung.

The sharp ring-like shadows which are frequently seen in the middle third of the lung are often due to the plane which the bronchi bear to the observer, but when these shadows are broad with irregular, hazy borders, they are cast by bronchial cartilages.

Three stereos, which can be removed for study, accompany the paper and assist in bringing out the descriptive text by which they are accompanied.—*Am. Rev. Tuberculosis.*

OBITUARY

LIEUT.-COL. WILLIAM J. OGILVIE MALLOCH, M.D., F.R.C.S.

Lieut.-Col. William Ogilvie Malloch, C.A.M.C. who arrived in Toronto from overseas on February 8th, died at his residence, 60 Lynwood Ave., on 18th February, from pneumonia, which he contracted on the day of his return after meritorious services in the near East and in England.

Lieut.-Col. Malloch was born in Clinton, Ontario, about forty-seven years ago of Scottish parentage, and early showed a taste for a medical career. At the age of 16 he entered Toronto University, graduating in arts in 1892, and in medicine in 1896. He was devoted to research work for some time, particularly in anatomy and physiology, and in 1905 he went to England, where he took a fellowship in the Royal College of Surgeons in the following year.

In 1908 Col. Malloch was appointed assistant surgeon on the staff of the General Hospital, and at the same time joined the teaching staff of the University of Toronto. At the time he left for England he held the position of senior assistant surgeon at Toronto General Hospital. This was in May, 1915, when he went overseas with No. 4 Base Hospital. This unit was ordered to Saloniki, and from thence Col. Malloch took up duties with a Siberian casualty station. On the return to England of the hospital staff he was stationed at Basingstoke, where he remained until his return to Toronto.

The late Col. Malloch was a Presbyterian, a member of the Masonic Order and of the University and Albany Clubs. He always took a great interest in athletics, and was devoted to manly sports of all kinds. He was a man who had the somewhat unique gift of making friends, and his kindly and genial nature responded to every call made upon him, either professionally or in a personal way. His eminence as a surgeon was widely recognized, and he was regarded as one of the most eminent members of his profession in Toronto. He is survived by his widow. Deceased was interred with full military honors. A short service was held at the residence, after which the body was conveyed to the Eaton Memorial Church, where a public service was conducted by Major Rev. C. A. Williams, pastor of the church. Major Williams made kindly references to the services of the late officer, speaking of the high esteem in which he was held by the officers and nurses, and of the ungrudging manner in which he gave his life to relieve the sufferings of the wounded. A firing party of 100 men and an escort of 250 were provided from the Garrison Battalion, while a number of the officers's former associates

accompanied the gun carriage to the cemetery. Acting as pall-bearers were Lieut.-Col. Boyd Magee, Lieut.-Col. E. S. Ryerson, Lieut.-Col. McGillivray, Lieut.-Col. MacIver, Lieut.-Col. King Smith, and Lieut.-Col. Rogers, while military headquarters were represented by Lieut.-Col. Irving, A.D.M.S.

G. H. BERRY, M.D.

Dr. G. H. Berry, leading physician of Westport and vicinity, died there on 6th March, from bronchial pneumonia, following an attack of influenza. He was a native of Leeds county, and took his degree at Queen's University in 1895. He was chairman of the Public School Board for many years, and prominently identified with Masonic and other fraternal societies. He leaves a widow and four children.

W. R. PATTON, M.D.

Dr. William R. Patton, the second son of the late R. G. Patton, at one time postmaster of Quebec city, died in London, England, 26th February, after a brief illness from pneumonia. Born in Quebec city, 72 years ago, he was educated at the Quebec Seminary, Laval University and Lennoxville University. He was a member of the Royal Canadian Yacht Club and made many extensive yachting tours throughout the world. He was also a member of the Rod and Gun Club of Canada. Since retiring from active life, he had made his summer home on Centre Island, Toronto Bay. He is survived by his brothers, Dr. J. C. Patton, Toronto; George Charles Patton, of New York, and his sister, Mrs. J. Carlyle, of Toronto.

CHESTER J. McBRIDE, M.D.

Dr. C. J. McBride died at Welland, Sunday, 2nd March, in his 34th year. His remains were interred at Alliston.

ANDREW CULLODEN PANTON, M.D.

Dr. Panton died at his home in Portland, Ore., 18th January, of pneumonia. He was a graduate of Trinity Medical College, and had practised in Portland since 1884. He studied in New York, London, Paris and Vienna.

JAMES B. AUSTON, M.D.

Dr. Auston died at his home in Coboconk on 12th January. While reduced in vitality from overwork, he had a severe fall, and pneumonia developed. He graduated from McGill in 1906. His remains were taken to Brighton.

 CHARLES ANTHONY JONES, M.D.

Dr. Jones, of Mount Forest, died there on 18th January. He graduated from Victoria University in 1866. His son, Dr. Warner Jones, is in practice in Toronto.

 LIONEL BEECH, M.D.

In the death of Dr. Beech British Columbia has lost a well-known medical gentleman. He died in Victoria on 16th December, 1918. He was trained in London and went to India in 1873. He had a distinguished military medical career and was awarded a war medal. He received the thanks of the Government for his work during the famine. He practised for eight years in Manitoba, and then in British Columbia.

 J. W. ATKINSON, M.D.

Dr. Atkinson, of Mitchell, where he had practised for sixteen years, died there recently. He had been overworking himself and took severely ill, lasting on two days. He was in his 47th year. He graduated from London (Western University) and was a gold medallist.

 CLARENCE WILLIAM FIELD, M.D.

Dr. Field died on 8th December in Edmonton, where he practised and where he was well-known and highly esteemed. He was a graduate of the University of Toronto. He left a widow and four children.

 J. F. DOLAN, M.D.

Dr. Dolan died on 15th December, 1918, at his home in Belleville. He had been in practice for twenty years and highly respected by all who knew him.

 R. RUSSELL SMALE, M.D.

Dr. Smale died last fall of pneumonia. He graduated from the University of Toronto, and was house surgeon at St. Michael's Hospital. In 1913 he located in Stayner, where his death occurred. He was chairman of the school board, Medical Officer of Health, and county coroner.

 F. S. KEELE, M.D.

Dr. Keele died a short time ago at Portage la Prairie, Manitoba.

 G. W. AVERILL, M.D.

Dr. Averill died of influenza when on a visit to the coast. He was one of the early settlers in Grand Forks, B.C.

DONALD ALEXANDER CAMPBELL, M.D.

Dr. Campbell died at his home in Halifax on 7th January. For forty years he had followed his professional work in Halifax. He graduated from the University of Dalhousie in 1874, and took a course of post-graduate study at Johns Hopkins. For many years he held the chair of the practice of medicine in the medical college, and endowed a chair of anatomy to the memory of his son. He was also a governor of the University. He always took a keen interest in all up-lifting social movements, and was regarded as a very skilful physican. He was held in very high esteem.

DANIEL MAHONEY, M.D.

Dr. Mahoney died on New Year's Day of pneumonia. He was assistant superintendent of the Vancouver General Hospital, and during the influenza epidemic had been working very hard. He graduated from Queen's in 1916, and went to Calgary, where he became connected with the General Hospital there. Eighteen months ago he took up the position of assistant in the Vancouver General Hospital. He was beloved by all who knew him, and was destined to have a brilliant career.

JOHN THEOPHILUS JENKINS, M.D., M.R.C.S.

Dr. Jenkins died in Charlottetown at the age of 90, on 17th January. He was born in Charlottetown in 1829. He studied in St. Bartholomew's Hospital and Medical School. He served in the Crimean war, receiving British and Turkish medals. He was for a time member of Parliament. He was an able speaker and a man of wide experience and learning.

E. J. KIBBE, M.D.

Dr. Kibbe died in Aurora, N.Y., on 17th March. Some weeks ago he had to resign his position as medical superintendent of the Byron Sanitarium, London, Ont., because of ill health. During the time he was in London he made many friends. He contracted influenza, which led to his death.

WILLIAM BURT, M.D.

Dr. William Burt, of Paris, Ont., died at his home there on 14th March, in his 70th year. Dr. Burt was a brilliant student, and an admirable type of medical practitioner. Few men were held in higher esteem by his confreres.

BOOK REVIEWS

NEOPLASTIC DISEASES.

Neoplastic Diseases. A Text-book on Tumors. By James Ewing, M.D., Sc.D., Professor of Pathology at Cornell University Medical College, New York City. Octavo of 1027 pages, with 479 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$10.00 net. The J. F. Hartz Company, Toronto, Canadian Agents.

In announcing this work the author states in his preface that "It is the object of this work to present within reasonable space and in accessible form the main features of the origin, structure and natural history of tumors." The author also calls attention to the mistake that so many regard tumors as falling into a certain number of grand groups. This, the author contends, has retarded the true study of new formations. He says that "the final classification of tumors must depend chiefly on histogenesis and structure." He also holds that "it may be safely said that there are more distinct clinical and pathologic entities within the groups of neoplasms than exist outside of them."

The first portion of the book, 149 pages in all, deals with "General Oncology." It is with interest that one turns to his classification based on histology. The first group is the connective tissue type. In this group come fibroma, chordoma, osteoma, myxoma, lipoma, angioma, lymphoma, sarcoma. In the second group are those of muscle origin, such as leiomyoma and rhabdomyoma. Then those that contain nerve elements make the third group. Neuroma, glioma and neuroepithelioma find a place here. The fourth group is the endothelioma. In the fifth group the author places papilloma, adenoma, epithelioma, carcinoma. These are the epithelial growths. He then has a sixth group, containing simple mixed tumors, teratoma and embryoma. This is his group of complex tissues. Such a classification renders the study of tumors both interesting and intelligible.

When discussing malignancy he lays down the following points: "Yet the tendency is to restrict the term of tumors which exhibit certain features which are essentially deleterious to the host. The most important of these features are infiltrative growth, local destructive properties, recurrence after removal, formation of metastases, local interference with function, and general toxic action of absorbed tumor products." To such a statement no exception can be taken.

With regard to the transformation of benign into malignant tumors the author remarks that this can and does happen. The tissues forming a teratoma may outgrow the normal tissue and supersede it. Carcinoma may develop from the epithelial elements present in many uterine fibroids. In the breast fibre-adenoma may contain carcinoma and sarcoma elements and become malignant. Notwithstanding this possibility the

author states: "While, therefore, the transformation of certain benign tumors into malignant forms has been shown to exist, this event is among the rare occurrences in the natural history of tumors." This position can be cordially endorsed, and is of the utmost practical importance.

In dealing with the origin of cancer the author reviews the embryonic theory of Cohnheim and concludes that it does not fulfil all the conditions. He then examines the "Theory of Cell Autonomy." The influence of mechanical pressure, distribution of nutriment, the influence of specified function and organization are taken up under this theory. To meet the objections to this theory three points have been emphasized: "1. The isolated cells have been altered and their growth tendencies increased by previous irritation. 2. There is a local predisposition to tumor growth. 3. There is a general predisposition to tumor growth." The author mentions the dictum of Billroth "without previous chronic inflammation cancer does not exist," and accepts this dictum as true for the vast majority of cases. The heredity in cancer is examined and concluded in these words: "The problem of heredity in cancer seems for the present insolvable."

One of the most interesting of his chapters is that in which he discusses the parasitic theory of the origin of cancer. In the following words the position of this theory is set forth: "In view of the considerations thus briefly reviewed it is impossible to regard as a valid hypothesis the conception of a specific group of parasites living in symbiosis with the cancer-cell and stimulating its growth and nutrition. All the facts are reasonably explained by regarding the cancer parasite as the cancer-cell." To this view we give our unqualified support.

The work is got up in the most superb manner of the printers and bookbinders art. The paper, type, illustrations and binding leave nothing to be desired. We recommend this volume as of the best we have seen in many a day.

A MANUAL OF GYNAECOLOGY.

A Manual of Gynaecology. By John Cooke Hirst, M.D., Associate in Gynaecology, University of Pennsylvania; Obstetrician and Gynaecologist to the Philadelphia General Hospital. 12 mo. of 466 pages, with 175 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$2.50 net. The J. F. Hartz Company, Toronto, Canadian Agents.

In a small manual of 466 pages, it is no easy task to cover the essentials of gynaecology, but Dr. John Cooke Hirst has done well in this effort. He has covered the subject well and given most useful and carefully arranged information for the general practitioner. The skilful writer and experienced operator can tell what he wishes in brief space. The methods of treatment are trustworthy, and may be adopted as modern. The publishers have done well in bringing out a book of this sort. It can be recommended with much confidence.

A MANUAL OF DISEASES OF THE NOSE, THROAT AND EAR.

A Manual of Diseases of the Nose, Throat and Ear. By E. B. Gleason, M.D., Professor of Otolaryngology in the Medico-Chirurgical College Graduate School, University of Pennsylvania. Fourth edition, thoroughly revised. 12 mo. of 616 pages, 212 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$3.00 net. The J. F. Hartz Company, Toronto, Canadian Agents.

This manual has now reached its fourth edition. It has stood the tests of time and criticism, and continues to grow more and more popular. The publishers have done well in bringing out a new edition of this excellent book, revised up to date. In a neat and concise manner it covers the essentials of the diseases of the nose, throat and ear. For the busy practitioner this is a very useful book, as it gives him in a convenient form what he needs to know, and how to get at the required information in short order. It is well printed, bound and illustrated. This book will render excellent services to all who possess it.

QUARTERLY MEDICAL CLINICS.

A Series of Consecutive Clinical Demonstrations and Lectures. By Frank Smithies, M.D., F.R.C.P., Associate Professor of Medicine, School of Medicine, University of Illinois, etc., etc., Augusta Hospital, Chicago. Published by Medicine and Surgery Publishing Company, St. Louis. Per year, in paper, \$6.00; in cloth, \$8.00; and per number, \$1.50; in paper, and \$2.25 in cloth.

The January issue is number one of volume one. This number contains a case report of 25 cases. These cases have been very carefully worked out. The diagnosis and treatment is given, and laboratory methods detailed. These case reports contain much useful information and could be studied with advantage by most practitioners. This bids well to be a very valuable addition to medical literature.

ELEMENTARY NERVOUS SYSTEM.

The Elementary Nervous System. By G. H. Parker, Sc.D., Professor of Zoology, Harvard University, with 53 illustrations. Philadelphia and London: J. B. Lippincott Company. Price, \$2.50. 1918.

This is one of the series of volumes that are being brought out on Experimental Biology. The author draws attention to the great importance of the nervous system. He discusses at length the anatomy of sponges, then he takes up the independent effectors in higher animals, and neuroix transmission in higher animals. The neurological structure of sea anemones are carefully studied, and the nervous transmission in these animals. Jellyfishes(nerve-nets and hydroids receive full consideration. The author then concludes by an application of the study of these low forms to the structure and function of the higher forms. The book is a most interesting and instructive one.

MISCELLANEOUS

KILLED AND WOUNDED IN WAR.

Notwithstanding the devilish ingenuity shown by the Germans in adding new horrors to war, and the prevalence of infected wounds, the proportion of killed to wounded has been materially lowered by medical science, says the *Journal of the American Medical Association*. In earlier days, we are told by Woods Hutchinson in his popular presentation of the work of "The Doctor in War," five were killed in battle to from ten to twelve who died of wounds. In the American Civil War 67,000 were killed and 43,000 died of wounds. In the Russo-Japanese War 47,000 were killed outright and only 11,000 died of wounds. In the British army during the first three years of the war 90 per cent. of the wounded who lived to reach the ambulance recovered, 95 per cent. of those who reached casualty clearing stations recovered, and of those who reached base hospitals in England 98 per cent. regained their health.

BATTLE DEATHS.

Battledeaths during the war among all participants so far as available statistics show, were given recently by General March as 7,354,000. This represents only men killed in action or died of wounds.

In the list prepared by the General Staff, Russia led with a total of 1,700,000; Germany was second with 1,600,000, and the United States last with 50,000.

Approximate figures for other nations were: France, 1,385,300; England, 800,000; Italy, 460,000; Turkey, 250,000; Bslgium, 102,000; Roumania, 100,000; Serbia and Montenegro, 100,000.

LONDON UNIVERSITY ASKING A GRANT.

An investigation into the question of Government support of Western University and Queen's University in order to find some better and more scientific method of aiding them is receiving the consideration of the Ontario Government, according to a statement made by Sir William Heart, to a deputation from the city of London and surrounding counties, which waited upon the members of the Cabinet to ask for \$150,000 for London University. The request was made on behalf of the project to extend the accommodation of the faculty of medicine. Already \$100,000 has been voted by the citizens of London, and the site, costing about \$22,000, has been secured. The balance is needed to put up the type of

building required. The Prime Minister gave the deputation an encouraging answer, but it cannot be said that he promised anything definitely. He assured the Londoners, however, that he would take the matter up with his colleagues to see if finances permitted assistance to be given, if so it would give him pleasure to help. In the meantime he suggested that a memorandum embodying the representations made be sent to him, together with a statement—and he emphasized the necessity of this—showing what it was proposed to do in the way of maintenance if the building was built.

The deputation was introduced by Sir Adam Beck, and among the speakers were Bishop Williams, of Huron; Bishop Fallon, of London; Mayor Somerville, Dr. Braithwaite, president of Western University, and Dr. McCallum, dean of the Faculty of Medicine at the University.

BRITISH MINISTER OF HEALTH.

In the last four years about 700,000 of the pick of the British race was lost on the battlefield, declared Dr. Christopher Addison, president of the local board, in moving in the House of Commons recently the second reading for the board to create a Ministry of Health, and in October, November and December of last year the mortality from influenza in the United Kingdom was as high as the average monthly losses during the war from war causes. Under the terms of the board the Minister said the various health and insurance bureaus which are now connected with the Local Government Board, the Home Office and the Ministry of Pensions, would be amalgamated. In regard to the poor law, it was proposed to thus disentangle sickness from destitution.

COMMUNICABLE DISEASES.

Following is a table showing the cases of communicable diseases reported to the Health Department of Toronto during the month of February:

Disease.	No. of cases.
Diphtheria	165
Scarlet fever	127
Typhoid	2
Measles	10
Smallpox	2
Tuberculosis	116
Chickenpox	83
Whooping cough	20
Mumps	52

DR. HENRY S. TANNER.

Dr. Henry S. Tanner, 87 years old, died in San Diego, Cal., at the County Hospital, after an illness of nearly a year. Doctor Tanner's practical application of the theory that health and long life depended upon long periods of fasting attracted world-wide attention a number of years ago.

No relatives of the aged doctor have been located. Before coming to San Diego about ten years ago he lived in Los Angeles, and in former years made his home in Litchfield, O.

For several weeks in the summer of 1880 Dr. Henry S. Tanner was the most talked of man in America, if not in the world. This came about through his fast of forty days, conducted at New York under strict medical and scientific supervision, he being the first person of modern times voluntarily to undergo such ordeal.

Dr. Tanner first came into notice in 1877 at Minneapolis, Minn., through his determination to abstain from food as an expedient of relief from asthma, rheumatism and an ailment of the heart. A 10-day period was fixed upon, that being then considered about the limit of human endurance.

Finding himself benefited from the first, according to the conviction which he held to until the end of his life, he continued the fast for forty-two days.

Owing to widespread doubt, especially in medical circles, as to the genuineness of Tanner's exploit, he offered to repeat the performance under any conditions which might be named. After long negotiations it was arranged that the test should be made under the supervision of a prominent medical college of New York city, and it commenced at noon, June 28, 1880.

Extraordinary precautions were taken against possible deception, the subject being confined to a bare room and constantly watched. For fourteen days he was permitted neither water nor exercise. After that, in response to public clamor, he was allowed a short daily ride in Central Park and water from a spring therein.

Large wagers were posted for and against the proposition of his holding out for forty days, the time fixed upon. The newspapers devoted whole pages to the story, many keeping reporters constantly at the door of the room.

Tanner won the test, abstaining from food for exactly forty days. Physicians in all parts of the world telegraphed warnings as to the manner of his breaking the fast, and it was freely predicted that he would not long survive the first food. The subject disregarded all advice, first

partaking of a peach and then a large slice of watermelon. No ill-effects followed.

Tanner was born in England, February 7, 1831. Previous to his first fast his health was so precarious that he anticipated an early death. Thirty-seven years later, at the age of 83, he announced that since the fast in 1877 his health had been invariably excellent.

PROPOSED MEDICAL CHANGES IN BRITAIN.

Changes in England's system of medical service whereby the "panel" plan now applicable to the poor would be extended to all classes are proposed by a Government committee.

For a number of years, under a Health Insurance Act, wage earners have been called upon to make a small weekly payment to a fund which the Government uses to provide medical attention for all classes of the population affected by the insurance law. Every practising physician must treat a certain number of the so-called "panel" patients, receiving pay for this work from the Government. The new scheme provides for whole-time medical service, and practitioners entering it are to be graded into five classes corresponding to military rank, ranging from lieutenant to colonel.

Class 1 would be paid \$7,500 a year; class 2, \$5,000, and so on down to class 5, which would pay \$2,000. Examinations would be held for promotion to higher classes. Expenses incurred by the practitioner for drugs, appliances, clinics and travelling expenses would be paid by the Government.

Each physician would be expected to look after between 2,000 and 3,000 patients. The higher classes of medical men would deal chiefly with administrative work and with the giving of consultative advice.

The patients would be expected to attend a surgery in the morning. Evening consultation would be discontinued and less visits would be paid at night to patients than is done now. Work out of hours would be taken over by juniors.

All hospitals would be taken over by the Government under this plan.

According to the secretary of the Medico-Political Union, there is a flow of protests from physicians in the army against the scheme.

"Not one-third of the doctors want it," he said. "A clinical service is an abhorrence to both medical men and the public. We are not opposed to State control of hospitals. What we object to in the clinical system is the destruction of the personal relationship between practitioner and patient, and the abolition of free choice of doctor. The women will be dead against it."

C. A. M. C. NEWS. MONTH OF FEBRUARY, 1919.

Appointments.—Major Thomas Lowell Butters is detailed to perform the duties, temporarily, of D.A.D.M.S., M.D. No. 2. Major (a Lt.-Col) William George Turner, is posted for duty as officer i/c orthopædic surgery in Ste. Anne de Bellevue Military Hospital. Capt. Andrew Pritchard McKinnon is posted for duty under the A.D.M.S., M.D. No. 10. Lieut.-Col. Edward Cooper Cole is posted for duty as officer commanding Convalescent Hospital, M.D. No. 2. Lieut.-Col. Ethelbert Browne Hardy, D.S.O., is posted for duty as officer commanding St. Andrew's Military Hospital, vice Major T. D. Archibald. Major Benjamin Leslie Guyatt is posted for duty as officer commanding Base Hospital, Toronto, vice Lieut.-Col. E. B. Hardy. Major John George Brown to be Lieut.-Col. while employed as officer i/c medicine of Ste. Anne de Bellevue Military Hospital. Capt. Roswell Park is posted for duty under the A.D.M.S., M.D. No. 4, from M.D. No. 2. Capt (a/Major) Hamish Henry McIntosh is posted for duty as officer i/c X-ray work at the Esquimalt Military Hospital, and to retain the acting rank of major whilst so employed. Capt. Herbert Leo Sims (A.M.C.) is posted for duty at the Water Street Hospital, Ottawa. Capt. Roy Hindley Thomas, M.C., is posted for duty under the A.D.M.S., M.D. No. 2. Major George Greer is posted for duty in the office of the Director-General of Medical Services, Ottawa. Lieut.-Col. John Morris Nettleton is posted for duty as acting A.D.M.S., M.D. No. 12.

Promotions.—Capt. Robert Hugh Arthur to be major. Lieut. Jacob Rosenbaum, to be captain. To be action lieutenant-colonels: Majors Charles McMane, John William McIntosh, Charles Woollard, Angus William McPherson, Harold E. Ridewood. To be actinb majors: Captains Michael James Carney, Almon Andrew Fletcher, Samuel Ross de L. Hewitt, George Alexander Campbell, John Henry Birch, Edward Kirkpatrick McLellan, John Johnston, Alfred Chatwin Scott, Daniel Rolston Dunlop, George H. Manchester, George Chester Lawson, Seymour Traynor, Thomas Albert Watterson, Thomas John Simpson, Gerald Shaw Williams, George Arlington Brown, Charles E. McMehan, Ernest Fielen Nivin, John V. Williams, M.C., William Baillie, Harry Morell, Gordon Wilson Armstrong, D.S.O., Horatio Fitzroy Chosholm. To be captains—Lieutenants Evelyn Edward Robbins, William John Cochrane, Floyd Cecil Stewart.

Returned from overseas—Capt. Thomas Alphonsus Lebetter, Capt. T. W. Walker, Capt. P. H. McNulty, Capt. Edwin James Ferg, Capt. A. H. Wallace, Capt. L. A. Roy, Hon. Lt.-Col. D. Law, Capt. John Neil MacLean, Capt. N. MacDonald, Capt. Andrew Pritchard McKinnon, Capt. Thomas C. Campbell, Capt. Edward Hiram Freeman, Major Her-

bert Alger, Capt. George Frederick Laing, Lt.-Col. David Alexander Whitton, Major Herbert William Wadge, Capt. Emmet Andrew McCusker, Lt.-Col. W. J. C. Maloch, Major Robert Frederick Flegg, Major Frederick George Logie, Major H. L. Jackes, Capt. D. S. Johnstone, Capt. W. Goldie, Capt. Esau A. Greenspon, Major George G. Greer, Capt. C. F. Dunfield, Major S. M. Fisher, Capt. E. C. Whitehouse, Major Thomas Logan Towers, Colonel H. R. Casgrain, Major C. A. McDiarmid.

Retirements—Capt. Willis Abrun Hutton, on general demobilization. Capt. Isaac Napoleon Vandandaigue, on general demobilization. Capt. Albert James Barlow Hebert, on general demobilization. Major Christopher Henry Chandler Bell, medically unfit. Lieut. Antoine Charles Lortie, on general demobilization. Lieut. A. D. Beaudin, on general demobilization. Capt. George F. Laing, on general demobilization. Major Angus Alexander Campbell, on general demobilization. Capt. Roy Percy Smith, on general demobilization. Capt. Colin Alexander Campbell, on general demobilization. Major Frederick James Munn, on general demobilization. Colonel John Munro Elder, on general demobilization. Capt. Thomas Chambers Campbell, on general demobilization. Major John Cameron Wilson, on general demobilization. Capt. Edward Hiram Freeman, on general demobilization. Lieut.-Col. Charles Edward Doherty, on general demobilization. Capt. Robert Henry Foster, on general demobilization. Capt. Charles Lamber Brooke Stammers, on general demobilization. Major Frederick George Logie, on general demobilization. Major Keith Forrester Rogers, on general demobilization. Capt. Neil Edward MacDougall, medically unfit. Capt. John Rankine, on assuming duty with the Board of Pension Commissioners. Major Edward Browne O'Reilly, on general demobilization. Lieut.-Col. John Leo Chabot, on general demobilization. Capt. Norman Straham Shenstone, medically unfit. Capt. Charles Bertrand, on general demobilization.

CONTAGIOUS DISEASES IN ONTARIO FOR JANUARY.

There is an increase for the month of 86 cases of various forms of the disease over December, a further indication that the scourge is widespread. The comparative statement shows:

	January.	December.
Syphilis	125	64
Gonorrhoea	138	110
Chancroid	1	4
	264	178

Referring to the Spanish influenza epidemic, the report states that it does not seem to prevail to the same extent as it did in the earlier months of the epidemic. This statement is substantiated by a marked decrease in the number of deaths reported for January, as compared with the first two months of the epidemic. Last month the leaths totalled 1,514, whereas in October—when the malady was at its worst—the total was 3,015, in November 2,608, and in December 1,568. The returns for January include 400 deaths that occurred during the last two months of 1918, which delinquent undertakers in Toronto, Hamilton and London failed to report. The total number of deaths since 1st October is 8,795.

With the exception of tuberculosis, the report shows that there is a marked falling off in the number of cases and deaths from communicable diseases. Even from that disease there is a decrease of one as compared with the same month of last year. The greatest decrease is in the number of cases of measles and whooping-cough. The large number of deaths from tuberculosis last month, it is said, is due entirely to the more complete returns being made by the undertakers during the last few months. The comparative statement is as follows:

	1919.		1918.	
	Cases.	Deaths.	Cases.	Deaths.
Smallpox	37	0	79	0
Scarlet fever	206	4	337	7
Diphtheria	294	25	394	32
Measles	5	0	1013	13
Whooping cough	56	6	367	8
Typhoid fever	11	2	24	7
Tuberculosis	186	156	187	60
Infantile paralysis	4	2
Cerebro-spinal meningitis .	4	4	4	3
	<hr/>	<hr/>	<hr/>	<hr/>
	1804	197	2409	132

DEATH TOLL IN PROVINCE.

The report of the Provincial Board of Health for February shows a decrease in the number of influenza cases. The total deaths from all causes in the Province was 3,331, and of this number 831 were from Spanish influenza and pneumonia, or 24.3 per cent. In Toronto the number of deaths was 129; Hamilton, 24, Sault Ste. Marie, 35, Brantford 18; Ottawa, 57; Sudbury, 27; London, 14; and in Windsor, 15.

Hereditary syphilis caused the deaths of seven babies under three years of age and, all told, there were 243 cases of venereal disease during the month, as compared with 264 during January, 1919. The comparative table for the month shows:

	1919.		1918.	
	Cases.	Deaths.	Cases.	Deaths.
Smallpox	41	0	91	0
Scarlet fever	337	11	357	4
Diphtheria	329	32	289	18
Measles	21	1	861	6
Whooping cough	41	2	168	6
Typhoid	12	3	36	3
Tuberculosis	226	144	131	69
Infantile paralysis	1	0
Cerebro-spinal meningitis	14	13	15	10
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DOMINION MILITARY ORTHOPEDIC HOSPITAL, TORONTO.

The formal opening of the Dominion Orthopædic Hospital, in the National Cash Register Building on Christie Street, Toronto, took place recently, when Hon. S. C. Mewburn, Minister of Militia; Sir William Hearst and Brig-Gen. J. A. Gunn joined in the ceremonies and the official welcoming of patients. The Minister of Militia pointed out that the building had been prepared specially for the care of orthopædic cases, and he trusted that the men would be as comfortable as it is possible to make them. He paid a fine tribute to all the wounded men, to the Canadian Red Cross nurses and to the medical men who had given their activities to the service. He added that there are now 65 hospital units in Canada, and 59 overseas. Since the war, there have been 195,717 admissions to the hospitals in Canada, and 492,960 to the Canadian hospitals overseas, and he believed the medical services had stood up well under the strain.

TORONTO'S STATISTICS FOR FEBRUARY.

The number of marriages recorded showed the large decrease of 97, compared with February of last year, and of 164, compared with January of this year. The number of deaths are 30 less than in January of last year and 231 less than in January of this year, which would seem to indicate that the influenza epidemic had spent its force. But the deaths from contagious diseases are given as normal. The figures are

as follows: Births, 913; marriages, 256; deaths, 497. In February, 1918: Births, 900; marriages, 353; deaths, 527. In January, this year: Births, 996; marriages, 420; deaths, 729.

The number of new cases of contagious diseases reported to the Health Department appear to indicate that the general health of the city is not up to the standard, diphtheria and scarlet fever being very prevalent, but not to an alarming extent, while measles are almost unknown, only 10 cases having been reported for the month, as compared with 344 in February last year. The most extraordinary feature of the returns is the reporting of 116 cases of tuberculosis, as compared with 44 in February, last year, and 41 in January, this year. No explanation for this was forthcoming from the health officials, but it is thought to be due to the large number of invalided soldiers that have reached the city within the past 30 days, quite a number of them suffering from bronchial complaints in various forms, which does not necessarily mean that they are incurable. Two cases of smallpox were reported during the month. They were of a very mild character, and the patients have recovered.

DR. REEVE'S BEQUESTS.

The deceased left \$1,000 to each of his sisters, Ellen Rosebrough and Betsy Lavall, and to Colina Rachel Fraser Campbell, "as a recognition of her faithful service to my family." The trustees are also to pay \$1,000 due on two subscriptions made to the endowment fund of Victoria University by the deceased, and to set aside a sufficient sum to provide \$100 a year, of which \$50 is to be given to the Toronto Faculty of Medicine for the "R. A. Reeve Prize," to be awarded annually as the Faculty may determine; \$25 to the Library Endowment Fund of the Academy of Medicine, and \$25 to the Building Endowment Fund of the Academy, each of these to be known as the "R. A. Reeve Gift."

The residue of the estate, about \$65,000, is to be equally divided between the University of Toronto, the Toronto General Hospital, Methodist Missionary Society, Superannuation Fund of the Methodist Church, Methodist Union of Toronto, Methodist Deaconess' Society, Upper Canada Bible Society, Upper Canada Tract Society, and the Salvation Army.

COL. CASGRAIN AND MRS. CASGRAIN HOME.

Wearing the Croix de Guerre and the Croix de Chevalier, awarded by the French Government for devotion to French soldiers, Colonel H. R. Casgrain and Mrs. Casgrain, who were in the service of the Allied armies for more than four years, were welcomed home 2nd March by more than 10,000 resident of Windsor and the neighboring cities.

Colonel Casgrain went overseas in 1914 with one of the Canadian Stationary Hospitals. He was sent to the Isle of Lemnos, in the Aegean Sea, when the Dardanelles campaign was on. After recovering from a dangerous illness, he went to Egypt and then to England, where he had charge of one of the largest hospitals.

Mrs. Casgrain, soon after her husband embarked for England, volunteered to work as nursing sister. For almost three years she labored among the sick and wounded soldiers of Canada, England and France, completing four years' service in St. Cloud, France, as a canteen worker in the hospital in which her husband had charge.

SLEEPING SICKNESS.

The first death in this city from "sleeping sickness" was reported to the Health Department recently. Erskine W. Martin, a clerk, 35 years old, became ill five days before, went to sleep a day later, and remained in a state of coma until he died, according to the attending physician.

Health Commissioner Copeland, declaring only 18 cases of the malady had been reported in Europe, and three others in this country, of which two had been fatal, said there was no cause for alarm. The symptoms, he added, were sore throat, headache and drowsiness, but these in a mild degree, might also be accompaniments to spring fever.

Dr. Copeland explained that the disease, known as encephalitis lethargica or epidemic coma, should not be confused with sleeping sickness, which is limited to tropical Africa and is transmitted by the tsetse fly.

He said there are eight suspected cases in New York, all in private homes.

The disease was first observed in the latter part of the 17th century in Germany. It appeared in Italy and Hungary in 1890, and in parts of Europe and the United States five years later. The first case in England was in 1918, when five persons became ill with it during April.

FRANCE'S BIRTH AND DEATH RATE.

France's civilian population in four years has decreased by considerably over three-quarters of a million, without including the deaths in occupied Northern France, nor the losses due directly to the war.

Official statistics show that in 1913 the births outnumbered the deaths by 17,000. But this slight excess disappeared in the following year, since which time the deaths have outnumbered the births—in 1914 by more than 50,000, and in 1915, 1916 and 1917 by nearly 300,000 in each year. The total excess of deaths over births for these four years is given as 883,160.

Births, which numbered approximately 600,000 in 1913, dropped to 315,000 in 1916, and 343,000 in 1917, while the deaths increased, but not in comparable proportions; so that the total decrease in population was due to the great diminution in births, and not to any great increase in deaths.

The statistics cover 77 departments, excluding 11 invaded departments and not including 1,400,000 persons killed in the war.

IMPORTANT CONFERENCE OF PUBLIC HEALTH OFFICERS. FEBRUARY 3RD, 1919.

The first steps toward the organization of a social hygiene programme for Canada were taken, when representatives of a number of the provinces met in Ottawa at the call of the Acting Premier, Sir Thomas White, to discuss legislation for the control of venereal diseases.

This important conference was brought together at the suggestion of the military authorities. Each province was invited to send its chief Health Officer.

While some of these were unable to be in attendance, those provinces which could not send representatives sent telegrams expressing their regret, as well as their cordial sympathy with the objects of the conference. Those present were:—Dr. Elzear Pelletier, Sec. Superior Board of Health, Que.; Dr. A. H. Desloges, Gen. Med. Supt. of the Insane, Que.; Dr. Arthur Simard, Pres. Superior Board of Health, Que.; Dr. M. M. Seymour, Commr. of Health, Sask.; Mr. Vincent Massey, who acted as Secretary to the Conference; Hon. J. A. Calder, Minister of Immigration and Colonization; Maj.-Gen. J. T. Fotheringham, D.G.M.S.; Dr. P. H. Bryce, Chief Medical Officer, Dept. of Immigration, Ottawa; Dr. Gordon Bell, Provincial Health Officer, Manitoba; Dr. Geo. G. Melvin, Chief Medical Officer of Health, New Brunswick; Capt. Gordon Bates, Toronto; Hon. Wm. F. Roberts, Minister of Health, New Brunswick; J. W. S. McCullough, Lt.-Colonel, C.A.M.C., Chief Officer of Health, Ontario; Hon. W. D. McPherson, Provincial Secretary, Ontario; Wm. Hutchinson, Major, C.A.M.C., Montreal; Dr. J. A. Hutchinson, President Canadian Public Health Association, Montreal.

The chair was taken in the morning by the Hon. J. A. Calder, and in the afternoon by Hon. W. D. McPherson, Provincial Secretary of Ontario. At the morning session, the Conference was addressed by Major-General J. T. Fotheringham, D.G.M.S., Major Wm. Hutchinson, C.A.M.C., and Captain Gordon Bates, C.A.M.C., Toronto.

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During the afternoon session, an important discussion took place in which the many aspects of the question were dealt with. The following resolutions were passed:—

1. Whereas in the "Reconstruction of Canada" following the great war, there are very many important problems that must be taken into consideration, such as finance, soldiers' re-establishment, labor, etc. Among these the conservation of the health and lives of the people is equally if not most important to be dealt with, as life is the country's greatest asset.

Therefore, Resolved that this Conference, whose personnel is made up by representatives from the various Provincial Governments of Canada, together with their Chief Medical Officers, assembled at Ottawa this third day of February, 1919, at the call of the Acting Premier, the Honourable Sir Thomas White, for consideration of the venereal disease question, do memorialize the Government of Canada that it is in the interests of the future health and life of the citizenship of Canada that there should be immediately established a Federal Department of Health.

2. That the representative of the several Governments and Health Departments of the Provinces of Saskatchewan, Manitoba, Ontario, Quebec, and New Brunswick assembled in conference, at the call of the Acting Premier of Canada, are agreed, subject to the consideration of the governments of the respective provinces, that the following general principles are necessary in any provincial legislation looking to the prevention and control of venereal diseases in the said provinces:—

- A. Compulsory notification.
- B. Compulsory treatment.
- C. Standardized treatment.
- D. Authority to examine persons suspected of being affected with venereal disease.
- E. Prevention of quack treatment, quack remedies, and of the advertising of such treatment and remedies.
- F. Right of entry of Public Health authorities.
- G. Prevention of infection—see Ontario Act, Sec. No. 8.
- H. Power to make regulations, by Order-in-Council, Sec. 13, Ontario Act.
- I. Liability of municipalities or local authorities—Sec. 14 (1) Ontario Act.
- J. Penalties—Sec. 13 (j) Ontario Act.

3. That the Criminal Code of Canada be amended so that a person who is suffering from venereal disease in a communicable form, who knowingly or by culpable negligence communicates such venereal dis-

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ease to any person, shall be guilty of a criminal offence. Provided that (a) a person shall not be convicted under this section if that person proves that he or she had reasonable grounds to believe that he or she was free from venereal disease in a communicable form at the time the alleged offence was committed, and (b) no person shall be convicted of any offence under this section upon the evidence of one witness unless such witness be corroborated in some material particular by evidence implicating the accused.

4. In view of the fact that the Government of Great Britain supports the treatment of venereal disease in the proportion of 75 per cent. to that of 25 per cent. paid by the local authorities, this conference respectfully urges upon the Government of Canada to provide financial assistance to the provinces on a scale similar to that in Great Britain, for the treatment of these affections.

5. That this conference suggests that all seamen coming within the jurview of the Immigration Act, be examined for freedom from venereal diseases before being allowed ashore at Canadian seaports.

6. Whereas the successful control of venereal diseases depends, among other factors, upon facilities for the free or readily available and adequate treatment of these diseases, and

Whereas the cost of one of the remedies for the cure of syphilis, viz., Salvarsan, and remedies of that character, is excessive, and

Whereas the production of this remedy in Canada is monopolized by two persons or firms, who have been licensed to carry on such production,

Therefore, be it resolved, that this conference do respectfully recommend that the Government of Canada shall give the right of production of Salvarsan or other remedies of this nature to any person or firm or corporation satisfying the head of the Health Department of any province, or, in the event of the establishment of a Federal Department of Health of the head of that Department, of his or their ability to successfully produce a satisfactory product of this kind.

7. That it is the feeling of this conference that a further meeting representative of social agencies should be called to discuss the constructive social measures which may be undertaken to combat the existence of venereal diseases in the Dominion.

8. That legislation be made to prevent the advertising, selling or giving of quack medicines to cure venereal disease.

While no formal resolution was passed, it was the strong feeling of the conference that legislation dealing with venereal disease, to be effective, should be supplemented by the further development of the machinery necessary to enforce it.