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The Canada Lancet

VOL. LIII

TORONTO, MARCH, 1920

No. 7

EDITORIAL

THE ONTARIO MEDICAL ASSOCIATION.

The time is rapidly approaching for the holding of the fortieth annual meeting of the Ontario Medical Association. The indications are the programme will be a good one. It is to be hoped that the attendance will be very large.

It may have transpired in the past that things may have been done that gave offence to some; but this is temporary and personal, and should be forgotten in the larger view that the association is what must be kept in mind, and loyally supported, for long after persons and minor features have passed away, the Association shall remain and be doing great work for the medical profession.

We have always stood firmly by the Ontario Medical Association. It has done noble work in the past, and is on the threshold of doing much better for the future. Let us give some reasons why every practitioner of the Province ought to become a member, and pay his fee, whether he may be able to attend or not.

In the first place about 3,500 contributing \$2 a year would furnish the substantial sum of \$7,000. With such an income much could be done in furthering the lectureship scheme of the Association. It will be admitted by all that the giving of lectures in various parts of the Province would be a boon of the utmost value to the doctors in these districts. It will appear that attendance on these lectures would become possible when they are delivered near one's home; while attendance might be quite impossible if they were delivered in a distant city.

Then again, the medical profession has too long remained in an unorganized condition. Times are rapidly changing. New forces and

ideas are in the air, and these are bound to make their impress upon public opinion and legislation. The medical profession should be in a position to speak with a united voice. The only body in Ontario, so far, that represents the entire profession is the College of Physicians and Surgeons. This body, however, is largely for maintenance of a proper standard of education.

The organization that can best speak for the whole profession is the Ontario Medical Association. If the officers of the Association could state that they represented the whole profession and not merely a few hundreds, the weight that would be attached to the words of these officers would be in proportion increased. If for lack of organization and a united front the profession does not reach its ideals and secure its rights, it will only have itself to blame.

All your strength is in your union,
All your weakness is in discord.

MENTAL HYGIENE COURSES.

Seven courses in eight weeks' time—this is the bill-of-fare prepared for nurses and social workers who plan to take advantage of the extension work in mental hygiene offered by the University Department of Social Service. As arranged in the weekly schedule, allowing from one to three hours each, however, the programme does not appear quite so formidable.

Foremost in the list of courses comes psychiatry, then psychology, with mental testing; neurology; child welfare, with special attention to the mentally abnormal child; occupational therapy; social conditions as related to mental health, defect and disease, and economic conditions in similar relations.

Special lessons will also be given on heredity, immigration, etc., in their bearing on questions of mental hygiene. Ten hours a week are to be set aside for field work, arranged under three heads—attendance at clinics, visits of observation and practice work under direction.

The visits will include Mimico, Whitby, Alexandra School, Mercer Reformatory and other agencies where the presence of mental defectives creates problems.

Lecturers for the composite course, which begin April 19th, are: Prof. R. M. MacIver, Dr. C. K. Clarke, Dr. C. M. Hincks, Dr. Eric K. Clarke, Dr. Gordon S. Mundie, Prof. W. G. Smith, Dr. E. A. Bott, Dr.

E. J. Pratt, F. N. Stapleford, Miss Lucy Brooking, N. L. Burnette and Miss A. C. McGregor.

A special extension course certificate will be issued to all who qualify by attendance, field work and such tests as the department arranges in connection with the instruction.

Now that the care of the feeble-minded and mental defectives is coming to the front for proper consideration and effective treatment it must be admitted this course should prove most useful. It should attract a large attendance. The scope for helpful work along this line is very great, and there is room for many workers.

THE CHIROPRACTORS AGAIN.

In the early days of February a deputation of this cult waited upon the present government with the view of presentating the case of chiropraxy, and securing some sort of legal recognition.

One of the stock arguments used was that the medical profession was opposing their claims through a desire of having a monopoly of the right to attend sick people. This is entirely false. The medical profession is on record many times over to the effect that all it wishes is the same standard for all. After securing the license of the medical council then one may practise under any name he pleases, or by any method he chooses, however, foolish they may be. This is just what the chiropractors do not wish. On the contrary they are seeking a short cut to a means of making money by a fake system of treatment.

Chiropraxy is an unmitigated humbug. It has not the least foundation in science to rest upon. The theory of some sort of spinal displacement pressing on some nerve as the cause for all sorts of disease is absolutely incorrect and is wild enough to suit the frenzied brain of a Zulu.

The deputation took occasion to condemn Justice Hodgins' report. It would be expected to do so. In the report the system of chiropraxy is placed where it properly belongs, namely, among the things which should be given no countenance or status to practise its methods upon suffering humanity.

Then the deputation asked that until an act be passed, chiropraxy be given such standing as an order-in-Council could grant them. How beautiful! By this means the hope is to secure some claim to vested rights which they have not at present. As a cancer is to the body, so is chiropraxy to the healing art.

ORIGINAL CONTRIBUTIONS

OSLER MEMORIAL ADDRESS.

By Rev. T. C. S. Macklem, M.A., D.D., LL.D.

WE are met here to-day in loving memory of a dear friend and a great fellow-countryman; one who was known and honoured wherever the English language is spoken, and in many lands of foreign tongue. At a score of centres in the British Empire and in the United States similar memorial services are being held—a spontaneous tribute of affection and admiration.

Sir William Osler was one of the world's greatest physicians and teachers; but he was more. He was a lover of mankind, a giant amongst his fellows, an idealist for whom the "Idea of the Good" was supreme. His personality made an impression upon his own generation and upon the younger generation that came under his teaching, such as no mere professional skill, however great, could have done.

The esteem in which he was held and the wide circle of his influence are shown in some measure, though far from adequately, by the academic degrees and other distinctions which were conferred on him with a prodigality indicative of the abounding enthusiasm created everywhere by the charm of his personality, the depth of his learning, and the greatness of his achievements. His earliest alma mater, the University of Trinity College, Toronto, and the University of Durham, England, conferred on him the degree of Doctor of Civil Law. The degree of Doctor of Laws he received from the Universities of Toronto, McGill, Aberdeen, Edinburgh, John Hopkins, Yale, and Harvard. The Universities of Oxford, Cambridge, Dublin, Liverpool, and Leeds conferred on him the degree of Doctor of Science; and he was fittingly honoured also by the Academy of Medicine, Paris, the University of Christiania, Norway. With unrivalled distinction, he occupied four Professional Chairs, having been successively Professor of the Institutes of Medicine in McGill University; Professor of Clinical Medicine in the University of Pennsylvania; Professor of Medicine in Johns Hopkins University; and Regius Professor of Medicine in the University of Oxford. In 1911 he was created a Baronet of the United Kingdom.

Sir William Osler was born at Bond Head, Ontario, in 1849. His mother was a woman of extraordinary sweetness and strength of character, who left a home of refinement in the Old Land, and came to Canada at a time when the ocean crossing took over seven weeks, and the journey from Quebec to Bond Head occupied several days. His father

began adult life at sea, and presently joined the Royal Navy. After some years spent in that profession, and with a brilliant future in it opening before him, he responded to an urgent call from Canada for missionaries. Leaving the Navy he went to Cambridge, where he took an honour degree, after which he was married to his young bride, was ordained by the Archbishop of Canterbury to the Ministry of the Church, and left for Canada to enter upon a fruitful ministry of fifty-eight years.

Of such forebears was Sir William Osler born, and in the salutary environment of a humble parsonage in a sparsely settled area of this Province his early years were spent. He carried with him through life, and developed to a high degree, his parental heritage of sweetness and loveliness of disposition, strength of will and character, high ideals, intellectual greatness, and a devout faith.

Sir William Osler's devotion to Literature was so marked a characteristic of his life that some reference to it, though necessarily a brief one, seems to be called for.

If Dr. Osler had devoted himself to literature as a profession, there can be little doubt that he would have won as high a place in the literary world as he did in medicine. He himself called it his avocation—medicine was his vocation, and literature his avocation. He found in it welcome relief from the strain of his profession, and it was the delight of his hours of leisure. But this does not mean that his knowledge of literature was superficial. On the contrary it was profound and far-reaching. His writings show an intimate acquaintance with the ancient Classics and the sacred Scriptures; with Shakespeare, Milton, Goethe, Tennyson, Browning, Keats and Shelley; with Sir Thomas Browne, Erasmus, Coleridge, Herbert Spencer; with Mathew Arnold and Cardinal Newman; with Montaigne, Emerson, Oliver Wendell Holmes, and a host of others. His ability to draw upon these authors for apt quotation and striking illustration showed an intimacy of knowledge and a skill of handling that were simply marvellous. His predecessor in the presidency of the Classical Association of London, Professor Gilbert Murray, referred to him as being equally distinguished as a physician and as a man of letters—high praise indeed, when said by an outstanding litterateur concerning one who has been publicly acclaimed as “the best known and best loved physician that this or any country has produced.”

Of Dr. Osler's medical writings I have no personal knowledge. I can only say that which everyone knows, that they are placed in the

first rank by the judgment of the medical profession in the leading countries of the world.

The exigency of time forbids more than the briefest acknowledgment of Dr. Osler's War-work, of which it must suffice to say that it was characteristic of the man. He gave of his best without stint, without reserve, and with a thoroughness of self-sacrificing devotion which neglected nothing that his immense powers could compass. That he gave also his only son was a tragedy which tested, and found to be not wanting, that which he himself years before had declared to be one of his personal ideals: "To cultivate such a measure of equanimity as would enable me to bear success with humility, the affection of my friends without pride, and to be ready when the day of sorrow and grief came to meet it with the courage befitting a man."

Three dominating ideas appear like guiding stars in Dr. Osler's life—Work, which he called the master-word in Medicine; Fellowship with great minds, and Charity. Listen to his own words about each of these:—

"It seems a bounden duty on such an occasion," he said to the undergraduates of the University of Toronto, in 1903, "to be honest and frank, so I propose to tell you the secret of life as I have seen the game played, and as I have tried to play it myself. You remember in one of the Jungle Stories that when Mowgli wished to be avenged on the villagers he could only get the help of Hathi and his sons by sending them the master-word. This I propose to give you in the hope, yes, in the full assurance, that some of you at least will lay hold upon it to your profit. Though a little one, the master-word looms large in meaning. It is the 'open sesame' of every portal, the great equalizer in the world, the true philosopher's stone, which transmutes all the base metal of humanity into gold. Not only has it been the touchstone of progress, but it is the measure of success in every life. Not a man before you but is beholden to it for his position here, while he who addresses you has that honour directly in consequence of having had it graven on his heart when he was as you are to-day. And the master-word is WORK; a little one, as I have said, but fraught with momentous sequences of you can but write it on the tablets of your hearts, and bind it upon your foreheads."

Concerning Fellowship with great minds, Dr. Osler had many things to say, and he said them often and well. Here is one of them:—

"The all-important thing is to get a relish for the good company of the race in a daily intercourse with some of the great minds

of all ages. Start at once a bed-side library, and spend the last half-hour of the day in communion with the saints of humanity. There are great lessons to be learned from Job and from David, from Isaiah and St. Paul. Taught by Shakespeare you may take your intellectual and moral measure with singular precision. Learn to love Epictetus and Marcus Aurelius. Should you be so fortunate as to be born a Platonist, Jowett will introduce you to the great master through whom alone we can think in certain levels, and whose perpetual modernness startles and delights. Montaigne will teach you moderation in all things, and to be 'sealed of his tribe' is a special privilege."

As to Charity—or Love—that spirit which enveloped the whole man, and emanated from him in a thousand forms of helpfulness, cheerfulness, and unselfish devotion—this Dr. Osler left as his parting word to the medical profession of the United States, on the eve of his departure for Oxford:—

"It may be," he said, "that in the hurry and bustle of a busy life I have given offence to some—who can avoid it? Unwittingly I have shot an arrow o'er the house and hurt a brother—if so, I am sorry, and I ask his pardon. So far as I can read my heart I leave you in charity with all. I have striven with none, not, as Walter Savage Landor says, because none was worth the strife, but because I have had a deep conviction of the hatefulness of strife, of its uselessness, of its disastrous effect, and a still deeper conviction of the blessings that come with unity, peace, and concord. And I would give to each of you, my brothers—you who hear me now, and to you who may elsewhere read my words—to you who do our greatest work labouring incessantly for small rewards in towns and country places—to you the more favoured ones who have special fields of work—to you teachers and professoros and scientific workers—to one and all, through the length and breadth of the land—I give you a single word as my parting commandment:—

"It is not hidden from thee, neither is it far off. It is not in heaven, that thou shouldest say. 'Who shall go up for us to heaven, and bring it unto us, that we may hear it, and do it?' Neither is it beyond the sea, that thou shouldest say, 'Who shall go over the sea for us, and bring it unto us, that we may hear it, and do it?' But the word is very nigh unto thee, in thy mouth and in thy heart, that thou mayest do it—CHARITY.

These guiding stars of Sir William Osler's life do not differ greatly from St. Paul's classification: Faith, Hope, Charity. "The greatest of these is Charity"; and that Dr. Osler, too, made the greatest.

St. Paul's "Hope" embraces that fellowship with the saints of humanity, that conviction of unflinching goodness and progress, that cheery outlook on life and abounding optimism, which radiated from Dr. Osler and infected all with whom he came in contact.

It remains then only to speak of Dr. Osler's faith, which found constant expression in the high ideals of his life. His personal conversation, his published utterances, and his whole manner of life bear eloquent testimony to a deep and abiding faith in God, in Christ, and in the life that is to come. When he urged his students to establish a bed-side library, and spend the last half-hour of the day in communion with great minds, and gave them a list of ten books whereby to form their characters, he placed first on the list the Old and New Testaments of the sacred Scriptures. In a Sunday evening address delivered to the students of Yale University, in 1913, he expressed at once his faith in true Christianity and his impatience of any dogma that veils the simple teachings of Jesus Christ, when he said: "Begin the day with Christ and His prayer—you need no other. Creedless, with it you have religion; creed-stuffed, it will leaven any theological dough in which you stick. . . . Learn to know your Bible. In forming character and in shaping conduct, its touch has still its ancient power." His personal application of Christianity was intensely practical: "We are here," he said, "not to get all we can out of life for ourselves, but to try to make the lives of others happier. This is the essence of that oft-repeated admonition of Christ, 'He that findeth his life shall lose it, and he that loseth his life for my sake shall find it'; on which hard saying if the children of this generation would only lay hold, there would be less misery and discontent in the world."

Lastly, consider Dr. Osler's faith in the life that lies beyond the grave. Naturally, his attitude towards this subject was first of all that of the scientist, and he displayed the caution which is characteristic, and properly so, of the man of science when dealing with any subject which cannot be demonstrated by logical processes of proof based on ascertained facts.

"Science" said Dr. Osler, "is organised knowledge, and knowledge is of the things we see. | Now the things that are seen are temporal, and the things that are unseen, science knows nothing of, and has at present no means of knowing anything."

"On the question of immortality," he says in the same essay, "the only enduring enlightenment is through faith. 'Only believe,' and 'he that believeth'—these are the commandments with comfort; not 'only think,' and 'he that reasoneth,' for these are the command-

ments of science." Quite consistently, therefore, he declares: "Though his philosophy finds nothing to support it, the scientific student should be ready to acknowledge the value of a belief in a hereafter as an asset in human life. He will recognise that amid the turbid ebb and flow of human misery, a belief in the resurrection of the dead and the life of the world to come is the rock of safety to which many of the noblest of his fellows have clung; he will gratefully accept the incalculable comfort of such a belief to those sorrowing for precious friends 'hid in death's dateless night'; he will acknowledge with gratitude and reverence the service to humanity of the great souls who have departed this life in a sure and certain hope."

His own belief in a future life he affirmed unhesitatingly; and in addressing the nurses in Johns Hopkins Hospital, in 1881, he said this: "You have been much by the dark river—so near to us all—and have seen so many embark that the dread of the old boatman has almost disappeared, and

'When the Angel of the darker Drink
At last shall find you by the river brink,
And offering his cup, invite your soul
Forth to your lips to quaff—you shall not shrink;'

your passport shall be the blessing of Him in whose footsteps you have trodden, unto whose sick you have ministered, and for whose children you have cared."

Into this great life that lies beyond the ascertained facts of science, but is clear and open to the eye of faith, Sir William Osler himself entered on the 29th day of December, 1919, in his 71st year. And if I may be permitted to give expression to my own faith, I believe that he is even now in closer communion with that great Physician of soul and body, with whose life on earth Dr. Osler's life bore close resemblance in many respects, and especially in respect of the record that He "went about doing good, and healing all manner of disease and all manner of sickness among the people."

That Dr. Osler's wonderful powers—those ten talents which he himself called one talent developed by assiduous work—are now finding an even wider sphere of activity and usefulness than they found on this earth, where two continents hardly sufficed to contain them, I do not doubt. And while his activities continue yonder under conditions unknown to us, his memory will survive here as that of one of the world's greatest physicians and most charming of men. But I believe he would himself wish to be remembered above all else as one who helped to make

others great; who raised to a higher level the noble profession to which he devoted his life; who reached out sympathetic hands to lift up his fellow-men; who filled the hearts of multitudes with joy, and their souls with strength; and who has left behind him a feeling which overshadows even the remembrance of his greatness as a physician—the feeling, shared by thousands, of intense loss, because a personal friend whom they loved, and of whose lives he had become a part, has passed within the veil.

“Amid earth’s vagrant noises, he caught the note sublime;
To-day around him surges from the silences of Time
A flood of nobler music, like a river deep and broad,
Fit song for heroes gathered in the banquet-hall of God.”

—McCRAE.

SYPHILIS AND GONORRHOEA FROM THE PUBLIC HEALTH POINT OF VIEW.

By R. R. McClenahan, B.A., M.B.

Provincial Board of Health of Ontario.

AS a great deal of interest in syphilis and gonorrhoea has been aroused of late years and as the seriousness of these diseases with the resulting loss to industry has been brought to the fore, the measures being taken from a public health standpoint by the Provincial Board of Health of Ontario will, no doubt, be of interest to the profession.

On the advice of the Provincial Public Health officials the medical profession and prominent social workers throughout Canada, the Canadian Government made a grant of \$200,000 (this to be a yearly grant to last for at least three years if conditions warrant it) towards combating venereal diseases. This grant was divided among the Provinces according to population, and was given on the understanding that the Provinces would advance an equal amount, \$10,000 of this grant was made to the Dominion Council for combating Venereal Diseases, a voluntary organization whose aim was along the lines of education, advertising and propaganda. The share allotted to the Province of Ontario was \$57,473.68.

The Ontario Government advanced an equal amount, making the total sum of \$115,000 available for the campaign in Ontario.

A Division of Venereal Diseases is being organized. This bureau will have charge of the effort of the Provincial Board of Health. It is proposed to divide the campaign into two heads:

- (1) Education.
- (2) Treatment.

Education.—The most important part of the campaign is education along public health lines. This education will be general in character. It will embrace the medical profession, dentists, druggists, nurses, public men and business officials, social workers, and the general public. A very excellent scientific book called "To-day's World Problem in Disease Prevention" written by Dr. John A. Stokes of the Mayo Clinic is now in the printer's hands, and will shortly be available for all medical men free of cost. This book takes up the venereal diseases in a practical and interesting way and will, no doubt, be of great value to medical men throughout Ontario.

Pamphlets and bulletins are in course of preparation for dentists asking their support and also for druggists enlisting their support to fight the dangers of quacks and self-treatment.

The Venereal Diseases Act and the Regulations are being strengthened and improved so that the treatment of these diseases may be made more efficient.

Pamphlets will be printed suitable for all classes, including nurses, social workers and the home. Lecturers will be sent out where desired to put the dangers of these diseases fairly before the public. There will be an advertising campaign carried on in newspapers and periodicals in Ontario. It is also proposed to show films from time to time on the venereal problem. The Dominion Council for combating venereal diseases has such a film which will be shown very shortly throughout Ontario. All available methods for placing the Venereal Problem before public will be used.

Treatment.—No campaign of this character, however, can be complete unless adequate free treatment is provided as well. At the present time all cases of Venereal Diseases in reformatories and prison farms, etc., are being treated by a specialist, medical officer employed by the Provincial Board of Health. All inmates of prisons, reformatories, jails, etc., are examined for venereal disease—smears are taken on all women and on men if considered advisable. All inmates have Wassermanns taken on admission. All cases are treated and kept in institutions until considered safe from a public health standpoint whether this necessitates their being kept over their time or not. These cases when set free are referred to the local Medical Officer of Health for further treatment or observation as necessary.

A license to manufacture an arsphenamine product has been given to the Board. Through it the Board has power to sell or give free of charge an arsphenamine product to its clinics and also to hospitals and institutions throughout the Province. It is expected that the product will be available in two months' time.

The Board is arranging to establish special treatment clinics in the larger cities throughout the Province for the free treatment of Venereal Diseases. These clinics are being very generously dealt with and it is hoped that the treatment they will be able to give those infected and in need of free treatment will be of help in preventing the spread of these diseases.

The following proposition is being presented to the municipalities where, in the opinion of the Board, a clinic is advisable. A schedule of apparatus and furnishing suitable for the adequate treatment of these diseases has been drawn up and will be part of the standard equipment required before Government aid will be given the clinic.

The Board feels that the choice of a site for the special clinic or clinics in the various municipalities should be left to a certain extent in the hands of the local authorities who understand local conditions. The Board would suggest, however, that where facilities already exist as in the case of hospitals, etc., other things being equal, these facilities should be used. The Board will afford the following assistance to each clinic established:

1.—For the purchase of furnishings and apparatus for a special clinic—\$1,000. (It is thought that the cost of the apparatus and furnishings will not exceed this amount). Where a clinic is already in existence and up to the standard the same financial assistance will be given.

2.—To assist in the payment of a social service nurse, \$500.00 yearly.

3.—For each out patient treatment for gonorrhoea, 50c; for each out patient treatment for syphilis, 50c. (No more than one treatment each day will be paid for). For each out patient treatment for syphilis in addition, free 'salvarsan' will be provided—as soon as the Board is in a position to furnish its own product.

4.—In the case of patients treated in the hospitals the sum of 25c in addition to the foregoing grants will be paid to the hospital for each day of indoor treatment up to three months, at the end of which time the indoor grant will cease.

5.—Standard record forms for the use of these special clinics will be supplied by the Board.

In return for this assistance the Board will require that the clinic will be kept up to a certain standard as follows:

1.—The special clinic shall be for the treatment of venereal diseases.

2.—The apparatus and furnishings for the clinic shall be as follows: (see Schedule (a)).

3.—The personnel of the clinic shall be:

(a) One specialist in venereal diseases who shall be appointed by the hospital if the clinic is in connection with a hospital and by the local Board of Health in other cases. This officer must also be satisfactory to the Provincial Board.

(b) Such Medical assistants as may be necessary shall be appointed on the same basis.

(c) One full time social worker who shall be a graduate nurse.

(d) One clerk, if the clinic is treating more than forty cases per week.

(e) One male orderly.

(f) If possible, one undergraduate nurse to assist in the clinic.

4.—All treatment in the clinic shall be free.

5.—At least one night and two day clinics shall be held per week. (This may be modified on agreement).

6.—Separate hours shall be set aside for men and women in the clinic, also is possible, separate hours for the treatment of gonorrhoea and syphilis.

7.—Weekly reports will be required on forms supplied by the Board.

8.—The clinic including its records, apparatus, method of treatment, etc., shall be open to inspection by the Board.

9.—The municipality will be expected to advance an amount for up-keep of the clinic or clinics which shall be approximately equal to the amount advanced by the Board. (See Section 14, s.s 1 and 2, Venereal Diseases Prevention Act).

10.—The social service nurse shall follow up cases outside the clinic to see that all patients continue treatment and also that any possible contacts are examined.

11.—Accounts should be rendered at the end of the month and will be paid on the Board's certificate.

12.—The Board reserves the right to modify these rules if such should, in the interest of the clinic, be deemed necessary.

In conclusion the Board wishes to express its appreciation for many valuable hints on the subject given by many of the medical men in Toronto and elsewhere who have given a great deal of their time gratuitously in this work. The Board feels that special mention should be made of the work of Professor Duncan Graham, Professor Fitzgerald, Dr. Edmund King, Dr. Gordon Bates and many others.

This campaign can only be a success through the closest co-operation and assistance of the medical profession throughout Ontario, and the Board feels that this will be given freely.

OBJECTIONS TO VACCINATION

By D. Fraser Harris, M.D., D.Sc., Dalhousie University, Halifax

W^e may in conclusion examine some of the objections to and criticisms of vaccination. The objections can be classified as those entertained (a) by medical men and (b) those by the public generally.

The objections raised by medical men are now a matter of ancient history. Each generation of medical men has refused at first to admit any new teaching promulgated in its time; physiological inertia is not at once overcome. The most enlightened of Jenner's critics *did really* believe that he was drawing too extensive an induction from insufficient data; this was the position of the Royal Society in 1788; but the Edinburgh reviewer of 1822 should have known better. The purely technical criticisms of Jenner's work have by this time been fully assessed and replied to. It is true that at one time it was not clear what were the relationships of chickenpox and smallpox, of vaccinia and variola, of vaccinia and varioloid, of the various form pox in animals—cowpox, swinepox, horsepox or grease—either *inter se* or to human smallpox. But I do not suppose that in this year of grace 1920 there can be found one properly trained medical man, acquainted with the history of Jennerian vaccination, familiar with the ravages of smallpox and with the protective power of vaccinia, who could be induced, by no matter how large a bribe, to say that he disapproved of vaccination or that he believed it did not protect from smallpox. There are cranks in all walks of life, but the medical crank who is also an anti-vaccinationist is happily the rarest of them all.

The lay objectors—the professed anti-vaccinators—are with us yet in spite of some very serious lessons which have been taught them. We may pass by the objectors of the class who believe that vaccinated persons cough like cows and bellow like bulls; these objections go into the limbo of old wives' fables or into the category of wilful misrepresentation. Unfortunately there is large class of persons who can believe the absurdest nonsense about any subject which is particularly distasteful to them.¹ Another class of objection is the sentimental repugnance to the idea of being given one of the diseases of "the lower animals." Now the fact is that already we share a great many diseases with the lower animals, a few of them being tuberculosis, anthrax, rabies, tetanus, cancer, pleuro-pneumonia, certain insect-borne diseases, some parasitic worm diseases and some skin diseases like favus. As the knowl-

¹Anti-vaccinators constantly allude to calf-lymph as "filth"; if lymph is filth, then I am able to assure them that each one of them has about three liters of it in his own body.

edge of the lowly origin of many of our diseases is more widespread, this sort of objection will die out.

An objection which is worthy of more consideration is that in being vaccinated a child is apt to contract some infectious disease such as tuberculosis or syphilis which are the two most dreaded. Now so long as arm-to-arm vaccination was the routine practise, there was a remote probability that this sort of accident might occur. It appears to be true that a few accidents of this kind have occurred, just as a few arms have become septic or had erysipelas develop in them. But when the few such cases are compared with the millions and millions of uncomplicated vaccinations, their importance becomes very insignificant. Now that arm-to-arm vaccination is no longer practised, but fresh calf-lymph used for each child, these accidental inoculations are a thing of the past. The ignorance of cause and effect is responsible for a great deal of the most childish objections to vaccination as to much else. One woman lately told me that she could not have her child vaccinated because a child in the same street was made a cripple for life by being vaccinated. Could we have a better example of the "post hoc sed non propter hoc."²

² Now and again, however, we have the sad spectacle of some one really well educated but apparently either ignorant of logic or desirous of wilfully misrepresenting facts. The Hon. Stephen Coleridge has an article in the June (1914) number of the *Contemporary Review* which is, to say the least of it, highly immoral in ethics and statistics.

I shall examine only that part of it bearing on vaccination. The statements are that in the last five recorded years, 58 persons died from smallpox vaccination (he means vaccination against smallpox), whereas in the same five years, 85 persons died from smallpox itself. The inference we are intended to draw from these figures is that to be vaccinated is nearly as fatal as to have smallpox itself.

Now this kind of argument is a very common one with statistically immoral persons, and is known as the suppression of the ratio. Before we can appreciate the facts that in five years 58 persons died after being vaccinated, we at least need to know the total number of persons who were vaccinated. If only 58 persons were vaccinated and they all died, then the mortality was 100 per cent., but if, as was practically the case, thousands of infants in Great Britain were vaccinated in five years, then if only 58 died after vaccination (although not necessarily in consequence of it) the mortality falls some thousands of a per cent. The suppression of the ratio, i.e., 58 many thousands is the deceit that is practised.

Fifty-eight per year for five years, is 11.6 deaths per year of persons vaccinated; presumably these were infants: taking the birth-rate in England as 30 per 1,000 living, we may say that 900,000 infants were born; deduct 100,000 as not vaccinated, we have 800,000 infants vaccinated, of these 11.6 died after being vaccinated, which is 0.0014 per cent. This is not much of a mortality from any cause; but using Mr. Coleridge's own figures, it is a splendid demonstration of the safety of infant-vaccination, the opposite of what he pretends it shows.

Mr. Coleridge proceeds to tell us that in five years 85 persons died of smallpox in Great Britain, i.e., an average of 17 persons per year. In other words 17 persons died of smallpox in a country with 30 million inhabitants, or 0.000056 per cent. of persons living, not a high mortality. And we strongly suspect, may we hope, that those 17 were persons who had not been vaccinated.

But in Pre-Jennerian days, 17 persons died of smallpox out of every 100 persons dying from all causes.

Mr. Coleridge's figures, properly and honestly interpreted, testify loudly to conclusions exactly the opposite of what he desires to insinuate; he has no doubt taken the statistics of the Registrar-General, but he has prostituted them.

Mr. Coleridge's paper could not be a better example of the art of concealing the causes of phenomena.

He exhibits the following table:

Deaths from smallpox per annum per a million living:	
1862-1870.....	172.2
1871-1880.....	244.6
1881-1890.....	45.8
1891-1900.....	13.3
1901-1910.....	12.8

So that the table shows that since 1880 in Great Britain the deaths from smallpox per million per year have declined until they are only about 1-14th of their original number.

The natural inference from these figures, viewed in the light of the history of smallpox in Great Britain, is that compulsory vaccination has been steadily eradicating the disease; but this is not Mr. Coleridge's conclusion: He says it is due to the large number of persons who have refused to be vaccinated! This would be laughable if it were not really serious; it is sad and serious that a man of Mr. Coleridge's education and social position should so consistently mislead the uncritical readers of the *Contemporary Review* to whose pages he has unfortunately very free access. If Mr. Coleridge really believes these things he is either very stupid or very ignorant; if he knows them to be otherwise, but wilfully deceives the public, he is immoral. He suffers from the worst form of bias, the anti-scientific.

There is still that group of persons who object to everything—anti-vivisection, anti-meat eating, anti-breakfast, anti-hats and of course also anti-vaccination. They are anti the usual and normal that are quite good enough for the most people. They generally also believe that the earth is flat; they are past praying for, all we can do with them is to look them, like the difficulty of Jonah and the whale, "full in the face and pass on."

Many people at the present time allow themselves to be persuaded into being anti-vaccinators because neither they nor their deluders have ever known what an epidemic of smallpox is, have never seen with their own eyes the awful spectacle of a person suffering from smallpox in any of its forms—discrete, confluent or hemorrhagic. Thanks to this very Jenner, the world has now for 100 years been almost free from epidemic, virulent smallpox and most perfectly so in the vaccinated countries, so that millions, the majority, of Englishmen, have never seen a case of smallpox at all. Not knowing the awful danger they have escaped, through Great Britain having had compulsory vaccination since 1853, they have become lax in their belief in the necessity for the continuance of that precaution. "They jest at scars that never felt a wound." Towns such as Gloucester in England, in which a large number of children have been allowed to grow up unvaccinated, have always been visited sooner or later by a serious outbreak of smallpox. It must

be so; the laws of natural phenomena can not be changed to suit the taste of those persons who are mentally incapable of understanding them. They can not be evaded; ignorance of the law is no more an excuse in the realm of natural than of man-made law.

We now come to the undesirable product of present-day, grandmotherly legislation, the conscientious objector. As I am not a politician, I shall not say anything for or against the policy of inserting in a bill which makes vaccination compulsory a clause giving to the conscientious objector the power or right to refuse to have his child vaccinated, but as a medical man who knows a little of the history of medicine, I can only describe it as gratuitous folly. *I am one of those who believe that the laity should have no say in the matter of whether any given procedure is or is not advantageous for the public health.* The efficacy of universal inoculation of vaccinia as a prophylactic against variola is a question of scientific medicine to be decided on technical grounds and ought not to be a matter open to debate by the public at all. It is perfectly monstrous to suppose that the ordinary person, quite untrained to weigh evidence for or against the advisability of the carrying out of a particular form of national immunization against a horrid disease, is qualified to form any opinion. He might as well be consulted on the advisability of making the channel tunnel or on the safest type of aeroplane or on any other subject involving the technical training of the engineer. To permit the so-called "man in the street" to say whether he shall or shall not permit the carrying out of some important piece of civic hygiene is to introduce a principle subversive of all system and obstructive of all progress in the science of public health. It is absurd that in a case like this the pronouncements of the judges are to be submitted to the criticisms of the jury. England has already had one or two pretty severe lessons through allowing such places as Gloucester and Leicester to exercise their right of private judgment on the question of vaccination. In Gloucester where there was at one time a vigorous anti-vaccination movement, a serious epidemic overtook the city a few years ago (1896). What science pronounces to be beneficial, the layman must submit to. What we want in these days is less superstition and more faith—in science. I am informed that there are more than 2,000 unvaccinated children in the schools of this city (Halifax) at the present moment, and all because a piece of legislation allows any unintelligent, prejudiced or credulous parent to decide on the momentous question of the vaccination of his children.

Our quarantine regulations are extremely strict, and rightly so, on the subject of smallpox; but is it not a farce to take so much trouble

about the health of our immigrants when inside the city we are all the time encouraging a high degree of receptivity towards this very disease? I should call this a very clear case of training at the international gnat and swallowing the municipal camel. *The community at present is at the mercy of its least instructed members.* A most sensible suggestion is that if an outbreak of smallpox occurs in Halifax, the cost of it should be borne by the unvaccinated and by the anti-vaccinators. The fact is we have forgotten what smallpox is like. In 1796 before Jennerian vaccination, the death-rate from smallpox in England was 18.5 per cent. of deaths from all causes; in London between 1838 and 1869 it was 1.4 per cent., while in 1871—the worst year for smallpox since vaccination became compulsory—the deaths from smallpox were barely 4.5 per cent. of deaths from all causes, a proportion which was exceeded 93 times in the eighteenth century. At the present moment the deaths from smallpox in London constitute a little under 0.24 per cent. of deaths from all causes, or 77 times less than in pre-Jennerian times.

According to MacVail, in the pre-vaccination period smallpox was nine times as fatal as measles and seven and one half times as fatal as whooping cough. To-day in the vaccinated community its fatality is negligible, in the unvaccinated it is as high as it was in the Middle Ages. In the city of Berlin, where vaccination is absolutely compulsory, there is no smallpox hospital at all; the cases of smallpox in that city being only a few unvaccinated foreigners. In 1912 the deaths in New York City were as follow: 671 from measles, 614 from scarlatina, 500 from typhoid fever, 187 from whooping cough and 2 from smallpox.

In London there were in 48 years of the seventeenth century no less than 10 epidemics of smallpox; in the whole of the eighteenth, 19; and in the nineteenth no epidemic at all during which smallpox was responsible for more than one tenth of the deaths from all causes in any one year.

In Sweden, the highest death-rate before vaccination was 7.23 per 1,000 persons, the lowest 0.30; under permissive vaccination the highest was 2.57, the lowest 0.12; under compulsory vaccination the highest was 0.94, the lowest 0.0005.

It is so frequently said that the disappearance of smallpox is due not to vaccination, but to improved general hygiene, that we must look into this criticism with some care. In the first place, a large diminution in the mortality from smallpox occurred before there was any great change in the unsanitary conditions of the English towns, before there was any enforcing of the isolation of patients either in hospitals

or in their own homes. Since the introduction of vaccination, measles and whooping cough still remain in the status quo ante, while smallpox has been exterminated in all fully vaccinated communities, these two diseases of children are as prevalent as ever in England even although the general sanitary conditions have been immensely improved in that country. Of course the effects of vaccination wear out in time, and that is why it is well to be revaccinated once or twice. Now there has been a remarkable progressive change in the age-incidence of smallpox "which can only be explained," says Dr. Newsholme, "on the assumption that vaccination protects children from smallpox and that the protection diminishes, though it never entirely disappears, as age advances."

The "conscience clause" should be immediately removed from the act in which it was inserted on the grounds that it is weak and reactionary in principle, not in the interests of the development of the legislative aspect of the science of public health, and that it permits in certain unintelligent communities quite a considerable number of unvaccinated children to grow up as a permanent menace to their town and district.

When the history of medicine becomes more widely known, when the principles of prophylactic inoculation are more generally understood, when respect for science is the rule rather than the exception, when great achievements in the saving rather than the destroying of life are objects of national veneration, then we may hope to see the day when it will be unhesitatingly admitted that the discovery by Dr. Edward Jenner, the Englishman, was one of the most momentous in the history of the human race, and that his life was one of the noblest, most unselfish and, in its far-reaching effects, most important that has ever been lived on this planet.

SUPPLIES FOR ARMENIA.

Responding to a request of the Committee on Relief in the Near East, the American Red Cross has donated emergency relief supplies valued at \$1,600,000 for distribution in Armenia. The supplies are now being shipped.

Three thousand eight hundred metric tons of supplies are in cargo. These include 112 carloads from the section of Army supplies—beds, bedding, hospital clothing and supplies, drugs, medicines, kitchen utensils, and many other articles; seventy-two carloads from the section of Red Cross supplies—surgical dressings, yarn, wheel-chairs, soap and refugee clothing; six carloads from the Transportation Unit, including ten Ford camionettes and supplies.

PRINCIPAL CAUSES OF DEATH.

By J. Ferguson, M.A., M.D., Toronto

THE Census Bureau's annual compilation of mortality statistics for the death registration area in continental United States, which will be issued shortly, shows 1,471,367 deaths as having occurred in 1918, representing a rate of 18.0 per 1,000 population, the highest rate on record in the Census Bureau—due to the influenza pandemic.

Of the total deaths 477,467, or over 32 per cent., were due to influenza and pneumonia (all forms), 380,996 having occurred in the last four months of the year during the influenza pandemic. The rate for influenza and pneumonia (all forms) is 583.2 per 100,000. Influenza caused 244,681 deaths and pneumonia (all forms) 232,786, showing rates of 298.9 and 284.3 per 100,000, respectively, these being the highest rates which have ever appeared for these causes. The rate in 1917 for influenza was 17.2 and for pneumonia (all forms) was 149.8. In fact the difference (416.2 per 100,000 population) between the 1917 and 1918 rates corresponds with the excess mortality which occurred in the last four months of the year from the influenza pandemic.

The next most important causes of death were organic diseases of the heart, tuberculosis (all forms), acute nephritis and Bright's disease, and cancer, which together were responsible for 391,391 deaths, or nearly 27 per cent. of the total number.

The death registration area in 1918 comprised 30 states, the District of Columbia, and 27 registration cities in nonregistration states, with a total estimated population of 81,868,104, or 77.8 per cent. of the estimated population of the United States. The Territory of Hawaii is now a part of the registration area, but the figures given in his summary relate only to continental United States.

The deaths from organic diseases of the heart numbered 124,668, or 152.3 per 100,000 population. The death rate from this cause shows a slight decrease as compared with 1917, when it was 153.2 per 100,000. There have been fluctuations from year to year, but in general there has been a marked increase since 1900, the earliest year for which annual mortality statistics were published, when the rate for organic diseases of the heart was 111.2 per 100,000 population.

Tuberculosis in its various forms caused 122,040 deaths, of which 108,365 were due to tuberculosis of the lungs. The death rate from all forms of tuberculosis was 149.1 per 100,000, and from tuberculosis of the lungs, 132.4. The rate from tuberculosis of all forms declined con-

tinuously from 200.7 per 100,000 in 1904 to 141.6 in 1916, the decrease amounting to nearly 30 per cent.; but for 1917 and 1918 increases are shown, the 1918 rate being somewhat higher than the rate for 1917, when it was 146.4. Until 1912 more deaths were due to tuberculosis than to any other single cause, but in that year and during the period 1914-1918 the mortality from tuberculosis was less than that from heart diseases.

Bright's disease and acute nephritis caused 79,343 deaths, or 96.9 per 100,000. This is a noticeable decrease as compared with 1917 when the rate was 107.4 per 100,000.

Cancer and other malignant tumors were responsible for 65,340 deaths, of which number 24,783, or nearly 38 per cent., resulted from cancer of the stomach and liver. The rate (79.8) is a decrease from 1917, when it was 81.6. With the exceptions of the years 1906, 1907, 1911, 1917, and 1918, there has been a continuous increase in the death rates from these diseases.

Apoplexy was the cause of 64,904 deaths, or 79.3 per 100,000. This rate, too, declined, having been for 1917, 82.9.

Diarrhea and enteritis caused 59,109 deaths, or 72.2 per 100,000, a decrease from the rate (79.0) for 1917. More than four-fifths of the total deaths charged to these causes in 1918 were of infants under two years of age.

Arterial diseases of various kinds—atheroma, aneurism, etc., resulted in 19,027 deaths, or 23.2 per 100,000, which rate is somewhat less than that (25.3) for 1917.

Deaths from diabetes numbered 12,927, or 15.8 per 100,000. The rate from this disease increased almost continuously from 9.7 in 1900 to 17.0 in 1916, but since 1916 a slight decrease for each year is apparent. The rate for 1917 was 16.9.

Bronchitis caused 12,783 deaths, or 15.6 per 100,000. This rate is lower than that for any preceding year. The proportional decline from 1900, for which year the bronchitis rate was 45.7, to 1918, amounted to 66 per cent.

The rate for diphtheria is 13.8, representing 11,280 deaths. As compared with 1917, when the rate was 16.5, there is a perceptible decrease.

Typhoid fever resulted in 10,210 deaths, or 12.5 per 100,000. The mortality rate from this cause has shown a remarkable reduction since 1900, when it was 35.9, the proportional decrease amounting to 65 per cent. This highly gratifying decline demonstrates in a striking manner

the efficacy of improved sanitation and of the modern method of prevention—the use of the antityphoid vaccine.

Whooping cough and measles together were responsible for 22,534 deaths of adults and children, or 27.6 per 100,000. The rates for these diseases were respectively, 16.8 and 10.8 as compared with 10.4 and 14.3 for 1917.

Deaths due to external causes of all kinds—accidental, suicidal, and homicidal—numbered 82,349 in 1918, corresponding to a rate of 100.6 per 100,000 population. This is a noticeable decrease, the rate for 1917 being 108.8. In fact, except for automobile and machinery accidents and injuries, all the external causes showed a general decrease in 1918.

The greatest number of deaths charged to any one accidental cause—10,330, or 12.6 per 100,000—is shown for falls.

Next to falls, the greatest number of accidental deaths—8,610, or 10.5 per 100,000—resulted from railroad accidents and injuries.

Deaths from automobile accidents and injuries in 1918 totaled 7,525, or 9.2 per 100,000 population. This rate has arisen rapidly from year to year, which strongly suggests the need for better traffic regulations and better enforcement of those we now have.

Burns—excluding those received in conflagrations—were responsible for 6,638 deaths, or 8.1 per 100,000.

Accidental drowning caused 5,633 deaths, or 6.9 per 100,000. This rate is considerably less than that for any preceding year since 1910.

Deaths due to accidental asphyxiation (except in conflagrations) numbered 3,371, or 4.2 per 100,000. This rate is slightly less than that, 4.5, for the previous year, but is somewhat higher than the rate for any year during the preceding ten-year period.

Mine accidents and injuries resulted in 2,497 deaths, or 3.1 per 100,000.

Machinery accidents caused 2,371 deaths, or 2.9 per 100,000, a rate greater than that for any year covered by the Bureau's mortality records.

Deaths resulting from street-car accidents numbered 2,366, corresponding to a rate of 2.9 per 100,000.

Deaths due to injuries by vehicles other than railroad cars, street cars, and automobiles numbered 2,337, or 2.7 per 100,000.

The number of suicides reported for 1918 was 9,937, or 12.1 per 100,000, the rate being the lowest shown for any year since 1903.

Other deaths due to external causes totaled 20,834, or 25.4 per 100,000.

The following table shows, for the death-registration area in continental United States in 1918, the total number of deaths and the death rate, by leading causes, together with the percentage which each cause contributed to the total:

Cause of Death	Number	Rate per 100,000 population	Per cent. of total
All causes	1,471,367	1,797.2	100.0
Influenza	244,681	298.9	16.6
Pneumonia (all forms)	232,786	284.3	15.8
Organic diseases of the heart ...	124,668	152.3	8.5
Tuberculosis (all forms)	122,040	149.1	8.3
Tuberculosis of lungs	108,365	132.4	7.4
Tuberculosis meningitis	5,910	7.2	0.4
Other forms of tuberculosis...	7,765	9.5	0.5
External causes	82,349	100.6	5.6
Accidental falls	10,330	12.6	0.7
Suicide	9,937	12.1	0.7
Railroad accidents and injuries	8,610	10.5	0.6
Auto accidents and injuries ..	7,525	9.2	0.5
Burns (excluding those due to conflagrations)	6,638	8.1	0.5
Accidental drowning	5,633	6.9	0.4
Homicide	5,508	6.7	0.4
Accidental absorption of dele- terious gases, except in con- flagrations	3,371	4.2	0.2
Mine accidents and injuries ..	2,497	3.1	0.2
Machinery accidents and injuries	2,371	2.9	0.2
Street-car accidents and In- juries	2,366	2.9	0.2
Injuries by vehicles, other than railroad cars, street cars, and automobiles	2,237	2.7	0.2
Effects of heat, other than burns	1,146	1.4	0.1
Other external causes	14,180	17.3	1.0
Acute nephritis and Bright's dis- ease	79,343	96.9	5.4
Cancer	65,340	79.8	4.4
Cerebral hemorrhage (apoplexy)	64,904	79.3	4.4
Congenital debility and malfor- mations	63,375	77.4	4.3
Diarrhea and enteritis	59,109	72.2	4.0
Arterial diseases — atheroma, aneurism, etc.	19,027	23.2	1.3
Whooping cough	13,728	16.8	0.9
Diabetes	12,927	15.8	0.9
Puerperal affections other than puerperal septicemia	12,927	15.8	0.9
Bronchitis	12,783	15.6	0.9
Senility	12,251	15.0	0.8
Diphtheria	11,280	13.8	0.8
Respiratory diseases, other than pneumonia and bronchitis ..	10,391	12.7	0.7
Typhoid fever	10,210	12.5	0.7
Appendicitis and typhlitis	9,912	12.1	0.7

Cause of Death	Number	Rate per 100,000 population	Per cent. of total
Hernia and intestinal obstructions	9,350	11.4	0.6
Measles	8,806	10.8	0.6
Meningitis	8,064	9.8	0.5
Cirrhosis of the liver	7,808	9.5	0.5
Syphilis	7,604	9.3	0.5
Paralysis without specified cause	7,183	8.8	0.5
Acute endocarditis	6,694	8.2	0.5
Angina pectoris	6,043	7.4	0.4
General paralysis of the insane..	5,890	7.2	0.4
Puerperal septicemia	5,250	6.4	0.4
Dysentery	4,725	5.8	0.3
Anemia chlorosis	4,525	5.5	0.3
All other defined causes.....	109,747	134.1	7.5
Unknown or ill-defined causes...	15,647	19.1	1.1

MEDICINE OF TO-MORROW.

By Ira S. Wile, M.D.

FROM RED CROSS NOTES.

TIMES and customs change. Medicine forms no exception to the rule, but through change comes progress. The practice of medicine in the twentieth century already evidences numerous alterations in character, and tendencies now noted bid fair to alter still further medical practice.

With the higher standards of education required for entrance into Class A medical colleges, the demand for cultivated, trained physicians is exemplified. To counteract the number of years involved in securing an adequate professional education and experience, some revisions of educational procedure are sought. With two years saved in elementary education, with possibly another one eliminated from secondary schools, and with a six year combined college and professional course, and at least one year mandatory hospital service, it will be possible for the future physician-to-be, entering school at the age of six, to be prepared to take up his life work at the age of 22 years.

The necessity for modifying our methods of professional training is more pronounced in view of the transformation which medical practice is undergoing. The vast competitive scheme of practice is becoming subject to new forms, making for co-operation. The tendencies to national unity in public health work are obvious in the co-operative interaction of the United States Public Health Service, the American Red Cross Society, State Departments of Health, and County and Municipal

Health Organizations, which are working more closely along definite plans involving a higher degree of harmonious effort. Similarly, numerous national societies are spreading their programmes upon the minutes of state and national health organizations. They are seeking to impress the profession in general with the urgency of their demands, while calling upon the laity for assistance in every direction to aid humanity to escape the perils and evils which they seek to combat.

THE GROWTH OF THE COMMUNITY IDEA.

It is natural that out of a world cataclysm there should grow a higher respect for man. It is unthinkable that after the antisocial devastations of war, the sense of brotherhood should be dulled and callous. Society perceives the error of its way, and now seeks to re-establish medical practice upon broad social lines. The spirit of the community, the spirit of the state, the spirit of the Nation are invoked in judgment upon measures seeking to conserve men, women and children, the makers of the future.

One may point out lines along which evolution is most marked, although the beginnings were evident before there was familiarity with such names as Joffre, Haig, Hindenburg and Pershing. There has been a growth in the community idea, which involves an extension of all facilities for the protection and care of the diseased and disabled citizens, who are penalized and might in turn punish the public. There will be a continued growth of community hospitals and dispensaries, with the extension of highly specialized hospitals in the utilization of which many communities will co-operate. As state hospitals for the insane have grown in number, so it is not unlikely to find state institutions for the care of orthopedic defects and the rehabilitation of those injured in industry. The development of venereal disease clinics, under city, state and federal auspices, is a further evidence of work in this direction.

SOCIAL HEALTH MEASURES.

Social responsibility, which demands that industry carry its own particular burdens, is sufficient reason for the continued progress in the establishment of first aid stations, hospitals and dispensary services by corporations employing large numbers of workers. The wider interest manifest in industrial welfare from the standpoint of health is patent in the recent establishment of a Division of Industrial Hygiene and Medicine, under the auspices of federal service. Probably no field of medicine will manifest greater alteration during the next decade than preventive medicine as applied to industrial life.

While social insurance of various types is still a moot question, the demand for its adoption is apparently increasing. In addition to employers liability or workmen's compensation acts, there probably will be evolved systems of sickness insurance, old age pensions, maternity insurance, and similar enactments designed to benefit the vitality and comfort of the masses. As social health measures, too, one notes forms of legislation calculated to affect hours of labor, minimum wage standards, and similar indirect health benefits tending to affect all branches of society.

As further indications of the larger co-operative agencies seeking to benefit public health, one need but mention such national organizations as those created for the control of tuberculosis, cancer, venereal diseases, the prevention of blindness, rural sanitation, industrial hygiene, and mental hygiene. To those may be added such definite trends in governmental machinery as are marked in the efforts to control infant mortality by the establishment of machinery clinics and babies' welfare stations. Medical inspection of schools, school nursing, social workers in connection with dispensaries, and the increased stress placed upon the regulation of alcohol, drugs, and the improvement of food and water supplies, along with general sanitary improvement are signposts of present and future practice.

THE DAY OF PREVENTIVE MEDICINE.

Such endeavors as have been enumerated are prophetic. They do not clearly point out their goal, because, as progress is made, the goal is always on the horizon, and, apparently, ever as distant as before. What is patent, however, is that the medical profession is already undergoing profound alterations. The medical practitioners of to-morrow will not have the same problems to deal with as those practising to-day. One need but recall the gradual decrease in various types of diseases which in former generations served to constitute the bulk of medical practice. The severe cases of Potts disease are rare. The widespread devastations of syphilis in its most revolting types are scarcely seen. Typhoid fever, enterocolitis, malaria, dysentery, smallpox, and yellow fever are rapidly following into the category of obsolescent conditions. The youthful graduate of to-day can scarcely grasp the profound changes which have made possible their reduction. The stress placed upon preventive medicine to-day may give an inkling to the new licentiate of the marked strides which have been taken during the past two decades. A generation ago public health work was largely a matter of sanitation, and the vast health agencies now in operation were scarcely known. The commonest

activities for the social regeneration of community vitality employed few physicians twenty years ago, and yet the greatest opportunity of to-day arises in connection with preventive health work.

The era of medical research has been continuous; but like all forms of motion, there is a wave which now has achieved a greater height than in previous years, and the demand for research workers is not equalled by the supply of adequately trained investigators.

A DEMAND FOR NEW TYPES OF NURSES.

The status of public health nursing, similarly, has affected seriously the problems of nursing, and the call for workers in this direction is putting our training schools to the test. The employment of nurses in laboratories as technicians, in hospitals as anesthetists, and in community service as district nurses, home visitors, and educators has materially changed the conditions of nursing practice. Hence, to-day, there is a demand for new types of nurse, one whose training will be more specialized on the one hand, and another whose experience will be principally on the side of practical nursing fitting her for caring for the numerous illnesses for which highly technical training is not an essential.

THE IMPORTANCE OF SOCIAL PATHOLOGY.

Throughout the world is apparent an unrest. The bulwarks of government have been partially undermined and threatened by varying degrees of ignorance, poverty and disease. The cry for health emanates from many lands. The great opportunity of libertarians lies in succoring humanity. Disease is no longer regarded as merely a matter of infection. Social pathology is as important as microbial invasion. In the efforts to overcome ignorance and poverty, and their various natural consequences, the demand for sympathetic and understanding physicians is increased. Public health medicine has assumed a position of maximum importance. The prevention of disease is recognized as a fundamental step in the promotion of national contentment.

The old order of competitive medical practice for the cure of individuals afflicted is slowly giving ground to the more effective means of co-operative methods of attacking illness and accidents upon a larger scale. Therapeutics is interpreted as a means of securing prophylaxis. Prevention of human affliction assumes magnificent proportions. There may be fears of paternalism or objection to the arrogation of medical functions, but it is patent that the larger vision of greatest usefulness will determine the course finally to be pursued. The needs and rights of the mass will take precedence over the interests or desires of any class in the community.

With health raised in popular esteem, and recognized as the first wealth, it is readily appreciated that the conservation of vital resources is to assume a place in the world, second to none. The growth of the public health movement will be rapid, and the significant changes now evident will be revealed in greater and richer content than is at present discernible.

These newer blossomings in the field of medicine will not enure to the disadvantage of professional men. With greater advantages to society as a whole, there will be a larger measure of opportunities for those called physicians.

PROGRESS OF CHINESE RED CROSS.

The Chinese Red Cross, an organization that had its inception during the war between Japan and Russia in 1904, when thousands of Chinese were left homeless and friendless in the regions where fighting raged for many months, to-day is an organization with 25,000 members, with a real interest in world relief work, as is manifested by the entrance of the society in the League of Red Cross Societies. Plans are under way for a committee to represent it at the first General Council of the League to be held at Geneva, March 2.

The Red Cross has established itself in the minds of the Chinese people as an organization of progressiveness and enterprise for the relief of suffering, and to the Red Cross the nation is indebted for its first and greatest medical school.

A considerable sum of money remained unexpended after the activities of 1904 with which, upon decision of the members of the General Council, ground was purchased near Shanghai and a large building erected as the Chinese Red Cross Central Hospital and Medical College for Chinese students. The hospital is equipped with the most modern apparatus.

The importance of the Medical School cannot be overestimated in the minds of the Chinese. Instruction is in English only. The first year there were twenty registrants in the school. All of these received their degrees as competent practitioners. Graduates of this school, under the direction of D. S. M. Cox, an American, by use of methods invented by his brother, Dr. Robert Cox, have done much to alleviate suffering from former severe epidemics.

CURRENT MEDICAL LITERATURE

THYROTOXICOSIS

Notwithstanding the amount of literature on the subject, the treatment of exophthalmic goitre by the roentgen ray has not received due attention in many clinics, according to G. W. Holmes and A. S. Merrill, Boston (*Journal A. M. A.*, Nov. 29, 1919). Investigations and experimental work have shown that the glandular structures can be destroyed after a sufficient length of time by the rentgen ray or radium. It is also generally known that the action of this form of light is most destructive on the higher organized type of cell and that the tissues of the lymphatic system are particularly vulnerable. Anatomically, the thyroid gland is somewhat allied to the lymphoid structures, and changes in it are often accompanied by thyus enlargement. Admitting these statements and that the amount of irradiation is sufficient to destroy the thyroid gland is not such as to injure the skin, we ought thus to be able to remove part or all of the gland by this means and have results equal to those of surgery, which to them proves that such results are possible, especially the conwithout its dangers. The authors review the literature of the subject elusions of Pfahler and Zulick, and those of Means and Aub in *The Journal*, July 17, 1917. Studying the case histories, they have classed their own patients as follows: "1. Patients in whom very definite benefit ensued, apparently as the result of the treatment, and are clinically well. 2. Patients in whom there was definite improvement but who still manifested some evidence of the disease. 3. Patients in whom there was no change under treatment or who became definitely worse. 4. Patients in whose cases fairly complete data were obtained, at least one basal metabolism record was made, and sufficient time had elapsed to warrant a definite opinion as to the final result. The cases in this group are selected from the other three." One hundred and thirty-three patients have been received for treatment who are not included in these groups because of insufficient data. There are thirty-four patients in Group 1—three males and thirty-one females. Two had previously been operated on without complete relief. The number of treatments ranged from three to thirteen averaging about seven. In some cases the exophthalmus persists, but the thyrotoxicosis is absent. When a record of metabolism was made it showed a sharp drop in most cases, and this was also true of the pulse. There were 68 (Group 2) improved—three males and sixty-five females. The records are not altogether complete in the earlier ones, but all of them had been referred for treatment for hyperthyroidism. In Group), (unimproved or bad results), there were fourteen patients—all women, none under 20 years of age. The diagnosis was possibly incorrect in two.

One died following the operation which was resorted to. Two died from intercurrent disease, and six had less than the required number of treatments. In one case, Myxedema developed, possibly as a result of overtreatment. Group 4 comprises a fairly complete study of thirty-six cases, all tested at least once for metabolism and some before, during and after treatment and the final observations made by a disinterested clinician. Of these, seventeen were perfectly well, and thirteen were improved, making a total of thirty definitely benefited. In four, the diagnosis was proved incorrect—one was operated on without relief, two had recurrences which responded to further treatment, and in one myxedema developed as result of overtreatment. The results are shown in tabulated form in the article. The methods were somewhat varied the first two years but, later, fairly constant. "Most of the work was done with an interrupterless machine, Coolidge tubes being used. The parallel spark was approximately 8 inches. The rays were filtered through 4 mm. of aluminum and 1 mm. of leather. The target skin distance was 8 inches. Three areas were treated at each sitting, each area receiving two-thirds of an erythema dose." The treatment should be applied to both thymus and thyroid regions, fairly hard rays should be used, and the treatment should not be repeated until three weeks have elapsed. The series should include two or three treatments following one another, and then an interval of three months, making nine treatments altogether. Consequently during this time, the patient will have been under observation about one and a half years. Bad results are less severe than from surgery, the undesirable features being hypothyroidism, telangiectasis and atrophy in the regions treated. But these can usually be avoided by using heavy filters and keeping well below the erythema dose. The importance of the study of basal metabolism before, during and after treatment is emphasized both for diagnosis and as a control of the amount given. The authors believe that the roentgen ray and rest should be tried in all cases for a sufficient length of time before resorting to surgery.

THE PERIOD OF INCUBATION OF SYPHILIS

Jambon and Tzanck (Paris Medical) say that the first period of incubation is considered to exist until the appearance of chancre, then the second period begins with the onset of the roseola.

This incubation in stages makes of syphilis a very special disease. In most infectious diseases the initial lesion remains unknown; the evolution taking place either in the depth of an organ or in the thick tissues of mucus, and the lesion apparently latent clinically until the first definite symptoms appear.

The ancients used to consider these delays as the proper character of the disease, although they recognized in them various phases of its development.

Such a conception is strengthened: (1) by the modern researches on the humoral modifications in infectious diseases; (2) by the assimilation with the latter of reactions caused by hereto-albuminous injections.

A number of studies, such as those of Metchnikoff, Richet, Ehrlich and others, have altered the established conception as to the humoral pathology of syphilis.

Antibodies are in excess in the blood and it is a fact, not a hypothesis, that there is definite change in the humors of the organism during the "periode d'etat".

In diseases with a rapid onset the appearance of humoral phenomena marks the invasion of phase, and fever emphasizes the perturbation of the various regulating automatisms.

In disease with slow onset, the invasion may pass unseen until a more detached or obvious symptom is noticed, such as the appearance of chancre in syphilis.

According to the old conception initial sclerosis is really the first symptom, but, from the standpoint of general pathology, such is not the case.

Among humoral modifications to be noticed are: (1) In the blood, appearance of the reaction of fixation of the Bordet-Wassermann complement and augmentation of the refractometric power of the serum. (2) In the cephalo-rachidian fluid, modifications of the pressure of the lymphocytosis; of hyperalbuminosis bearing especially on the quantity of globulin; reaction on iodine; stabilizing action on colloidal gold; positive Wassermann in a certain number of cases. All these signs are invariably missing when chancre is first formed. The forty-five days of the second incubation are, therefore, far from being a homogenous period. All the various humoral phenomena come in degrees revealed by such symptoms as cephalic anemia, temperature, roseola. In practice the second period may be said to begin very soon after inoculation. Neisser's works give weight to his assertion. It is known that in the presence of a foreign agent the organism can present itself under various states, either receptive or refractory, immunized or sensitized; namely, constituting what von Pirquet calls "allergia", and Siebert "anergia", since syphilitic is not protected from his own treponema. In the progression of the disease the organism modifies itself, indicating a systematized syphiloplastie reaction.

PERSONAL AND NEWS ITEMS

The late Mrs. Ruth McRoberts left the following bequests: Home for Incurables, \$250; the Hospital for Sick Children, \$1,000 to endow the "McRoberts Cot"; and \$250 to the Protestant Orphans' Home.

The recent epidemic of grip in Italy was accompanied by many cases of severe pneumonia, and a high death rate.

Dr. Frederick Montizambert, Director-General of Public Health for Canada, met with a painful accident on 19th February, when he was knocked down by an Ottawa street car. His collar bone was broken and there were severe bruises on his head.

Dr. Charles A. L. Reed, of Cincinnati, in an address at Los Angeles, said that doctors must form a union to protect their own and the public's interests.

The Province of Saskatchewan has made eight ounces the limit of liquor prescriptions. Under no pretext can a larger amount be ordered. Power has been given to the Commissioners to take away the right to order liquor from any one who appeared to be giving out a larger number of prescriptions than was necessary.

Sir George Newman, principal medical officer of the British Minister of Health, has recently said that owing to war duties, the adult population of Britain is well vaccinated; but that children have not been so poorly protected for twenty years.

A motion was introduced into the House of Commons, Ottawa, to place the distribution and sale of opium and its derivatives under the control of the Department of Health.

The Canadian Club of New York, has undertaken to raise \$1,000,000 to secure and equip a suitable building to be known as "A Canadian Hospital".

There was opened, in Montreal, at 76 Lagauchetiere Street, on 9th March, a hospital for sick orientals, especially the Chinese. The hospital has twenty-five beds.

Dr. Frederick McKelvey Bell, formerly of Kingston, has been appointed Editor-in-Chief of the International Journal of Medicine and Surgery, of New York. He also holds the position of chief medical officer of the Federal Board for Vocational Education.

Two brothers by the name of Piper died recently in London very suddenly after drinking wood alcohol.

Dr. John Todd, of McGill University, with Dr. B. Wolbach, of Harvard Medical School, has gone to Poland to study typhus fever. They are working under the Red Cross.

A deputation from Queen's University recently waited upon Dr. George E. Vincent, President of the Rockefeller Foundation, and Dr. R. M. Pearce, director of medical education of the Foundation, asking for a grant from the sum set aside to aid Canadian medical education.

The late Dr. R. A. Stevenson, of Toronto, left an estate valued at \$188,000. The legacies were all personal and none to charities.

Drs. George E. Vincent and R. M. Pearce recently visited Toronto, and inspected the Medical Department of the University of Toronto.

The City Council of Windsor decided not to submit to the people a vote for a grant of \$25,000 to the Salvation Army Hospital.

The site of the old General Hospital, Toronto, is to be used as the one for a new isolation hospital for infectious diseases. The site is a large and excellent one.

The late Dr. E. W. Spragge, of Toronto, who died last December, left an estate worth \$60,000 to his widow.

Two gypsy women called upon Dr. G. Silverthorn recently to consult him, while engaged with one the other concealed and took away a valuable pair of brass candlesticks.

The women of Chatham who have been aiding the General Hospital there, reported collections for the year of \$3,932.64, and disbursements of \$3,333.58. The ladies were warmly complimented on their excellent work.

The Royal College of Surgeons of Edinburgh has decided to admit women to the fellowship. The examination will be the same as for men.

The Board of Trustees for the Chatham Hospital has decided to raise \$50,000 for the purpose of enlarging the institution.

The returns seem to show that doctors do not always report venereal diseases. For February this year the number was 158, whereas for February a year ago it was 243.

The Red Cross Society is instituting a campaign against malaria in Europe. This is much needed in some countries.

The Province of Quebec has removed the smallpox quarantine against Ontario.

The University of McGill has received the resignation of Sir Auckland Geddes as Principal, who has decided to go to Washington as the representative of the British Government. It is rumoured that the University will now select some Canadian for the position.

From February 8 to 14 there were 1833 deaths and only 8 births in Vienna. The deaths were mostly among children.

Judge Colin Snider finds that the Asylum at Hamilton is well managed, but that some of the patients were roughly treated. Several suggestions were made and should be adopted.

The Toronto Medical Officer of Health is seeking power to enforce proper heating in apartment houses, to enable him to compel owners of houses to keep these in proper condition or to have them destroyed, to prevent overcrowding in dwellings, and to prevent unnecessary noises.

Judge Talbot, of London, after a careful investigation into the management of the asylum there came to the conclusion that there was no foundation for the charges that had been made against the treatment of patients in the institution. Dr. W. H. Robinson the Medical Superintendent, was completely exonerated.

A banquet was given to Dr. George Glionna, of Toronto, for his fine patriotic work during the war, especially among the Italians in aid of the Red Cross.

Poland is at present the centre of the worst typhus fever epidemic known in the world's history. The disease is brought into Poland in many places by refugees from Ukraina. The Red Cross is at work trying to arrest the spread of the disease.

Dr. Kister, of St. Catharines, was awarded damages of \$5,000 for injuries he sustained by being hit by an electric car on Stanley Street, Niagara Falls.

Lady Drummond, of Canada told the Red Cross Congress that the future duty of the Red Cross throughout the world would be to supply the moral equivalent for war; it would assume a moral role, as well as that of physical educator. Canada, she said, was the first country to follow the United States example of organizing a Junior Red Cross, which had been such a powerful factor in the development of the American Red Cross.

The executive of the Ontario Committee of the Canadian National Council for the Combatting of Venereal Disease held a meeting at the Parliament Buildings recently and elected officers as follows:—Hon. President, His Honor the Lieutenant-Governor; President, Dr. Hodgetts of Ottawa; Vice-Presidents, Dr. Storms and Mrs. Torrington of Toronto; Secretary, Dr. R. R. McClenahan; Treasurer, M. L. Woods; Literature and Propaganda, A. E. S. Smythe, Toronto; Lectures, Speakers and Films, Dr. Gordon Bates, Toronto; Education of Young, Dr. Anna Young; Protection of Girls, Mrs. L. A. Hamilton of Toronto; Education of Nurses, Miss Gunn of Toronto; Law Enforcement, Chief Wheatley.

Dr. Frederick W. Marlow, F.R.C.S., Eng., wishes to announce to the medical profession that he will confine his surgical practice to Abdominal Surgery and Gynaecology (including diseases of the female breast), also that Dr. Frederick C. Marlow having returned after four years service overseas is located for practice at 647 Broadview Ave., Toronto. 417 Bloor St. West, Toronto.

In Toronto during February there were 29 sudden deaths in Toronto; Found dead or suddenly stricken, 15; burned, 4; Alcoholic poisoning, 3; Killed by railways, 2; Killed by street car, 1; Killed by fall, 1; Shot, 1; Frozen, 1; Killed by auto, 1.

The present and future status of the permanent Army Medical Corps will shortly be discussed with Hon. Hugh Guthrie, Minister of Militia, by a delegation from the Canadian Medical Association. In a letter to the Minister it is pointed out that the association at its annual meeting appointed a committee of its members and of members of the provincial association and it is the result of this committee deliberating which it is desired to present. While details are not yet given, a radical re-organization of the corps is to be proposed and pending the presentation of this report it is asked that no change in the system be made.

The local Board of Health for Toronto did not cut off a single cent from the estimates of the department for 1920, totalling \$1,067,216.40, which includes \$217,500 on capital expenditures.

Sleeping sickness, or sleeping headache, as the Italian scientists prefer to call the malady which has appeared in Rome and several other Italian cities, is believed by Professor Guiseppe Sanarelli, the distinguished Italian bacteriologist, to be the same as that which followed other waves of influenza.

OBITUARY

JAMES A. BUCHAN, M.D.

Dr. James A. Buchan, of 157 Keele Street, died suddenly on 13th March, following an attack due to injuries received while overseas. He was a native of Prescott County, having come to Toronto only recently, after serving overseas. He had been receiving treatment regularly at the College Street Hospital for a slight paralysis, which was due to shell shock received when a shell burst and buried him in France. The immediate cause of death is attributed to a blood clot which formed on the brain.

The late Dr. Buchan had been turned down several times for overseas service on account of age, but eventually got across as a lieutenant. In England he resigned his commission and got to France as a private. He is survived by his widow and three children.

STEPHEN H. THORNE, M.D.

Dr. S. H. Thorne, of Bobcaygeon, died in Lindsay on 6th of last December. He was a well-known practitioner in Lindsay and surrounding country.

LAUGHLIN MACPHERSON, M.D.

Dr. MacPherson of Antigonish, N.S., died there on 1st January, after a brief illness with pneumonia.

CLINTON F. PURDY, M.D.

Dr. Purdy, of Moncton, N.B., died there on 12th January. He was in his sixtieth year at the time of his death. He was a graduate from New York, and was highly esteemed.

W. J. CHAMBERS, M.D.

Dr. Chambers, of Calgary, Alta., met his death in the train accident which occurred at Sudbury in January.

A. F. REID, M.D.

Dr. Reid, a very well known member of the medical profession of Nova Scotia, died at his home in L'Ardoise, C.B., on 27th February. He was a graduate from Edinburgh. He was a native of Windsor, N.S., where he was born 85 years ago.

D. W. FAULKNER, M.D.

Dr. Faulkner, well and favorably known in Hastings County, died at his home in Foxboro Village on 4th March. Deceased was in his 68th year. He took a keen interest in all matters of a local welfare character.

JOHN A. ALLEN, M.D.

Dr. Allen, a former Torontonion, died at Medical Lake, Washington, on 6th March.

DR. GRANT.

Dr. Grant, of Roblin, Man., died in the Winnipeg General Hospital, on 5th January.

JAMES B. CAMPBELL, M.D.

Dr. Campbell had not been able to practise for the past two years; but his death was caused on 8th February by an attack of pneumonia. He was a graduate of Arts and Medicine of the Western University, London, obtaining the latter degree in 1898. For a number of years he was professor of physiology in the Medical College of London, and later was associate professor of medicine. He was unmarried.

BOOK REVIEWS

THE OPIUM MONOPOLY

By Ellen N. La Motte, Author of "Backwash of War", "Peking Dust", "Civilization", etc. New York: The Macmillan Company, 1920. All rights reserved. Price, \$1.00.

This little book of 84 pages is well worth reading. It gives an excellent account of the opium trade of the world, and where the drug is produced, and the countries that chiefly control its sale. The book covers the opium trade of Britain, India, Japan, Singapore, the Straits Settlements, Opium in Siam, Hongkong, Sarawack, Shanghai, Turkey and Persia, Mauritius, Borneo, Guiana, Opium in China, and then comes the conclusion. The authoress properly condemns the opium traffic among dependent races, while self-governing countries and colonies do not permit it. This book should be widely read and studied.

POPE'S MANUAL OF NURSING PROCEDURE

By Amy E. Pope, formerly Instructor in the School of Nursing, Presbyterian Hospital, New York; Visiting Instructor, San Francisco, Cal. Author of "A Medical Dictionary for Nurses", "A Quiz Book of Nursing", "Essentials of Dietetics", "A Dietary Computer", and, with Anna Maxwell, of "Practical Nursing". G. P. Putnam's Sons, New York and London: The Knickerbocker Press; 1919; Price, \$2.40.

This is a very complete manual on the art of nursing. It gives full and explicit directions for the care of the sick. It would be greatly to the advantage of the sick if all nurses read such a work as this. It is a book that will prove of special value in the hands of the instructor who has to take charge of classes in training. While the book is a practical one, proper attention is given to the theory of nursing and the "why" of things. We can cordially recommend this work on nursing.

ORTHOPEDIC AND RECONSTRUCTIVE SURGERY

By Fred. H. Albee, A.B., M.D., Sc.D., F.A.C.S., Lieutenant-Colonel M.C., U.S.A., Professor and Director of Department of Orthopedic Surgery at the New York Post Graduate Medical School and at the University of Vermont, Chairman Rehabilitation Commission of State of New Jersey, etc., etc. With 804 Illustrations. Philadelphia and London: W. B. Saunders Company; 1919; Price \$12.00.

Dr. Albee's work is a full and comprehensive presentation of operative orthopedic surgery, covering this side of the subject more thoroughly than any other work in any language. It takes up not only the orthopedics of the child, but of the adult as well. Besides including all the surgery of the limbs, joints, tendons, muscles, ligaments, and fascia, it contains a great mass of organized information relative to bone-

grafting—its advantages, use, technic, end-results, all graphically illustrated. An immense amount of surgical treatment not covered by any previous book is made more readily available to the medical profession. The book is replete with useful and explanatory illustrations, which add very much to the value of the text. The author has had a large experience in orthopedic surgery, and has been a keen student of the best literature upon the subject. It is very pleasing to find in one volume the happy combination of extensive knowledge and extensive practice as we find in this book. It is truly a magnum opus.

THE DISEASES OF INFANTS AND CHILDREN

The Diseases of Infants and Children. By J. P. Crozer Griffith, M.D., Ph.D., Professor of Pediatrics in the University of Pennsylvania. Two octavo volumes totaling 1,542 pages with 436 illustrations, including 20 plates in colors. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$16.00 net. J. F. Hartz and Company, Toronto, Canadian Agents.

This is a very comprehensive work on the diseases of infants and children. When any author undertakes to write, two large volumes on any topic or field in medicine, he should have an important message to deliver. Dr. Griffith has such a message. He has been a thorough-going student of the diseases of children, and has combined his studies with much practical experience. But the author has also had much experience as a teacher, and has thus learned what the general practitioner is most in need of. The author in his preface states that he has tried to make the work as complete as possible, without making it too encyclopedic. He has included such surgery and special branches as the general practitioner should be familiar with. The work is quite modern in all respects, and these two volumes will be of the utmost value to all who have to treat children's diseases. We recommend these volumes.

THE PREVENTION OF TUBERCULOSIS

The Nineteenth Annual Report of the Canadian Association for the Prevention of Tuberculosis with the Transactions of the Annual Meeting held in Ottawa, October 9th, 1919.

This Association has now a long and useful record to fall back upon. Its reports are always interesting and instructive. These reports should be widely read, and if so, would prove most helpful. Much has been done in the direction of the prevention of tuberculosis, but much still remains to be done. The whole situation with regard to tuberculosis is steadily becoming more and more hopeful.

Obituary

MISCELLANEOUS

PHOSPHINE POISONING.

26 Gerrard Street East,
Toronto, Feb. 11, 1920.

Dear Sir:—

The occurrence of influenza, encephalitis lethargica, and other affections of an ill-defined nature at the present time, suggested to me that I should write you concerning some work on chronic poisoning with phosphine, which I have been carrying on during the last three years.

This study has led me to believe that the ingestion of phosphine, even in minute doses for long periods, is capable of producing a great variety of diseases in the most insidious manner. I believe that poisoning with phosphine has been common during the late war, and was the principal agent in engendering diseases occurring during, but not prior to, the war, such as Shell Shock, Trench Foot, Trench Shin, Trench Fever, Trench Mouth, Trench Nephritis, and Encephalitis Lethargica; and I am also of the opinion that poisoning with phosphine has been the principal cause of the variations of some diseases of "known" origin observed during the war, such as the increased frequency of acute yellow atrophy of the liver, exostoses, neuromata, and neurasthenia, and mental diseases; the increased severity of syphilis and influenza (influenza, itself, is in my opinion swine fever communicated to man whose resistance has been reduced by phosphine).

In carrying on this work I have depended principally on inductive reasoning, making use of my knowledge of the pharmacological action of phosphorus and phosphine, clinical observations, and observations of laboratory workers. Any induction formulated to explain facts has been tested in a deductive manner so far as opportunity presented. I may tell you that I have been greatly handicapped by the want of laboratory facilities.

Most of my work was carried on while I was in the Army in England. After my return from overseas in August last, I found evidence of poisoning with phosphine, or phosphorus, in the civilians of Toronto. I then began to test food, water, and drugs for phosphine. I found it in the city water of Toronto, one kind of pear, and two samples of Epsom salts. I then began testing faeces for the poison, and found it in several cases presenting the following symptomatology:

- 1—Symptoms of increased sensitization of the nervous system.
- 2—Constipation with abdominal distress and offensive stools after a purgative, and symptoms of hepatic insufficiency.
- 3—Purpura, mostly seen in women.
- 4—Symptoms of fibrositis (myalgia, etc.).
- 5—Symptoms of irritation of the genito-urinary organs.

In my experience cases of this type are common at present, and I have no hesitation in diagnosing phosphine poisoning when the symptomatology is fairly complete without testing the stools for phosphine. Moreover, treatment rational to my belief as to the origin of the condition is successful.

The action of phosphine is somewhat similar to the action of the toxins of the *spirochaeta pallida*. Indeed, some of the affections engendered by phosphine may be mistaken by one unfamiliar with its action for luetic infections, especially general paralysis and tabes dorsalis. For instance in the early stages of both general paralysis and poisoning with phosphine, symptoms of neurasthenia are present. Later in both one gets inequality of the pupils, tremor, asthenia, etc. Dr. Hunt, of New York City, in the *J. A. M. A.*, January, 1918, described cases of this kind occurring in the American Army. He was unable to account for them as they were negative to the Wassermann reaction. There are many other resemblances between the two conditions; in both there is a diminished resistance to infectious diseases; in both periostitis, neuritis, and stomatitis are common. The affection known as encephalitis lethargica, which is occurring at the present, resembles in its symptomatology the acute attacks in general paresis. Indeed, in most cases one has to do a Wassermann test to distinguish the affections. Now, I hold the view advanced by Louis Bruce and Idelsohn some years ago that tabes dorsalis and general paresis are syphilitic disorders, complicated by secondary infection from the gut, the germ being probably *bacillus coli*. If this view is accepted, then the origin of encephalitis lethargica can be explained in an analogous way. The ingestion of phosphine, or the over-production of phosphine in the gut will tend to lower the resistance of the liver and of the tissues generally, and to increase the sensitization of the nervous system, etc. These changes produce increased susceptibility to infections, especially from the gut. In a condition such as this one can readily understand how infection takes place from the gut, by a germ of the normal flora, or one ingested with food, such as the microorganisms of swine fever, and chicken cholera. In the case of encephalitis lethargica I suspect the microorganisms of chicken cholera.

The question naturally arises: why are minute doses of phosphine administered for long periods so dangerous? The answer to this is, I believe, that infinitesimal quantities of phosphine may occur normally in metabolism. Fischer, writing before the war stated that it is possible that phosphine is formed in putrefaction. You know that we have evidence that bacterial growth in the gut of both adults and infants is necessary for health. In an infant the action of the colon bacilli and putrefactive germs is very slight, if present, because in health the bile is not reduced to any extent as indicated by the yellow colour of the stools and the absence of stercobilin. If the stools of an infant become brown and contain stercobilin the infant is, in my opinion, always more or less ill, although it may not show any marked gastrointestinal disturbance. The explanation of this is, I think, that phosphine is liberated so readily from caseinogen that, when the putrefactive changes that occur in an adult take place in an infant, the latter suffers from poisoning from phosphine. I believe that the origin of rickets, tetany, laryngismus(eclampsia, and other affections in which there is a sensitization of the nervous system, is to be at least partly explained in this way. The view held at present that in the sensitization of the nervous system there is a deficiency of calcium salts is, I think, probably correct, but I hold that it is usually secondary to the action of the phosphine.

The above hypothesis would explain the principle of the mode of action of phosphine. Infinitesimal quantities are necessary in motabolism; deficiency or excess tends to cause disease. My observations go to show that phosphine may be formed from the tissues of the body or from food, and the foods which give rise to it most freely are the phospho-proteins (caseinogen, vitellin, phospho-protein of eggs of fish, and possibly of the "germ" calls of cereals).

I ask the question: Is phosphine a growth-producing substance of the character which has been designated vitamines during recent years. I may tell you that I am skeptical about some of the laterature on vitamines.

In connection with this discussion, another interesting study is the relation of poisoning with phosphine to the disturbances of menstruation and pregnancy. I have been struck by the remarkable resemblances between diseases engendered by phosphine and the physiological conditions and diseases of pregnancy. In both we get a sensitization of the nervous system with a tendency to neurasthenia, hysteria, neuralgia, convulsions; nervous disturbances of the stomach and heart, etc.; in both there is a tendency to acute yellow atrophy of the liver and nephri-

tis; in both in increased susceptibility to infections; in both a tendency to constipation; in both a tendency to dermatitis herpetiformis. Again, during menstruation there is a sensitization of the nervous system.

An hypothesis which will explain these facts is that the endometrium supplies a sensitizing agent which readily liberates phosphine. The hypothesis would also explain the character of the lochia, such as offensive odor, and the presence of gas in cases of puerperal fever due to infection with the colon bacillus.

The foregoing is a brief statement of my work in connection with phosphine. If you are interested, I shall be pleased to supplement these statements with a more detailed discussion. In this connection I have attempted to condense the subject within the limits of a letter.

Yours truly,

GRAHAM CHAMBERS

26 Gerrard St. East.

SWEDISH RED CROSS HEALTH CAMPAIGN.

The League of Red Cross Societies has received a communication from the Central Committee of the Swedish Red Cross to the effect that the Swedish Red Cross Society has asked its government for a subsidy of one million crowns, in order that it may take a more active part in the campaign against the deplorable material conditions and dangerous epidemics prevailing more especially in Eastern Europe, and which constitute a menace to the entire continent. The General Assembly of the Swedish Red Cross, realizing that the situation demanded a prompt and favorable reply to the appeals for help issued in the stricken countries, and by various welfare organizations, without waiting for the decision of the Riksdag, has resolved, without further delay, to draw upon the available funds of the Society, and to place an advance of 100,000 crowns at the disposal of the Central Committee, for the immediate relief of the most severely tried regions.

The communication referred to appears to indicate that the action of the Swedish Red Cross will in the first place be directed toward those countries most easily accessible to Sweden, namely, Russia—more especially Petrograd—the Mission advancing as and when the interior districts become more settled. Similarly with regard to Austria, assistance to the Central Bureau in Vienna, for epidemic campaign in Eastern Europe.

In reply to this interesting communication, and while pointing out that the Central Bureau in Vienna, under the chairmanship of a member of the International Committee of the Red Cross of Geneva and

composed of government representatives, is an undertaking independent of the League, the Secretary General of the League desires to express his appreciation of the generous action of the Swedish Red Cross. Notwithstanding that the field of action selected is not its own, the League has much pleasure in realizing that its appeal has not been in vain, a fact which constitutes a practical demonstration of the humanitarian solidarity which forms the essential principle of its action.

RESOLUTIONS ADOPTED BY AMERICAN PUBLIC HEALTH ASSOCIATION.

The American Public Health Association at its recent meeting passed a series of resolutions on various matters relating to public health and sanitation. A number of these resolutions are reproduced for the benefit of the readers of the *Lancet*:

PHYSICAL TRAINING.

Whereas, The physical examination of school children and drafted men in the armies of the countries represented in the American Public Health Association has revealed a large amount of remediable defects, and that therefore legislation is necessary, whereby provision may be made for the correction of such defects by physical training and whereas it is further desirable that the youth of these countries be educated in the duties of citizenship, be it

Resolved, That steps should be taken to provide means to these ends under the direction of properly qualified persons, and that arrangements therefore be made through cooperation by the several federal, state and municipal governments.

NATIONAL MEDICAL EXAMINATION WEEK.

Whereas, The people of the several countries represented in the American Public Health Association have not as yet been effectively aroused to the necessity for periodical physical examination, be it

Resolved, That the American Public Health Association urges that a national medical examination week be appointed during the month of May, 1920; and that this Association unite in an educational movement with all national health, social and medical agencies of these several countries for the furtherance of this end.

CONTROL OF PLAGUE.

Whereas, The American Public Health Association recognizes the importance of thorough eradication measures for the control of plague in the seaports and districts where infection is likely to be introduced and spread by rats and ground squirrels, be it

Resolved, That adequate means be voted by the proper governments, whether state or federal, for destroying the carriers of this disease, and that this resolution be brought before the United States Public Health Service, and before the health departments of several seaboard states, where danger may exist through the importation of plague from foreign countries.

CO-ORDINATION OF FEDERAL HEALTH ACTIVITIES.

Whereas, It is believed that the promotion, maintenance and protection of health in its citizens is one of the fundamental functions of civil government, and;

Whereas, Lack of coordination in any national programme of administration and of orderly balanced expansion of the functions of the federal health services in the United States has resulted from the present distribution of such functions among various departments of the government, be it

Resolved, That the American Public Health Association thereby does urge that measures be taken to assure for the future a national health programme and a coordinated federal administration; and that to accomplish these ends a standing committee of members of the American Public Health Association be appointed by the President of the Association to study the needs of the national health situation, to confer with other health and social agencies and do whatever lies within its power, to secure the appointment of a special congressional commission on the coordination of the federal health activities along the general lines of the so-called France Bill.

VENEREAL DISEASE.

Whereas, The American Public Health Association recognizes the work of the U. S. Army and Navy in combatting venereal diseases during the period of the war, and the important influence of this work upon the progress of control of these diseases in civil life; be it

Resolved, That the Association does strongly endorse the programme for the protection of our armed forces in future years as outlined in the report of the Committee on Venereal Diseases of the Section of Public Health Administration and pledges its support of civilian cooperative measures for making these programmes effective; also that the Association heartily endorses the programme of the United States Public Health Service for combatting venereal diseases, and hereby offers the active cooperation of its officers, members and the Committee on Venereal Diseases in promoting this programme and urges the coordination of federal and state activities everywhere in the United States to this end.

ONTARIO VITAL STATISTICS

The reports to the Provincial Board of Health for January show that 654 cases of influenza were reported, and of these about 600 are credited to the one centre, the other fifty-four cases being scattered over fifteen municipalities.

As compared with December, the first four weeks of January shows a decrease of 245 cases of smallpox. Ottawa is now experiencing an epidemic of measles, 840 cases having been reported out of 1,300 for the whole province. The mortality, however, is very low.

The general record for the month was not a promising one, there being 4,790 cases of communicable disease compared with only 802 in January, 1919. Even eliminating the influenza cases which were not reported in January last, the increase in disease is startling. In January, 1919, however, influenza was ravaging the province, and 1,514 deaths were reported through undertakers.

DRUG PROBLEM CALLS FOR MORE EDUCATION.

The narcotic drug problem has in recent years attracted more and more attention. There used to be a notion that all the men addicted to drugs were weak-minded degenerates or intentional criminals. It seemed to be generally supposed the men and women with the narcotic drug habit belonged naturally to the under-world, and that those who did not had strayed from there. Now, of course, it is true that among the social degenerates drug addicts are found in very large numbers, but it is poor logic to assume that because many criminals use drugs, all drug users must be criminals. As a matter of fact, drug addicts have a disease. They are sick men and women, and they require proper treatment. Dr. Ernest S. Bishop has been taking a deep interest in this subject, and is one of the men now carrying on a campaign to have society take a proper attitude towards drug addicts. In his book, "The Narcotic Drug Problem", he aims to educate public opinion regarding the unfortunate. He wants people to understand that the dramatic features of the addiction problem, including crime, degeneracy and sensuality, are not the only side of the question, and he hopes that in time the sufferers will not be herded together in the popular mind. The present attitude is unscientific, and makes it harder for the addicts who do not belong to the criminal or degenerate group to get proper consideration. As Dr. Bishop says: "In the near future, I earnestly hope the true story and the real facts concerning that opiate drug addict will become universally known. Without familiarity with them and understanding of them, and comprehension and appreciation of their disease, we shall never make real progress in the solution of the narcotic drug problem. From the present day trend of

articles and stories in the newspapers and lay and medical magazines it cannot be doubted that the time is not far distant when in the lay press will appear, in plain, sober, unvarnished truth, the true story of the experiences and struggles of the opiate drug addict. I have marked a rapidly-growing appreciation of facts and a steady-increasing activity in the investigation of conditions. This is sooner or later bound to be followed by intelligent public and scientific demand for competent and commonsense explanation and solution."

BREATHING ROCK DUST.

Over 200,000,000 tiny particles of dust, as sharp as ground glass, are breathed into the lungs and passages with every cubic foot of air in some of the factories in the United States, according to a survey made by the Public Health Service.

Such dusts breathed into the lungs are never expelled. Photomicrographs show the tiny particles to be exceedingly sharp and jagged and chemical tests prove them to be practically insoluble. Work under such conditions invites respiratory diseases and make a real health hazard. Similar investigations in chemical factories showed that laborers were frequently exposed to poisonous fumes and gases.

The investigation was made at Niagara Falls because plants were engaged in the manufacture of abrasives, chemicals, gases, electrodes, carbons, metals, and alloys. In all of the factories the laborers were found to be exposed to dangers which would eventually incapacitate them for further work. Fortunately over 60 per cent. of the labor in these plants seeks new employment monthly and the result of exposure to such dangers is not evident as it would be if the workers remained at the same work for longer periods.

As a result of the survey industrial hygiene engineers devised means of removing the dust from the air and minimizing hazards from fumes and poisonous gases. In spite of the fact that the installation of such devices was expensive, factory managements immediately put them into use.

DRUGGISTS PROTEST THE LICENSE LAW.

A deputation representing the Canadian Pharmaceutical Association and the Ontario Association of Druggists waited on Hon. N. W. Rowell, minister in charge of the federal department of health, asking that some amendments be made in the Act respecting patent medicines, which was passed at the last session. Objection was made to the clauses providing that every druggist must register his formulas and secure license for those he uses. A fee of \$2 is charged for registration, and an additional fee of \$1 for the license. This, the druggists claim, is an unnecessarily heavy

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burden, and one which, if not removed altogether, should at least be materially reduced.

The deputation also asked that there be a revision of the provisions respecting drugs, the presence of which must be indicated on the label of the container of the patent medicine. Many of these drugs, it was stated, were not of a character which made it necessary that they should be under such a schedule.

The third objection was that the act involved the renumbering of the labels of all goods in stock when the act came into effect. The deputation asked that druggists be allowed to dispose of their existing stocks without this renumbering of labels, and without incurring any liability.

SCHOOL ROOM AIR LACKS HUMIDITY.

In an illustrated lecture on "The Principles of Ventilation" at the University of Toronto Physics Building a few weeks ago, Prof. J. J. Macleod, M.B., Ch.B., head of the university's department of physiology, stated that the general impression that ventilation is merely a matter of pure air is a wrong one. He submitted that the temperature and humidity of the air are the physical conditions of the atmosphere which are of paramount importance.

Observations made very largely on properly selected groups of children have established that for school room air a temperature of 65-68 F., with a relative humidity of 45-60 is the most desirable state, he said, adding that to maintain these conditions throughout the period that the class occupies the class room, usually requires, in this country at least, the addition of a considerable quantity of moisture to the ventilating air. He stated that the air in most of our school rooms in winter is too dry, and under these conditions the mucous membrane suffers.

He stated that oxygen deficiency had nothing to do with the evil effects of ill-ventilated places.

"The odor of polluted air has no bearing on its unhealthy influence," he remarked, "except in so far as it excites disgust and puts one off his appetite."

ORGANIZE AGAINST VENEREAL DISEASE.

As a result of an informal conference held two months ago by those interested in combating venereal diseases, a meeting was called recently in Dr. R. R. McClenahan's office at Parliament Buildings, to take steps for the formation of an Ontario branch of the national society. Amongst those present at the meeting were: Dr. C. A. Hodgetts, Ottawa; Dr. Gordon Bates (secretary of the national council), Toronto; Prof. Fitzgerald, Toronto; Dr. D. G. Storms, Hamilton; Dr. Luney, London; Miss Fairley, Hamilton; Miss Torrington, Toronto; Miss Perry, Y.W.C.A.

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The meeting drew up a form of constitution which will be submitted to the national council for approval. It was decided by the committee to work in conjunction with the provincial board of health, and so that a touch could be maintained with Queen's Park. Dr. R. R. McClenahan was appointed honorary secretary to the new organization.

The lieutenant-governor was elected honorary president; Dr. C. Hodgetts, president; Dr. Storms and Miss Torrington, vice-presidents; L. M. Woods, treasurer, and Dr. R. R. McClenahan, secretary.

The following ladies and gentlemen were appointed as conveners of sub-committees: General propaganda, A. E. S. Smythe; lectures, etc., and industrial plant education, Dr. Gordon Bates; education of the young, Dr. Anna Young, Y.W.C.A.; education of medical students, Prof. Fitzgerald; protection of girls, Ald. Mrs. Hamilton; law enforcement, Police Chief Whatley, Hamilton; education of nurses, Miss G. Gunn.

A campaign for educational purposes and membership of the association will be commenced almost at once by the association.

MEDICAL PREPARATIONS

THE THERAPEUTIC ADVANTAGES OF COLLOSOLS.

Medicaments in the colloidal state have established their reputation and have proved themselves of vast importance in therapeutics. The colloidal state connotes an increased activity of the agent. In some cases, indeed, the agent is practically inert until it is in the colloidal condition. It is an axiom of therapeutical practice that before a drug can exert its full therapeutic action it must become converted into the colloidal state. So far as the treatment of syphilis and other infections is concerned, the principle of successful treatment is to stimulate the protein particles of the organism which are antagonistic to the parasites of disease and of those of syphilis in particular, to increased activity. Drugs, therefore, administered in the colloidal state act at once, no energy being wasted in bringing them into the state which is necessary before they bear their full powers.

In this last month's publication has appeared a most remarkable article by Dr. J. E. R. McDonagh the great British authority on Venereal Disease. The importance of Intramine, is well explained and is considered far better than the arseno-benzene treatment, which has been often said might do more harm than good to the real treatment of syphilis. The value of Collosol Maganese, Palamine and Intramine in gonorrhoea is demonstrated and proved to be of the greatest value. All these colloids are prepared in a perfect colloidal state by the Crookes Laboratories in London and placed on the market by The Anglo-French Drug Co., Ltd., Montreal.