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EDITORIAL

THE CONDITION OF SERBIA.

" 'Tis strange, but true; for truth is always strange; stranger than fiction," said Byron. And the condition of Serbia is deeply more interesting than fiction. The case of that little country is very distressing, and should appeal to all. She was set upon without cause by Austria. Serbia had offered full reparation for the murder of the Archduke if it could be shown that any Serbians were guilty. Since the war broke out she has suffered all the horrors of war. Many of her strongest and bravest have been killed, and the country is filled with wounded and sick. In addition to the curse of war, Austria has given the country the curse of pestilence; for her army contained many who were infected with typhus fever. When these became prisoners of war they spread the germs broadcast and soldiers and civilians have suffered severely. This condition attracted the attention of a number of persons of means and influence, notably Sir Thomas Lipton and the Duchess of Talleyrand (Anna Gould).

By the efforts of these and the Red Cross, especially the American Red Cross, some much-needed and valuable assistance has been sent to that country. Of those that have gone several doctors and nurses have already succumbed to typhus fever. Dr. B. M. Cookingham, of New York State, gives an interesting account of the conditions found. There are some 300 doctors for a population of 3,000,000, or one for every 10,000. These doctors are not at all efficient in most instances.

Dr. Cookingham remarks that in the village of Valjevo the population was increased by over 6,000 due to the war. There were from 800 to 1,000 sick with only himself and an assistant to do all the work. They had very little hospital accommodation and almost no supplies. There were no nurses, and they had to make use of some Austrian prisoners as orderlies. For some time there were 150 deaths daily at Valjevo from typhus fever. This terrible condition was common throughout the country. Dr. Cookingham fell ill with typhus and had to lie on a miserable make-shift of a bed; but he recovered.

Food is very scarce, and there is urgent need for surgical supplies and drugs. The epidemic of typhus fever is one of the worst ever known. Dr. Cookingham hopes that all who can will render aid.

CANADIAN DOCTORS AND NURSES.

Already the Canadian doctors and nurses are being fully appreciated. So far they have landed safely at some port of Britain, and have been assigned to posts of duty, in connection with the several Canadian hospitals that have recently been sent over; or in connection with some of the hospitals already in operation.

The Metagama, carrying No. 3 and 4 General Hospitals, some 1,700 troops, and 150 nurses, landed at Devonport. The steamer came in with all lights out, and was escorted by five torpedo boat destroyers. The nurses were sent on to London and put up at a Bloomsbury hotel. The troops were sent on to Shorncliffe camp. Some of the nurses were soon sent over to France, where their services were very urgently required, and where they are to be temporarily employed until their own hospitals are established. Some were sent to strengthen the staff of the Duchess of Connaught's Hospital.

As soon as the various Canadian hospitals, especially those from the universities are settled for work excellent results are expected from them. The Canadian doctor and the Canadian nurse, like the Canadian soldier, has won high praise in all quarters.

COL. G. STERLING RYERSON, M.D.

Dr. G. S. Ryerson is entitled to much praise for his splendid work in connection with the Canadian Red Cross work. He had two sons at the front, and one of these was killed at Langemarck, and the other wounded. As the latter was retiring with others, he saw his brother on the battlefield and picked him up to carry him off, when he was himself hit. Col. Ryerson at the time was in Britain in connection with the Red Cross work.

On hearing the news of the death of one son and the wounding of the other, Mrs. Ryerson sailed for England on the Lusitania with her daughter. Mrs. Ryerson lost her life when that steamer was torpedoed, but the daughter in a most miraculous manner escaped.

When the news of the death of one son and the wounding of the other had reached England, at a meeting of the British Red Cross Society Princess Christian moved and the Marchioness of Lansdowne

seconded, that a resolution of sympathy be sent to Dr. Ryerson, expressing their heartfelt sorrow for the great loss he had sustained.

We join in expressing our deepest sympathy for Col. Ryerson. Truly he has suffered grievously. His son died bravely on the battlefield, and his wife was foully murdered by the crew of a German submarine.

THE ONTARIO OFFICERS OF HEALTH.

The fourth annual conference of the Provincial Association of Medical Officers of Health opened at the Armories, Peterboro, on 25th May, with an attendance of 125. Dr. W. H. Hall, M.O.H., Chatham, presided.

Dr. J. H. Holbrook, superintendent of the Mountain Sanitarium, Hamilton, read a paper on "The Early Signs of Tuberculosis." He held that while advanced cases seldom infected adults, yet young children were subject to it. Dr. Craig, superintendent of Queen Alexandra Sanitarium, London, spoke on "Tuberculosis Problems from a Health Standpoint." It was a disease of housing and living conditions, contaminated houses being one of the greatest sources of infection. Especial care was needed to insure immunity in establishments where food is prepared or sold.

Dr. Hall, the President, in his annual address, spoke of the reversed conditions of relative healthfulness of city and country. Formerly children were sent to country schools for health. Now, owing to sanitary advance, the children of city schools were healthier than those of the country, city children having the benefit of dental attention and nurses.

Dr. F. W. Schofield, Toronto, dealt with "Anti-Typhoid Vaccination," particularly emphasizing its effectiveness in military camps, as demonstrated in Toronto.

Dr. Hastings, M.O.H., Toronto, spoke of the difficulty of educating public opinion on sanitation. He pointed out the benefits of it in Toronto, where in 1910 the death rate per 100,000 was 40.8, whereas it had been reduced to 7.5 in 1914.

At the evening session, open to the public, the Provincial Board of Health moving pictures were presented, and Dr. H. D. Pease, of Lederle Laboratories, New York, spoke on "The Rational Position on the Food Question."

Dr. C. N. Laurie, of Port Arthur, treated the question, "How Shall we Enforce Better Observance of Quarantine?" In schools, he said, nurses were valuable in preventing concealment of contagious dis-

eases. "Health Problems in Small Towns and Their Solution" was the subject of the address of Dr. J. W. Shaw, Clinton. Dr. E. B. Oliver, Fort William, dealt with "How Health Officers can Secure Co-operation of Residents of a Municipality," and Dr. M. Powers, Clinton, in a humorous but practical address dealt with the subject, "Some of the Troubles of the Rural Health Officer and Their Remedy."

One of the best papers was that of Dr. T. J| McNally, Guelph District Health Officer, on "Sanitary Conditions in Rural Schools." It was extremely practical, and the President, Dr. Hall, of Chatham, and Dr. Hastings, of Toronto, particularly congratulated Dr. McNally.

At the closing session the report of the committee composed of Drs. W. E. Crain, Chrysler; F. W. Vardon, Galt; C. N. Laurie, Port Arthur, and E. Bull, Lambton, suggested a schedule of salaries for Medical Officers of Health: Townships, $300 per annum; incorporated villages, up to 1,000 population, $150 per annum, with addition of $50 for each 1,000 or majority thereof; towns, $100 for first 1,000 population, $50 for each subsequent 1,000; cities under 20,000, $1,000 per year, over this number, $1,200. In the discussion leading to the adoption of the report it was pointed out as desirable as to towns and cities that the salary should, to insure best results, be large enough to enable the Health Officer to give his whole time to the work.

An address by Dr. Adam H. Wright, of Toronto, on "Abnormal Conditions in Children" followed.

Election of officers resulted as follows: President, Dr. A. W. McPherson, Peterboro, former M.O.H., but now on active service overseas; Vice-President, Dr. A. J. Macauley, Brockville; Secretary-Treasurer, Dr. J. W. S. McCullough, Toronto, Provincial Officer of Health; Committee on Papers, Dr. Roberts, Guelph; Dr. F. A. Dales, Stouffville, and Dr. J. W. S. McCullough, Toronto.

THE TORONTO PREVENTORIUM.

Due to the generosity of Col. and Mrs. A. E. Gooderham, the Preventorium for Children is now in an excellent and efficient condition. This institution, out of the city on Yonge Street, is their gift. The situation is ideal and has every facility for proper care, fresh air, and sunlight. In addition there is an infirmary, to which patients suffering with any form of contagious disease may be removed. This is a most practical way of dealing with the earliest stage of tuberculosis, or with those children which may only be suspected of having the disease. The I. O. D E. have taken a keen interest in the work.

THE DOCTOR IN THE ARMY.

The doctor is coming to his own in the army. In the first place the planning of the hospital system and the Red Cross work have done a vast amount for the wounded and sick soldiers. Every effort is made to secure prompt attention and in this way affords the best chance of recovery.

By a thorough system of sanitation and inoculation against typhoid fever this disease has almost disappeared from the army.

Then, again, the use of anti-tetanic serum is accomplishing much. At the earliest moment the wounded, especially those with dirty and lacerated wounds, are given injections of the anti-tetanic serum. By this means lockjaw has become almost a thing of the past.

Owing to the care in sanitation and isolation, the diseases spoken of as paratyphoid fevers have become very rare in the army.

Already the army has learned much, if not in the way of pure science, at least in the way of applied science of medicine. Since the fighting is over a highly cultivated, highly fertilized terrain, there is great danger of septic infection. In fact, this is more than a danger—there is a great deal of actual infection. Science had already conquered sepsis, theoretically, but in practice it still remained a danger under war conditions. In the early stages of the war, when all the Army Medical Services in Europe were still finding their way, there were many deaths from sepsis. By observation, by the collection and exchange of results, the Royal Army Medical Corps and the Red Cross have made that problem no problem at all. "Sepsis has ceased to have any terrors for us," said an eminent surgeon recently.

CAMPAIGN AGAINST CANCER.

In the New England States the death rate from cancer is higher than in any other group of States. This is due to the fact that the proportion of old people is greater there than in other parts of the country. The published returns have stimulated much activity in many quarters for the control of the disease.

In the United States in the registration areas there were in 1913 49,928 deaths from this disease. This gives a rate of 78.9 per 100,000 of the population. The New England States have a cancer death rate much higher than this. In Connecticut it is 85; in Vermont, 111; and in Maine, 107. In Kentucky it is only 48. The difference is largely due to the difference in the average age of the people in the several States.

Without doubt this high death rate can be materially reduced by

early recognition and proper treatment. Cancer is not always a hopeless incurable affection. The main thing to aim at is the education of the people so that they become alert to the early symptoms of the disease and seek advice in time. It is held that in this way the rate could be reduced by one-half or two-thirds.

It is with the view of spreading useful information that an organized effort is being made by the medical profession in many districts in the United States. On the list of those taking a leading part in this movement will be found such names as Drs. Robert Abbé, G. E. Armstrong, J. C. Bloodgood, G. E. Brewer, W. W. Chipman, H. C. Coe, W. T. Councilman, T. S. Cullen, James Ewing, J. R. Goffe, Howard Lillienthal, F. H. Martin, W. J. Mayo, W. L. Radman, J. H. Wainwright and many others, together with many prominent lay ladies and gentlemen. Dr. W. S. Brainbridge is taking a prominent part as a lecturer.

MILITARY SURGERY.

Henri Hartmain call (in *Paris Medicalq* attention to the unexpectedly large proportion of wounds due to artillery projectiles in the European war; in a series of cases recently seen no less than 168 wounds had been due to artillery, compared to ninety-nine caused by rifle bullets. Under these conditions the treatment of the wounded has had to differ considerably from that advised by certain authors at the beginning of the war, stress being now laid on active preliminary surgical treatment, including dissection of infected tracns, removal of foreign bodies, and copious irrigation and drainage, as prerequisites in conservative surgery, i.e., in surgery which avoids complications and secondary mutilating procedures. Tvidence of the prophylactic efficiency of antitetanic serum was obtained in a series of 311 cases of wounded soldiers, in whom no tetanus appeared except in two instances in which the preventive injection had been by error postponed until sif and eight days after admission to the hospital. As regards gangrene with gas formation, Hartmann points out the fallacy of attempting to arrest the process by means of interstitial injections of hydrogen dioxide solution at the margins of the gas infiltrated tissue; the only rational treatment is to deal particularly with the initial focus, removing all foreign bodies there, freely separating and disinfecting the tissues, and even resorting to amputation where the entire thickness of the limb is involved. In dealing with wounds in general, Hartmann prefers irrigation with hydrogen dioxide solution or one in twenty phenol solution to the use of tincture of iodine. In badly infected wounds immersion in antiseptic fluids or the use of antiseptic sprays, is recommtnded. Radioscopic examination of all wounds is advised, immediate detection of fractures and metallic foreign bodies being thus rendered feasible.—*New York Medical Journal.*

ORIGINAL CONTRIBUTIONS

THE NURSE.

AN ADDRESS TO THE GRADUATING CLASS OF NURSES, THE WESTERN HOSPITAL, TORONTO, JUNE 9TH, 1915.

BY THE HONOURABLE WILLIAM RENWICK RIDDELL, LL.D., Etc.,
Justice of the Supreme Court of Ontario.

I AM not sure why the Board of the Western Hospital have asked me to deliver the Graduation Address to you, but shall flatter myself by assuming that I am credited with some knowledge of medicine, some knowledge of the world and its ways, and at least a modicum of common sense.

You are to be congratulated upon the advance in public estimation heretofore made and still being made by your profession. Scarcely half a century has passed since the nurse, as we understand the name, has become an integral and necessary part of English-speaking communities. The hideous picture of the nursing trade—it could not be digniled as a profession—given by Dickens in *Martin Chuzzlewit,* in the early 40's is as terrible as it is disgusting and nauseating—Sairey Gamp and Betsy Prig, ignorant, drunken, slatternly, unkempt and unreliable—yet there is no doubt that the picture, vile as it was, was true to nature. Dickens could and did see life as it was and could and did faithfully describe what he saw.

It is, in great part, to that splendid woman and efficient nurse, Florence Nightingale, that we owe the profession as it now exists. But some part, and that by no means negligible, has been played by the fundamental revolution in the medical conception of disease itself, due largely to the microscope.

The old physicians looked upon disease almost as an entity to be met, fought with and conquered by the proper medicine; the newer school sees but an abnormal condition of the tissues and organs of the body, due not seldom to some foreign animal or plant which has made its way where it should not. These physicians endeavour to assist nature to throw out the alien and think in most cases they do well in making and keeping the patient as qualified as possible in being himself the agency of bringing about a return of health.

With these the nurse is essential; with those rather a superfluity, nay, a hindrance than otherwise. When a disease was to be subdued by doses of medicine, there a nurse was of no use; she was rather in the way than otherwise; but when the body is to be helped to strengthen itself by a comfortable bed, fresh air, good water, appropriate food, the story is different.

And so the nurse is coming, if not quite come, to her own—a consummation devoutly wished and to be wished.

Poeta nascitur non fit—a poet is born, not made; and so it is of the nurse. Without the knack of nursing, which comes by nature, if it comes at all, the nurse cannot attain distinction, but must be to a great extent mediocre, if not a complete failure.

Granted this knack, this "fairy god-mother" gift of Dame Nature, what then?

First, I would say, on the list of qualifications for a successful nurse comes common sense.

Carlyle says, "A thinking man is the worst enemy the Prince of Darkness can have" and he is nearly right—a thinking woman is a worse.

It is said that a reasoning mule will neither lead nor drive, and if a nurse were something just to be led or driven that apothegm would be applicable to her; but neither in law nor in reason is that true of the nurse. She cannot sink her individuality or abrogate her duty as a member of the public and as a reasoning creature.

I remember when at the Bar defending a doctor for malpractice; he was to perform a serious operation under an anæsthetic and the patient required to be laid on his back on a water bed. The nurse swore at the trial that the doctor had told her to fill the bed with boiling water. She did fill it with boiling water and, of course, the patient had his back shamefully blistered. The nurse knew the necessary result of doing as she did, but said she thought she should do exactly as she was told, and without enquiry. She was a fool. If the doctor did give such an order, she should have known that it was a slip of the tongue and should have asked about it pointedly. Had the result been fatal, as it might have been, nothing could have saved her from a conviction for manslaughter; she could not have sheltered herself behind the direction of the doctor; and that the doctor would be equally liable would not have saved her. At that trial a surgeon of Toronto, in the front rank of his profession, swore that if he could not rely upon his nurse he must give up surgery—that anyone calling herself a nurse should know that no doctor could intentionally give such an order. That nurse did not use her common sense (assuming that she had any); she applied to that case the ordinary rule that a doctor's directions are to be implicitly followed without comment—an excellent rule, but not always to be followed. The doctor is not to be contradicted, but every enquiry is not contradiction. Sometimes it is only knocking at the door to see if intelligence and knowledge are at home. Taking the nurse's own story as accurate, the doctor's intelligence was not at home, but was away woolgathering.

I remember when studying medicine my preceptor once wrote ℥ for ℥ and gave me the prescription to fill. If I had done so, both of us would have seen the prisoner's dock if we got our deserts.

Many difficult questions have been put—hypothetical questions generally, or, at least, the case must be of extremely rare occurrence—as to the duty of a nurse in administering medicine in dangerous doses, when the doctor is not available to be asked. If that particular doctor is not at hand another probably will be; and, in any case of real doubt, better follow the advice given by *Punch* to those about to marry, "Don't." For you may be quite sure that if a mistake is made, you will not be able to clear your skirts by throwing everything on the doctor—you are not his slave, but his assistant, and your negligence is not his.

I know what I say is opposed to the teachings of many medical men and nurses, too, but it is law. You have no right, much less duty, to lay aside your common sense.

In what I have said I am not to be considered as suggesting constant or open criticism of treatment—that is not your function at all. You must use due care; but the doctor is the final judge as to treatment. Yet even here to improve yourself in your art there must needs be observation, and therefore criticism, not open, indeed, or to the patient, but to your own mind. "Criticism is like champagne, nothing more execrable if bad, nothing more excellent if good," says Colton; and while in these days of temperance and prohibition, we may not all agree with him as to the excellence of good champagne, there can be no doubt of the execrableness of bad criticism. Good criticism will assist in your profession—and to be a competent critic you must know. Natural intelligence, natural good sense, is not enough; neither reading nor writing comes by nature, nor does a knowledge of nursing. You cannot know too much, "a little knowledge is a dangerous thing," and "cultivation is as necessary to the mind as food to the body," as Cicero wisely says.

Knowledge has grown from more to more and is still growing; old and time-honoured ideas are gone, newer ones taking their place. In my school days the future character of Nero was considered to be indicated by his childhood habit of killing flies. Everyone will remember in Charles Reade's "Hard Cash" how the conduct of David Dodd in preventing his mate from killing flies was held up as a model. God's creatures had a right to live. "He was killing God's creatures . . . so, ye see, to save their lives, I was obliged to throw him overboard," said David. Now the insect has found his true place as the outlaw of creation, the Ishmael of the animal kingdom with his hands against every man and every man's hand against him. Emerson said, "A fly is as untameable as a hyena," but he did not know that it is more dangerous, and so he did not advocate its slaughter. Nowadays with the ringing slogan "Swat the fly!" the boy Neco would be held up as admirable,

and heads gravely shaken at the degeneration shown when he grew up. He would be likened to Domitian, who began so well and ended so badly.

Mere intelligence and mere knowledge, "without corresponding energy are the polished sword within its scabbard, contemptible if it is never drown forth." The efficient nurse is energetic, she throws off langour, *dolce far niente*; with her, life is real, life is earnest, she is diligent, and diligence includes most of the virtues. She throws herself into her profession and loves it and lives it. She does the duty which lies nearest to her and fears not that bidden to wait it may return "with seven fresh duties at its back."

She follows the advice of Pythagoras to "choose always the way which seems to be the best, however rough it may be, well knowing that custom will render it easy and agreeable"—that custom is second nature, that "doing is the great thing, for if people resolutely do what is right they come in time to like it," as John Ruskin assures us—that "duty by habit is to pleasure turned."

Enthusiasm is a great thing, but it may go too far; nearly as many suffer from too much as too little. *"Meden agan,"* in nothing too much, was the Green maxim. Enthusiasm must be tempered by reason and so become earnestness, for we know that even those of the most distinguished talents are not necessarily gifted with discretion; and while one of large intelligence generally knows a great deal, he is not therefore always prudent.

Courage, too, is needed. "Courage, sir, that makes man or woman look their goodliest," says the late Poet Laureate. There is no room in the nursing profession for one who loses her head in an emergency, and who is afraid to take on responsibility when occasion calls for it; but this does not mean or imply running unnecessary danger, danger for danger's sake is senseless folly and cannot be too severely reprobated. Doing nothing is not necessarily doing ill. There is such a thing as disciplined inaction, and they also serve who only stand and wait.

Shakespeare lilts:

A merry heart goes all the day,
Your said tires in a mile a

The Good Book puts it better thus: "A merry heart does good like a medicine"; Addison says: "Cheerfulness is the best promoter of health and is as friendly to the mind as to the body"; and Jean Paul, "Cheerfulness is the heaven under which everything thrives but poison."

Many patients have grown well under the compelling influence of the cheerful nurse, to whom a broken spirit would have dried the bones; and to tell of one's physical afflictions to a sympathetic and cheerful nurse is itself an alleviation as old Ovid well knew in his day. Whether

every man is a rascal as soon as he is sick, as Dr. Johnson thought—and he was much of the time sick himself and should know—there is no doubt that every man is an egotist as soon and as long as he is sick; the wise nurse well knows how much and how little to pander to this abnormal egotism and how much to discourage mournful forebodings and to encourage optimism. I know many lecturers advise against talking with a patient about his ailments at all; it tends, they think, to make him too introspective, morbid, pessimistic, and so it may, if he talks to a fool; not, I think, where the nurse is intelligent, skilled, earnest—*Dieu seul devine les sots.*

But you should be secret as the grave to others. The patient's secrets are his own and to be shared only by the doctor, the nurse and those to whom he approves.

Do not allow yourself to become vulgarized. You are a nurse, you should not cease to be a lady. Many things you see, many things you must sometimes speak of in your profession will have a tendency to brutalize the mind. Guard against that, a woman once vulgarized can never be rehabilitated, she is vulgar and no longer a lady—the uniform of a nurse should cover a clean mind and a pure heart as it covers a clean body.

To be a perfect nurse you must be perfectly healthy. You should not be liable to the lash of the Roman satirist, "*Aliorum medicus, ipse ulceribus scates,*" "you who would fain cure others, yourself overflowing with diseases." "Take care that you keep well," says Cicero, advice is good to-day as it was two thousand years ago.

"*Der Mensch ist, was er isst,*" man is what he eats, says the German proverb. What to eat, how much to eat, is in great measure a matter of experience utilized by common sense. I have recently had occasion to examine the evolution of dietetics from the time of Charles II., and the main thread running through the process is the gradual elimination of animal flesh in excess. I am not a vegetarian in general; moreover, few raw fruits agree with me, but I lose my guess if the process does not proceed further, and if at least for sedentary or semi-sedentary occupations, the day of much meat is not done.

We are creatures of habit and are wont to eat what, and what amount, we are accustomed to eat, but food to us is like fuel in a furnace. If a skilful furnace-man keep up the accustomed heat or any sufficient heat it does not matter how murh or what kind of coal he uses (so long as it does not cost too much). So with food—if you find that less keeps the body in vigour, you will be silly if you do not eat less; if less meat, you find, makes you more healthy, take less meat —in all such matters use your common sense.

Those who should know, tell us that the use of a diet largely, if not exclusively vegetable, will destroy rheumatism (which many say does not exist anyway—like Sairey Gamp's Mrs. Harris, "there is no such person") gout (which they admit with some reserve) and neuritis (which everyone knows) perhaps so; "*fiat experimentum in corpore proprio,*" i.e. try it.

The drunken old nurse—she who had the bottle of gin placed on the mantel so she could put her lips to it when so disposed—is dead, and has no successor; without being a prohibitionist, or even a temperance man, the average patient would, if there must be a smell, prefer that of the harmless mephitis Americana to that of liquor on the breath of his nurse. Wine maketh glad the heart of man even yet, as it did in the Psalmist's days, but not when it gets no nearer him than the nurse—it does its joymaking work only at first-hand.

Speaking of myself only, I could never see and cannot see, why, if men use tobacco, women may not. The custom is growing in some circles and will probably continue to grow. But I have heard many delicate women complain of the smell of stale tobacco on the clothes of the doctor; and I am quite sure that most women, and men,too, would prefer the smell of assafœtida on a nurse's uniform to that of tobacco. The one might be medicinal or accidental, the other could not be.

In dress the nurse, like the soldier, when on duty, is relieved of all care of her outside clothing. The uniform of the nurse in its neatness is as far removed from finicalness as from slovenliness, is as honourable and should be worn as proudly as that of His Majesty's troops. She is engaged in as necessary and as lofty a work as are our splendid lads in the trenches in Flanders, and should be as proud as they.

A writer in the *Anglo-American Magazine,* published in Toronto, in the number for May, 1853, gives an appalling picture of the General Hospital of that day. (See my article, "Examination for License to Practice Sixty Years Ago," *Canada Lancet,* June, 1913). He calls it an old pest house, its surgery with shelves of musty-looking old bottles covered with dust and cobwebs, its operating room a dark close room, "a sort of Calcutta Black Hole." We need not be told that the mortality in that chamber of horrors was frightful.

Now we know that dust may be as dangerous as arsenic, and that sunlight is often itself a medicine. The nurse is called upon to shield the patient from dirt, dust, flies, darkness, as formerly she kept her charge from light, fresh air (and especially night air), and often fresh water. Utter cleanliness must be considered as natural and essential as breathing; fresh air as food.

In an interesting and amusing book published in 1800, "The Hos-

pital Student,'' by James Parkinson, a surgeon of some note and a paleontologist not quite forgotten, he speaks (p. 26)) of ''the vulgar (i.e. common) observation, that a physician seldom obtains bread by his profession, until he has no teeth left to eat it''; and he adds, ''I have myself known a physician above fifty years of age objected to for his youth.''

Matters are not quite so bad in this age and country, but still the young physician is not considered to be entitled to charge quite so much as the old and experienced—much less is the young surgeon expected to receive so much as the leaders in the profession. So, too, the young lawyer just starting cannot charge a counsel fee which the noted K.C. would expect as of course.

In your profession, however ,the recent graduate expects to receive and does receive the same fee as the more experienced. Sometimes that is explained by the suggestion that the science and art of nursing is advancing and the latest graduate has the latest improvements. Perhaps so, but as the Germans say, ''Change and betterment are different things,'' and in any event, the same argument should apply to the young surgeon. I may be permitted to doubt that in either profession the extra science and knowledge can take the place of the extra knack and dexterity acquired and acquirable only by experience. Experience is the best teacher, even if the school fees are high.

The real reason for this equality of nurses' fees lies deeper. A physician should be as good at sixty as at thirty, or better—a lawyer does not lose by advancing years, and until he becomes practically helpless his practice generally increases; but a nurse has not more than fifteen or twenty years of really efficient and remunerative servicee. She must make hay while the sun shines and cannot wait till October to do it either.

True, the nurse is still a woman. Most of you are destined for the slow march down the long aisle to the favorite air from Lohengrin, but there are exceptions. Some are born old maids, some achieve old maidhood, and some have old maidhood thrust upon them; and it requires reasonably generous pay, and careful and economical management for a nurse to make enough during her years of active service to support her in after life.

And that brings me back to a most important—some would say—*the* most important matter. Many have not yet got rid of the idea that a nurse is a kind of Sister of Charity; that she ought to attend a sick person for nothing, if necessary; and in any event for what the patient can afford. The other day I read an address from a very prominent medical man to a graduating class of nurses, in which he advised

them to take what are called "poor cases" cheerfully. Now it is easy for a doctor to give that advice—when he attends the poor, it takes up but a small part of his time and he can make it up with his paying patients. The lawyer advising the poor and impecunious, need not therefore close his office to the well-to-do. It is to the credit of both professions that their members do give an enormous amount of attention and assistance to those who cannot pay; but their time is never wholly taken up with such,they are not prevented from making money out of others. As regards the clergyman, visiting the poor is part of his work for which he is paid.

If the nurse take a poor patient, she cannot take a rich, her time is wholly taken up with the one—and if she is not paid, her short term of productive service is by so much shortened. Moreover, while a doctor or a lawyer does not lose caste, but rather the reverse, by helping the poor, the nurse does. A nurse who acquires the reputation of being a cheap nurse will be held cheap.

Now God forbid that I should say anything to check a generous impulse or to prevent kindly gratuitous service; but let it be considered, as it is, a charity. No one may be required to do, as no one may be restrained from doing, a charitable act, and be sure there is nothing in your professional ethics which calls on you to give your service for nothing or for less than you can obtain. A farmer might just as well be required to give a load of potatoes or wheat. The estimate you put on yourselves will be the estimate the people will put upon you. Robert Burns knew this world well when he advised a young friend thus:

"Gather year by every wile
That's justifi'd by honour;
Not for to hide it in a hedge,
Nor for a train attendant;
But for the glorious privilege
Of being independent."

Nor need you fear want of employment if you are the right sort. Emerson asks, "Can anybody remember when the right sort of men and the right sort of women were plentiful?" Anyone with any experience or reading would readily answer in the negative.

Nor need you to cringe for employment or to be too humbly cognizant of favour on obtaining it—the labourer is worthy of his hire and you will give 100 cents' worth for every dollar you receive.

But once employed, all thought of self and self aggrandizement must cease, morbid fear of depreciation or want of appreciation, apprehension that you will not receive proper respect or your rightful social position, all that and the like, must be relegated to the back-

ground; the patient first, the patient last, always the patient being your care, all else forgotten. *Esprit de corps,* valuable as it is; pursuit of knowledge, laudable as it is; pursuit of pleasure, excusable as it is, are all as the small dust of the balance, compared to the real object of the nurse's life, to heal the sick.

I wish the graduating class of 1915 of the Western Hospital all success and all happiness in their chosen life; I am confident that the debt which everyone owes to his profession will be paid by them in full, and that the nursing profession will not suffer in public opinion or in proficiency from them.

ADDRESS ON SURGERY.*

By Francis J. Shepherd, M.D., LL.D., F.R.C.S.

IT is one of the privileges of age to be reminiscent, and when asked to give this address I thought it would be interesting to look back and see what changes have taken place in the science and art of surgery since I entered as a medical student in the fall of 1869.

It is well for the present generation of surgeons to be aware of the condition of affairs in the pre-antiseptic days and to have some conception of the dangers and difficulties of surgery at that time. What is easy to the present generation was a source of difficulty them, and it is well to know that surgery was not born thoroughly equipped as was Minerva, the Goddess of Wisdom and Wars, Arts and Sciences, when she sprung full grown and completely armed from the brain of Jupiter.

The efficiency of surgery has been arrived at by a slow process of evolution. There had been but little advance in surgery for some time before I entered medicine. Lister was just being heard of in Glasgow as applying Pasteur's germ theory to surgery and trying to find some substance which would destroy the organisms he was convinced were the cause of sepsis and suppuration. But the germ theory was not yet admitted by surgeons in general and especially were the London surgeons opposed to it and even made fun of Lister's anticeptic efforts.

I remember my first experience of surgical responsibility was sitting up at night after an amputation of the thigh so as to be present and apply a tourniquet in case of secondary hemorrhage. At that time only one end of the silk legatures was cut short, the other hanging out of one corner of the flap, cheifly, they said, for drainage. During my student days it was rare to have an amputation of the thigh live until

* Read before the Ontario Medical Association, May 27th, 1915.

the ligature came away on the 14th day, they usually died of shock or pyemia the first week; I do not think I ever saw an amputation of the thigh high up recover.

Surgical operations then consisted chiefly of removal of external tumors, amputations for injury or disease, cutting for stone and opening obscesses. The abdomen was a *mare clausum,* and if by accident the peritoneal cavity was opened the fate of that patient was sealed and the church was his only salvation. Still the surgeons of that day were most skilled operators as they had learned their business in pre-anæsthetic times, and it was a common thing to see an amputation of the leg or thigh done in sixty seconds, and a complete lateral lithotomy under two minutes. I remember Sir William Ferguson, of King's College Hospital, London, operating in a dress suit with much expanse of shirt front and cuffs and being so clean an operator that he prided himself on never getting a drop of blood on his white shirt. Most operators used an old frock coat which was never cleaned and so was soaked in the gore of many victims. Some washed their hands, others did not, the field of operation was rarely cleansed except the wound caused by injury was full of dirt. All compound fractures of the leg were amputated at once so as to avoid certain death from sepsis, the only excepting was when the bone had made a punctured wound, the wound would be closed by congealed blood and healed in that way under clot.

In my last year of studentship Professor Wm. Fraser, who had spent the summer in England, introduced Lister's method of opening abscesses under lint soaked in carbolic acid. At this time there was no such thing as trained nursing, any old person was employed who thought they had a gift that way, and did their best; many of them imbibed, for at that time every patient was given an allowance of beer, whiskey, or port wine daily, and the night nurses especially were seldom sober. I remember in the seventies paying a visit to a patient in the hospital on whom I had that morning operated for strangulated hernia. I could not find the nurse at all (she supervised three flats), but my patient I found sitting out on the verandah in his night-shirt smoking a pipe, and all the obstreperous or delirous patients strapped to their beds. It was a cool evening in the autumn and my patient died of pneumonia some days afterwards.

I do not want to imply that we had no successes, for I have seen very many brilliant successful lithotomies, removal of tumors and amputations, and I have even seen healing by first intention. But it was strange that one of our surgeons, a very skilful operator, but who after operating visited his patients but seldom, had better results than his colleague, a much more conscientious man, who also was fond of path-

ology and liked to see the post-mortems on his patients and fussed a good deal over his cases. Needless to say the latter's results were not remarkably good.

We knew nothing about germs at tnat time and thought that putrefaction was caused by the oxygen of the air. When Pasteur demonstrated that putrefaction was caused by microbes, Lister by his previous work, from his student days onder Sharpey, was prepared to welcome this discovery and he says in his Third Huxley Lectore: "Thus was presented a new problem; not to exclude oxygen from wounds, which was impossible, but to protect them from the living causes of decomposition by means which should disturb the tissues as little as is consistent with the attainment of the essential objeit." Since then it has been proved that putrefaction is not the only cause of serious mischief in wounds, for there are microbes which are odorless and yet produce profound septic effects.

At this period and for some time after it was a common thing for the operating room orderly to be also orderly in the post-mortem room. Hence the better results of operations performed in the country or private houses than those performed in hospitals. When I visited London in 1873 I found the results of the surgeons fairly good, in fact London and English surgery was always clean and the results excellent for that period, and this is one of the reasons why antiseptic surgery made such slow progress in London. Whilst in Germany the surgery of that time was very dirty and neither personal cleanliness nor the cleanliness of hospitals a distinguishing feature, the results were accordingly bad, hence Listerism was adopted with avidity and the change to antiseptic surgery revolutionized the German methods with such amazing improvement in the death rate that soon they out-Listered Lister.

When I was in Vienna in 1874-5 antiseptics had not yet been introduced and surgical mortality was tremendous. I never saw an operation for strangulated hernia recover and sepsis prevailed everywhere, even the great Billroth had often disastrous results; twelve years later when I visited Europe again what a change had taken place! Hospitals and operators clean to excess; operations never hitherto attempted performed successfully, a very low surgical mortality, and surgery invading every region of the body and annexing territory which formerly was thought to be the exclusive domain of the physicians.

In 1874 I visited Edinburgh to see Professor Lister's work and a great impression it made upon me. John Chiene was then his house surgeon and if I remember aright he manipulated the hand spray of carbolic solution which was used during the operating and dressings. What struck me most was the excessive care of Lister in his dressings,

the great attention to detail and cleanliness; and in operating, his great deliberation. The spray was used on the supposition that most of the germs which infected wounds came from the atmospheric dust; when Lister found that the atmosphere was comparatively harmless and that the organisms were on the skin of the patients and the hands and implements of the operator he abandoned the spray. As many of you may remember, the hand spray was replaced by a steam spray. In Germany this was furnished by a large boiler placed in an adjoining room which poured forth carbolic acid spray into the operating room and covered everybody with a thick Scotch mist; in fact, one could scarcely see across the room and to protect oneself waterproof clothing had to be worn. This, of course, was German excess. Later von Bruns led a crusade against the spray and "fort mit dem spray" was the cry and soon the spray was replaced in Germany by irrigation. Niagaras of water were poured over the patient and the field of operation, so much so that the floors were flooded and the onlookers had to get on chairs whilst the operator and his assistants waded through the flood in long rubber boots.

Soon irrigation became out of fashion and aseptic and dry dressings were adopted which in ordinary surgery are used to the present day. In military surgery asepticism is impossible and resort is once more being had to antiseptics with the best results.

The scope of surgery in comparison to what it was forty years ago is enormous—no cavity of the body is now shunned by the surgeon; had such advances been prophesied in the middle of last century the lunatic asylum would have been thought a fit place for the prophet.

As I have said before, one of the great troubles after amputation was secondary hemorrhage—one saw hanging out of one corner of the stump a number of waxed linen or silk threads; some were on small vessels, others on large, and the surgeon making his rounds looked at the stump and pulled at one or other of these threads to see if they had ulcerated sufficiently to come away! Very often with the ligature came a gush of blood. This secondary hemorrhage required the reopening of the stump and the vessel secured, no easy matter with the instruments then in use and in a suppurating granulation surface. Sir James Y. Simpson, to do away with ligatures and their dangers, introduced what he called acupressure, a method to compress arteries by means of metallic needles introduced in various ways. At the same time Lister began to cut both ends of his ligatures short and leave them to their fate buried in the tissues; this was before he introduced absorbable ligatures of catgut. Although good results were obtained from acupressure, and many cases of healing by first intention were reported, yet Lister's

ligatures won the day and soon Simpson's method passed away and is now quite forgotten.

Abdominal operations are now as safe as any other major cases and our knowledge of germs, how to control their evil effects and to prevent their invasion, makes most operations in surgery comparatively without much risk. Appendicitis, or inflammation of the bowels as it was called, was thought to be a rare disease and was not considered at all surgical. The common medical term was typhlitis, with peri—or para—as additions. It was thought to commence in the cellular tissue around the cecum or typhlus, or cecus. In a short time our greater knowledge of pathology properly placed the blame on the appendix. Operations were then rarely performed, except for peri-typhlitic abscess. At first operations were never undertaken unless puss was found by the exploring needle, and the search for the appendix was always a matter of difficulty. The first twelve cases I operated on all died, because I was only called in to operate when the physician thought he could do no more; then the surgeon was the *dernier ressort*. At this time diagnosis was not easy and appendicitis was often mistaken for typhoid. It seems absurd now to know with what difficulty physicians and surgeons diagnosed this disease and then only after many anxious and serious consultations, whilst now every man and child in the street could make a diagnosis from a verbal description of the case. But so it is, and what is difficult and obscure in one generation often becomes simple and clear in the next.

It is strange to look back and see the gradual growth of abdominal surgery; at first the only operation on the abdomen was an obligatory one, viz., for strangulated hernia, and this was done with serious forebodings. Soon operations were performed for ovarian tumors and ovaries without tumors, and soccessfully carried out by Lawson Tait, Spencer Wells, Keith, and others. In fact, we are indebted largely to Lawson Tait for his pioneer work in abdominal and especially pelvic surgery. Ovariotomies, since MacDowell's famous case, were performed from time to time with occasional success, but when I studied in London every case I saw operated on proved fatal. With our knowledge of the germ theory and with the introduction of Listerism the obstacles to recovery were removed and ovariotomy became a common and safe operation. Surgeons rapidly adopted Listerism and "boomed" it, and in a short time were doing all the operations hitherto only suggested, such as excision of the stomach, intestines, kidney, spleen, et cetera. From pest houses German hospitals became sanitariums, and as the *Lancet* of August 13th, 1881, observed at the time "our admiration for the change effected is only equalled by our horror of previous condi-

tions.'' Many German surgeons advocated the compulsory use of antiseptics, and Professor Naussbaum, in 1881, suggested the following law: ''Any person summoned to heal an accidental case or wound, must no longer close it up with an adhesive plaster, nor examine or disturb it with a finger which has not been disinfected; but after the surgeon has washed his hands and the wound with some disinfectant (for which purpose a five per cent. solution of carbolic acid seems to be the most convenient), the wound must be thoroughly protected with an antiseptic dressing. Such dressing may consist of carbolized jute or wadding, chloride of zinc wadding, or some other well-known antiseptic material.''

Simon first removed the kidney designedly in 1869. In 1881 an occasional excision of the kidney is reported, and papers were read on the subject at the International Medical Congress in London in 1881. I think it was Mr. Henry Morris who first successfully removed a stone from the kidney where there was no suppuration (in 1880). I first excised a kidney successfully in 1884 and a stone in 1886. My first gallstone operation was in 1890.

It is interesting to look back on the past literature and to study the conditions of surgery at that time. In 1888 I gave the surgical address before the Canadian Medical Association in Ottawa and spoke among other things of the surgery of the abdomen, and the information given below is extracted from that address: ''It was strongly advised that all cases of intestinal obstruction be handed over to the surgeon and not kept on medical treatment by the physician until it was too late to operate.'' Surgical treatment was recommended in all cases of suppurative appendicitis and a few advanced surgeons advocated early operations. Typhoid perforations were being occasionally operated upon, always with fatal results. It was found out accidentally when operating for tumor in a mistaken diagnosis that tubercular peritonitis could be cured by opening the peritoneal cavity. Perforating gunshot wounds of the obdomen were being immediately operated upon. Radical cure of hernia was becoming a safe and fashionable operation. The surgery of the gall bladder was looming up as an accepted and successful fact. Lawson Tait reported thirty cases of cholecystostomy with one death. Crede, of Dresden, had had only five cases with one death, and Langenbuch, of Berlin, had collected 75 cases of cholecystostomy with two relapses, 11 deaths, and 16 cases with fistula resulting. He advised against operation when the stones were in the common duct.

Occasionally cases of operations on the stomach, intestines, spleen and pancreas were reported, but with few successes. The operations of nephrectomy and nephro-lithotomy had become well established. In 1888 prostatic surgery was yet in its fatal infancy, though tumors of

the bladder were being operated on. In other departments of surgery, the brain and spinal cord were fields of operation just becoming known through the work of Victor Horsley, Keen, Macewen, Weir and others.

Surgery is still advancing and is enlisting more votaries than ever, nearly every new graduate wishes to become a surgeon. Every small place has now a well-eqoipped hospital with excellent facilities and every opportunity is offered for the prosecution of the art of surgery. I am afraid there is often more art than science and much unnecessary operating because now most operations are comparatively safe. There is something more than mere mechanical skill needed by surgeons. The most important attributes of a surgeon are judgment and knowledge when to operate and when not to operate and when to stop—mechanical knowledge of surgery can never teach this. I remember some years ago visiting a small town west of Montreal and operating in a well-equipped little hospital and afterwards was shown no less than four cases of extirpation of the uterus operated on by four different surgeons, all I am happy to say convalescing (the patients, not the surgeons). What amazed me was that there should be such a necessity for so many operations in so small a place. In our own large hospitals in Montreal I had never seen so many cases together in the gynecological wards. I remember hearing of another case where a good surgeon in a large city of the United States operated for appendicitis on the only child of a very prominent family. After removing the appendix, as the cecum, or what they thought was the cecum, was full of feces, it was opened and the feces evacuated and then the wound was closed. A few days later a fecal fistula appeared which would not close. The boy's condition from the continuous drain and irritation became bad and an anastomosis operation was advised and done. Still the fistula continued and he grew rapidly worse. He was brought to Philadelphia and a prominent surgeon was consulted, who told me the tale. An exploratory incision was made, but nothing could be done as there was so much agglutination of the intestines and the boy's condition so serious. At postmortem it was found that the appendix was still in situ and had never been removed. It was the upper part of the ileum and not the cecum from which the feces had been evacuated and which was fistulous, but the anastomosis of the ileum with the colon had been a perfect success. Hence you see here a well marked case of technical skill without knowledge. I could relate many analogous cases, but refrain.

As long ago as 1887 Professor Bergmann, at the German Scientific Medical Association, spoke the following impressive pregnant words which are applicable even to-day. He said: "There is more or less rivalry between medicine and surgery in the case of disease but further

progress in surgery can only take place through an increased knowledge of internal medicine. Surgeons must now avail themselves more of the accurate means of investigation which one owes to physicians, auscultation and percussion, thermometry, chemical, microscopical and electrical investigations. As long as internal medicine remains guardian of scientific medicine and scientific principles, so long will it remain the parent tree of whch surgery is only the branch. . . . It follows from what has been said that surgery owes all its recent development to clinical medicine and just as antiseptic treatment is the product of careful observation in etiology so the energetic procedures of internal surgery will have successful results only when firmly established by the methods of clinical medicine; otherwise surgery will sink in the hands of expert specialists to a mere display of manual dexterity."

Surgeons soon felt that they could not be good internists and have a competent knowledge of all branches of surgery, so this has led to team work in private and public hospitals which makes for such efficiency and enables the surgeons to do an enormous amount of work. This method, however, is apt to make the surgeon a mere operating machine and may not work out for the entire good of the profession. It is better for a surgical department to have a head who has gone through all the stages of medicine including a sound course in pathology and pathological chemistry and who has a good training in clinical medicine. Of course, his department is equipped with a staff of specialists in pathology and chemistry, but he himself should be the guiding hand and suggest and direct the work to be done. It goes without saying that every one who practises in the country must do some surgery, but he should not attempt it without having had some hospital training as a surgical interne after graduation. The tendency of the younger surgeons is to look upon the older men as having had no proper training; they call us pre-scientific and seem to think that laboratory methods are everything. I remember a pathologist giving a lecture to the incoming students in a medical school, and he told them that laboratory methods had supplanted all others, including experience, which the older men prided themselves upon. I had happened to have had some ten days before a serious gunshot wound of the arm in a boy where the brachial artery and biceps muscle and some of the nerves had been shot away, where, in fact, the whole arm was shattered. He had pulled the gun to him by the barrel when it went off. The whole forearm was wax-like, bloodless, cold and absolutely no circulation existed. I was advised to amputate immediately, by a colleague, but refrained, and after treating and dressing the wounded arm, wrapped the extremity in layers of cotton wool. In 24 hours there was a slight flush in the fingers

and in three days the limb was warm and afterwards the case went on well. Now I asked my friend, the lecturer, how he could tell by any laboratory method, whether to amputate or wait. Of course, he could give no answer, and no doubt he thought he was quite right, but he had never practised surgery and had never been up against a case which required judgment and experience, and yet he was quite willing to speak *ex cathedra* to men who were going to practise medicine and surgery. I may say the boy alluded to has a most useful right arm, with which he can play a good game of tennis. As the Psalmist says, "I am wiser than the aged," so say the younger men of every generation, but remember what Huxley says: "We are none of us infallible, not even the youngest." I admit as we get older we become more conservative, and perhaps procrastinate, but this is the infallible result of long experience.

How many methods have we older men seen come and go, lauded to the skies by eloquent advocates, both in societies and journals; we often hear of remedies and methods by which every case is cured and dozens who have made use of them print undigested articles confirming the originator's views and improving on them; some would find them only suitable on selected cases, and finally this remedy or method is forgotten because it is of no value and could not stand the test of experience. As Byron said in his poem, "English Bards and Scotch Reviewers":

"Thus saith the Preacher: 'Naught beneath the sun is new,
What varied wonders tempt us as they pass?
The cow-pox, tractors, galvanism, gas,
In turns appear to make the vulgar stare
Till the swoll'n bubble bursts and all is air?"

Although I am as much an advocate of laboratory methods as the most scientific younger surgeon, yet they should not replace those powers of observation which are the great asset of the medical man. I fear it is tending to do so, for the recent graduate dares not diagnose a fracture without X-rays, a typhoid fever with a Widal, syphilis without a Wassermann, and so on. We cannot always carry a laboratory or hospital appliance about with us, so we should not depend too much on the use of mechanical means in diagnosing disease, and should not let our powers of observation atrophy. Time, no doubt, will remedy this state of affairs and things will bear their proper proportion to one another. Some are very sceptical that this will occur and think there is nothing true or sure but mutability. As Moore says:

"The world is all a fleeting show,
For man's illusion given;
The smiles of joy, the tears of woe,
Deceitful shine, deceitful flow,
There's nothing true but Heaven."

For the sake of the wounded in the present awful war, it is fortunate that surgery has attained such a high pitch of efficiency and that hospitals are now so well arranged and managed. What a contrast to that which existed in the Crimean War, when Florence Nightingale did so much to clean out the Augean Stables whose doors were closed with red tape. Now from the field to the base hospital everything is done for the wounded in the quickest possible time, and in the most skilful manner, and the proportion of recoveries is proportionately large. I am glad that Canada is doing so well and is so eager to establish hospitals. The universities deserve great commendation for the way they have come forward to man the various hospitals with their best teachers, best surgeons and physicians and specialists. All honor to them and to the Canadian nurses and students who go with them. We are all sure the work will be well and scientifically done, and reflect credit not only on the British Empire, but on the whole of Canada and its professional men and women. May God go with them and prosper them!

SOME OF THE TROUBLES OF A RURAL MEDICAL OFFICER OF HEALTH: AND THEIR REMEDY.*

By Martin Powers, B.A., M.D.
Rockland, Ontario.

WE Medical Officers of Health, in our duties in the prevention or elimination of communicable disease are brought into contact with either urban or rural communities. The former I call the urban, the latter the rural officer, and really and truly the path of the former as compared with the latter is strewn with roses, and this I will try to briefly elucidate or explain.

Up to a certain point we, both urban and rural, are on the same level in that we all have had the advantages of the same preliminary medical education, our positions are permanent and our salaries reasonable, by law, and thence our paths diverge. For instance, the urban has special officers detailed to do his placarding and disinfecting for him, whilst the rural must usually do this work himself.

The urban has milk inspection, a properly protected milk supply, and modified milk depots in the torrid summer months; the rural no milk inspection, where each one's dairy is in his own or his neighbor's backyard. The urban has adequate and up-to-date sewerage systems; the rural the ordinary outdoor toilet or the antiquated cesspool, where

* Paper read at the Ontario Health Officers' Association annual meeting in Peterboro, Ont., May 26th, 1915.

each owner is as apt as not to pass the overflow on to his neighbor's lot or the public thoroughfare, whichever proves the handiest.

The urban has a pure water system or at least a protected supply, whilst the rural has the ordinary well, or if he be lucky enough to have a water system his source of supply, otherwise pure, is usually polluted or contaminated by sewerage from higher up the stream. The urban has his isolation hospitals, with their staff of trained nurses, whilst the rural has no hospitals at all and rarely sees a trained nurse except in his private practice.

In short, the urban officer who is on the alert all the time is at the head of a well-trained army, where every avenue of inspection or contagion is adequately protected against the advent of disease, or if perchance disease shoul denter he has the proper means ready and at his instant disposal to prevent its spread and properly cope with it. Whereas the rural officer is the whole army himself, is not, and is not called upon to be on the *qui vive* all the time; intruth, his work begins only where an epidemic threatens, and then he has to hastily improvise his defences; in fact, his is the work in the trenches, not spectacular, rather strenuous, but gives surprisingly good results sooner or later, especially as he has as his allies fresh air and sunlight, natur'e own protection against disease. I've stated this much to prove or rather show to you that since the means at our disposal, i.e., the tools we are to work with, are so widely different, it must necessarily follow that the solution or solutions of the individual problem must be also entirely different and the remedy I suggest for this is that at this our annual conference a special section or session be set aside for the rural officers to discuss problems whose solution may concern themselves and themselves alone, with the one proviso that sufficient space of time may be found so as not to seriously interfere with the general scope of this meeting or assemblage.

This brings me to the consideration of our actual troubles, and the first and foremost may not, and not unrarely does, come from the attending physician upon whose active assistance and not his passive resistance we must confidently and mainly rely if we wish to have any success in our work, especially in trying to cut short an epidemic. We have his active assistance when he reports promptly and definitely that he has such and such a communicable disease under his care. In fact, he oftentimes helps us very much by actually quarantining the case before our arrival. On the other hand, we have his passive resistance when he may not report at all, or if he should, he does so tardily, almost reluctantly, saying that he has such and such a case under his care that he has slight suspicions that it may or may not be contagious,

perhaps diphtheria, probably tonsillitis, scarletina, hybrid measles, typhoid, a branch of fever, smallpox, chickenpox, or pustular eczema, and so on, although in his own heart or soul he knows, or rather should know, as well as we that the case is actually diphtheria, scarletina, typhoid, or smallpox, as the case may be. He who acts thus knows full well the reluctance of the average family to be quarantined, which they unfortunately very wrongly consider a disgrace, and relieves himself of all personal responsibility or blame in the matter by leaving the onus of actual and definite diagnosis to the Medical Officer, who then gets all the blame, with its attendant troubles.

Of course, in this category I do not include cases whose diagnosis may be somewhat obscure or uncertain, but I am aiming at the physician who shows such a lack of sympathy with us and our work that he finds it ever convenient to be consistently uncertain in his diagnosis when it comes to a question of communicable disease. For such a state of affairs I have no remedy, we must grin and bear it and things will right themselves in the end.

But there is more than this at which we must grin and also bear, I here refer to the highly munificent salaries some of us receive as medical officers. A brief history of how I came to receive $10 per annum and how I've had it recently increased to $100 may prove not untinteresting reading, and what is more, may enlighten you on some of my troubles and how I managed to surmount them. I've practised fifteen years in the same town of Rockland and eleven years of this I've been medical officer, and during this time I've been appointed thrice and dismissed twice, each time following an epidemic of smallpox, when, quite naturally, extra money had to be spent in suppressing it, and mark this well, I held my position under the old regime for six consecutive years without any trouble of any kind until smallpox came along in 1911. The tax rate went up, and I, along with the whole local Board of Health, received our congé, so that in the final analysis it seems to me that our troubles have origin, in it being a matter of dollars and cents to the community, and under the old regimé they sought efficiency not so much as economy in dealing with health matters, which under the new regimé has been happily changed, since our positions were made permanent by the Provincial Board seeing to it that we are efficient, whilst the local council attends to the economy in many localities by giving unreasonable salaries to their medical officers.

What persecution I had to endure during 1911 made my heart sore, and many's the day I thought the proverbial darkened cloud had lost its silver lining. First and foremost the general public was raised up against me by a few of their self-appointed leaders, who claimed it was

not smallpox at all. I got over this by bringing in a specialist, who showed them that my diagnosis was correit. They then objeited that the disease was so mild and only in children that no precautions should be taken. My answer was that from the mildest case the most virulent might develop, and that adults were not immune. Time vindicated me for, later on, adults were attacked and some of these were of the virolent confloent type so hideoos to look upon in the pustular stage. And these individuals are now, sad to say, the living relics and constant reminders of fools rushing in where angels fear to tread. Quarantining those exposed was another target for my opponents, and try how I might I could not seem to be able to drill it into their heads that a certain number of days were required after exposure for the disease to develop, but when smallpox appeared amongst the quarantined they let up in their fusilade.

Vaccination was tabooed, and they would have none of it, and in this they were encouraged by the advices so often given in some newspapers whose editors, otherwise highly intelligent, are constantly on the alert with an energy worthy of a better cause to rail against any and all sorts of vaccination, and all I have to say to them in this connection is to study more deeply and thoroughly, for as Pope says, "A little learning is a dangerous thing," and will add, may the Lord forgive them for they know not what harm they do and they would have it brought home to them more succinctly and understand it much better if they could see, as I have often seen in a smallpox epidemic, how the disease spreads like wildfire amongst the household unvaccinated, leaving the vaccinated unscathed.

But what capped the climax of my troubles in 1911 was the establishment by our local Board of an Isolation Hospital, which I did then and do still consider an ideal system in cutting short an epidemic, but the public in general considered it an absolutely foolish and unnecessary expense and did not hesitate to tell us so in no unmeasured terms.

Public opinion, as I have shown, was strong against us, and our council, to be popular, were also against us and tried by devious means to circumvent us, but all to no avail, as they found we were within the law in every move we made. Their principal and final onslaught was their very determined effort to remove from us our money supply; in this also they failed. They then kept quiet, but only for a time. One very easy solution of the question from their standpoint would have been my summary removal from office, which the then law could not have prevented, but luckily for me they never thought of it.

With such opposition to the local health authorities from the general public and municipal council, it was not very surprising to find

that many of the infected families thought they were doing what was just and proper in concealing their cases, and in this they were often abetted even by their neighbors till some timorous soul more fearful of infection than the rest would give the alarm, but usually rather late to prevent its spread. But more of this anon.

Finally, thanks to the brilliant efforts of the then local Board of Health, without whose courageous assistance I would have been practically helpless, our epidemic came to a speedy and successful termination. For this we received no thanks; only abuse and opprobium were headped upon us by those who should have known better for our so-called heinous crime of so foolishly spending the people's money with the very natural result that at the next election, when smallpox was the issue, a council was chosen whose majority saw to it that we were speedily relieved of our positions and as far as they were concerned we went down to oblivion, "unwept, unhonored and unsung." However, I was not mortally wounded. I was only struck below the belt. My opponents had won on a foul, and I'm alive and well to-day to tell the tale.

As my successor they chose a very estimable and clever practitioner, who died witha few months. Two other attempts were made to fill the position; both proved abortive. The office was again vacant, so, our council now knowing that the position would be permanent, decided after mature consideration to re-appoint me, even in the face of the most strenuous opposition. My re-appointment at this juncture I considered a vindication of my conduct as medical officer in my previous years, and ever look back upon it as one of the brightest and happiest moments of my medical career. But now I give you all a gentle warning who consider yourselves secure and immune from trouble as medical officers that you will find as councils change that though your friends in the natural course of events must find time to slumber, still your enefies never seem to do the Rip Van Winkle stunt, but are wide awake and on the job all the time, for in my case they got back at me by naming as a reasonable salary $10 per annum, and notwithstanding my most earnest endeavors to show them the error of their ways they repeated the dose in 1914. The only glimmer of satisfaction that I could get from them during all this time was that if I were not satisfied I could resign and that they had another medical man ready to take the position at even a lower salary. This latter statement was all too true. So my answer was that I was not in the resigning business, but intended to do my work as faithfully and efficiently in the future as I had done in the past, no matter what the salary, and I kept my word.

During these two years my work consisted mainly in dealing with sporadic cases of smallpox, which has been practically epidemic in our

locality since our epidemic of 1911, due mostly to the concealment of cases by infected families in our population so largely unprotected through lack of vaccination.

This was brought home to us most vividly early in the present year when I received a complaint from a most authoritice source that the town counsellor, my most inveterate opponent, who had been the prime mover in fixing my salary at $10 per year, was concealing smallpox. He was running a grocery store in connection with his residence, so I knew it meant an epidemic if my information proved correct. And true it was, for though he had at first denied it, he finally acknowledged, when the local Board brought pressure to bear on him, that he had had chickenpox in his household and that the families of his son and son-in-law, the latter a butcher, had it as well, and our epidemic was on gloriously, for all this chickenpox was true smallpox. Energetic precautions were at once instituted, but rather late, as some of the customers of this grocery store and butcher shop were already infected, and through them their relations. The infection of over a dozen families comprising fifty cases, with a total cost of one thousand dollars, was the sum total due to the concealment of this one case of so-called chickenpox. This councillor had mighty little respect for the local board till it was so forcibly brought to him, and his son had less, for he broke quarantine. For this our remedy was his speedy arrest and a heavy fine, which worked like a charm, for we found that public opinion from that moment turned in our favor and ever since then we have had practically no trouble.

Just at this juncture our municipal council assembled to decide my salary for the present year. A motion was made that it be increased to $100. Objection was at once made by my consistent opponent, who, along with my variloid friend, has made my life as medical officer so miserable during the last few yeors. His objection was that I was making too much fuss about this disease, which he thought was not smallpox at all, while even if it were smallpox it was not contagious because the people did not die from it. However, even he relented somewhat when he saw that the public through their council wanted to treat me reasonably, but made a last and final effort to still keep me under by making an amendment to give me $50, which was lost, and the motion making my salary $100 carried. This is by no means an adequate salary, but I accept it as an omen of good will on the part of our council who this year are really trying to do what is right by me. And I arrived at this happy termination of my strenuous troubles of the last few years by bearing no spite or malice to even the bitterest of my opponents and by practically waiting for better days. In the meantime I attended

faithfully and efficiently to all my work, as I understood it, and as so ably directed by our ever ready and always courteous chief officer, Mr. McCullough, and his very able and painstaking assistant in our district, Dr. Moloney, to both of whom I tender by most sincere thanks for so much of my success during this most strenuous period of my career as medical officer.

But a reasonable salary and just treatment one year do not necessarily mean the same the year following, for councils change and the newly chosen members who, like some of the old ,may be over zealous at lowering expense, which is at all times a very popular move, are just as apt as not to commence their economic campaign by curtailing the emoluments of the luckless medical officer. This is no idle dream, but actually does happen, and one remedy for this would be for those in authority to decide upon what constitutes a fair and reasonable minimum salary, or otherwise arrange it in any manner that their mature judgment would consider proper so that we officers could not impose upon our councils or they upon us, which happens in more than isolated instances. And now, in conclusion, if we take a broader view of the source of all our troubles we would find that it really and actually consists in the false impression the general public have of preventitive medicine in general, and especially of its exponents, the medical officers, in particular, who are looked upon in many instances as an infernal bother and unnecessary bill of expense to be got rid of at all hazards. Whereas if they would only look upon us in the proper light they would soon see that we are actually working not only against our own best interests from a financial standpoint, but rather in favor of the whole community, for if we could succeed as we wish to do in keeping all the people well, there would be no doctors' bills to pay and enforced idleness through illness would vanish, thus adding to the wealth and prosperity of the country at large. We, in short, are the pioneers who are blazing the trail for the physician of the future whose duty 'twill be to keep the people well, not to cure them when they are ill, and I will add, all pioneers must suffer.

This forming and moulding of public opinion is to my mind the best solution, and I know of no better means of attaining this happy end then by constant and progressive study to so improve ourselves that even the most obtuse will be forced to admire us in our continued efforts for the public weal. Then with the public confidence will come their active co-operation, and that is what is most needed to make our work of practical and lasting value.

As a means to this end we should all aim at becoming specialists in our chosen line by having ambition enough to at least aspire to being

the proud possessor of the title of Diploma of Public Health. The incentive to those amongst you who have the time and the wherewithal to take such a course may yet come from the county councils who, singly or collectively, may yet see their way clear and will, I think, find it money well expended to have and to hold in their midst the holder of such a title, whose duty would be to give constant advice and timely assistance to the local officers, until the time when the Provincial Legislature will in tis wisdom find it convenient to so increase its staff of district health officers as to have the number sufficient to sover the whole Province, which will be the logical and most satisfactory ending to all our troubles.

THE OCULAR MANIFESTATIONS OF DISSEMINATED SCLEROSIS, WITH REPORT OF A CASE.*

By Colin Campbell, M.D.
Toronto.

PERHAPS no disease is more frequently missed, in its early stages at least, than the disease known variously as disseminated multiple or insular sclerosis.

The classical symptoms: intentional tremor, mystagmus and scanning speech, are by no means always present, and in a large percentage all may be absent throughout. It is to this group particularly that clinicians look to the oculist for aid in diagnosis, and it has been stated, (1) that "the most frequent prodromal symptoms of an incipient sclerotic change throughout the central nervous system is some transient disturbance of vision."

The following case was instructive: The patient, a young woman, stated that she had been thrown to the ground while alighting from a street car five weeks previously. She was shaken up, "hurt generally," but she was not unconscious, merely numbed, and thinks her brain was hurt. Has stammered ever since. Has attacks of dizziness making her fall. Her left eye was turned in at times since the accident and she cannot see so well with it. A few days after the accident she had the misfortune to fall downstairs and following this had a period of delirium with hallucinations of sight, seeing wild animals, etc.

My notes state that her speech was slow and hesitating. There was partial paralysis of the left external rectus, causing convergent squint of ten degrees. Conjugate movement to the left was defective in both eyes, but the left eye turned in excessively. Convrgence was defective,

* Read at the Ontario Medical Association, Peterboro, May 27th, 1915.

failing at seven inches, and it was the left eye which then diverged.

Pupils were normal in size, equal and active, but the left alone was not so quick to respond, and did not maintain contraction so well as the right. Vision of R. E. with correction was 6/6, of l. E. hand movements. Both discs had their margins everywhere obscured by a very low pale smelling extending somewhat into the retina. It resembled the last stage of a subsiding optic neuritis. Vessels were normal, as were other parts of both fundi. The fields showed slight irregular concentric contraction, and the right had a sector defect on the lower nasal suadrant.

The left eye was color blind to 10 m.m., red and green, and to all colors with 5 m.m. objects. Three weeks later there was no appreciable change in vision or muscles. The fields were slightly smaller, Three months later the eyes were parallel, the left even divergent at times. The right disc's outer margin was discernable. The left vision had improved to the recognition of large letters (half-inch type at eighteen inches). The left pupil was slightly the larger. Fields could not be obtained.

Dr. Goldwin Howland has kindly supplied me with his notes on her general condition. He found marked tremor of face and legs and coarse tremor of hands, but no intentional tremor. There was partial semi-anæsthesia to all sensations over the left side. Her mental condition was peculiar, and she had marked loss of memory, which could, however, be stimulated. Reflexes were esual and but slightly increased, and organic evidences were entirely absent. Wassermann in the blood was negative.

A diagnosis of insular sclerosis seems best to explain the contradictory features of this case. The onset of symptoms after an accident or shock has been noted by authorities (2) and renders the diagnosis from traumatic hysteria difficult. The defective memory and slow, slurring speech were suggestive, but the reflexes were of negative value and the hemi-anæsthesia of doubtful import. Reliance had to be placed on the ocular findings.

The pupils, as is usual, were equal and active. Paralysis of oscular muscles occurs in about twenty per cent. (3); affects the sixth nerve more often than the third, is usually partial and shows its central origin by frequently involving conjugate movements and convergence.

Contradictions occur which only lesions of association fibres can explain. This is well shown in the present case by the paretic left external rectus acting better in conjugate movement to the left than the sound internal rectus of the right eye. Also when convergence failed at seven inches it was the left eye with paretic external rectus which

diverged. The disappearance of the squint after a few weeks without improvement of associate movement is noteworthy.

Changes in the discs are seen in about fifty per cent. of all cases (3). Total atrophy probably never occurs and recovery of vision is aften remarkable even in the presence of marked pallor.

The plaques in this disease destroy the medullary sheaths, but spae the axis cylinders to a considerable degree. When we recall that the optic nerves are strictly not nerves, but a system of neurous, still part of the central system, and knowing the predeliction of this disease for the white matter, we can understand the frequency with which they are affected. The transient amblyopias and pareses in acute cases are explained by Foster Kennedy (1) on the hypothesis of an acute interstitive œdema set alight by toxins.

Optic neuritis was observed in five of Uhthoff's hundred cases (4), Buzzard (5) in one hundred cases never saw a true optic neuritis, but a "grey discoloration somewhat resembling hyperæmic grey matter." Risien Russell remarks that this rare appearance no doubt depends on a patch in the nerve at the disc.

Nettleship (6) has described a case of chronic optic neuritis in disseminated sclerosis as follows: "The discs were slightly pale and misty all over, the deep tissue being opaque and obscuring the lamina cribrosa and the borders being nowhere quite clear." This description would do for our case. The appearances were hard to explain without assuming an antecedant optic neuritis, but there were no changse in the vessels to indicate activity.

Risien Russell lays stress on the unequal effects on the fields and vision in the two eyes, and the lack of relation these bear to appearances exhibited by the discs. E. W. Taylor speaks of the irreularity of the concentric contraction shown in the fields. All authorities speak of the frequency of central scotoma of the retrobulbar type, either slight, and to colors only, or total, and usually unilateral. Uhthoff found central scotoma in fifteen out of tyenty-four cases.

The sector defect in one field, with central defect involving colors in the other, is very characteristic. Kennedy (7) has recently described a symptom complet peculiar to tumors of the lower parts of the frontal lobes, in which central scotoma of the retrobulbar type in one eye accompanies choked disc in the other. Here, however, the disc pictures were practically identical.

I regret that owing to legal entanglements I was unable to follow up the case, but Dr. Howland has furnished me with the following notes: Eight months after the accident conditions remained much the same, except that marked mental depreciation occurred. At this period

occurred a recurrence of a knee arthritis and some fluid appeaed in the joint. There was slight partial wasting of the left deltoid. The reflexes were but slightly increased and there was still no evidence thereby of organic involvement. A year after the accident her eyes appeared to be in the same condition as before. Her mental condition was much improved, but memory was still very faulty.

REFERENCES.

1. Kennedy, Foster, Jour. Am. Med. Assn., Dec. 5, 1914.
2. Russell, J. S. Risien, Albutt's System, Vol. vii., p.p. 809-852.
3. Taylor, E. W., in Posey and Spiller, p.p. 469-474.
4. Uhthoff, Arch. fur Psych., Berlin, 1890, xxi. 303, v., Buzzard in B. M. J., 1893, ii., 779.
4. Nettleship, T. O. S., Vol. iii., 227.
7. Kennedy, Foster, Am. Jour. Med. Sc., Sept., 1911, No. 3, Vol. cxiii, p. 355.

DIABETES AND SURGERY.

E. H. Risley (*Boston Medical Sug. Journal*) groups the cases presenting this association into the following categories: (1) Cases in which glycosuria is caused by the surgical lesion. (2) Cases in which it causes do not inuuence each other. (4) Cases in which glycosuria is a harmful factor and adds to the danger of the already present disease or injury. The following rules may be laid down in regard to operations on diabetics: A thorough examination of the urine must be made in every case, especially for the detection of acetone and diacetic acid. The total amount of ammonia must always be estimated. No operation except of the extremest emergency should be performed if there is one gram of ammonia excreted in 24 hours, until this has been reduced to the normal amount, .759 gram. An operation should be postponed should there be acetone or diacetic acid, even if the amount of ammonia is normal. Much albumin in the urine is a contra-indication to operation and even in small amounts is of bad prognostic import. Most of the major operations of surgery have been and can be performed with success on diabetics. The presence of glycosuria should never deter the surgeon from performing any operation of emergency. Other cases should not be operated upon in which acetone, diacetic acid, and ammonia cannot be reduced by preliminary treatment. A mortality of 20 to 30 per cent. is to be expected in this class of cases. The use of an anesthetic other than ether and chloroform, careful dietary treatment before operation, the prevention of sepsis, and rapid technique will still further reduce the mortality.—*Medical Record.*

CURRENT MEDICAL LITERATURE

HEART DISEASE.

The importance of remembering that we are dealing with an organism and not with a mechanism in our studies of disease is pointed out by J. I. France, Baltimore (*Journal A.M.A.*, Feb. 20, 1915), and especially the necessity of appreciating that pathologic processes may show their first effects in the nervous system. He gives the result of a study of the nervous and mental syyptoms of cardiac disease, and presents his tentative conclusions. Head has shown that there are two symptoms referable to the nervous system that are quite constant in cases of disturbed or broken cardiac compensation. First, a reflecttd pain, along tht distribution of the fifth nerve and, second, depression, anxiety and fear, independent of worry about the disease, and with or without distinct delusions and hallucinations. His conclusions, so far as he has been able to give them from Head's observations and his own, are briefly summed up as follows: 1. A defective heart valve causing cardiac strain or irregularity is sufficient to cause a distinct emotional depression and fear, which may be unexplained or be attended by distinct delusions or hallucinations. 2. The mental symptoms of cardiac disease are apt to occur when the inhibitions of the higher centres are relaxing in the hypnagogic or incipient dreaming state, and there is much to support the old view that night terrors or nightmare are often due to disturbed heart action. All heart patients should be questioned closely about their sleeping and dreaming. 3. There are cases of heart disorder that may be overlooked by the physician by his not studying the nervous system, and the stethoscope may not reveal thtm. Nocturnal attacks of bradycardia may be the only cardiac symptom for a time, and the importance of studying the heart action during sleep is evident. 4. The nervous symptoms of certain forms of heart disease are sufficiently constant to be of some practical value. The neuralgia of the fifth nerve and the scalp tenderness over its distribution are so frequent as to be of diagnostic and prognostic value. In chronic valvular cases it may be so constant that the patient himself learns that it indicates a need of rest. 5. It is important to remember that in many cases of fifth nerve neuralgia and also many cases of neurasthenia with anxiety, fear and depression, especially in patients over forty or fifty years of age, may possibly be due to that condition of nerve strain which may be caused by nascent cardiac disorder not yet shown by physical signs. We are just beginning to learn the importance of cardiac nerve and muscle strain in the production of nervous symptoms. Every physician should

make these a study, and take note of tht nervous and mental symptoms of his patients; and every general hospital should have a phychologic laboratory for the investigation of suitable cases.

THE SALICYLATES IN RHEUMATIC INFECTION.

R. Miller (*Lancet*) states that the theory that salicylates have tht power of diminishing the activity of the rheumatic infecting agent may be taken as the working basis of salicylate therapy in rheumatism, and the drugs should be administered with the sole view of controlling the bacterial activity. Of this the temperature chart is as accurate an index in rheumatic as in other infections (*e.g.* tuberculosis). Care must be taken to discriminate between symptoms directly due to active rheumatic inflammatory processes and those dependent upon toxic parenchymatous changes which may remain long after all bacterial activity is at an end. Used solely with a view to controlling bacterial activity, the effective range of dosage for child or adult is usually from 60 to 120 grains per diem. Less than 1 dram daily is rarely sufficient; more than 2 drams need seldom be given. Much larger doses than these have been shown to be safe if properly administered, and if necessary to gain control may be used, but for the most part "massive" doses have been administertd in cases of chorea in which there was no evidence of bacterial activity remaining. Any dose greater than 100 grains daily should be given subdivided into 10 doses in the 24 hours. Large infrequent doses should never be given, particularly in children. Constipation must be avoided. The sodium salicylate should be combined with an equal dose of sodium bicarbonate. Vomiting in cases of severe cardiac dilatation may be difficult or impossible to prevent ,but in other cases may be avoided for the most part. . The more serious symptoms of salicylate poisoning (acid intoxication) should nowadays never be allowed to arise. —*Medical Record.*

FAR-REACHING EFFECTS OF LEAD POISONING.

"To one who contemplates the manifold physiologic activities which are called into progress during the period of gestation in the female, it is not surprising that damage of any sort, whether it be a physical injury or a chemical intoxication, may bring untoward consequences to both the maternal organism and the fetus. The metabolism of the mother is intimately bound up with the nutrition of the young she bears. The transmission of harm, like the communication of disease," says *The*

Journal of the American Medical Association, "follows as a more or less obvious consequence of the intimate connection between the female and her developing offspring. Defective conditions may accordingly affect the embryo independently of any purely hereditary factor. They are, so to speak, the result of a detrimental uterine environment.

"The possibility of harm transmitted through the medium of the male is not equally obvious. The germ cell of the male is, of course, the carrier of conspicuous hereditary qualities which manifest themselves in unmistakable fashion in the offspring. This is not equivalent, however, to the contention that damage to the male may deteriorate the germ cell in a way that expresses itself by defective offspring. Nevertheless, the experiments of Stockard on guinea-pigs and of Cole and Davis on rabbits have indicated that alcohol has a deleterious effect on the germ cells of the male.

"Lead poisoning in industries in which individuals are exposed to lead in its various forms is reputed to have a detrimental effect on the offspring of the workers, whether male or female. Half a century ago Constantine Paul reported striking observations in the effects of paternal lead poisoning—cases in which in the course of his work the father was subjected to plumbism, the mother being unaffected. He obtained the history of thirty-two pregnancies of this order; twelve of them resulted in the death of the fetus before term; twenty children were born alive, but the mortality among them was extremely large, only two surviving the third year. Children so born were found particularly liable to various nervous affections. These unusual statistics have not, so far as we are aware, been refuted.

"In the department of experimental breeding at the University of Wisconsin, Cole and Bachhuber have clearly shown the effect of lead on the germ cells of the male, in rabbits and fowls, as indicated by their progeny. Their method involved the ingenious device of double mating, which consists in breeding a female of a certain type to two males of unlike type at the same period. In this way the male parentage of the offspring can be recognized by their distinguishing characters. One male was treated with lead, the other remained free from intoxication. It is unnecessary to quote here the actual statistics of these breeding trials. They lead to the conviction that the young produced by male rabbits which have been poisoned by ingestion of lead acetate have a lower vitality and are distinctly smaller in average size than normal offspring of unpoisoned males. In fowls likewise the poisoning of the male parent with lead results in offspring of a distinctly lower average vitality.

"The outcome of these investigations furnishes food for reflection. Lead poisoning and the opportunities for it are by no means rarities.

There are more than a hundred occupations in which industrial lead poisoning may more or less readily occur, and the cases of known intoxication from such sources reach into the hundreds in some of the larger cities. Plumbism may appear under mose peculiar clinical guises and with most unexpected histories. These newly recognized features of the effects transmitted to a second generation complicate its manifestations more than ever."

INDIRECT TRANSFUSION OF BLOOD.

Moss (*Amer. Journal of Medical Science*, May, 1914) describes a simple method for the indirect transfusion of blood which he has used in about 75 cases. Its advantages over the direct method are that it is easier to perform and the amount of blood transfused is under absolute control and can be measured exactly. Only in exceptional cases—as in very small children, where it is necessary to expose a vessel—is any scar left, and the vessels are not obliterated. The fact that defibrinated instead of whole blood is used does not appear to be detrimental, as the body can apparently withstand the injection of large amounts of fibrin ferment without harm, and in no instance has there been intaravascular clotting after the introduction of defibrinated blood. Following the transfusion of 500 c.cm. the blood count gained between 1 and 2 million cells, and no instance of blood destruction was observed where homologous blood was used, the donor and donee belonging to the same group, as determined by the iso-agglutination method. Except in those patients whose blood is deficient in fibrinogen, such indirect transfusion of defibrinated blood accomplishes as much for the patient as the more difficult direct transfusion of whole blood. The method consists of two parts: (1) Obtaining blood from the donor by means of an aspirating apparatus, and its defibrination by shaking in flasks with glass beads; and (2) the intravenous introduction of the defibrinated blood into the patient. Five Erlenmeyer flasks, each of 300 c.cm. capacity, 2 oz. of glass beads, one infusion bottle, two infusion needles, 12½ ft. of rubber tubing, 18 in. of glass tubing, one thumbscrew, one rubber stopper with two holes, and four plain rubber stoppers constitute the apparatus required. For the aspirating outfit two pieces of glass tubing, 4 in. long, are bent at the middle at right angles, one end of each being passed through the holes in the rubber stopper, while to the free end of one an infusion needle, about 1½ in. long and of fairly large calibre, is attached by means of a short rubber connexion, the free end of the other being fitted with 6 in. of rubber tubing, with glass tubing for a mouthpiece. Half an ounce of glass beads is placed in each of four of

the Erlenmeyer flasks, which are stoppered with cottonwool. For the introduction of the defibrinated blood a small infusion needle is attached to the infusion bottle by 12 ft. of rubber tubing interrupted by two glass cannulae, the thumbscrew being placed on the tubing near the needle. The four flasks containing the beads are sterilized by dry heat, and the remainder of the apparatus by boiling. The rubber stopper carrying the needle is fitted into the empty Erlenmeyer flask, and a little malted paraffin, which has been heated to 200 C., is aspirated through the needle into the flask, air being continuously aspirated until the paraffin solidifies on the inner walls of the needle and tubing. The stopper is then fitted into one of the flasks containing beads, and under aseptic precautions the needle is intriduced into a vein, and about 200 c.cf. of blood aspirated. Without disturbing the needle another flask is substituted, the first one being closed with a sterile rubber stopper and shaken vigorously by an assistant for ten minutes to defibrinate the blood, a second and third flask being treated in the same way, 600 c.cm. yielding 500 c.cm. of defibrinated blood. Sterile normal salt solution is then run through the infusion bottle, tubing, and needle, and the thumbscrew closed when only a few c.cm. remain in the bottle, over the mouth of which four layers of sterile gauze are placed in the form of a funnel-shaped depdession, through which the defibrinated blood is poured from the Erlenmeyer flasks. The needle having been inserted into a vein and the bottle elevated, the salt solution in the tubing and the defibrinated blood is allowed to run into the patient's arm, the tubing having been coiled in a vessel of water at 38 degrees C., in order that the blood may enter the patient at body temperature.—*British Medical Journal.*

PERSONAL AND NEWS ITEMS

Dr. A. Jacobi was recently the guest at a dinner given in honor of his 85th birthday by a number of physicians at the Hotel Astor, New York.

Dr. Otto V. Huffman, secretary of the New York State Board of Medical Examiners, has been elected secretary of the faculty and executive officer of Long Island College Hospital, Brooklyn, as successor to Dr. Joseph H. Raymond.

It is announced that Columbia University is going to build one of the largest medical schools in the world on a part of the site which was formerly the American League baseball grounds at 165th Street and Broadway.

The new buildings of the Washington University Medical School, St. Louis, were dedicated with appropriate exercises on April 29th and 30th. Addresses were made by the dean of the school, Dr. Eugene L. Opie, and President Lowell, of Harvard; Mr. H. S. Pritchett and Dr. Abraham Flexner, of the Carnegie Foundation; Dr. Welch, of Johns Hopkins; Surgeon-General Gorgas, Drs. George Dock, R. J. Perry and William T. Porter.

The King Edward Hospital Fund recently held its annual meeting. The reports were of a most satisfactory character. The total receipts for 1914 were £529,885, of which more than £315,000 were contributed for capital, and £214,000 for general account. Since the foundation of the fund a total of £1,950,416 have been distributed to the various hospitals, convalescent homes and sanatoria.

Dr. Richard P. Strong, head of the American Red Cross Commission sent to Serbia, has asked for at least 175 additional doctors and fourth-year students to aid in controlling the typhus fever epidemic. There is great need for hospital supplies.

The Belgian Relief Committee reports the distribution of nearly $50,000,000 worth of food and clothing.

The medical profession of Regina tendered a banquet to Drs. Dakin and Field on the occasion of their leaving for service in the Royal Army Medical Corps.

Madame Depage, wife of Dr. Antoine Depage, surgeon to King Albert of Belgium, was drowned in the Lusitania disaster. She was in America collecting funds for the Red Cross work. She had $100,000 with her in the ship's safe, which was lost.

The National Association of the United States for the Study and Prevention of Tuberculosis is putting forth an effort to induce doctors, nurses and medical colleges to pay more attention to the study of the prevention of this disease, and give special instructions.

Recently M. Wernberg, of the Pasteur Institute, has isolated a bacillus which causes gaseous gangrene. A serum has been obtained that promises good results.

At this time when the public mind is so full of weighty concerns, one would think that Mr. Stephen Coleridge could find something better to spend his energy upon than in an attack upon Sir Almroth Wright, who has done so much in the way of perfecting vaccination against typhoid fever. This method of preventive treatment is too well established to be affected by any such diatribes as appeared in the *London Times*.

On 30th April Sir Alexander R. Simpson, emeritus professor of gynæcology and obstetrics, University of Edinburgh, completed his 80th year.

Mr. G. L. Cheatle, Sir W. Cheyne, Bart., Mr. Raymond Johnson, Sir W. MacEwen, Dr. H. D. Rolleston, and Mr. G. R. Turner are retained for advice by the Admiralty, and are paid a retainer of £5,000 a year.

Sir Wilmot Heringham will be remembered for his visit to Toronto some years ago, when he read a paper on renal disease. He has been knighted since, and quite recently had a son killed in the war.

Mr. Arthur W. Corwin, F.R.C.S., consulting surgeon to the Central London Throat and Ear Hospital, left an estate valued at £91,000. He left instructions that special care was to be taken that he was really dead before his body was cremated.

Sir William Richard Gowers, the noted London physician and neurologist, died on 4th May, at the age of 70, after a long illness. He was educated at Christ School, Oxford, and, when 17 years old, was apprenticed to a surgeon in Essex. He obtained his M.R.C.S. in 1867, and later his M.D., London University, with gold medal. He studied shorthand and became so expert in the art that he mainly supported himself by it. For some time he was private secretary to Sir William Jenner, and reported his lectures. He became connected with University College Hospital and the National Hospital for Paralyzed and Epileptic. For some time he was engaged in teaching students. He was the author of many books on the nervous system. His researches on the examination of the blood, the fundus of the eye, and the central nervous system added much to our knowledge in these subjects.

Dr. E. T. E. Hamilton, of Johannesburg, died recently as the result of ill health contracted through his strenuous surgical duties in connection with the troops engaged in quelling the South African rebellion. He was a practitioner of exceptionally high standing and character.

Sir George Turner, M.B., D.P.H., died at his home in Colyton, Devon, a few weeks ago. For many years he was a specialist in public health matters. He was connected with the medical department of the Local Government Board. He was later on associated with Professor Koch in the investigation of some tropical diseases. He was sent out by the British Government as Medical Officer of Health for Cape Colony. He retired a few years ago and returned to England.

The subject of twilight sleep is now being aired in the lay press in Britain. Some women in writing contend that it is morally wrong to relieve the suffering of childbirth, as to do so would be acting contrary to the teachings of Scripture. Fools die hard.

The medical men of Vancouver, through Dr. A. S. Munro, have offered the personnel of a military hospital of 1,040 beds.

Dr. W. M. Hart, superintendent of the Sanatorium for Consumptives at Qu'Appelle, Sask., and who went with the Fifth Batallion, is a prisoner.

Major T. B. Richardson has been placed in charge of the hospital at the Exhibition Camp.

Dr. David Smith, of Stratford, is in charge of the hospital of the 33rd and 34th Batallions, at London concentration camp.

Bangour Asylum, in Scotland, has been emptied of its patients by distributing them among other institutions. It is fitted up as a military hospital, and will be capable of receiving 1,350 wounded and sick soldiers.

The fourtieth annual meeting of the alumni of medical department of Buffalo University, was held on 5th June. There are about 1,800 graduates scattered in all parts of the world.

At the National Conference on Charities it was stated that there were 200,000 feeble-minded persons in the United States.

On a recent date the funds in connection with the war stood as follows: Belgian Fund, $1,295,818; Red Cross, $628,492; American Ambulance, $388,743; Polish Fund, $123,687; and Serbian Fund, $94,-936.

A bill has passed the House of Representatives of the Massachusetts General Court providing that no one shall be admitted to the State to practise who has not graduated from a college with power to grant a medical degree.

Dr. H. L. Fisher, of Washington, and Dr. F. W. Pearl, of New York, on their way to join the Red Cross; Dr. J. T. Houghton, of Troy; Dr. O. N. Kenan, Washington; Dr. D. V. Moore, of Yankton, were on board the Lusitania and were all saved, due to their coolness and presence of mind.

The Osiris prize, about $20,000, is awarded every three years for the best work on original discovery. It is under the control of the French Institute, and was bestowed this year equally on Drs. Chantemesse, Widal and Vincent.

The Legislature of Nebraska has appropriated $150,000 for the erection of a teaching hospital in Omaha in connection with the Medical College.

The antivivisectionists lose in Pennsylvania. They attempted to defeat the bill permitting all unclaimed animals in the pound to be used for scientific purposes, but were voted down.

The medical colleges in Russia have been closed for the present to enable all doctors and students to attend the sick and wounded soldiers.

The medical men of Britain, Canada and the United States have

responded well to the call of Serbia for help. Already a number of hospital units are at work in that country with efficient means of fighting typhus, smallpox and other infections.

Dr. J. G. Adami has been appointed medical historical recorder of the Canadian Expeditionary Force. He is eminently fitted for the duties of such a post.

Dr. H. A. Boyce, for seven years medical superintendent of the Kingston General Hospital, has gone into general practice in Kingston, and has been succeeded in the hospital by Dr. Coon.

It is proposed to expend about $125,000 in enlarging St. Joseph's Hospital, Hamilton.

Dr. David Townsend, superintendent Jordan Memorial Sanatorium, River Glade, N.B., visits a number of places at regular dates and gives clinics on tuberculosis.

The 34th annual meeting of the Notre Dame Hospital, Montreal, showed a deficit of $3,500. The members of the executive committee subscribed $4,480, and gave a credit balance of $978.

Dr. George R. Pirie, of Calgary, has been appointed superintendent of the Hospital for Sick Children, Great Ormonde Street, London, England.

During the past year 260 patients were treated in the Red Deer Memorial Hospital.

The Provincial Hospital, at Battleford, Sask., is to be enlarged by the addition of a new pavilion.

The St. John's Ambulance Association of British Columbia has forwarded to Britain $470.

The offer of the physicians and surgeons of Peterboro, Ontario, to man a hospital for service in Europe, including Serbia, has been accepted. Supplies are to be raised by voluntary effort.

The French-Canadian Stationary Hospital, which is being recruited in Montreal, will be in command of Lieut.-Col. Arthur Mignautt. The doctors making up the staff will be Drs. E. Peltier, J. R. Roy, F. de Martigny, J. A. Lanoie, F. Parisian, C. St. Pierre and R. Laurier.

The likely officers of the Ontario Bass Hospital will be Drs. R. B. Orr, H. J. Hamilton, H. B. Anderson and H. A. Bruce. If they are appointed they will be given the rank of lieutenant-colonel.

The draft of medical men at the disposal of the War Office has led to commissions in the R.A.M.C. being given to fourteen McGill graduates. Although the War Office has asked Canada to supply doctors hitherto they have only accepted licentiates, but this is now waived.

Dr. Archibald Williamson, the treasurer of Queen's Stationary

Hospital for Overseas Service, wishes to acknowledge the receipt of $150 from the Women's Patriotic Auxiliary, Fort William, which will go to the furnishing of six cots in Queen's Hospital.

It is intimated that the Ontario Hospital for Convalescents will be located at Sandling Camp, England.

The rapid reconstruction of part of the Lakeside Hospital for Sick Children has made it possible to remove 100 children from the hospital in Toronto to the one on the Island for the summer.

The old Toronto General Hospital has been offered as a soldier's convalescent home.

No better use could be made of a portion of the money voted by the Legislature for war purposes than that decided upon by the Government. An Ontario hospital of 1,000 beds in England and half a dozen motor ambulances in France will meet pressing needs, soften the lot of wounded soldiers, and save the lives of many. The heavy casualty lists give promise of more to come and the sooner the hospital is built, equipped and in operation the better. No time will be lost by the Government, which has already devoted $800,000 to war and relief purposes, and has still upwards of $1,000,000 in hand for the new hospital and other projects.

The faculty of medicine at Laval University has bee notified by the Militia Department at Ottawa that the Government will accept an offer of a hospital equipment and personnel of 1,040 beds.

Thirty-two doctors and seventy-five nurses, comprising the Chicago unit for service in the British army, left on 14th June. The doctors will receive commissions in the British Army Medical Corps.

BOOK REVIEWS

FARR'S OUTLINES OF INTERNAL MEDICINE FOR NURSES.

Outlines of Internal Medicine. For the Use of Nurses. By Clifford Bailey Farr, A.M., M.D., Instructor in Medicine, University of Pennsylvania; Assistant Visiting Physician, Philadelphia General Hospital; Pathologist to the Presbyterian Hospital. 12mo., 408 pages, illustrated with 71 engravings and 5 plates. Cloth, $2.00 net. Philadelphia and New York: Lea & Febiger, Publishers, 1915.

As a basis for a systematic training school course in internal medicine or as a reference volume for the graduate nurse, Dr. Farr's work has been most logically planned and perfected with a discriminating grasp of the requirements and limitations of a nursing text-book.

He has conscientiously avoided the somewhat frequent practice of

making a rudimentary medical work masquerade as a nurse's text-book merely by the insertion of a few general observations on nursing. Confining himself strictly to the consideration of internal medicine, he presents it with the single purpose of meeting the nurse's needs. In selecting his material, in order to emphasize the practical, he has wisely drawn largely on his personal experience in hospital work, although he has referred frequently to the most authoritative text-books for supplementary data.

Believing that an intelligent grasp of the nature of the various diseases, their symptoms and treatment, is essential to the development of nursing efficiency, the author has presented every vital fact in detail, but has limited his consideration to essentials and has emphasized those points which will be mose useful to his readers. His work is at once comprehensive, readily understood and stimulating to a full conception of all that is comprised in the term "Internal Medicine." The nurse who conscientiously studies this volume can hardly fail to acquire a useful appreciation of the significance of symptoms, of the purpose and technic of treatment and of the nature and causation of the various diseases.

The plan of the work, while novel, is most logical, and from a didactic standpoint presents many advantages. It is divided into ten "Parts," eight dealing with diseases of the various systems and two with harmful agencies (physical, chemical and bacterial) invading the body from without. In each "Part" general considerations are first taken up, to be followed by sketches of the more important diseases, including briefly their etiology, and in more extended detail their characteristics, symptoms and prognosis, with frequent suggestions for emergency procedure. In appropriate sections much information on dietetics of special and general value is presented. The sections dealing with infectious diseases are peculiarly useful both from the logical grouping of topics and the extended consideration of prophylaxis and from the clear insight afforded into serum and vaccine therapy, infection and immunity, and the application of the principles of immunology in diagnosis. A useful section gives in detail the relative frequency of diseases and their relative mortality.

Realizing that an understanding of technical terms is of prime importance, the author makes no effort to avoid their use, but is at pains to supply clear definitions and explanations. While the consideration of every topic is ample and suggests no abridgment, the author's purpose is plainly to develop the student as a well equipped nurse and not as an internist.

MISCELLANEOUS

SANATOGEN.

It has been said by some that this preparation is a German one. This is quite incorrect. It is manufactured in Britain, with British labor, and from material secured in Britain. The factory is located near Pensance, in Cornwall. The site is in a rural district among the hills, in a most sanitary situation, and free from smoke. It is an ideal spot for the manufacture of a food. This location was chosen because it furnishes an ample supply of the best quality of milk. The water supply is also the very best.

With regard to the manufacture of Sanatogen the utmost care is taken that the very best material is used, and that the actual production of the article is carried on under the most scrupulous care as to every detail of skill and cleanliness. The milk must be absolutely fresh. The powder is prepared at the factory and shipped in bulk to London, where it is put up in packages and labelled at Chemes Street.

The composition of Sanatogen is made known to the public and has been from the inception of the business. The greatest care is taken over every stage of tis manufacture to avoid contamination. Sanatogen is not a mere mixture, but a definite chemical compound with definite therapeutic properties.

THE LOCAL APPLICATION OF BOVININE.

Our recent knowledge of the effect of blood and blood serum in reparative processes has resulted in a wide application of its uses.

In local processes where repair is sluggish, as in indolent ulcers, the application of blood serum supplies, not only nutrition to tissues which are under nourished, but the stimulating properties which are now known to be inherent in blood serum as well.

Blood for this purpose is now available in a practical form in Bovinine, a preparation of beef blood, in which the biological properties of the blood serum have not been altered by heat.

The small amount of alcohol which Bovinine contains, not only aids in promoting antisepsis when used as a local dressing, but provides an admirable stimulant to the sluggish tissues.

The use of Bovinine as a local dressing in sluggish and indolent ulcers and bed sores, has yielded successful results in many cases where other well-known methods had proved unsatisfactory and unavailing.

ONTARIO VITAL STATISTICS.

The returns issued by the Provincial Board of Health relating to the cases and deaths from communicable diseases reported by the local Boards of Health for the month of May, 1915, show that cases and deaths respectively numbered 1,109 and 126, as compared with 1,434 and 127 in 1914. The following places last month reported smallpox: Toronto, London, Stratford, Port Arthur, Haileybury, Berlin, Cobalt, Rockland, Norwich, South Dumfries, Madoc township, North Walsingham, Windham, Biddulph, Rawdon and Keewatin. The comparative returns are as follows:

	1915		1914	
Diseases.	Cases.	Deaths.	Cases.	Deaths.
Smappox	55	0	39	0
Scarlet fever	112	3	275	13
Diphtheria	191	13	183	10
Measles	659	9	691	21
Whooping cough	39	5	96	6
Typhoid fever	24	6	36	9
Tuberculosis	114	31	110	65
Infantile paralysis	0	0	2	0
Cerebro-spinal meningitis	15	9	3	3
	1109	126	1434	127

THE ACORN AND THE OAK.

The growth of the Sharp & Dohme drug and pharmaceutical business is one of the best proofs to-day before the world of good methods and good quality. The business had its real rigin in 1860 when the partnership was formed that has been so successful. The firm has now large branches in New York, Chicago, New Orleans, St. Louis, Atlanta and Philadelphia. The main department is in Baltimore. The letters "S. & D." stand for quality and purity.

AMERICAN PUBLIC HEALTH PROBLEMS.

The Prudential Insurance Company of America has issued a very interesting and instructive booklet on this subject. It contains a good deal of very useful information on health affairs, and is well worthy of careful study. A reading of this booklet will repay well for the trouble.

PRINCE OF WALES FUND.

The Prince of Wales Fund has now reached $26,650,000. This is only one of many patriotic funds raised in Great Britain, but is the greatest apart from the Red Cross. So far some $10,525,000 has been distributed for the additional relief of families of soldiers and sailors and in cases of civil distress, which have been much less than at one time

feared. Widows and orphans have come in for substantial aid as well as maimed and blinded soldiers.

The administration of the fund has so far cost a little over $30,000.

CHINESE MEDICAL INSTITUTIONS.

The Rockefeller Foundation has embarked upon a plan of Americanizing the medical education of all Chinese institutions of learning. Dr. Wm. Welch, pathologist of Johns Hopkins University, accompanied by Dr. Simon Flexner, Dr. David H. Robinson and Dr. Wallace Butterick, of the Rockefeller Foundation, have arranged to depart for China about June 30th to work out the plan. The medical education in the schools already established will be systematized, and new schools will be established. President Frank J. Goodnow, president of Johns Hopkins, and constitutional adviser of the Chinese Republic, will be associated with tne work. He is already on his way to China.

GRAND MARCH PAST OF THE ALLIES AT THE EXHIBITION.

The most brilliant and spectacular episode ever staged before the grand stand will be the Review of the Troops at Calais and the Grand March of the Allies. In the former the visitor will see the armies of France in the ancient city of Calais. Massed upon the litoral will be the commanders of the allied armies and the sovereigns of the allied countries. Soldiers from Russia, France, Great Britain and her Dominions, Italy, Serbia and Montenegro, dressed in their national uniforms will march in one great phalanx before men who to-day are making history and changing the map of the world.

When this great military aggregation has passed in review order before kings and generals, a wonderful vista will open before the eyes of the people. On the far horizon will be seen the watch-dogs of Great Britain, led by the latest super-Dreadnought, the Queen Elizabeth, and followed by twenty-six battleships, battle cruisers, torpedo boats and submarines. In his flagship, the Lion, Admiral Sir David Beatty will lead the total fleet before Sir John Jellico, the admiral commanding, in his flagship, the Iron Doke, who will review the fleet amidst a salvo of broadsides. Then at a given signal the whole fleet will be brilliantly illuminated and amidst the strains of "Old Hundred" will vanish over the horizon.

It is going to be Military and Patriotic Year at the Canadian National Exhibition this year. "The March Past of the Allies" will be put on with a thousand performers and a score of bands.