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# The Canada Lancet

VOL. LIII

TORONTO, MAY, 1920

No. 9

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## EDITORIAL

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### INFANT BIRTHS AND DEATHS

In the birth-registration area of the United States 1,353,649 infants were born alive in 1918, representing a birth rate of 24.4 per 1,000 population. Of this total number of infants born alive 1,288,711 were white and 74,938 were colored. The total number of deaths in the same area was 1,014,620, or 18.2 per 1,000. The births exceeded the deaths by 34.4 per cent. For every state in the registration area, for most of the cities, and for nearly all the counties, the births exceeded the deaths in many cases by considerable proportions. The mortality rate for infants under 1 year of age averaged 101 per 1,000 live births. The foregoing are among the facts brought out by the annual compilation of birth statistics by the Bureau of the Census.

The birth registration area, established in 1915, has grown rapidly. It comprised in 1916, as in 1917, the six New England States, Indiana, Kansas, Kentucky, Maryland, Michigan, Minnesota, New York, North Carolina, Ohio, Pennsylvania, Utah, Virginia, Washington, Wisconsin, and the District of Columbia, and had an estimated population of 55,813,339, or about 53 per cent. of the estimated total population of the United States in that year.

The birth rate for the entire birth-registration area fell below that for 1917 by two-tenths of one per 1,000 population; but the death rate was greater by 4.1 per 1,000 than in 1917. Thus the excess of the birth rate over the death rate for 1918, which amounted to 6.2 per 1,000, was somewhat less than the corresponding excess for 1917, 10.5.

The infant mortality rate—that is, the number of deaths of infants under 1 year of age per 1,000 born alive—throughout the birth-registration area as a whole was 101 in 1918 as against 94 in 1917. This is equivalent to saying that in 1917 of every 11 infants born alive 1 died before reaching the age of 1 year, whereas the ratio in 1918 was about 1 in 10. Among the 20 states these rates ranged from 64 for Utah to 140 for Maryland, and for the white population separately the lowest and the highest rates were 63 for Utah and 126 for Pennsylvania.

The infant mortality rates vary greatly for the two sexes and for the various nationalities. The rate for male infants in 1918, 111 per 1,000 live births, was nearly 23 per cent. greater than that for female infants, which was only 90.4. When the comparison is made on the basis of race or nationality of mother a minimum of 71.4 is shown for the infants with mothers born in Denmark, Norway, and Sweden, and a maximum of 172.4 per 1,000 births for infants with mothers born in Poland, while for Negro children the rate was 163.

The reports from the registration area show the birth of 15,342 pairs of twins and 147 sets of triplets in 1918—in all 30,123 live births, or a little more than 2 per cent. of the total number born.

The reports for 1,252,552 of the births occurring in 1918 contained information as to number of children in order of birth. Of these reports, 345,027 were for the first child born to the mother, 264,964 for the second child, 192,339 for the third, 136,366 for the fourth, and 95,963 for the fifth. In the remaining 217,993 cases, or 17.4 per cent. of the entire number for which information on this point was obtained, the total number of children borne by the mother was 6 or more; in 38,343 cases it was 10 or more; in 1,820 cases, 15 or more; and in 58 cases, 20 or more. The total number of children ever born to the mothers of these 1,252,552 babies of 1918 was 4,109,309, or 3.3 per family. The reports for 1,189,682 mothers of 1918 contained information as to the entire number now living and gave a total of 3,461,110, or an average of 2.9 living children in each family.

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#### BRITISH OFFICIAL INERTIA

The following remarks are quoted from a recent issue of the *Toronto Globe*. They speak for themselves.

When the Prince of Wales on the battleship *Renown* was passing through the Panama Canal the special correspondent of *The London Times* cabled to his paper: "The Americans have slain the mosquito, banished malaria, cast out yellow fever." So they did, and the achievement was much to their credit, but the scientific basis for their work was discovered previously by Sir Ronald Ross in India in 1899, and in a letter to *The Times* he says: "It was not my fault that this great method was not utilized in all malarious parts of the British Empire from 1899 onwards, as, in fact, it was utilized by the French on my advice in Ismailia in 1902. I calculate that if this had been done, as I suggested at the time, as many lives would have been saved by now as we lost in consequence of the war."

In the current number of *Science Progress* Sir Ronald tells how his method was blocked everywhere by British official inertia and indifference. Having failed to move anyone in the colonies, he says: "Well, at last I determined to make a final appeal to the head of the India Office in London himself. I spent an hour alone with him pleading my cause on behalf of the million people who are said to die of malaria every year in India alone, and of the millions more, mostly children, who suffer from it. He sat before me like an ox, with divergent eyes, answering and asking nothing. Of course he did nothing. He was the personification of the British nation in the presence of a new idea; and as I left I could almost fancy seeing the prophetic handwriting on the wall over his head, 'Mene, mene, tekel, upharsin.'"

Sir William McGregor, who was Governor of Newfoundland 1904-1909, adopted the method when Governor of Lagos, West Africa, in 1901, and he was, says Sir Ronald, "the only high British official who ever grasped the real importance and significance of the general anti-malaria scheme which I proposed in 1899."

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### TUBERCULOSIS

During the war 35,684 Canadian soldiers had been killed in action, and during the same time, 42,920 had died of tuberculosis in Canada.

Dr. Parfitt has given some interesting figures of the incidence of tuberculosis in the C.E.F. The total number of cases during the five and one-quarter years to April 30, 1920, was 8,508. The increase of cases in the last two and one-quarter years was 16 per cent.: The incidence ratio per 1,000 civilian males of military age in Canada in 1915 was 5.3. The incidence is therefore 20 per cent. less in soldiers in 1917 than in civilians in 1915. The incidence ratio of tuberculosis per 1,000 enlisted men in the B.E.F. was 6.14, showing that the incidence in C.E.F. was 128 per cent greater than in the B.E.F. It has been urged that relapse of a tubercular patient was always imminent, and declared that often too hopeful a view was taken of his case.

Back-time jobs are not easily available. Total disability pension should certainly be allowed the sub-standard man who is even up to 80 per cent. efficient. There is a tendency to reduce the pension when the patient appears to be improving. That in itself is often the cause of relapse. The increased efforts to make good the diminished income causes worry, his courage is shaken and morale lowered. The interests of the individual, he felt, would be jeopardized if his pension were not subject

to review at regular intervals. It is advisable that every discharged sanitarium patient should, if at all possible, be placed under the supervision of a physician, who should be a D.S.C.R. or B.P.C. tuberculosis specialist, civilian clinical tuberculosis specialist or a private practitioner.

The proposal to have public hostels ideally situated and furnished for these patients whose home conditions would be unfavorable, should meet with approval. The separation of the sick from the well would control the spread of the infection.

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### THE VALUE OF PUBLIC HEALTH

Some time ago while addressing a woman's meeting in Toronto, Dr. C. J. Hastings gave utterance to some very valuable thoughts. He said:

"That the ideal of Public Health work was prevention rather than cure. The war revealed the necessity of taking active preventive measures when it was shown that from 30 to 40 per cent. of the men examined were physically unfit for active service. The physical examination of the children in Toronto Public Schools has re-impressed this need by revealing that 50 per cent. of the children entering the Public Schools are suffering from some physical defect which needs attention."

He spoke strongly against children entering school too young. They should not go before the age of seven. Before that they should be out in the open air all day long, if possible. The precocious child should not go to school until eight or nine years of age and then only for half a day. This type of child is just on the border line, and is mentally unbalanced.

He stated that as far back as 450 B.C. Public Health Departments were well established.

Money used by any municipality in safe-guarding health is an investment, he stated.

The speaker referred to the number of epidemics which have been traced directly to the water and milk supply and pointed out that the first duty of any Public Health Department is safe-guarding the water and milk supply.

The modern Department of Health, the M.O.H. said, should embrace all the activities of developing a fitter race, and to develop a fitter race, it is necessary to begin with the expectant mothers. He emphasized the importance of properly balanced diet, pointing out that a great many people eat too much. Dr. Hastings also touched upon the social side of the Public Health work and showed what strides the department is

making by looking after the children of pre-school age, by establishing the system of examination of children on leaving school, as well as when they enter, which will act also as a vocational guide. He also referred to the death rate in Toronto, which had been lowered during the last ten years, 1,700 fewer people dying in the city every year.

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### COUNCIL OF HEALTH

The Dominion Council of Health has concluded an interesting and well-attended conference, which was in session for three days.

Resolutions adopted recommended to the various provinces that all public milk supplies be pasteurized; endorsed the activities of a national health agency to carry propaganda throughout Canada; emphasized the urgent need of child welfare work and that such organizations, with a view to economy, work under the direction of the Provincial Health authorities; endorsed the employment by official health departments of properly trained public health nurses; recommended the Canadian Red Cross Society and other voluntary organizations to act as auxiliary to and under the direction of the Dominion Health Department or of the Provincial Health authorities, and requested the Dominion Government to afford financial aid to the Provinces for the purpose of assisting in the carrying on of extensive work in regard to tuberculosis and maternal and child welfare.

It was also resolved:

That the Dominion Council of Health place itself on record as endorsing the international minimum standards for women in industry set up by the International Labor Conference, held in Washington, to which Canada and thirty-nine member nations gave their approval which covered women's employment, (a) before and after child birth, (b) during the night, (c) in unhealthy processes.

Be it also resolved: That the Dominion Council of Health respectfully draw the attention of the law-making bodies of the Provinces to the urgent need for early action with respect to these international standards.

Another recommendation was to the effect that necessary equipment and remedies for the fight against venereal diseases be admitted free to Canada.

These are very important suggestions and are all in the right direction. It is to be hoped that we are rapidly getting beyond the resolution stage, and are now entering upon the stage of action.

## ORIGINAL CONTRIBUTIONS

## ANESTHETICS IN MIDWIFERY.

BY DR. E. ASHCROFT, MONROE, N. C.

*From the Charlotte Medical Journal.*

NO other contribution to the science of obstetrics has been so beneficial as the introduction of anesthesia. In addition to the unmeasurable suffering it has prevented, it has acted directly and positively toward the development of the art itself by making possible manipulations and procedures which were before impossible or unthought of.

Sir James Y. Simpson, in January, 1847, delivered with ether the first woman ever under an anesthetic in parturition, and in November of the same year he began the use of chloroform in labor. His defence of the practice maintains with equal force to-day: "pain in excess is destructive, and even ultimately fatal, and the great pain accompanying parturition is no exception to this general pathologic law."

He was not satisfied with the results he obtained under ether; he did not consider chloroform perfect; and after seventy years' use of these and many other agents for induction of amnesia and anesthesia, when indicated in the lying-in chamber, the ideal agent is yet unknown. Ether, chloroform, chloral, opium, morphine, nitrous oxide, cocaine locally to cervix and external genitals; morphine-scopolamin; pantopon; heroin, and tocanalgin; all have been tried—all have had their enthusiastic advocates—but none have produced results sufficiently satisfactory to convince and convert the profession, as a whole, to their use. The profession demands more of an anesthetic than they formerly required. Not so long ago, anybody who could hold an ether can and tell the patient to "breathe deeply" was considered "good enough" to give the anesthetic in surgical operations. Of late years we have exacted more skill and experience from the anesthetist, and more exact results from our anesthetic, in the surgical operating room; but only a very few physicians have given the matter the attention it deserves in obstetrics—where two lives, instead of one—are at stake.

ETHER.—The year 1847 saw the introduction of ether in midwifery. While Simpson experimented in Edinburg, Dubois and Deschamp worked in Paris, and Morton and Keep in Boston. Ether is undeniably the safest of all anesthetics for obstetrical use, with the sole exception of nitrous oxide, and many of the well known objections to its

employment may be minimized by skillful administration. The drop method, in the hands of an expert, yields a result almost faultless, and absolutely without danger to mother or child, and happily without the haunting fear of dangerous post partum hemorrhage. It is begun only when the head shows the first bulging of the perineum, and carried only to the point of analgesia, when this stage is maintained through the second stage of labor. Amnesia is not necessary, unless instrumental interference becomes imperative, when it is easily and quickly secured. The amount required is astonishingly small, and decreases as the operator's skill increases with added administrations.

Conceding the more rapid impression upon the patient by chloroform, and admitting all the claims for the convenience of the operator in its use, we still insist that these items will progressively diminish in importance, as the physician extends his experience with the drop method of giving ether in the parturient patient. In short, the preponderance of professional partiality toward chloroform in labor is due solely to the lack of knowledge of how to give the safer anesthetist—ether—skillfully, to meet the indications at hand. The skillful anesthetist in a surgical operating room is no more than a novice when he essays exact results with ether in the lying-in chamber; unless, of course, in those cases where surgical anesthesia is required for prolonged instrumental manipulations. We are not discussing exceptional cases, but the routine employment of the anesthetic to the point of analgesia, as required in many strictly normal cases of obstetrics.

**CHLOROFORM.**—Chloroform was the second anesthetic employed in midwifery, and it has maintained its lead in the preferences of the majority of conservative physicians, in the face of newer claimants for popular favor. The earlier experiments employed chloroform only during instrumental interference, or for the time the head was passing over the perineum. Soon came familiarity with the agent, and there seemed to be no limitation to the length of the anesthesia—Snow continued its administration continuously for 31 hours in one case; and Prothero Smith for 28 hours in another case; and Simpson for 14 hours in still another case—and in none of them was either the mother or the infant considered to be in danger. It became currently believed that chloroform, in labor, was given recklessly. We are unable to cite statistics in support of our belief that grave consequences must have followed such careless use of this powerful agent, but we can point to the fact that with increased knowledge of the action of chloroform upon the excretory organs the use of chloroform has been restricted, in the hands of the better class of obstetricians, to the latter part of the second stage of labor.



Outside of the known physiology of chloroform excretion, we have the undisputed statements of the highest authority that death from chloroform nearly always occurs under "light" anesthesia, and this is the type sought to be attained by those who use it for hours in obstetrical work. The wiser man withholds it until the time of greatest need, and then pushes it to the point of full surgical anesthesia as quickly as possible. Our maturer knowledge leads us to shorten the anesthesia as much as possible, moreover, to avoid the predisposition to post-partum hemorrhage consequent upon the employment of the chloroform anesthesia.

Those who have given chloroform routinely in obstetrical work acquire the keen judgment necessary to stop short of seeming danger of either the dreaded post partum hemorrhage, or the alarming syncope. Such skill is not acquired by the novice, but, when attained, seems to be devoid of danger over a period of from one to three hours, when inhalation is given only during the period of uterine contraction.

**NITROUS OXIDE.**—Admittedly the safest of all general anesthetics, it was certain that experimenters would think of the use of nitrous oxide in obstetrics. Bert, in 1878, advised its use, and Klikewitsch in 1880 reported 25 successful cases wherein he had employed it. The earlier experimenters failed to secure uniform results, due in some measure to their imperfect apparatus, and undeveloped technique. Guedel has collected more than 1800 reports of cases in which it was employed, with 98.5 per cent. listed as "favorable"; the unfavorable reports carried nothing more detrimental than lack of relief from pain.

It has no known deleterious effect on either mother or child, although a mild headache is common following its employment. It does not produce irritation of the mucous membranes of the nose or throat, and muscle tonicity is not impaired. Analgesia is the end desired, and not narcosis. The administration is only continued during the expulsive effort, and cases are reported where it has been in use for ten hours, without discoverable harm.

Outside institutional delivery, the use of method requires a portable apparatus, consisting of inhaler, gas bags, and regulating valves; and two tanks. An apparatus is now on the market which can be easily transported in the ordinary buggy or automobile.

The technique of administration is said not to present any difficulties, but it is certain that ideal results are only possible after one has a considerable experience with the method, and it is impossible to predict how the individual patient will accept and react to the method. Death or serious accident with nitrous oxide anesthesia in obstetrics is highly improbable in the normal woman; but may occur under any of

three conditions (1) Asphyxia; (2) Cardiac dilatation; and (3) Apoplexy.

The expense of employing nitrous oxide anesthesia, in labor, and the added inconvenience of transporting the equipment, will deter many from giving the method the fair trial it deserves. But in cases financially able to ignore the expense, and with the preponderance of evidence as to the entire safety of the method, one may at least consider if he has the moral right to place his convenience in the balance against the known advantages of nitrous oxide anesthesia.

MORPHINE-SCOPOLAMINE.—Schneiderlein, in 1902 first used and advocated the use of morphine-scopolamine in obstetrics. The following year Von Steinbuchel developed the technique, and Kronig, Pankow, and Gauss experimented with it extensively, with varying success. Heralded by many as the long sought ideal anesthetic in labor; "promoted" by drug houses through commercial instincts; extensively employed by many physicians who had been chary in the employment of other anesthetics; assiduously cultivated by lay magazines and ladies' journals; it swept to great popularity in a shorter time than any other obstetrical anesthetic has even attained in like period. It has been thoroughly discussed and investigated in all parts of the world, especially in America. It has not borne out the early claims made for it, and of late it has come in for severe condemnation in many quarters. Many competent observers now declare that it has no valid place in the equipment of any practitioner doing general practice, and that its use should be strictly limited to those who make a specialty of obstetrical work, and who do that work within a hospital where abundant trained help is at hand.

It is conceded that, in a labor already well established, it may be employed during the first stage without unduly prolonging it. But the morphine-scopolamine combination is a first stage anesthetic, and it is not here that we oftenest feel the need of an anesthetic. It is admitted by all with experience in its use that it prolongs the second stage of labor, and increases the hazard of foetal asphyxia directly and definitely in proportion to the prolongation. This combination is already limited in its scope. It must not be used in cases of suspected foetal death in utero. It must be avoided in primary uterine inertia. It is not to be used till the os has dilated to the size of two fingers. It seriously complicates the common accidents of labor, and should never be employed in the accidents of pregnancy. The infant is often narcotized, and in such condition bears the stormy passage under the pubic arch but poorly.

Many of its enthusiastic early supporters have abandoned its use, and its popularity seems to be progressively waning among the better class of physicians who have used it enough to realize its limitations.

Mass found 11 deaths as a result of the use of scopolamine in 1449 cases—a rate of one in 134.

DeMaurans collected reports of 22 scopolamine deaths; Wood reported statistics of 9 deaths due solely to the scopolamine; Deybert and Dupont reported 7 scopolamine deaths, and collected reports of 22 others from literature. Hatcher has given the number of fatalities from scopolamine in the United States as 30 up to 1910.

With any anesthetic which has been but comparatively few years before the profession, it is extremely difficult to judge as to the position it may ultimately occupy provided it seems to fulfil the need of the physician. However, there seems to be but little doubt as to the verdict in the case of this agent in obstetrics. However well it might serve to mask the pain, or induce forgetfulness of it, the mortality statistics already in evidence cannot fail to check the enthusiasm of any rational man. Any agent which can not escape a mortality rate such as those published must fall under the condemnation of the profession, in the end, for no man can defend himself in its use in the event of untoward results. While it is hardly to be hoped that an anesthetic which is absolutely safe will be produced, we can do no more than employ those which statistics have shown to be the least liable to induce dangerous symptoms or even death. Nor is it likely that we will ever be able to state the degree of danger present in any individual case; but already we can determine approximately the relative danger attending the use of the better known agents, and the relative danger of one death in each 134 administrations is too high to longer justify the use of this agent.

**HEROIN.**—Only two years ago, Kapp, of California, brought this drug to the attention of the profession by a report of 100 cases of delivery under its influence.

Mere analgesia is induced, and the patient sleeps lightly between expulsive efforts, being easily aroused at any time. If awakened, there is no mental dullness or confusion of ideas, and the patient is perfectly rational. The claim is boldly made that heroin induces a painless labor. It can be used by any physician with perfect safety in the home of the patient. The second stage of labor is said to be shortened because in the absence of pain the uterine contractions are advantageously augmented by willing expulsive efforts. The condition of the new mother is better by reason of the few hours sleep following the completion of labor, and so the customary exhaustion is abated. It is said to have

no tendency whatever toward the induction of post partum hemorrhage, and to be absolutely harmless to both infant and mother.

An injection of 1-12 of a grain is given when the pains have become strong and regular, and the effect is produced within twenty minutes. The patient becomes drowsy and no longer complains of the pains. The dose exerts its influence over a period of two to three hours, and on the first complaint of pain, a second dose of 1-24 of a grain is given. This may be followed by other injection if needed, but generally said the statements made and the claims advanced are more rational than those with which we have been assailed in the name of other drugs. We have great confidence in this drug as being the nearest approach to the long sought ideal obstetrical anesthetic.

TOCANALGIN is the latest candidate for favor in obstetrical analgesia and amnesia. While a hydration product of morphine, it exhibits none of the morprine characteristics, and it is only one-fifteenth *ax oxie*. Dessaignes used it first in obstetrics, reporting in July, 1914, 112 labors in which it was used. 75 per cent. had complete analgesia; 22 per cent. partial analgesia; and 3 per cent. were unaffected. There were 115 babies, 77 of which cried spontaneously; 28 showed apnoea, but soon cried; one was born dead, but the fetal heart could not be heard before administering the tocanalgin. The remaining 9 had some asphyxiation, but breathed normally after establishment of respiration, and then progressed without incident.

It may be used in all normal cases of labor, but should not be employed in the presence of complications. It may be given at any time after the cervix admits two fingers, or during the second stage of labor, even within a few minutes of final delivery. 1 1-2 cc. are given at the first dose, and subsequent injections of 1-2 to 3-4 cc. are employed. Often one injection is sufficient, but two or three may be employed, if the contractions of the uterus become painful.

Tocanalgin is seemingly without danger to the prospective mother, but it does produce oligopnoea in some of the babies. The advantages claimed for it are:

1. Lessened toxicity in comparison with morphine.
2. It has no effect upon the uterine contractions.
3. Temperature and pulse remain normal following administration.
4. Lactation is undisturbed.
5. Involution is normal.
6. It does not predispose to postpartum hemorrhage.

7. Versions, forceps, and perineal repairs do not require further anesthesia.

8. 75 per cent. of the labors are painless, with no after effects.

The published results of the use of tocanalgin encourage us to follow it up with more extended use, hoping that in it we have something nearer the ideal obstetrical analgesic than anything heretofore known.

RESULTS.—Within six months following the beginning of ether anesthesia, two deaths were recorded as due to its use. Simpson was undoubtedly influenced to experiment with chloroform in part because of the danger incident to ether anesthesia. Yet the same year in which he began the use of chloroform, at least one death was recorded as due to the anesthetic. Steadily down through the intervening years one may read the unbroken series of deaths due to the anesthetic, in various types and under varying technique of administration. And yet comparatively few physicians comprehend that in every case in which a general anesthetic is employed, we take our helpless patient down into the very valley of the shadow of death. What wonder, then, that the thinking men in the profession have long and earnestly desired an anesthetic devoid of danger? Especially insistent is this demand felt when one approaches the couch where a new life is to be ushered into the world, and the supremest happiness of womankind is to be attained after travail. Such environment cannot fail to appeal intensely to the highest attributes possessed by any man;—here, if ever—he is impelled to the greatest caution and the most painstaking skill of which he is capable, and here he must not fail to choose his anesthetic judiciously and administer it in the most skilful manner.

Because this is not always done, I have been impelled to present this subject in the manner outlined before you. Not that I pose either as an expert anesthetist or as an authority on things obstetrical; but that I am convinced that in these things we have been negligent, and that much real benefit to humanity will accrue from extended experience with at least two of the promising newer obstetrical anesthetics.

Dry statistics will help us to maturer judgment, and statistics can only be compiled from results. Statistics of the past teach us much, and of coming novitiates in our art, and happily even for our own benefit.

As early as 1864 The Royal Medical and Chirurgical Society had a committee collect reports of 109 chloroform fatalities, and Kappeler brought the record up to 210 by 1876. In 75 cases the period of death was stated, and in 90 per cent. of these the patients died in the first fifteen minutes after the beginning of administration. From 1880 till

1889 The Lancet and The British Medical Journal reported 130 chloroform deaths, and fifty-four of these took place either before the operation began, or in the course of a trivial operation. 20,613 chloroform administrations were investigated in 1912, with a mortality of 1 in 2,060; the same author collected reports of 11,859 ether administrations, with one death in each 5,930 cases; also reported by same investigator were 10,230 cases in which chloroform was first used to introduce anesthesia and then followed by ether, with the result of 1 death in each 3,410 cases. 700 chloroform deaths were reported in 1913, and in 223 of them death occurred before the operation was begun. In 1912 the committee of Anesthesia of The American Medical Association reported that: (1) The use of chloroform as an anesthetic for major operations is no longer justifiable; (2) for minor operations the use of chloroform should cease. No condemnation could be more sweeping as to the elements of danger in the use of this agent, and yet we have stilled our obstetrical conscience by the sop that every succeeding pain was sufficient to rouse the reflex nervous system so that there was not the slightest danger—but—we have learned that many deaths occur in the first fifteen minutes of administration, and must ask ourselves what might happen in cases where the expulsive efforts were more than fifteen minutes apart.

These are not idle speculations, when we face the unimpeachable and unquestioned facts and figures. We do not know that the pains stimulate the reflex nervous system to a degree that precludes possibility of danger: we have only repeated that to ourselves so often that we have come to believe it, without really knowing anything about it except that our patients have escaped, so far. But, do we know that the next parturient woman to whom we administer chloroform may not go to swell these awful statistics? By no means an alarmist, I insist that sober consideration must give us a cause for caution. It must be plainly understood that these statistics only cover the immediate deaths from chloroform, and take no consideration of the fatalities consequent upon delayed chloroform toxemia.

What, then, in the face of these facts, is our duty? We may belong to that class who deem anesthetics in midwifery seldom absolutely necessary, and yet we must confess that they are sometimes needed imperatively. We may choose to ally ourselves with those who declare that there is no valid reason why any woman should suffer any twinge of pain because of the birth of a baby, when we are able to prevent such pain absolutely. We may occupy a conservative and middle ground, and declare that midwifery frequently requires the use of an anesthetic

in normal delivery, and that we propose to make use of some agent for this purpose. The first class must and does use anesthetics; the second class always use them whether really needed or not; and the third class employ them when they deem them necessary. It is thus plain that all physicians employ anesthetics in midwifery. It must be admitted that unwarranted risks if we use some of those we have reviewed in this sketch.

We are now offered several anesthetics for which claims are advanced which will almost place these agents in the long hoped for class of ideal anesthetics, provided such claims can be established to the satisfaction of a majority of the profession. Nothing detrimental has so far been produced against them, while our older anesthetics can not evade that long line of death records. Hence, it seems to me, it is our duty to take up these newer agents and experiment with them in obstetrics, and report our results to the profession. It seems likewise plain that we are not warranted in the thoughtless use of the older anesthetics.

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#### A NOTE ON THE VALUE OF THE INITIAL METHODS OF TREATMENT OF SYPHILIS.

By Marcel Pinard, M.D.

*Chief of the Dermato-Syphiligraphic Centre at Versailles.*

**W**E are at present in a position to form an opinion as to the value of the various methods in use for the treatment of syphilis at the onset.

Numerous are the means brought to bear for the "whitewashing cure," and although many of them do whitewash, approximately, what happens to the patients later on? How many times will they return to the hospital centre to be refurbished?

I have always done my best to follow up my patients, and I always question closely as to the early treatment every sufferer from syphilis who comes under my observation.

Although the methods are numerous—it might almost be said that everyone has a method of his own—they can be classified in three groups:

The mercurial treatment.

The arsenical treatment.

The simultaneous mixed treatment.

The exclusive mercurial treatment is now almost a thing of the past. In ordinary doses it does not prevent mucous manifestations which are so prone to recur and are so contagious. Novel methods of employing

mercury have been tried, intravenous calomel and massive doses of mercury. With big doses of mercury the results are certainly better; indeed, I have obtained what I may claim to be good results, but the treatment is often interrupted by symptoms of intolerance. With regard to the intravenous calomel method I am not greatly attracted thereby. The only case of malignant syphilis that has come before me during the last few months was in a subject who had previously received six intravenous injections of calomel.

The mixed method—novarsenobenzol with biniodide, cyanide or grey oil-galyl or arseno-benzol with various mercurial compounds—is greatly in favor and is the one recommended in military hospital centres.

Although in expert, prudent hands it yields adequate results, I would call attention to the enormous number of recurring mucous accidents with this method and, on the other hand, the number of grave and even fatal cases resulting from the mixed treatment.

The mixed treatment, as a matter of fact, comes to grief almost infallibly on one of two reefs, either small doses of arsenic are given, in which case the treatment, being almost exclusively mercurial, is often followed by relapsing mucous lesions; or else the arsenical treatment is in adequate doses and then the liver and kidney may suffer from this simultaneous double violent attack.

For example, at the Versailles Centre in October, 1918, of 50 patients suffering from relapsing syphilitic accidents of the skin or nervous system, 34 had been previously treated either with mercury alone or by the mixed method; 8 by means of novarsenobenzol; 7 by arsenobenzol; and 1 with luargol, and these figures all the same signify something, because the patients who frequented this centre were always treated with arsenobenzol alone in accordance with Dr. Queyrat's practice, from the beginning of the war, and in these relapsing mucous lesions were practically unknown.

Although all the arsenical methods (arsenobenzol, novarsenobenzol, galyl and uargol) employed in adequate doses may yield good results, the two most in use are novarsenobenzol and arsenobenzol.

Recent observations of my own have convinced me that arsenobenzol is the more rapid in its curative action as well as the more durable in its effects.

It may be true that novarsenobenzol is easier to handle, but its activity and solidity are vastly less. All observers who have given a trial to these two methods are unanimous as to this, and in point of fact it is the simplicity of Ravaut's method that has conferred a vogue on novarsenobenzol.



The theoretical reasons of the inferiority of novarsenobenzol confirm the reasons based on experience and impartial observation of the facts of the case. These reasons are important enough for it to be worth while insisting thereupon.

Novarsenobenzol is not a colloid like arsenobenzol, it is very unstable and rapidly decomposes on exposure to air and heat. Dalimier remarks "the notorious therapeutical inferiority of 914 appears to be due more to the blockage of its amine function by the solvent monomethylenesulphoxylate of soda group than to its smaller proportion of arsenic."

Now, the tenor in arsenic of dioxydiamino-arsenobenzol formaldehyde sulphoxylate of soda (neosalvarsan) is 32.18 per cent., that is to say higher than that of dichlorhydrate of dioxydiamino-arsenobenzol (salvarsan) which is only 31.6 per cent.

In spite of this fact, as is pointed out by Mr. Cousin, of the School of Pharmacy, in one of his reports, it has become the practice to state, to repeat, to teach and to print the fundamental error that neosalvarsan contains only two-thirds as much arsenic as salvarsan.

As physicians continued to prescribe neosalvarsan in doses half as big again as those of salvarsan, the manufacturers were constrained to lower the proportion of arsenic.

Even so the different brands of novarsenobenzol vary in respect of the arsenical constituent to the extent of from 20.74 to 27.24.

After comparative trials of various methods I have retained my preference for arsenobenzol. "It is more active, more sterilizing and yields a much larger proportion of negative Wassermann reactions than any other arsenical product in equivalent dose" (Queyrat).

From data that have come within my personal observation I feel justified in concluding:

Mucous accidents or cutaneous manifestations are by no means rare after the mercurial treatment, the mixed and the novarsenobenzol treatment, while they are infinitely rare after the arsenobenzol treatment.

Meningeal accidents are met with just as often after a purely mercurial or arsenical treatment as after a mixed treatment.

These appear to be the outcome of inadequate treatment whichever method be employed.

The enormous number of intravenous injections made since the war shows how extremely easy to handle these products are.

If we should wish to steer clear of accidents, attention should be paid more particularly to the two following rules:

1. Never undertake at the same time a mercurial and an active arsenical treatment.

2. Never commence a first course of arsenical treatment with a dose above 10 centigrammes for arsenobenzol and 15 centigrammes for novarsenobenzol.

The clinical diagnosis having been duly established and confirmed by the ultra-microscope or the Wassermann reaction, the primary or secondary syphilitic subject whose urine is normal in respect of albumen, sugar, and urobilin is given a first injection of 10 centigrammes, three days later one of 20 centigrammes and, after four days' interval, a third of 30 centigrammes; thereafter every seven days one of 50 centigrammes, one of 60 centigrammes, and another of 60 centigrammes in all 2 gr. 60. The treatment will not have lasted a month, yet it has reached the highest useful doses and carried out in this way presents no risk.

This only constitutes the "whitewashing" cure, yet it is possible, if applied early enough, that it may give much more than one would anticipate.

The course for definite sterilization which certain cases, now of upwards of ten years' standing, justify our looking upon as possible, is unfortunately only the outcome of our empiricism and does not rest upon a sound scientific basis—namely, a knowledge of the life history of the treponeme, the different forms through which it passes, and the sensitiveness or resistance of each one of these forms to our therapeutical agents.—*The Med. Press and Circular.*

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#### DOES PROHIBITION PAY FROM A HEALTH STANDPOINT?

With the beginning of prohibition, alarmists—there are always such—predicted dire calamities: increase in crime, resort to habit-forming drugs and other vicious practices. The time has been brief for the compilation of accurate statistics on the subject, but some actual evidence has accumulated: In New York City, the Board of Ambulance Service has reported a large decrease in cases of alcoholism and intoxication. In 1919, during January and February, there were 412 and 364 alcoholic calls, respectively. This year, during the same months, these calls numbered 307 and 133. Bellevue Hospital's figures show 228 calls for intoxication during the first two months of 1919 and thirty-one calls for January and February of 1920. As a result, it is estimated that there will be room for seven thousand new patients a year in Bellevue Hospital, owing to the reduction in the number of alcoholic patients. These figures are for New York. What of other cities?—*Jour. A. M. A.*, April 17th, 1920.

## CURRENT MEDICAL LITERATURE

## HEMOLYTIC STREPTOCOCCI.

The occurrence of hemolytic streptococci in normal throats under various conditions has become a subject of some importance during the past two weeks. It has been taken up by H. B. Van Dyke, Chicago (*Journal A. M. C.*, Feb. 14, 1920). He reviews briefly the literature of the subject and finds that the proportion of these organisms in normal throats after tonsillectomy has been variously reported, but that all investigators who have examined throats after the operation agree that there are far fewer in such throats than in those not operated on. He gives a table of his findings in the throats of tonsillectomized patients in good health. His technic is thus described: "A sterile cotton swab was gently but thoroughly rubbed against the walls of the tonsillar spaces, over the pharyngopalatine arch and the posterior wall of the pharynx, and at once used to inoculate an enrichment broth. This consisted of from 5 to 6 c.c. of plain broth, made with 15 gm. of Fairchild's sugar-free culture peptone, 5 gm. sodium chlorid, and distilled water sufficient to make 1,000 c.c., to which had been added from 6 to 8 drops of defibrinated goat's blood. The organisms were cultivated for twenty-four hours in the enrichment broth, after which surface smears were made on 1.7 per cent. agar containing about 10 per cent. of defibrinated goat's blood, and shake cultures were inoculated at 45 C. and plated in tubes of blood agar of similar composition. Like Tongs, I found a somewhat larger proportion of hemolytic streptococci by the shake method than by the surface smear method. The plates were cultivated and observed for forty-eight hours. Organisms from hemolytic colonies when present were inoculated into plain broth, made as described, and after twenty-four hours' cultivations were again plated in blood agar by the shake method to observe the purity and hemolytic action of the strain. At the same time the staining reactions and morphology of the broth cultures were studied. From the same broth culture, blood agar slants of 1 per cent. agar containing about 5 per cent. of defibrinated goat's blood were inoculated and kept at a temperature of 37 C. for twenty-four hours, after which they were sealed with paraffin and corks and placed in an ice-box for later use in fermentation tests. The streptococci found were gram-positive organisms forming chains in broth of from five to sixty cocci. Two types of colonies on blood agar were chiefly present. One was markedly hemolytic and the other considerably less so—the hemolysis being more

complete in the first type, and the unhemolyzed corpuscles little discolored. The first type resembled that described by Brown as the Beta type—the second resembled the Alpha type of hemolytic streptococci. The details of the fermentation tests are also given. In tonsillectomized throats of healthy individuals there were 16.4 per cent. with markedly hemolytic streptococci, and in twenty-nine per cent. of the throats there were the less markedly hemolytic ones resembling Brown's Alpha type. Van Dyke considers that his method differs from that of most investigators in that a routine prior cultivation of the throat cultures in blood broth was made. His observations agree quite closely with those of Nichols and Bryan, Pilot and Davis.

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#### EPIDEMIC (LETHARGIC) ENCEPHALITIS.

William House, Portland, Ore. (*Journal, A. M. A.*, Feb. 7, 1920), says that lethargic encephalitis appeared first on our northwestern coast in October, 1919. The author observed thirteen cases, indisputably of this disease, and at least four others in which the diagnosis was not absolutely clear. There is no hint, he thinks, as to the method of spread. Of his first five patients, three dated their symptoms definitely from October 12, and these patients were widely separated and knew nothing of each other. He is convinced that the disease is not contagious in the ordinary sense of the term, and he sees no reason for quarantine. Two types are recognized by House—the slow and the rapid—the former being most common. Its chief symptoms of the slow type were, from the beginning, double vision, slight mental confusion reaching slight delirium in some cases, followed by other symptoms indicating local cerebral and cranial nerve involvement. After a week or ten days, the patient seemed to improve, and then developed the so-called lethargy. During this interval, most patients suffered from insomnia, but with the beginning of the lethargic stage this disappeared. The second type is more severe: "In this type, patients complained of some head pain followed by a rapidly developing delirium, which was acute and attended by hallucinations of sight and hearing of the most vivid character." Three cases are briefly described. The cases observed suggested to House a probability that the infection had reached the brain from different points—in Type 1 causing local cranial nerve paralyzes—and he sees no reason why it should not specially effect the anterior portion of the brain, as was the case in these three patients. The delirium was of a type seen in victims of rabies, and in paresis, with intense congestion and hyperemia of the anterior portions of the brain. The

most striking symptoms is the euphoria. The feeling of well-being was present in a greater or lesser degree in all of his patients. Apathy is a better term than lethargy to describe the tendency to quiescence. They are not exactly somnolent, as Bassoe has also observed. Double vision was present in eleven patients during the first week, and seldom lasted more than four or five days. It suggested weakness of all the ocular motor nerves. In three cases, there was distinct pain referable to the branches of the fifth nerve. The ninth and tenth nerves were apparently involved in one case in which death seemed to be due to paralysis of the heart and respiratory centers. One case of twelfth nerve involvement was observed. The optic nerve seemed to escape generally. The seventh nerve was once involved causing paralysis of the muscles of expression. Most of these patients were seen at about the end of the second week, but temperatures of over 100 were reported in the earlier days. Two patients were afebrile, and in most cases the fever subsided at the end of a week or ten days. In several cases, stiffness of the neck was complained of but was not like that of meningitis. It was easily overcome and gave but little discomfort. Involvement of viscera was notably absent, except in two instances in which heart and lungs were involved. Epidemic cerebrospinal fever was suggested by consultants in one case, and ptomain poisoning was diagnosed by the attending physician in three cases, the patients attributing their trouble to eating canned goods. House thinks that many cases reported as cranial nerve palsies following influenza are really cases of epidemic encephalitis. Four of his thirteen patients died, and one was in a critical condition at the time of writing. Treatment is necessarily symptomatic. The patient should be encouraged to eat and should be given abundance of fluid and semisolid food. One of his patients was being fed artificially.

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#### CAMPAIGN AGAINST VENEREAL DISEASES

Dear Doctor:—

The Provincial Board of Health has started an organized campaign against Venereal Diseases. This campaign is being developed along three lines:

- (1) Free diagnosis of cases.
- (2) Treatment of the infected.
- (3) Education of the infected and the non-infected.

1. Diagnosis. Free laboratory diagnosis of V.D. cases is now provided at the Board's laboratories at No. 5 Queen's Park, Toronto; Queen's

University, Kingston; the Institute of Public Health, London, and the City Hall, Fort William. Two additional laboratories will be established in New Ontario this year. Containers and slides for samples of blood and smears will be available for all physicians at any of these laboratories. You are invited to make use of these facilities.

2. Treatment. Clinics for the free treatment of Venereal Diseases will be established in the larger cities and towns in Ontario. The Board has provided a generous sum for their establishment and upkeep. These clinics will be in charge of capable medical specialists so that efficient treatment may be available for all. These clinics will be at the disposal of medical men for clinical diagnosis in doubtful cases. Special "follow up" work along social service lines will be carried out by the Local Boards of Health by means of public health nurses.

3. Education. At the same time education of the general public as to the danger of Venereal Diseases will be carried on by means of bulletins, pamphlets, advertising matter of various kinds, films, etc., this part of the work being done in conjunction with the Canadian National Council for Combating Venereal Diseases.

Your active aid and co-operation in this campaign are urgently required. It is unnecessary to point out to you the dangers from syphilis and gonorrhoea—you are meeting with them every day.

It is perhaps not known to you that the number of cases of gonorrhoea, syphilis and chancroid reported through Medical Officers of Health to the Provincial Board far from represents the actual number of these cases in the province. No doubt many of these cases do not go to a physician at all but are self-treated, treated by quacks or by druggists. But there are a large number not reported that are apparently receiving medical treatment by physicians. This latter fact is put down either to ignorance of the Board's regulations or carelessness. The Board has taken great pains to make the regulation as simple as possible and do not require a report by name unless the patient discontinues treatment.

You can help the Board by reporting each case of syphilis, gonorrhoea or chancroid promptly to the Medical Officer of Health on the special form provided. If this is done the Board will obtain an idea of the number of cases of these diseases and how to diminish the number.

Dentists have complained to the Board that physicians send cases of active syphilis or gonorrhoea for dental treatment without warning the patient or the dentist of the danger of spreading the infection. A dentist should not be asked to expose himself and his patients to infection this way. You can help by explaining the dangers to the patients or by warning the dentist when sending a venereal patient for dental treatment.

Druggists are being asked to co-operate by discouraging self-treatment and by referring venereal patients to qualified physicians or to the free clinics. Quacks will be rounded up by the Board's law-enforcement officer and prosecuted.

You can assist in the campaign of education by disseminating knowledge on venereal diseases wherever you think it should be given. Your position in the community gives you a wonderful opportunity to do such work. The Board will be glad to furnish pamphlets dealing with all phases of the subject.

Some few days ago a very excellent monograph on venereal diseases by Dr. John H. Stokes of the Mayo Clinic, entitled "To-day's World Problem in Disease Prevention" was sent you. If you haven't read it, please do so. It will repay you and give you a new viewpoint on the whole subject.

After all, the Provincial Board of Health can only point the way in a campaign of this character. The general public must be willing to help. The physicians are of the first importance and if they do not heartily co-operate in every way the whole plan must fail. Will you do your part and help?

Yours sincerely,

JOHN W. McCULLOUGH,  
Chief Officer of Health.

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### IDEALS IN MEDICAL EDUCATION

In discussing ideals and their function in medical education, George E. Vincent, New York (*Journal A. M. A.*, April 17, 1920), says that in order to measure achievement and to guide progress, there is need of ideals or standards. Without tests there is danger that opportunism, provincialism, even a narrow nationalism, will prevent the development of medical education on a broad, international basis.

In human institutions there are no absolute standards. The highest ideal may be approximated in a few medical schools in which methods may be tested and leaders trained, but it would be a serious mistake not to recognize various degrees of achievement. The influence of local conditions, the possibilities of economic support, and relations with other university units must be taken into account. All that can be confidently affirmed is that some institutions fall below any standard that can be recognized as guaranteeing results which will safeguard the public and protect the profession. The number of such schools in the United States grow steadily smaller.

There is danger that the existence of a standard may force a formal rather than a real compliance with ideals. A premature effort to conform to an accepted standard may do positive harm. For example, there is reason to believe that in the case of medical schools in the South, where high school systems have had to be developed within a brief period, there has been an overstimulation of secondary and college education; that three-year high schools have changed to a four-year curriculum with little or no additional resources or increases in numbers and efficiency of teaching staff, and that colleges have offered courses which they are not prepared to give efficiently. Moreover, the Class A of the American Medical Association, having been accepted by state boards of medical examiners and thus become a part of the official machinery has been extended in such a way as to produce serious anomalies. These will doubtless be largely removed as a result of the new survey which has recently been completed.

One of the ideals of modern medical teaching which needs constant emphasis is the provision of the best type of medical care for the sick. Laboratory and clinical methods must be thought of as a protection to the patient. Careful diagnosis, resourceful treatment, constant watchfulness are sources of safety and hope to those who come under the care of a modern university hospital. The prestige of the clinical teachers who are in charge is always at stake. The mutual scrutiny of members of the teaching staff, and the alertness of students, together with unremitting search for new truth and its application to disease, make the teaching hospital the best place for the sick.

In medical education, the relation of the laboratory and clinical years in organic. The antithesis which is often set up between these two aspects of medical education is most unfortunate. In the first and second years, the chief emphasis is laid on work in the laboratories; but this training ought to be extended right into the clinical phases of the curriculum. While it will usually happen that laboratory teachers will be graduates in medicine, many able laboratory men without the M.D. degree have demonstrated their capacity to develop co-operative and sympathetic team-work with clinical departments.

As to the hospital, it is recognized that effective teaching can be secured only in an institution which is under the complete control of the medical school. The devices of clinical clerkships, the individual responsibility of students, close relations between bedside and laboratory, the proper organization of the teaching staff, permanence of tenure, team-work, necropsy conferences, and case conferences with physicians and social service workers are all factors in the development of clinical training of the right type.



In spite of the overcrowding to which references has been made, there is an increasing demand for the introduction in undergraduate teaching of such subjects as preventive medicine, psychiatry, institutional administration, and some knowledge of social amelioration through clinics, popular education, improved housing, better food, recreation, and the development of community responsibility. The introduction of medical sociology in the premedical course would be of distinct value.

Judged by the criteria which are suggested in this paper, existing medical schools fitting the present need fall into two general groups:

1. University centers for teaching and investigation. The chief characteristics of these institutions are: broad and thorough preparation; limitation of numbers in proportion to faculties and staff; well rounded laboratory equipment with professional teachings corps; complete control of adequate hospital and dispensary facilities with vocational leadership in the clinical departments, which include the chief specialties; practitioner or avocational clinical teachers organized systematically into a unified staff; geographic concentration of all phases of plant and instruction; laboratories and clinics in close relations of co-operation and interdependence; research a conscious purpose; facilities for graduate study.

2. Training centers, parts of academic institutions. Two-year college requirement; limitation of numbers; fundamental laboratory facilities with professional teachers; control of appointments to hospital and dispensary staff; practitioner clinical teachers well organized in long service periods; assisted by full-time resident and other assistants; concentration of buildings and work; co-operation between laboratories and clinics; some opportunity for research by staff members.

As to the policy of the General Education Board and the Rockefeller Foundation with regard to assistance to medical education, it may be said that there is no one, inflexible type of organization which it is proposed to suggest to all institutions. Aid has been given and will continue to be given to a few centers of the higher type, but assistance is also being considered with respect to a number of institutions less highly developed. The General Education Board co-operates with medical schools in the United States, while to the Rockefeller Foundation falls the opportunity to work with medical centers in Canada and in other countries.

## IMMEDIATE STERILIZATION OF WOUNDS

As an apology for presenting a new method for the immediate disinfection and closure of chronic infected wounds, W. Wayne Babcock, Philadelphia (*Journal A. M. A.*, May 8, 1920), says that a treatment successful in the hands of highly skilled enthusiasts may fail in routine use when it exacts infinite care as to detail over prolonged periods of time, and when it is adapted only to selected cases and requires repeated operations and multiple and, at times, exceedingly painful dressings. The average surgeon is not constituted to stand on tiptoe all the time, his technic is not invariably perfect, and his soul rebels against the constant infliction of pain. It is not strange, therefore, that he has so often failed in his Carrel-Dakin treatment. The new method consists of four procedures carried out in one operation under anesthesia: 1. Chemical sterilization of all sinuses and wound surfaces by the injection and application of a saturated solution of zinc chlorid. 2. Delineation of infected areas by the injection or application of an alkaline ethereal solution of methylene blue. 3. Mass excision of the entire area of infection. 4. Wound closure with the obliteration of all dead spaces. As to the final percentage results, it is too early to speak positively except in regard to soft tissue wounds which, as a rule, are easily and satisfactorily handled by the method. Unless the surgeon can prevent the entrance of the zinc chlorid into the general circulation during and for five minutes after the injection, and unless he is able to excise freely all chlorided tissue adjacent to the important structures, he should not employ the method.

## TYPHOID FEVER IN THE AMERICAN EXPEDITIONARY FORCES

As a result of the system employed at the ports of embarkation in the United States, nearly all soldiers leaving for France received preventive typhoid inoculations prior to leaving this country. A study of this disease as it occurred in France becomes, then, a study of typhoid fever in the immunized individual. The aim of the investigation reported by Victor C. Vaughan, Jr., Detroit (*Journal A. M. A.* April 17, 1920), has therefore been to determine the clinical difference, if any, between typhoid fever in the vaccinated and in the nonvaccinated, and the effect of vaccination on the course of the disease as well as on the severity and the mortality. Investigations from the point of view of laboratory work and epidemiology have been touched on only as they affect the clinical aspects of the disease. A series of 270 cases in which

it was proved by successful cultivation experiments that the patients were infected with *B. typhosus* form the basis of the work. In hospital cases the clinical picture of typhoid in the vaccinated was similar to that of the unvaccinated. Absence of leukocytosis, continued fever of the usual course and duration, rose spots, palpable spleen, relapses and complications all remained characteristic of the disease. The mortality was 11 per cent. Positive cultural results from blood, urine and feces were of about the same percentage as with non-vaccinated patients, and the duration of the bacteremia appeared to be the same. Patients infected within eight months after vaccination had an average severity (fatal percentage combined with "severe" percentage) of less than 10 per cent. After eight months, the severity percentage gradually increased. The figures for later months were not complete enough to allow the author to draw conclusions as to the period of maximum immunity. The onset of the disease was more frequently acute when occurring within the first month after inoculation. In sixteen cases with onset from seven to twelve days after inoculation (the usual incubation period), the infection probably occurred during the interval after inoculation. The paratyphoid infections, although much milder as a group, could not be distinguished clinically in individual cases from straight typhoid. They were of much less frequent occurrence than was the latter. It is probable that a large number of vaccinated persons were infected with *B. typhosus* and allied organisms who never became sick enough to require admission to the hospital. In these the immunity mechanism was eventually successful in combating the infection, so that they did not develop clinical typhoid fever. Their epidemiologic importance is recognized. This report dealt with the remaining persons—those who in spite of vaccination developed the disease.

There are six possible causes of failure of vaccination to protect against typhoid; a new clinical variety is for convenience called "back-handed" typhoid.

The incidence of the typhoid group of diseases in the American Expeditionary Forces was less than 0.1 per cent., as compared with 20 per cent. for the Spanish-American War.

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#### ON THE TREATMENT OF PNEUMONIA.

Dickson, in *The British Medical Journal*, in speaking of the slight progress made in the treatment of pneumonia, says that enough stress cannot be laid on the "enormous importance of rest." Cardiac weakness is so pronounced that the patient can actually die from the effort of sitting up in bed.

Following the doctrine of Professor Greenfield, Dr. Dickson considers that there are two essential parts in the treatment.

(1) Absolute rest—the value of which cannot be over-estimated.

(2) All cases are given tincture of strophanthus, from the time the diagnosis is made, in sufficient doses to keep the pulse satisfactory. Early dosage is extremely important; it is absolutely wrong to wait for signs of heart failure.

The dose of strophanthus varies with individual reaction to the pneumotoxin.

Strychnin the author considers as positively harmful. Heroin, 1-6 grain hypodermically, is beneficial. It quiets the cough and induces sleep.

It should be remembered that the active principle of strophantin readily undergoes decomposition when diluted in water, so it should be prescribed as the tincture alone, and not made up with water in bulk.—*Charlotte Medical Journal*.

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#### SALINE SOLUTION WITH ORGAN EXTRACTS IN SHOCK.

Descamps and Clermonthe (*Presse Medicale*, August 22, 1918). Thirteen cases of shock hemorrhagic or toxic were treated within from six to twenty-four hours after injury, by intravenous injection of a hypertonic solution of about the same composition as Ringer's solution—to which was added a few mils of soluble extracts of thyroid, hypophysis, adrenals, testicles and spleen and a little strychnine and digitalin. This was administered to supply the temporary dééciency in the blood of the secretions of the endocrine glands, which exert a controlling action on the functional activity of the sympathetic and maintain the action of the vaso-motor centres. Circulatory disturbances are a conspicuous feature of all shock.

Eight of the patients thus treated recovered and in five the measure was a failure.

The successful cases showed a regular and forcible pulse within six or eight hours. Blood pressure rapidly increased. Persistent diuresis and increased daily elimination of urea were noted. Urea output increased above the average to twenty-nine up to forty-two grams, suggesting an action on the liver. Chlorides were low. The specific gravity of the urine was always normal or above.

In some cases there was a diminishing of delirium, restlessness and mental disturbances.

## MEDICAL AND SURGICAL GYNECOLOGY

The physician who sees the largest number of gynecologic cases is frequently not the one who does the most operative work. The surgical treatment is in the hands of a general surgeon, who sees the patient at a certain stage of the pathological process, operates, and after her discharge from the hospital sees her no more. And, hence, it would seem, in certain operations: if the surgeon came in closer contact with the preoperative condition and had the chance to study the postoperative results over a long period, he would, not infrequently, revise his methods as well as his reports of cures. As a concrete example, take pelvic inflammatory disease; how many times a subtotal hysterectomy with salpingo-oophorectomy is performed, and the patient returned to her physician, who proceeds to continue to treat the diseased cervical glands for many months before the discharge ceases.

And the other side of the story is along the same line, for the so-called "medical gynecologist" often wastes time with local applications when a surgical procedure is inevitable. All of which leads to the observation that gynecology can be divided into medical and surgical with no more wisdom and success than laryngology can be. It is a specialty for which a physician must equip himself by a knowledge of and ability to carry out both lines of treatment.—*Charlotte Med. Jour.*

## PERSONAL AND NEWS ITEMS

Hon. N. W. Rowell has given notice of a proposed amendment to the Canada Shipping Act which would provide for the equipment and maintenance of hospitals for the treatment of sick and distressed seamen. The amendment would provide for the collection of a toll based on the tonnage of the ship from which the men were taken. The provision of monies for the relief of shipwrecked, destitute or otherwise distressed seamen is also to be made by the proposed amendment.

Dr. S. M. Asselstine, Professor of Pharmacology at Queen's Medical College, has resigned, and is leaving for the Old Country where he will take up specialist work in London. He will be away about a year.

A verdict of one dollar damages for the plaintiff in the case of Dr. Forest against Mrs. Barrington for alleged slander was rendered by the jury. The verdict added that the jury considered there was no malice on the part of the defendant. Dr. Forest's action was for \$1,000 damages for statements made by the plaintiff calculated to injure his professional reputation.

Dr. Victor J. Harding of McGill University has been appointed professor of chemical pathology in the Faculty of Medicine by the Board of Governors of the University of Toronto. Dr. Harding has spent nine years at McGill University, since he obtained his D.Sc. degree at Owens College, Manchester. At McGill he was a popular teacher, and while there acquired a reputation as an original investigator, and stimulated an interest in the application of pathological chemistry in the study of various diseases.

The late John William Morgan left \$100 to each of the following charities: The House of Providence, The Sacred Heart Orphanage, and St. Michael's Hospital.

Dr. Renry A. Kingsmill of London, Ont., who died on February 11th, left an estate of \$120,509. His son, Ardagh, receives an income of \$50 a week until he becomes twenty-five years of age, which will be increased to \$75 a week if he marries before he reaches this age. The widow receives \$50 a week until her son reaches this age, and after that one-half of the income. If the son dies before he becomes thirty years of age, following the death of his mother, the estate will be divided among the three children of a deceased sister.

Queen's Medical College is preparing for a forward movement. It has increased all salaries and is enlarging its permanent staff by the addition of six professors. The extension of the General Hospital, for which the Government is giving eighty thousand dollars a year for five years, will provide the necessary clinical facilities for the medical college, thus rendering unnecessary the removal of the college, which was a live issue a few months ago. About a million dollars is in sight now for improvements to the hospital.

The annual meeting of the Women's Medical Alumnae was held at Sherbourne House Club, Toronto, when the following officers were elected: Honorary President, Dr. Augusta Stowe Gullen; President, Dr. Catharine Woodhouse; Vice-Presidents, Dr. Isabella Wood, Dr. Carveth Higby and Dr. Dorothea Orr; Secretary, Dr. Edna Robertson; Treasurer, Dr. Edna Guest.

Lieut-Gen. Sir Arthur Currie, who commanded the Canadian forces in Flanders and who has been offered the post of Principal of McGill University, has accepted the post. Sir Arthur received the LL.D. degree from McGill a few days ago.

Dr. Daniel Murray has been re-elected Mayor of Campbelltown, N.B. The North Waterloo Medical Association has bene reorganized at a largely-attended meeting. The physicians decided to co-operate with the Provincial Board of Health in all questions pertaining to public health. The following officers were elected: President, Dr. J. F. Hons-

berger; Vice-President, Dr. W. Geiger; Secretary, Dr. J. E. Hett; Treasurer, Dr. H. H. Huehnergard. A monthly meeting of the association will be held at the homes of the members.

Two lives were lost in a fire which occurred on May 13th in Dr. Hagar's Maternity Hospital, Ottawa. The victims, who were both patients, are: Mrs. B. Morris, 121 Le Breton Street, and Mrs. P. Mitchell, 22 St. Joseph Street, Ottawa.

The Essex County Tuberculosis Sanitarium, destroyed by fire recently, is to be rebuilt on a new site. This was decided upon at a meeting of directors, and, if no change is made in the present plans, the sanitarium will be located at a point on the new Government road, some three miles back of Sandwich, where fire protection, electric lighting and accessibility to the city can be had. The site tentatively chosen can be had for \$15,000, and the directors have practically agreed that it is the best location for such an institution to be found anywhere in Essex County.

Dr. J. G. R. Stone announces that he is located at 207 Bloor Street, East, Toronto, and is limiting his practice to radiography and radiotherapy to referred cases only.

There were several cases of smallpox recently in Newmarket. The town had been free from any cases for more than a month.

Dr. William G. Anglin has been appointed Surgeon of the Provincial Penitentiary at Portsmouth and will likely assume his new duties the first of May. Dr. Anglin, before the war was one of Kingston's ablest medical practitioners, his specialty being surgery, of which subject he was professor in Queen's Medical College. He is a native of Kingston and has resided here all his life. When the Queen's University Hospital Corps was formed during the winter of 1914-15 he volunteered for service and went overseas with rank of Lieut.-Colonel. He served in Egypt and France, but was invalided home in 1916, being in hospital here for some months, but eventually recovering. Latterly he has been in charge of the Pensions Examining Board in Kingston.

The physicians of Winistere, France, will refuse to attend the families of men who are on strike. The members of the medical society of Finistere, in a congress just held, have adopted a resolution to that effect.

Hon. R. H. Grant, Minister of Education, informed the Legislature recently the reason Queen's University had relinquished its Faculty of Education was its lack of equipment and facilities for the training of teachers, and the heavy expenditures needed in order to provide the requisite accommodation and equipment. The authorities of Queen's University had also presented a request for \$400,000 in aid of medical education. It was impossible for the Government to meet both expendi-

tures. This was explained to the governors of Queen's and they agreed to accept the aid to the Medical Faculty and hospital and relinquish the other Faculty.

Appalling conditions in the Crimea, due to the widespread prevalence of cholera and typhus, are reported in an American Red Cross communique received from Feodosia, on the Crimean Peninsula. The statement reads: "Ten thousand cases of cholera now exist among the refugees in the crowded territory of the Crimea, with the number of new cases doubling daily. The death roll from disease had already been brought to appalling proportions by the ravages of the typhus. The crowded and filthy conditions in South Russia have aggregated the disease, and the exhaustion of the refugees by hunger and hardship renders them easy prey."

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## OBITUARY

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### CHARLES O'REILLY, M.D.

Dr. Charles O'Reilly, who for thirty years was medical superintendent of the Toronto General Hospital, died at his late residence, 229 St. Clair Avenue west, on Monday, May 3rd, 1920. Dr. O'Reilly was generally regarded as one of the noted hospital experts in America. He was born in Hamilton in 1846, and received his early education in that city. Later he entered the study of medicine at McGill University, graduating in 1867 with the degree of M.D., C.M. He became resident physician of the Hamilton City Hospital, a position which he held until 1875, when he left to take charge of the medical work at the Toronto General. He remained in the latter office until his retirement in 1905. He was a member of the British Medical Association, the Dominion Medical Association, the Ontario Medical Association, and many other organizations. He held the honor of having the first ambulance in Canada built and presented to the City of Toronto. The late Dr. O'Reilly was very popular in the medical profession, of which he was an esteemed member.

He is survived by his widow and his son, Dr. Brefney O'Reilly.

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### CHARLES A. JONES, M.D.

Seldom has Mount Forest mourned so sincerely as for Charles Anthony Jones, M.D., whose funeral took place at St. Paul's Church, Mount Forest, on Wednesday afternoon, April, 23rd, 1920. The church was taxed to its utmost to contain the great number of friends who came to pay their last tribute of affection to one whom the whole



countryside held dear, The burial service was conducted by the Rector, Rev. W. G. O. Thompson, and the hymns sung were, "Hark, Hark, My Soul" and "Peace, Perfect Peace." "Nunc Dimittis" was sung as the body was removed from the church.

Interment took place in the family plot in Mount Forest Cemetery, beside the grave of the late Dr. C. A. Jones, Sr., who predeceased his son by less than two years.

The flowers, representing many friends, relatives and business and fraternal associates, were very beautiful.

Dr. Jones leaves to mourn him his widow, Mrs. Florence Jones nee Clapp, his widowed mother, two sisters, Mrs. Charles Gardiner, of Mount Forest, and Mrs. W. G. Keith of Toronto, and two brothers, Dr. W. Warner Jones and Dr. Reginald A. Jones, both practising in Toronto.

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#### REV. O. L. KILBORN, M.A., M.D., D.D.

The late Dr. Kilborn gave 29 years to the missionary and educational work of the Methodist Church in China. His field of operation was mainly in Chengtu. He was interred in Toronto on May 20th.

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#### S. G. BARTON, M.D.

Dr. Samuel G. Barton died at his late residence, 146 Balliol street April 21st, from heart failure, after an illness of three weeks. He was born in Athlone, Ont., 58 years ago, and came to Toronto when four years old. He graduated from Toronto University in 1886, and practised in the city until four years ago, when he moved to Dundas. He returned to the city a year ago.

He was a member of the Metropolitan Methodist Church. His wife and one daughter, by his first wife, Mrs. Matthew Wood, of Minneapolis, survive him.

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#### JAMES SPRAGUE, M.D.

Dr. James Sprague, a well-known practitioner, who for the past seven years had lived a rather retired life, died on April 23, aged 75 years. The late Dr. Sprague was exceptionally clever in his profession, and articles contributed by him to medical publications imparted valuable information. For years he was examiner in materia medica and therapeutics for the Medical Council of Ontario, and a member of the Iowa medical board of examiners. In 1909 he was given an honorary membership in the Humboldt Iowa Medical Society.

Dr. Sprague was a life member of Stirling Lodge, A.F. and A.M., and a member of Moira Masons, and of Moira Chapter and King Baldwin

Preceptory. He was also identified with the I.O.O.F., I.O.F., A.O.U.W. and Chosen Friends.

He was married to the eldest daughter of the late Mr. James Haggerty, M.L.A., of Huntingdon township, who, with two daughters Mrs. Fred Girdwood, of Perth, and Miss Annie, at home, survive.

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#### DR. MENZIES

The Vancouver *World* of April 23rd contained the following:

"Reuter's Pacific service carries confirmation of the murder of Dr. Menzies, medical missionary of Toronto, at Naiking on the night of March 17th. He was stabbed in the stomach and died an hour later. The robbers, who had attacked the compound, wherein women workers were defended by the missionary, escaped.

"The civil governor is sending a deputy to co-operate with the vice-Consul Ogden, of Tien-Tsin, who is conducting investigations."

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#### HERBERT WILLIAM WILSON, M.D.

Dr. Wilson died at his home, 508 West Marion Street, Toronto, on April 24th. He had formerly resided in Tamworth, Ontario.

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#### GEORGE M. WARREN, M.D.

Dr. Warren died at his mother's home, 4 Elm Avenue, Toronto, on April 8th, at the age of 72 years.

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#### W. G. HEPWORTH, M.D.

Dr. Hepworth went to the Klondike many years ago, when that region was opened up. He died at Steveston, B.C., a short time ago, at the age of 52 years. He was a McGill graduate of the year 1895.

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#### H. C. CLERMONT, M.D.

Dr. Clermont died at his home in Montreal recently of an attack of pneumonia. He was engaged for four years in military medical duties, and received a medal from the French Government. He was in his 44th year, and was a graduate of Laval University.

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#### W. E. NEWCOMBE, M.D.

Dr. Newcombe, Medical Officer of Health for North Vancouver, died from an attack of pneumonia, on March 9th. He was a native of New Brunswick and graduated from McGill in 1909.

#### GEORGE R. DOBSON, M.D.

Dr. Dobson died at his home in Moncton, N.B., on February 21st, after a lingering illness.

## ALLAN GORDON RICE, M.D.


Dr. Allan Gordon Rice, divisional surgeon for the Grand Trunk Railway, died recently at his residence, 114 South Drive, Rosedale, after a lingering illness. Dr. Rice, who was in his 36th year, was the only son of Mr. A. B. Rice, sub-collector in charge of the Customs outpost of West Toronto, and Mrs. Rice. He was born at Welland, Ontario, but came with his parents to what was at that time Toronto Junction at an early age.

He was educated at Annette Street School, Humberside Collegiate and the University of Toronto. He graduated from the latter institution in Arts in 1906 with honors in biology and physics, and in medicine in 1908. He obtained his license from the College of Physicians and Surgeons in the same year. Instead of immediately entering upon an individual practice, he accepted a position as house surgeon in Grace Hospital and divisional surgeon of the Grand Trunk Railway. When Dr. Rice's year was about completed he accepted Dr. Riordan's invitation to join him as partner in his extensive practice. From that date to the time when failing health rendered him inactive the rise of the young surgeon was very rapid and he attained an eminence in his profession beyond that of most men of his years.

On the death of Dr. Riordan a few years ago, Dr. Rice was appointed at the age of thirty to the important position of Divisional Surgeon to the G. T. R. He was a member of Rosedale Presbyterian Church and belonged to the Engineer's Club and the Canadian and Empire Clubs. He was a member of Alpha Kappa Kappa fraternity and of the A. F. & A. M., having been initiated into Victoria Lodge at the age of 21. He was a charter member of the General Mercer Lodge and held the office of Junior Warden at the time of his death. From an early age he had been connected with the militia and held a captain's commission in the A. M. C. He made a determined effort to get to the front with the first contingent, although then not fully recovered from a serious illness from blood-poisoning, which had left him with a partially disabled hand. Because of this he was turned down as unfit for overseas duty.

He is survived by his widow, who was Miss Amy Doner before her marriage, and three children, Allan, aged eight, Margaret, aged five, and Isobel, aged one year.

During Dr. Rice's illness his duties have been performed by Lieut.-Col. P. G. Brown, a former class-mate, who recently returned from overseas.



## CORRESPONDENCE

## ALCOHOL AND OPIUM

Editor, *Canada Lancet*:

For the first time in many years a convention of the American Medical Association has not received the publicity usually accorded to the proceedings of this body. It should be important, however, for the public to know that at the session just held at New Orleans this body refused to pass a resolution condemning the use of alcohol in the treatment of influenza. Nevertheless this fact has been recorded only in the local journals reporting these proceedings although the previous action of the American Medical Association a few years ago in pronouncing alcohol to be of no medicinal value whatever and only of use in the arts was widely proclaimed throughout the country, if not throughout the world. Likewise the unanimous condemnation of Compulsory Health Insurance was a fact of the greatest importance to the whole medical profession, which has hitherto opposed this measure although it was fathered and nurtured by the most powerful influences in the American Medical Association. This news should be welcome to the medical profession of England already under a politically imposed form of State Medical Service, and to the English people now threatened with Bone Dry Prohibition.

The fact that the Legislature of New York had just rejected the plan for the compulsory hospitalization or institutionalization of drug addicts to the exclusion of every other form of treatment though fully presented to the American Medical Association had no evident weight with this body. By condemning the ambulatory treatment of Drug Addiction it thereby approved this plan in its entirety which was presented to it by the same sponsors whose recommendations and limitations the New York Legislature refused to apply to the fifteen thousand physicians of this State. How this action will be received when known by the 150,000 physicians of the country remains to be seen.

In effect this recommendation implies the inability of the medical profession or of the police power of the States to deal with the problem of drug addiction without invoking the aid of the National Government. American physicians and surgeons have heretofore contributed their full share to the general fund of medical achievement, to the benefit of mankind, and to the credit of their profession. Must it now be admitted, that in the treatment of drug addiction, that the medical profession of this country is so incompetent or so untrustworthy that the control and supervision of the importation, manufacture, distribution and prescribing of opium and its derivatives must be the function solely of the United States Government as recommended in the findings of the Narcotic Committee

of the American Medical Association? This committee has only studied this subject for one year. It was appointed at the suggestion and because of the plans laid down by Dr. Alexander Lambert of New York then just elected President of the American Medical Association. With the exception of the author of this plan none of those recommending it have had any previous knowledge whatever of the disease of drug addiction or any experience in its treatment, either institutional or otherwise.

John P. Davin, M. D.

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### UNIVERSITY OF TORONTO LECTURES

Editor, *Canada Lancet*:

I think the following will be of interest to the medical public:

In connection with the Ontario Medical Association's scheme for Extension Lectures for the practitioners throughout the country, the University of Toronto has put on a series of lectures for the Medical Society in Hamilton which has been a great success and well attended. I enclose a copy of this schedule.

We are also expecting to put on a special refresher course in Paediatrics in connection with the University of Toronto's Extension work. I enclose syllabus of this herewith. This course will last a month but any part of the course may be taken by arrangement. If you consider it advisable you might mention that the fee for the month or any part thereof will be \$20.00.

I would be very glad if you could see your way clear to publishing this information in the next number of your monthly.

Yours faithfully,

Velyien E. Henderson,

Chairman Post Graduate Studies

Time Table for Extension Course in Paediatrics to be held at the Hospital for Sick Children, July, 1920

#### CLINICS

Monday—9-12: Bed-side Clinics and Ward Rounds, Heart Disease, Rheumatism and Chorea. 2-5 P.M.: Ward work under supervision of Resident Physician.

Tuesday—9-12: Bed-side Clinics and Ward Rounds, Infant Feeding, Acute Intest. Disorders. 2-5 P.M.: Feeding of normal infants, (Memorial Institute).

Wednesday—9-10: Neurology Clinic in O.P.D.; Syphilis Clinic; 10-11 in O.P.D.; 11-12 Clinical Lecture Infant Feeding. 2-5 P.M.: Ward work under supervision of Resident Physician. 5-6 P.M.: Practical demonstration in milk modifying laboratory.

Thursday—9-10: Clinical Lecture—Infant Feeding and allied topics. 10-11: O. P. D. 11-12: Clinical Lecture—Acute Intest. Diseases, Ploric Stenosis. 2-5 P.M.: X-Ray Dept Demonstration of plates illustrating various conditions in childhood.

Friday—9-10: Clinical Lecture—Anemias of childhood. Congenital and acquired Heart Disease. 10-12: O. P. D. 2-5 P.M.: Demonstrations of Pathological specimens.

Saturday—9-10.30: Clinical Lecture and Ward Rounds, Infectious Diseases. 10.30-12: O.P.D. Malnutrition in older children.

Note:—Bed-side Clinics illustrating the lectures will be given twice a week.

#### LECTURES

1. Eight lectures on Infant Feeding, including Physiology and Pathology of digestion, with a discussion of the percentage and caloric methods in infant feeding.
2. Four lectures on the acute-intestinal disorders, illustrated by cases.
3. Four lectures on congenital and acquired heart disease and allied topics, also illustrated by cases.
4. Four lectures on Infectious Diseases.
5. (a) Neurology, illustrating the more common nervous disorders of children, with special reference to the examination of such patients. (b) Syphilis, illustrating the methods of diagnosis and treatment. (c) The diagnosis and management of malnutrition in older children.

#### LIST OF LECTURES GIVEN TO THE HAMILTON MEDICAL SOCIETY BY MEMBERS OF THE STAFF OF THE FACULTY OF MEDICINE, UNIVERSITY OF TORONTO

April 9th and 13th—Professor Redfield, The Mechanism and Control of Respiration.

April 16th—Professor Macleod, Chemistry of Respiration.

April 20th and 23rd—Professor Hunter, Chemistry of the Blood.

April 27 and 30th, and May 4th—Professor Henderson, Cardiac Mechanism.

May 7th and May 11th—Dr. Taylor, Peripheral Circulation.

## BOOK REVIEWS

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### HEALTH REPORT

Forty-second Annual Report of the Department of Health of the State of New Jersey, 1919. Trenton, N. J.: Published by the State. 1920.

The report for this year of the Health Department of New Jersey is full of useful information. It will well repay careful study by all who are interested in the wide subject of preventive medicine. The subjects discussed in the report are Plans for the disposal of sewage, water supplies, vital statistics, the contagious diseases, and the best methods of administration. The tabular matter is well arranged and very complete.

### STANDARD NOMENCLATURE.

Standard Nomenclature of Diseases and Pathological conditions for the United States. First Edition; Department of Commerce, Bureau of the Census, Sam L. Rogers, Director, Washington: Government Printing Office. 1920.

The work consists of three parts. The first gives a complete alphabetical list of diseases and pathological conditions; and by a number refers one to other headings when the condition is named in some other way. The same method is followed with regard to accidents and injuries, and with regard to poisons. It is somewhat difficult to explain the plan of the book, but it is readily understood when it is seen and read. This will prove a very useful book, and the Government of the United States is to be congratulated in producing such a volume.

### PATHOLOGY AND CLINICAL PSYCHIATRY

Report from the Department of Pathology and the Department of Clinical Psychiatry, Central Indiana Hospital for the Insane, 1915-1916 and 1916-1917. Vol. vii.

This is a profound scientific work. The basis of the book is the cases that were studied in the Hospital for the Insane. The clinical side is well handled while the patients were under observation; and the pathological part is based on the study of the morbid findings obtained from those that died. The papers are very exhaustive and very carefully prepared. The practical and the scientific are herein blended in a very interesting and helpful manner.

## MISCELLANEOUS

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### RESEARCH INSTITUTE FOR CANADA

Plans for the establishment of a national research institute for Canada were before the Commons' Committee on Scientific Research, recently. It was recommended that a site of at least fifty acres should be secured near Ottawa and a building of a laboratory type, four storeys in height,

to cost \$500,000, should be erected. Scientific instruments required would cost approximately \$100,000, and salaries would require about \$100,000 per annum. This institute would be similar to the Bureau of Standards at Washington, and the Mellon Institute at Pittsburg. It was felt that such an institution would meet the most pressing requirements for developing natural resources and make provision for assistance to Canadian industries. A bill covering the establishment of such an institution is to be drafted by a sub-committee composed of Dr. S. B. Steele, Dr. Thompson (Yukon), and Dr. R. J. Manon (Fort William), who will report back to the committee.

#### MAINTENANCE OF PATIENTS IN HOSPITALS

The average cost of maintaining one patient in any one of Toronto's eight hospitals increased over 55 per cent. during the five years from 1915 to the end of 1919, according to information given by the Bureau of Municipal Research. In 1915 the average cost was \$1.87 per day, and this gradually grew until last year, when it amounted to \$3.02. This year the cost will be still greater, and as a result the revenue derived from various sources will have to be increased. This means that the city will probably have to help more than in the past. Last year the local hospitals treated 32,891 in-patients who remained for an average of 16.5 days, and 139,232 out-patients. The total expenditure during that time was \$1,775,775.64, and the revenue from paying patients was only \$1,392,270.30, leaving a deficit of \$412,437.43. At present the charges to public-ward patients do not nearly meet the cost, and as a result it is necessary to go to the various municipalities concerned, as one-sixth of the patients are from outside points, for grants.

Increased grants involving an expenditure of about \$350,000 will be paid by the Ontario Government to hospitals, sanatoria, houses of refuge and orphanages. The necessary legislation was introduced in the House recently by Hon. H. C. Nixon, Provincial Secretary. The increases are made to meet the greatly-increased costs of maintenance in the various institutions, and will mean little short of a doubling of the outlay of the province upon the institutions named.

The most important increase is that to the various hospitals of the province, now, receiving 30 cents per diem per patient. The Government grant after the bill goes into effect will be 50 cents per day, and the estimated cost will be \$178,913 over the present aggregate grant. In 1915 the average cost of maintenance per patient per diem was \$1.64. In 1917 this had increased to \$2.02 and in 1919 to \$2.25. For some years previous to 1917 the hospitals received only 20 cents per patient, this being raised to 30 cents in that year.



From 1915 to 1919 the cost per diem for patients in sanatoria increased from \$1.74 to \$2.98. Previous to 1918 the Government grant was \$3 per week. It was then raised to \$3.50, or 50 cents a day. By the bill introduced recently it will be increased again to 75 cents a day, entailing an extra expenditure of \$80,988.

The Government has also decided to increase from 7 to 10 cents per diem per patient the grant to houses of refuge, and from two to five cents per day that to orphanages. The former will cost \$31,001.40 more and the latter an additional \$23,754.78.

The Government has also decided to pay all hospitals the same grant for child patients as for adults. Hitherto the Hospital for Sick Children has been the only one in receipt of the full grant. An extra \$34,372 will be needed for this.

The hospitals, etc., will receive further help by a change in the Act permitting them to charge municipalities \$1.50 per day instead of \$1.25 for indigent patients.

At the present time the province is paying \$540,228 in grants to the institutions named. Its outlay under the new scale will be approximately \$890,000.

#### DR. CORBETT'S EXPERIENCE

H. F. Blake, the well-known Ungava explorer, arrived in Quebec on May 9th, bringing with him Dr. Corbett, of Ottawa, medical man of the expedition, who had been seriously wounded by gunshot about three weeks previously. The doctor had been in the act of taking a shotgun from the bottom of the canoe, when it exploded, its contents lodging in his abdomen. The patient, after the wound had been dressed by Mr. Blake, had to be brought 160 miles to civilization through dense forests. He was carried on a toboggan over the ice on the lakes and then by canoe down rivers, when one of the canoes upset and its occupants were only rescued with difficulty. Provisions and outfit were lost, and the party travelled for two days without food. Finally, 11 miles from the nearest house, two of the party pressed on and reached the little settlement of Riviere-au-Doré, with only enough strength to send help.

The accident occurred at a spot 350 miles north of Quebec.

#### TO CONDUCT CAMPAIGN AGAINST VENEREAL DISEASE

An informal meeting, which resolved into a round table conference, of the Toronto Branch of the National Council for Combating Venereal Disease was held recently in the City Hall, Dr. Hastings presiding, to confirm and legalize the activities of the temporary executive. It was moved and carried that the meeting be considered the organizing meeting of the Toronto branch of the organization, and that the tem-

porary executive appointed at the last meeting resolve itself into a permanent committee.

The constitution drawn up by the temporary executive was read by Dr. Gordon Bates, and was received and adopted as a provisional constitution.

An intensive campaign to obtain new members, to be inaugurated as soon as possible, which had been discussed by the temporary executive, was endorsed by this meeting.

### TORONTO'S STATISTICS

According to statistics issued by the Public Health Department measles was the most prevalent during April, when 744 cases were reported and six deaths were registered. Scarlet fever and diphtheria are decreasing, although the figures shown are still somewhat high. The doctor points out that whooping cough is high in the death column, although the number of cases reported is not abnormal. The spread of these diseases, in the opinion of the doctor is due to congested housing conditions. The table is as follows:

	Cases Reported		Deaths Registered	
	1920	1919	1920	1919
Typhoid Fever .....	2	2	0	1
Smallpox .....	35	0	1	1
Measles .....	744	18	6	0
Scarlet fever .....	136	168	3	7
Whooping Cough .....	38	24	6	0
Diphtheria .....	172	128	19	9

According to a statement issued by Dr. Hastings, the general mortality during April was somewhat higher than is usual during that month. During April of this year there were 646 deaths registered and 47 still-births. The death rate for the month is 15.3 per annum. There were 556 deaths in April, 1919.

### ESSEX COUNTY SANITARIUM BURNED TO THE GROUND

Essex County tuberculosis sanitarium at Union-on-the-Lake, thirty miles south of Windsor on Lake Erie, was burned to the ground on April 29th. There were 45 patients, including fourteen children, besides the superintendent and his staff, in the buildings. All escaped without injury, some of the patients being carried from their beds. The damage is estimated at \$100,000, with less than 50 per cent. insurance. The sanitarium was built in 1911. A \$40,000 addition to the original buildings was put up in 1915, and a campaign was shortly to have been launched to add a \$50,000 addition for children.

The patients and hospital staff were given shelter by residents in the neighborhood. Dr. Murray Flock, medical superintendent, who telephoned first news of the fire to Windsor early in the morning, said the buildings and equipment are a total loss.

The buildings covered several acres of ground. An overheated furnace is believed to be responsible for the fire.

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#### WAR AMPUTATION CASES.

Amputation cases, resulting from Canada's participation in the war and to whom prosthetic aids have been fitted total 3,350 individuals. Of these, 2,330 men suered leg amputations, and 1,011 sustained arm amputations.

For these 3,350 individuals the orthopaedic and surgical appliances branch of the Department of Soldiers' Civil Re-establishment have made and delivered 3,137 artifficial legs and 1,370 artificial arms.

The practice of the department is to provide each individual with two properly fitted artificial legs so that in case of accident or damage to one leg the man is in a position to carry on while the other is undergoing repair. The majority of the leg amputation cases have received the second issue of artificial limbs, and in a short while every individual will have received his second artificial leg.

The number of individuals who sustained such injuries as to require the use of specially constructed orthopaedic boots total 3,431, and to those individuals 8,234 boots have been issued.

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#### MEDICAL AMBASSADORS TO UNITED STATES

The world was considerably astonished when it learned that a doctor was to be appointed Ambassador from Great Britain to the United States. There were some who thought that the Senate was sick indeed. Others thought that there was something wrong with its anatomy when the professor of anatomy in McGill University was appointed to the office. However, it appears that Dr. Geddes is not the first medical man to be the British representative to the Court of the White House. In 1825, Sir Charles Vaughan, M.D., was appointed British Minister Plenipotentiary and Envoy Extraordinary. Sir Charles Vaughan graduated B.A. from Oxford in 1798 and M.D., Edinburgh, in 1800. In the same year he was elected Radcliffe Travelling Fellow in the University of Oxford. In 1808 he entered diplomacy, having in the meantime inherited a large estate, and joined the Embassy in Spain. In 1809 he became secretary to the Minister of Foreign Affairs. In 1820 he became secretary to the Embassy in Paris, and in 1823 Minister to Switzerland. In 1825 he became Minister to Washington, where he remained until

1835. The Dictionary of National Biography says: "His services in Washington covered one of the most interesting periods in American history. He was intimate with such men as Story and Clay, and he had to watch such burning questions as that of the boundary of Canada, the position of the South American Republics, the slave trade and the tariff." He was sent to Constantinople in 1837, and died in London in 1849.

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#### DR. H. J. HAMILTON'S BEQUESTS

The Imperial Trusts Co. has been granted probate of the will of Dr. James Herbert Hamilton, secretary of the Academy of Medicine, and a member of the Board of Governors of St. Andrew's College, who died in Wellesley Hospital, February 5th, leaving \$2,102 in household goods, personal effects, medical books and instruments, \$3,512 in book debts and promissory notes, \$14,847 secured by mortgages, \$7,000 insurance, \$652 cash, an auto, valued at \$400; four shares Publishers' Association of Canada, \$4; Masonic Temple Corporation bonds, \$6,323; the property at 220 Bloor west, valued at \$27,580, and a vacant lot on Greenwood Ave., \$1,200.

He left his clothing and a marble mantel clock to his brother, Albert G. Hamilton, Melita, Man.; the Hamilton family grandfather's clock to his sister, Mrs. Ada Howell, Guelph, and his medical books and surgical instruments to the Academy of Medicine. After providing legacies of \$5,000 each for his sister, Mrs. Howell, and his cousin, Minnie Alexander, Toronto, he directed that the income from the residue be equally divided between St. Andrew's College, Mrs. Howell and his cousin, Minnie Alexander. On the death of these two beneficiaries, the estate passes to St. Andrew's College.

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#### LEGISLATION RE OPIUM

Hon. N. W. Rowell introduced in the House on April 23rd, amendments to the Opium and Drug Act, which, it is expected, will meet most of the objections raised by the representatives of the drug trade when they recently waited on the Government. The principal amendment will change the original bill so that bona fide druggists will not be prevented from selling remedies which do not contain more than two grains of opium, or more than one-quarter of a grain of heroin, or more than one grain of codelin, nor will it prevent a druggist selling liniments, ointments or other preparations which are for external skin use only which do not contain cocaine or any of its salts. However, every such preparation must contain active medicinal drugs other than narcotic in sufficient proportion to confer upon the remedy valuable medicinal qualities other than contained in the narcotic drugs.

Mr. Rowell explained that these amounts are lower than mentioned in the International Opium Treaty and the same as mentioned in the Harrison law, which was referred to by the druggists' deputation. Such preparations must have printed on the label a notice that it is unlawful to administer them to a child under two years of age. It will not be necessary for druggists to keep a record of such sales, or have a license to sell such preparations.

Another amendment raises the minimum fine to \$500 and the maximum fine to \$1,000 for persons found guilty of illegally selling any of these drugs. The prison term also is increased.

### DOCTORS IN THE VARIOUS PROVINCES

Both Dominion and Provincial maps are now being made in order to clearly visualize the statistics which have been obtained.

For the provinces these are as follows:

Alberta—Population, 587,770; No. of doctors, 464; U. of T. graduates, 161; percentage, 35; one doctor to 1,266.

British Columbia—Population, 718,660; No. of doctors, 794; U. of T. graduates, 126; percentage, 16; one doctor to 905.

Manitoba—Population, 618,903; No. of doctors, 540; U. of T. graduates, 79; percentage, 15; one doctor to 1,146.

New Brunswick—Population, 351,859; No. of doctors, 265; U. of T. graduates, 5; percentage, 2; one doctor to 1,327.

Nova Scotia—Population, 503,162; No. of doctors, 458; U. of T. graduates, 10; percentage, 2; one doctor to 1,098.

Ontario—Population, 2,523,274; No. of doctors, 3,265; U. of T. graduates, 2,201; percentage, 69; one doctor to 766.

Prince Edward Island—Population, 93,728; No. of doctors, 77; U. of T. graduates, 5; percentage, 6; one doctor to 1,217.

Québec—Population, 2,450,000; No. of doctors, 1,984; U. of T. graduates, 13; percentage, 8; one doctor to 1,235.

Saskatchewan—Population, 754,090; No. of doctors, 491; U. of T. graduates, 166; percentage, 34; one doctor to 1,535.

Yukon—Population, 8,512; No. of doctors, 6; U. of T. graduates, 3; percentage, 50; one doctor to 1,418.

Of the twenty-three cities of Ontario eleven typical instances may be found in this list:

Toronto—Population, 490,000; No. of doctors, 864; U. of T. graduates, 803; percentage, 93; one doctor to 567.

Brantford—Population, 28,460; No. of doctors, 33; U. of T. graduates, 27; percentage, 82; one doctor to 862.

Belleville—Population, 11,360; No. of doctors, 13; U. of T. graduates, 5; percentage, 46; one doctor to 874.

Chatham—Population, 15,140; No. of doctors, 20; U. of T. graduates, 20; percentage, 100; one doctor to 757.

Guelph—Population, 16,970; No. of doctors, 28; U. of T. graduates, 18; percentage, 64; one doctor to 606.

Hamilton—Population, 109,070; No. of doctors, 139; U. of T. graduates, 120; percentage, 93; one doctor to 790.

Kingston—Population, 23,740; No. of doctors, 25; U. of T. graduates, 9; percentage, 36; one doctor to 950.

London—Population, 56,210; No. of doctors, 79; U. of T. graduates, 25; percentage, 33; one doctor to 711.

Ottawa—Population, 100,030; No. of doctors, 119; U. of T. graduates, 35; percentage, 29; one doctor to 840.

Woodstock—Population, 9,600; No. of doctors, 14; U. of T. graduates, 14; percentage, 100; one doctor to 960.

Peterborough—Population, 19,890; No. of doctors, 26; U. of T. graduates, 20; percentage, 77; one doctor to 761.

#### CANCER'S TOLL

Attention is called to the increasing inroads of cancer by *Health News*, the bulletin of the New York State Department of Health. It estimates that in the war about 80,000 Americans were killed or died from disease. In the same time 180,000 Americans fell victims of cancer. The annual death toll is between 75,000 and 100,000, and the ratio is increasing annually, while the disease continues to spread to countries that previously had escaped it. Cancer is regarded by the layman as being practically incurable, and so it is probably in its advanced stages, but *Health News* declares that: "In its early stages cancer is a disease which can be entirely eradicated and a large proportion of deaths from this cause are thus preventable." The great trouble is that the disease is not recognized in time. When its grosser symptoms become manifest it is often too late to resort to an operation. The lesson would seem to be that every foreign growth on the body that does not speedily disappear should be regarded with suspicion and be subjected to the examination of a doctor. If it should prove malignant it can be easily and permanently removed without pain and with no risk.

The medical profession knows little about cancer, compared with what it knows of most other diseases. It is easily recognized, of course, and can be easily removed, as remarked, if taken in time. The fact that it is not a germ disease and therefore is not infectious seems

pretty well established. It starts in a few cells in various parts of the body, and these cells, which may be called cannibals, continue to thrive at the expense of the healthy tissue until the cancer reaches a vital organ or eats into an artery. Internal cancer, which is the most common, is not easily diagnosed because the growth is practically painless in the earlier stages; but nevertheless if the patient consulted a doctor at the first twinges of mysterious pain there would in most cases be plenty of time for an operation. The problem is one for the surgeon. In the old days when there was little check upon patent medicine advertisements concoctions were sold which purported to cure cancer. Their effect was to ease the pain and thus soothe the sufferer into the notion that the growth had been arrested. Pain was lulled until the malignant growth had become so enlarged that an operation was out of the question and death ensued.

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#### MENTAL HYGIENE ASSOCIATION

Members of the Ontario Provincial Association for the care of the Feeble-minded were addressed at their annual meeting held recently on the subject of "Community Control of the Feeble-minded," by G. A. Hastings, secretary of the mental hygiene division of a New York institution engaged in social and charitable work. Mrs. A. M. Huestis, president of the association, occupied the chair, and in referring to the work of the past year, stated that committees had been appointed to meet the medical officer of health and the police commissioners, with a view to enlisting their co-operation in dealing with the problem of feeble-minded and insane people in the province.

George A. Hastings gave in some detail the history of the progress of the association he represented in curing and preventing mental diseases. There are, he said, 35 mental hygiene demonstration clinics in New York state, with 2,000 patients. It is not fully realized to what a degree insanity and feeble-mindedness contribute to our social problems.

A very large percentage of our criminals, inebriates and moral delinquents suffer from mental disorder of some kind, and it is essential, continued Mr. Hastings, that scientific and systematic steps be taken to decrease the number of psychological cases. Many forms of mental diseases are curable, and about 40 per cent. of them can be prevented if dealt with at a sufficiently early stage. The chief instruments for the prevention of mental disease are demonstration clinics and psychopathic hospitals. The latter would deal with mild cases, and should be a training centre for teachers who come into contact with modified form of mental deficiency in their schools. Such clinics should be intimately

connected with the universities in order to enable medical students to obtain more comprehensive knowledge of insanity, psychiatry and neurology, also to help remove the stigma which usually attached to mental cases and institutions in which they are looked after.

The association's vote of thanks was supported by J. Noble, chairman of the board of education, who contended that the need is for more intensive physical training as opposed to mental training in our schools. The natural way to prevent insanity, he said, is by work, and in our schools that rule is entirely neglected, and the young students are made to sit still with nothing to do.

## MEDICAL PREPARATIONS

### THE THERAPEUTIC VALUE OF "OVALTINE"

It is now generally accepted as a result of considerable research that protein, fat and carbohydrate are regarded as essential elements of food, and to satisfactorily repair waste and supply energy are best presented in approximately the following proportion:

Protein	Fat	Carbohydrate
17.51 per cent.	8.31 per cent.	74.18 per cent.

"Ovaltine"—a combination of diastasic Malt Extract, Milk, Eggs and a Cocoa Flavoring—is a natural tonic food preparation, presenting a high concentration of these nutritive substances. Excluding moisture, mineral salts, etc., and taking the three proximate principles alone as they occur in "Ovaltine", calculating them out in relative percentage proportion of each other, we get:

Protein	Fat	Carbohydrate
15.5 per cent.	8.7 per cent.	75.8 per cent.

These practical figures accord sufficiently closely to the theoretical conclusions of advanced research to justify the claim that in "Ovaltine" itself all the elements necessary for the maintenance of life are present in just and adequate proportions.

"Ovaltine" contains its carbohydrate entirely in the form of readily absorbed and assimilated malt and milk sugars,—the proteins have undergone that initial change by the action of the malt diastase which materially assists in their subsequent digestion, while the fat reproduces in the beverage the natural fine emulsion of the milk in its manufacture.

These facts readily show why "Ovaltine" is capable of absorption with the minimum functional strain, without causing digestive or intestinal disturbances. Its value is augmented by definite therapeutic properties, and is of service to the practitioner in many directions.



"Ovaltine" has proved to be of service in neurasthenic conditions, neuritis, influenza and its accompanying depressing nervous disorders, and in all forms of anaemia. It forms an alternative to the milk diet in typhoid and other fevers, duodenal and gastric ulcer, and in the dietary treatment of sprue, beri-beri and dysentery it is a welcome change, as it neither causes constipation nor aversion by prolonged use. Its prompt assimilation with the minimum of functional strain, and without the formation of intermediate toxic, irritating products, particularly adapts it as an article of diet in Nephritis, Heart Diseases and Post Surgical Cases. In the feeding of the tuberculous, for those undergoing rest cures, in augmenting the diet in difficult alimentation and in convalescence, "Ovaltine" fills an exceedingly useful place.

It has been shown that "Ovaltine" is of specific value in increasing mammary activity, due it is suggested, to its richness in phosphatides. For this reason it is administered in agalactia.

Many doctors also prescribe "Ovaltine" for sleeplessness.

"Ovaltine is manufactured under modern hygienic conditions, and is entirely untouched by hand. It presents a natural tonic food beverage of definite therapeutic and dietetic content.

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#### A DANGER AND A REMEDY.

Quiet thinking by the citizens of Canada was never more needed than at the present time. It is a time of unrest in the world's history, when people who do not do their own thinking are easily influenced and led astray.

Woodrow Wilson, president of the United States, once said: "A Western Senator is more useful than his Eastern colleague, because sometimes he chews Virginia leaf". The President is right. Men who chew are more likely to have opinions of their own and to think things out for themselves.