Contents November 1943

VOL. XXII No. 11

The Nova Scotia Medical Bulletin

OFFICIAL ORGAN OF THE MEDICAL SOCIETY OF NOVA SCOTIA
CANADIAN MEDICAL ASSOCIATION NOVA SCOTIA DIVISION.

NOVEMBER 1943

Published on the 20th of each month and mailed to all physicians and hospitals in Nova Scotia. Advertising forms close on the last day of the preceding month. Manuscripts should be in the hands of the editors on or before the 1st of the month. Subscription Price:—$3.00 per year.

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Some Life-Saving Procedures in Obstetrics*

H. B. Atlee

IF, perhaps, I should apologize for the pretentiousness of my title, there is certainly no need to apologize for my intention—which is a still further reduction of our still too high maternal and neonatal mortality rates. We have two reasons to be concerned with these rates (1) the small size of the modern family which, among the Anglo-Saxon portion of Canada is not large enough to sustain our numbers and (2) the fact that so many of our young men are away at the war at the height of their breeding capacity—a considerable number of whom will not return. Such being the case we have a special duty to look to those holes in our fences through which death creeps to cheat us of mother and child.

BLOOD TRANSFUSION

I wonder if we are as blood transfusion-conscious in obstetrics as we are in surgery? I do not say that we fail to think of transfusion in this connection, but the continued maternal mortality from hemorrhage is surely evidence that we do not think of it in time. Just so long as we wait until the patient is showing signs of severe blood loss before preparaing for it, that long will we continue to have deaths. For the effects of hemorrhage are subtle: the vasomotor system, by contraction of its arterioles, takes up the slack for a considerable time: the pulse and general condition remain surprisingly good despite the continued bleeding—and then suddenly, as the vasomotor system lets go, we are faced with disaster. If we have waited until now to prepare a transfusion, we have waited too long. What we really should do is to prepare for the bleeding before it occurs.

With this in mind, let us consider the following conditions:

1. Anemia at the onset of labor.
2. Abortion.
3. Placenta previa and abruptio placentae.
4. Post-partum hemorrhage.
5. Ectopic Gestation.

Anemia at the onset of labor. It should be a routine part of prenatal care to do a hemoglobin estimation during pregnancy, and the earlier the better. If anemia is present, it can then be treated without pressure from time. Probably most women in the lower economic groups require to take iron during pregnancy in order to maintain their blood in a proper state. Some authorities believe that there is in all women a physiological anemia during pregnancy. I do not believe that any anemia is physiological. I believe, further, that the anemia that occurs in pregnancy is due in the main to an inefficient diet and that where it occurs the woman should be given iron until the hemoglobin returns to normal. Why should anemia be so treated? Because the anemic woman can stand less blood loss during labor than the normal woman, and

*Paper presented at the 90th Annual Meeting of The Medical Society of Nova Scotia Kentville, Nova Scotia, July 7, 1943.

because she is much more liable to infection. What proof have I of these statements? The following (1) in two cases of death from postpartum hemorrhage in my service at the Grace Hospital the women were anemic at the onset of labor and their blood loss was not ufficient to have killed a non-anemic woman; (2) almost invariably the patients I see in my service at the Victoria General Hospital suffering from severe puerperal infections are grossly anemic. We can therefore prevent death from hemorrhage and infection by building up a woman's blood during pregnancy. But if that has been impossible and the woman enters labor in an anemic state, she should be matched for a transfusion and have a donor made available immediately her condition is discovered. We have a rule now at the Grace Hospital to this effect. But in order to carry out this rule, it is necessary to do a hemoglobin estimation on every woman when she enters hospital.

Abortion. The two death-producing factors in abortion are sepsis and hemorrhage. I do not propose to say anything about the treatment of puerperal sepsis except to remind you of the value of fresh-air. Unquestionably this is a life-saving procedure which we grossly neglect in this climate. Yet I have seen patients so desperately ill from sepsis that they responded neither to blood transfusions or the sulpha drugs, who turned the corner when they were put outdoors on a verandah for 24 hours a day. Like spiritual salvation fresh air is intangible, and in this material age we neglect the intangibles—to our physical as well as spiritual deaths.

We should not get deaths from *hemorrhage in abortion*, but we will continue to do so if we treat abortion lightly. The fact that we do treat it lightly is made evident almost every week in my service at the Victoria General, where patients are often admitted so gravely anemic that only an immediate transfusion saves them. The aborting patient should be treated in hospital: should be sent to hospital the moment she starts to abort, since only in hospital can hemorrhage be treated early and quickly. When, in such circumstances, hemorrhage becomes excessive, the uterus can either be cleaned out or packed before the woman is bled out. If you decide to pack, don't just stuff some packing into the vagina: this is a stupid and dangerous practice. The packing to be effective, must go into the uterus and must be tight. If it is tight, there will be no further bleeding of any consequence and you have ample time to prepare for a transfusion. But be sure to give the transfusion if the patient is badly bled out. You may have stopped the bleeding, but the woman is still in that dangerously anemic state where infection is likely.

Placenta Previa and Abruptio Placentae. We have likewise a rule at the Grace Hospital that the woman who is admitted at or near term with vaginal bleeding *shall have a donor made immediately available even before anything is done to establish the correct diagnosis.* Why did we make this rule? Let me illustrate one of our reasons by describing what happened in a case of my own of this nature. The patient came into hospital with a history of a very slight bleeding the night before. I examined her and felt the placenta previa. Despite the fact that I decided on immediate Cesarian section she bled so badly in the three-quarters of an hour that it took to get ready, that I had to give her a transfusion before starting the operation. That's the sort of thing that happens when you try to diagnose by vaginal examination between previa and abruptio without being ready to operate at once. It is better to have everything ready

for immediate operation where placenta previa is suspected before doing a diagnostic vaginal examination. You may not require to do a section: it may be a partial previa that can best be handled by vaginal delivery: it may be abruptio: but if you do have to operate, you do so on a patient who has not bled out and with some hope of getting a live baby. The second reason for having a blood transfusion made immediately available where either abruptio or previa is suspected, is that, in the vast majority of these cases it will be needed. In some the need will be urgent: in others it may only be required as a preventive of sepsis . . . . but it will be needed. In this connection the parable of the foolish virgins is extraordinarily apropos.

Post-partum hemorrhage. I do not propose to go into the details of the usual treatment of this condition, which is so well known, but to mention two more or less new procedures (1) intravenous pituitrin and (2) intravenous ergometrin at the time the baby's body is being born. Intravenous pituitrin is dramatically rapid in its action: if you do get an effect you get it within a matter of seconds, but the pituitrin *must be well-diluted otherwise you may get pituitary shock.* Not less than five cc. of saline should be used to dilute 3 units of pituitrin. Pituitary shock is a very real thing: I saw one woman die of it and another come nerve-wrackingly close to it. Intravenous ergometrin, given immediately the baby's head is born, is being used in some clinics to shorten—and prevent blood loss—during the third stage. I have not used it this way, but have given it intramuscularly immediately the baby was born. It does shorten the third stage very considerably, and is worth giving routinely in long drawn out labors where there has been uterine inertia.

Ectopic Gestation: In the old days when operating for ectopic gestation we foolishly emptied the abdomen of the collected blood and discarded it. To-day, before starting to operate we do two things: (1) we have everything ready to collect and citrate the blood, (2) we have intravenous saline going into one arm so that we can start transfusing the blood back into the patient while we are still operating on her. In some cases we have given back in this way over 3000 cc. of blood: one patient I recall was actually gasping her last when we began to pour the blood back: she was in excellent condition when she left the table as a result of the auto-transfusion. In acute ectopic don't wait to get a donor: you can open the abdomen and auto-transfuse long before you can get a donor ready. Since, by auto-transfusion, you restore almost all the blood the patient has lost a hetero-transfusion is rarely necessary.

ASPHYXIA NEONATORUM

Four factors tend to produce this condition, (1) over-sedation of the mother in an attempt at painless childbirth, (2) such obstetrical manoeuvres as difficult forceps, podalic versions, breech deliveries, (3) long drawn-out labors where the membranes have ruptured early, (4) prematurity complicating normal as well as difficult labor.

Over-sedation. Just so long as we attempt to achieve painless labor by the use of such general sedatives as morphia and its derivatives, the barbiturates and deep terminal anesthesia with ether, that long will we continue to have dangerous asphyxia neonatorum. I believe that the time has come to call a halt to over-sedation in obstetrics, and I think our profession might well begin

to protest against articles appearing in the lay press on the matter, in which all sorts of miraculous claims are made. There is no drug that, given to produce general sedation in the mother, does not adversely affect the baby's respiratory centre. As long as we continue to give such drugs, we will have babies which (1) we cannot resuscitate or (2) become so depressed as a result of delayed resuscitation that they die within the first week or so of atelectasis. Some pediatricians go so far as to claim that many asphyxiated babies suffer from permanent brain damage as a result of it. Despite the lay press and despite the clamor of women themselves for painless childbirth, I believe that we should take a definite stand against it.

What can we do for the pains of the woman in labor? Unquestionably we shall have to continue to give some general sedative, but our aim should be to reduce this to a minimum. We should aim at relieving the worst of the pain, rather than abolishing it entirely. We can also make greater use of *local anesthesia.*

Let us deal first of all with a very simple procedure—local infiltration of the perineum. All that is required for this is a 20 cc. syringe and some 1% novocaine solution. Under such anesthesia an absolutely painless episiotomy can be done. I have put on low forceps after such an episiotomy and delivered the baby with surprisingly little pain, although I usually add a little terminal ether. If the ether is stopped when the baby is born, the episiotomy can be sewn up without pain.

A more extensive anesthesia can be obtained by guiding the needle up the ischio-rectal fossa with a finger in the vagina to the neighborhood of the ischial spine and so anesthetizing the internal pudendal nerve, the perineum also being infiltrated.

Finally there is the *new continuous caudal anesthesia*, about which we are hearing a great deal these days. I have attempted this on nine patients, but without the results claimed by its authors. In some cases I have produced a local anesthesia of the vulva, but I have not yet succeeded in abolishing the abdominal pains. Perhaps my technique is faulty, but I have had it checked by one of my colleagues who does a large number of caudal anesthetics in another connection, and he could find no fault with it. I am continuing with the method, but I must confess that so far I cannot agree that it is the complete answer to the problem.

Before leaving the subject I would like to say something about anesthesia in Cesarian section. It is the experience of everyone performing this operation under ether than some of the babies are badly asphyxiated, that a small percentage cannot be resuscitated. Because we so often do the operation for the baby's sake, this is a serious consideration. Sometimes we operate because the baby is actually showing signs of fetal distress. But in all cases where we do an operation that carries a greater risk to the mother than vaginal delivery, we should leave no stone unturned to get a live baby.

For the last two years I have done all my Cesarian sections under local. At first I used nothing but the local—infiltrating the abdominal wall and the peritoneum over the uterine incision. The operation is not completely painless. One gets through the abdominal wall with practically no pain, but the incision into the uterus and the actual delivery of the baby does cause ten minutes of pain comparable to ten minutes of the worst of the second stage. There is less pain if the patient is kept engaged in conversation by an anesthetist.

Lately, I have modified the procedure: when the abdomen is opened and packed away, the anesthetist starts to give nitrous oxide and continues until the uterus is sewn up—the abdominal wound being sewn quite painlessly with the patient out of the anesthetic. This seems to me to be the anesthetic of choice for this operation: in particular it is the anesthetic of choice where the mother is toxemic, and where there is placenta previa or abruptio or any other condition causing devitalization of the baby. What one notices in all these cases is that the baby cries *lustily* the moment it is born. And isn't that the desideratum in all births—to have the baby cry lustily immediately it is born?

Why not use *spinal anesthesia*? Because it is a dangerous anesthetic from the mother's standpoint. Year after year the late Joseph B. DeLee gathered statistics in his annual Year Book to show the dangers of this anesthetic in childbirth. I don't see how anyone who has followed his proof can continue to use it.

Asphyxia due to damage to the child in difficult forceps, breech deliveries, etc. There are two ways of applying forceps. We can apply them cephalically, or we can apply them pelvically. If the baby's head is lying in the antero-posterior of the pelvis the two concide—a pelvic is a cephalic application. But if the head is lying in transverse arrest or in one of the obliques and we apply the forceps to the side walls of the pelvis, we do not get a cehpalic application. It is here that we do the most serious damage to the fetal head. Babies can stand an enormous pull without damage if the forceps are applied so that the blades lie fairly along the sides of the face, but if the blades lie in any other position anything but the lightest pull is likely to cause damage. This means that in all transverse and oblique arrests of the head we should leave no stone unturned to get a cephalic application—either by the Melhado, key-in-lock or manual rotation. This means again that in applying forceps in all cases where the head is not actually showing at the vulva, we should determine its exact lie, and should not be content to push the blades in along the pelvic wall on each side. If we all insisted on cephalic forceps applications we would lose fewer babies.

Breech delivery and podalic version. Breech delivery causes a considerably higher percentage of asphyxia and serious brain damage than vertex delivery. For that reason we should try to turn all breeches to heads before labor sets in. Sometimes this is easy—sometimes it is impossible—but we should always try it. Where we have failed, we should deliver the woman in hospital, where every facility is available. Unfortunately *podalic version* is an easy way out of a great many obstetrical difficulties, but the actual need for it has become less and less as our other methods have improved. It is unnecessary in posteriors and transverse arrests if you have mastered the Melhado method. It is unnecessary in partial placenta previa if you have a Willetts' forceps, or will use a heavy vulsellum in lieu.

Asphyxia due to prolonged labor. In a prolonged labor we have two factors causing asphyxia (1) the necessity of giving more sedative than usual (2) the effects on the baby of pressure in the pelvis when the membranes have ruptured early. I have already dealt with (1). Unfortunately, in many cases of disproportion and posterior position the membranes do rupture early. In this type of case I believe that we can save babies by putting on the forceps—after deep

episiotomy—when the head is visible with the pains. This is particularly true in dealing with primiparae—and it is true whether the baby is showing signs of fetal distress or not. If, of course, there are signs of distress—as shown by the fetal heart or the passage of meconium stained fluid—there is all the more indication for it.

Premature babies. The more I see of premature babies the more I believe that they should be helped across the perineum whether there has been a long labor or not, but most certainly if there has been a long labor. I make it a practise with all prematures to do an episiotomy: where the head does not come through almost immediately I lift it through. I believe not only that you prevent asphyxia by doing this, but you give the baby a better chance of being born without serious damage to its brain. Only recently a post mortem at the Grace Hospital in a spontaneous birth of a premature infant following an easy labor showed the ventricles full of blood.

Some people are afraid to do deep episiotomies—afraid of some permanent damage to the perineum resulting. I have no patience with this sort of argument. A perineum can always be sewn up, but a dead baby is a dead Canadian. Better a perineum through which you can drive a coach and horses, than a baby that dies or grows up to inhabit a home for the feeble-minded.

The actual handling of the asphyxiated baby. Don't cut the cord! And once again, gentlemen, *don't cut the cord*! Leave the baby attached to its mother until the cord has stopped pulsating at the vulva and until it has lost its bluish-grey sheen. If you take that precaution, you allow to flow into the baby from its placenta from 50-100 cc. of rich, red blood. If you will take a pencil in hand and calculate this thing mathematically, you will find that 50 cc. of blood flowing into a baby of 8 pounds is the equivalent of a 1000 cc. transfusion to an adult of 160 pounds. Why waste this blood because you are in a hurry? When I think of all the blood that flows from all the umbilical cords that are cut too soon each day of the year, I see a stream of life whose waste is appalling and inexcusable. But all the more so does the asphyxiated baby need this extra blood. So keep it attached to its mother while you resuscitate it.

The next important step is to *clear the baby's air passages.* Despite tracheal catheters, I believe that the best way to do this is to hold the baby upside down, its back against your forearm, your index and middle finger over each shoulder, the finger of your other hand milking the trachea. The suction is more effective if you get someone to press the baby's nostrils together. Keep milking until all the mucous has come away. To clear the mouth and nasopharynx insert your forefinger into the back of the baby's throat and draw it out quickly, exerting suction. This is a better method than holding the baby up by the ankles, which are slippery. By adopting the above procedures you will very seldom require the tracheal catheter: I have not had to use it in the last two years.

Having cleared the trachea *get the baby into a basin of warm water* and keep it there while you carry out artificial respiration. It is most important to conserve the baby's body heat, since any great drop in heat is seriously devitalizing. But how, you will ask, can you get the baby into warm water if it is still attached to its placenta? I have overcome this difficulty at the Grace Hospital by delivering the type of patient in which an asphyxiated baby is

likely in the lithotomy position, and have had built a sort of baby carriage that pushes right up against the mother's buttocks. Into a hole in its top is placed a sterile basin containing the warm water. Unless the cord is abnormally short resuscitation can be carried out in this life-saving warmth without separating the baby from its blood transfusion. It cost me $4.59 to make this buggy.

Be sure to have your equipment for resuscitation available the moment the baby is born. This means that in all difficult deliveries, in all cases where there are signs of fetal distress, all preparations are made before the baby is born. In this way no precious moments are lost—and the pediatricians will bear me out that it is the first moments of a baby's life that are the most important.

Many of the procedures I have outlined above can only, it must be confessed, be carried out in a hospital. But since these days more and more women are being delivered in hospital, there is no reason why every hospital in which obstetrics is practised, should not be equipped to undertake them. We can only continue to lower our mortality rates by paying attention to the type of details I have mentioned in this article—details which, at first sight may seem to be very minor, but which in effect can become very major.

The Value of Preventive Medical Services in Industry

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NOVA SCOTIA with a total of 60,000 workers in industry out of an estimated population of 600,000 presents a strong claim for recognition as an industrial province. The situation is not less significant because out of that number over 5000 female workers are engaged in various branches of industry. The fact that only one or possibly two of several large industries maintains a Medical Service in keeping with recognized industrial needs, permits me to say something about the value of such a service to the employer, the employee and the community as a whole. By the lack of adequate Medical Services it is not meant that plants have been negligent in their provision for first aid and a degree of nursing services. This, however, you will agree, is not accepted as fulfilling the requirements of an industrial hygiene programme as it is envisaged or presently understood.

Industrial welfare is the oldest of the branches of preventive medicine, dating back to the trade guilds of the middle ages. As far back as 1355 an ordinance stated that "if any journeyman of a given trade who has behaved well and loyally towards his master whom he has served, shall fall sick or unable to maintain himself, he shall be found by the good folks of the same trade until he shall have recovered and be able to maintain himself." The measure of co-operation thus indicated and which for a time had existed between master and man soon began to decline. This deterioration was followed by the journeymen organizing themselves into separate guilds whose concern was mutual aid with benefits for sickness, disability and death. On the other hand the masters' guilds which had become quite powerful and autocratic sought to keep wages down and the price of commodities up.

There is little to indicate that any substantial progress was made until the 18th century when many movements on behalf of the public health and welfare were begun although the great reforms did not take place until the 19th century. These reforms in no small measure may be very definitely traced to the gospel of humanitarianism so effectively preached by John Wesley, the itinerant clergyman who rode on horseback or walked on foot over the length and breadth of England, preaching, teaching and awakening men's minds to their own needs and the social needs of others. Jeremy Bentham and John Howard, one, the great utilitarian whose social philosophy gave such impetus to necessary law reform, and the other not less known as the quiet force instrumental in bringing about changes in the conditions of prisons, their abuses and health hazards, were contemporaries of Wesley's later days. Chadwick with his profound "sanitary conscience" and enquiring mind, Shaftesbury with a demonstrable zeal for social reform, Robert Owen and Southwood Smith,

each in his particular sphere were crusaders of a later period than Wesley, though greatly influenced by his teachings.

The Industrial Revolution had been responsible for the introduction of fresh evils. The population in and around manufacturing areas had increased tremendously at the expense of the countryside and the forerunner of the modern slum was born. Simple sanitary procedures were unknown. Gross overcrowding was the rule in the hastily constructed and miserable shelters built as near as possible to the mills. The closer people lived to their work, the shorter the distance to drag their tired bodies for a period of rest before labour was again resumed. Leisure time was practically unknown. The workers—men, women and children—were all caught in the mad whirl and bore the brunt of the ruthless discipline of the period. The working shift was twelve or more hours long and no rest periods were given for meals, each individual eating as he worked. The extreme hazards of unguarded machinery which was not stopped for oiling, the inadequate lighting and vitiated air in the factories and the presence of unrecognized industrial diseases, in addition to the deplorably filthy home conditions all added up to the mortality rates which apart from the plague years were the highest in British history. "Life in the new mills" says one observer, "as in the new town resulted in a terrible deterioration of physique and national health."

There was a great and urgent need for reform and it is to the merit of Owen, Shaftesbury, Chadwick and others who, by personal example, organized effort and through effective legislation succeeded in reducing the hours of work in factory and mine and by sanitary and other needed reforms within the limits of their knowledge, bequeathed to successive generations opportunities for a fuller meaning of life than their prematurely aged forebears ever knew.

The Modern Movement

The modern movement on behalf of industrial hygiene is of comparatively recent origin. Real, sustained progress was largely initiated because of knowledge acquired through the inauguration of compensation schemes for accidents and other hazards of industrial employment, two Great World Wars notwithstanding. Assuredly at no time are the dangerous trades of greater magnitude and complexity than in the manufacture of implements of war. The increasing need for the conservation of manpower, is also of great importance. In more normal times the broad field of adult health can in no way be better approached than through the channels afforded by organized Medical Services in industry. The great difficulty, however, is that management and too frequently Medical Officers in industry look upon their responsibilities and duties from a first aid and treatment point of view rather than from the preventive side.

The Economic Viewpoint

It may be accepted without question by a group such as this that a preventive Medical Service in industry is sound economically. Figures may be quoted to prove that plants with a properly organized and adequate medical set-up yield commensurate returns and frequently pay high dividends. You may be familiar with the results of a survey conducted last year by the National Association of Manufacturers in the United States, wherein it was shown that the annual loss to an average 500 employee plant, without a health programme was $39,900, whereas the net annual profit to an average 500 employee plant,

with a health programme was $5,611. The fact that 35,000 employees in the manufacturing industry in this country are absent daily because of sickness, to say nothing of the large number definitely ill though working and the even greater number below accepted standards of health, should bring home, in a practical way, the need for and value of Industrial Medical Services.

The Duties of a Plant Physician

What are the duties of a plant physician? Briefly, they center around pre-placement, periodic and post-employment examinations; the supervision of employees and the environment in which they work; their rehabilitation following sickness or injury; studies of specific occupational hazards as they occur; of accident and sickness proneness and cooperation with the plant safety service in an effort at reducing accidents.

Pre-placement examinations and medical supervision of employees are not only of considerable value to the employer and the worker himself, but contribute immeasurably to community health. Over 1,800,000 workers are engaged in the various branches of industry in Canada at the present time with well over 1,000,000 in essential war duties.

The early diagnosis of disease or disability which a pre-placement examination should disclose is too well known to admit of any successful argument. By the discovery of pathological conditions, such as myocardial insufficiency, hypertension, a history of fits, etc., the plant physician is possessed of knowledge of great value in avoiding a serious illness or accident or possibly saving a worker's life or the lives of others. This will be appreciated by the following illustrative cases:—

1. A worker where fumes were present sought compensation for a chest condition. Silicosis, with a superimposed tuberculosis was diagnosed but this was proven to antedate his present employment by many years going back to his previous occupation as a moulder at which trade he had worked for nearly twenty years.

2. A welder in an aircraft repair plant whom nobody knew to be a sufferer of epilepsy fell to the floor and was quite seriously burned when his welding torch came into contact with the lower abdomen.

3. A workman climbed a scaffold and thinking the structure was moving jumped and fractured both ankles. His spinal fluid revealed an early tabes and that *he* was moving and not the scaffold.

Active pulmonary disease, venereal and other communicable diseases may also be discovered initially and proper treatment instituted before further inroads have been made or the health of others jeopardized. Recently among 3,450 employees in a large industry, 2% gave positive Wassermans, which means that 69 individuals are being further investigated prior to receiving anti-syphilitic treatment. Three cases of active tuberculosis were found in one group of 450 workers and seven in another group of 750 were similarly discovered by the use of microfilm and confirmed by a standard plate.

Rejections Through Pre-Placement Examinations

The rejection rate, that is those whose disease or disability makes *any* employment undesirable, varies considerably, depending upon the nature of

the work. One survey of a large number of industrial plants prior to the war, averaged a little over 4% rejections, although higher figures are sometimes given. The presence of hernias are frequently responsible for higher figures but many of these may be salvaged if an operation has been performed or a suitably fitted truss prescribed. In a survey among *unemployed* males a few years ago, only 3% could be classed as definitely unemployable. More recent figures put the rejectees at less than 1%, which low figure is doubtless due to efforts now being made to place applicants at sedentary jobs or light work in order to avoid the stigmata of classifying them as unfit for any occupation. This very commendable attitude on the part of industry means the employment of a considerable number of individuals at productive jobs, thus avoiding great manpower losses.

A working clssification of applicants may be given as follows:

1. Physically fit for any work.
2. With slight defects but otherwise fit.
3. Fit for certain types of employment, subject to the approval of the plant physician.
4. Definitely unemployable.

No examination can be considered adequate unless the applicant undergoes, in addition to a general physical, urinalysis, a hemoglobin determination if not a complete blood count, a serological test and an X-ray examination of the chest. Where specific hazards exist, such as lead and benzol, frequent blood examinations for stippling and anaemia are necessary and desirable. No person with a degree of anaemia should be engaged at work where he is exposed to an environment containing lead or benzol. A so-called "streamlined" physical examination, while often necessary during an emergency when large numbers apply for work at one time, should not be carried too far when the Medical Officer is less busy, although many details of an examination may be performed by nurses or attendants. These include the medical history, urinalyses, obtaining of blood for Wassermans or counts, visual and hearing examinations, pulse and blood pressure readings.

The Keeping of Records

Records must be complete. The value of simple but efficient records is best appreciated if repeat visits are made to the dispensary or a sudden accident or sickness occurs, when a glance at the medical history becomes extremely important. Without systematic record keeping, worthwhile statistics are impossible, for the collection and analyses of sickness records provides valuable information to the Medical Department and management. The dissemination and use of that knowledge is the essence of progress.

The Home Environment

The effectiveness of a Medical Service is greatly enhanced if the individual's home environment is given its proper perspective. A suitably trained worker or nurse, by a survey of the home life and the family unit, or by cooperation with another health agency, can evaluate and assist the physician in the solution of many complex problems not discernible in the plant. Financial

insecurity and other worries, late hours, insufficient sleep and overcrowding in the home are too well known as factors influencing health to require emphasis here. There is even a danger of overdoing one's play for all recreation is not restful and much energy is poured away wastefully, although amusements, games and sports have a real place in overcoming mental fatigue and the monotony of the daily task.

Nutrition

Any discussion of the value of a good nutritious meal on the job, officially, is outside my province to discuss, except to say that lunchstands and cafeteria should be under the guidance of a trained dietitian and be run by managements on a non-profit basis. The opportunity to teach food values and the simple principles of nutrition will be appreciated. Eating meals in a plant where toxic substances are present or where washing facilities are not available, should be prohibited forthwith.

Specific Industrial Hazards

Nothing is closer to the work of a Medical Department in industry than the elimination or control of specific occupational hazards. These include lead, mercury, carbon tetrachloride, chlorinated naphthalene, benzol, toluene, cadmium and silica, to say nothing of the various nuisances, some of which cause mild indispositions, such as headache from petroleum, throat irritation from spray painting, etc.

Industrial dermatoses deserve special mention, being responsible for 65% of the total of occupational diseases. The differential diagnoses of these is important for chronic eczema, erythemas and impetiginous lesions of non-occupational origin, are frequently mistaken for occupational dermatoses or vice versa occupational skin diseases are sometimes missed as such and a worker does not receive the compensation for which other things being equal, he is entitled by law. Cleanliness and protective clothing are the answer to most of the skin trouble in industry, although management has a great responsibility in the substitution of mechanical devices for manual methods and the replacing of hazardous materials by less hazardous ones. Here too the plant Medical Officer can play a very important advisory role.

Accident Prevention

The cause and avoidance of accidents while primarily the concern of the Safety Department and its committee, should receive the recognition and cooperation of the industrial physician and his department. The increasing importance of accidents in industry may be judged by the figures of non-fatal and fatal accidents in Canada in 1939, when the total was 181,000 as compared to a total of 352,000 for last year, representing an increase of almost 100%, though employment increased only 75% in the same period. A study of accident proneness should be the cooperative effort of both the Medical and Safety Departments.

Another interest of the Industrial Medical Service should be to see that proper sanitary standards are maintained. These should embrace adequate washing and sanitary fixtures, rest rooms, proper ventilation and lighting. Lighting facilities are inadequate in over 50% of all plants. This applies to natural as well as artificial light. Factory windows, skylights and glass roofs

are more often dirty than clean and many employees engaged in fine and intricate work spend their day in the comparative gloom of a footcandle or two, whereas 20, 50 or even 100 footcandle power may be necessary for good workmanship, and if fatigue, eye strain, headache and other ills are to be avoided.

In conclusion there are many additional aspects of the situation which might have been touched upon to indicate the importance of preventive Medical Services in industry. The value of such services to the employer and employee cannot be gainsaid nor can the contribution to effective conservation of adult health be minimized. The ability of men and women to give of their best to the national economy, especially during a time of great emergency, depends upon many factors, some personal, some communal. There is a considerable weight of evidence to show that industrial workers are living beneath their rights if not their privileges, in positive health and disease prevention. That industry can supply these privileges to their own distinct advantage, by properly organized Medical Services, is well proven and abundantly clear.

Meeting of the Executive of the Medical Society of Nova Scotia, October 13, 1943

A MEETING of the executive of the Medical Society of Nova Scotia was held at the Dalhousie Public Health Clinic, Halifax, Wednesday evening October 13, 1943. The purpose of the meeting was to discuss a request which came to us through our representative on the executive of the Canadian Medical Association, Dr. H. K. MacDonald, regarding the advisability of the extension of authority to the Canadian Medical Procurement and Assignment Board. The Canadian Medical Association was asked early in September by the Department of Labor whether they approved of an extension of the National Selective Services regulations to apply to physicians.

Several of the provinces of Canada have held annual meetings since the receipt of this request and five of them, namely Ontario and four Western Provinces passed the following resolution;

> That, if the moving and freezing of doctors as a war measure is necessary these divisions, that is divisions of the Canadian Medical Association, approve, providing the authority is vested in the Canadian Medical Procurement and Assignment Board.

Dr. J. C. Wickwire, the president, opened the meeting and explained the purpose. Following this letters were read both by the secretary and also by Dr. H. K. MacDonald, which explained fully the request of the Canadian Medical Association. The question then came up as to whether the executive should deal with this matter or whether a general meeting of the Association should be held. After some discussion it was moved by Dr. J. G. B. Lynch and seconded by Dr. P. S. Cochrane that the executive act in this matter. This motion was adopted. Dr. J. W. Reid felt that a general meeting should be called. Dr. J. C. Wickwire asked Dr. J. R. Corston of the Divisional Advisory Committee how this would affect the physicians in Nova Scotia. Dr. Corston said that the control of physicians was not so urgent in Nova Scotia as in other parts of Canada, but said that the Dominion Advisory Committee did not recommend either the moving or "freezing" of physicians at their last annual meeting. He also said that the giving of further authority to the Medical Procurement and Assignment Board would affect very few physicians in Nova Scotia.

Dr. P. S. Cochrane then moved the following resolution:

> That, if the moving and freezing of doctors as a war measure is necessary the executive of the Medical Society of Nova Scotia approve, providing the authority is vested in the Canadian Medical Procurement and Assignment Board.

This motion was seconded by Dr. H. K. MacDonald and passed unanimously.

President J. C. Wickwire then spoke on the necessity of a 100% membership and suggested to the representative from each branch society that they do everything within their power to bring their membership up to full strength.

The doctors present were:

J. C. Wickwire, P. S. Cochrane, D. M. MacRae, J. P. McGrath, M. R. Elliott, J. R. Corston, chairman of the Divisional Advisory Board; D. F. McInnis, W. G. Colwell, H. E. Kelley, A. Calder, J. G. B. Lynch, H. G. Grant, H. J. Pothier, K. P. Hayes and L. M. Morton.

The meeting adjourned at 8.30 p.m.

Correspondence

Debert, N. S., September, 1943

Dr. H. B. Atlee
95 South Park St.
Halifax, N. S.

Dear Benge:

I wish to acknowledge through you to those members of the Nova Scotia Medical Society who contributed to the Gerald Burns Memorial Fund with deepest thanks, their generous subscription toward the Regimental Fund for No. 9 General Hospital.

As you are aware I have been pressed for time in mobilizing this unit and the matter of Regimental Funds was a worry to me, for as you know, a unit starting overseas without any such Fund is at a disadvantage.

However, thanks to you folks and other friends, that worry is over, many generous subscriptions have come in, and when we organize our Canteens in England, this fund so generously contributed will be of great assistance. I can assure every dollar will be of great service in securing for our different messes such comforts as are needed.

I expect to see you personally before we leave and in the meantime I hope this note will convey to your Society my sincere thanks on behalf of myself and my unit.

Sincerely

(G. Ronald Forbes) Colonel R.C.A.M.C.
Officer Commanding
No. 9 General Hospital

Abstracts of Current Literature

PENICILLIN in the TREATMENT of INFECTION. KEEFER, C. : J. AMER. MED. Ass., 1943, 122:1217.

The authors have described in this paper the results that have been obtained in the treatment of five hundred cases of various infections with penicillin. Penicillin is a remarkably potent antibacterial agent which can be given intravenously, intramuscularly or topically. It is ineffective when given by mouth. Following intravenous or intramuscular injection it is excreted rapidly in the urine, so that in order to obtain an adequate amount of potent material in the circulating blood and tissues it is necessary to inject penicillin continuously or at frequent intervals; that is, every three to four hours. Penicillin has been found to be most effective in the treatment of staphylococcic, gonococcic, pneumococcic and haemolytic streptococcus infections. It has been disappointing in the treatment of bacterial endocarditis. Its effect is particularly striking in sulfonamide resistant gonococcic infections. While the dosage schedule requires additional investigation, it seems clear that the average patient requiring intravenous or intramuscular injections for serious staphylococcic infections requires a total of between 500,000 and 1,000,000 Oxford units, and the best results have been observed when treatment is continued for at least ten days to two weeks. At least 10,000 units should be given every two to three hours at the beginning of treatment, either by continuous intravenous injection or by interrupted intravenous or intramuscular injections. Satisfactory results are obtained in sulfonamide resistant cases of gonorrhea following the injection of 100,000 to 160,000 units over a period of forty-eight hours. Patients with pneumococcic pneumonia frequently recover following the use of 100,000 units given over a period of three days. This is especially important in sulfonamide resistant pneumococcic infections. It may be necessary to give between 60,000 and 90,000 Oxford units daily for four to seven days to obtain a maximum effect. In the treatment of empyema or meningitis it is advisable to use penicillin topically by injecting it directly into the pleural cavity or the sub arachnoid space. Toxic effects are extremely rare. Occasional chills with fever, or headache and flushing of the face have been noted. Urticaria has been reported and thrombophlebitis at the site of injection has been described.

SULFAMERAZINE: CLINICAL EVALUATION IN 116 CASES. Hall, W. H. and Spink, W. W.: J. Amer. Med. Ass., 1943, 123:125.

Investigations have continued in a search for more therapeutically effective sulfonamides which at the same time provoke less toxic manifestations. In the experience of the writers, sulfadiazine has proved to be less toxic than sulfathiazole, sulfapyridine and sulfanilamide. Nevertheless it has been found that renal complications are not uncommonly associated with sulfadiazine therapy. For this reason the therapeutic possibilities of the monomethyl derivative of sulfadiazine were investigated (sulfamerazine). This paper presented the results that were obtained in the treatment of 116 patients with sulfamerazine and its sodium salt. During the treatment of 116 patients having a variety of infections an attempt was made to compare sulfamerazine with sulfadiazine with respect to its pharmacology, therapeutic

effectiveness and toxicity. Adequate blood concentrations can be maintained with smaller doses of sulfamerazine than with sulfadiazine. Because sulfamerazine is retained in the body for a longer period of time than sulfadiazine, doses of the former may be given at less frequent intervals.

Sulfamerazine appeared to be as effective as sulfadiazine in the therapy of 40 cases of pneumococcic pneumonia or bronchitis. Sulfamerazine was less effective than sulfathiozole in the treatment of staphylococic sepsis. Thirty-three patients with streptococcic infections responded as well to sulfamerazine as a comparable group did to sulfadiazine. Two cases of meningitis due to type B influenza bacilli and 3 patients with meningococcic meningitis recovered following therapy with sulfamerazine. Compared to sulfadiazine, when sulfamerazine was given orally adequate blood concentrations necessitated smaller doses given less frequently. Sulfamerazine did not appear to be any more toxic than sulfadiazine. The drug did not produce any demonstable neurologic complications. Sulfamerazine caused less nausea and vomiting than sulfapyridine, and fewer skin eruptions and instances of drug fever than sulfathiozole. Two instances of non fatal urinary tract complications were produced by sulfamerazine, despite the fact that sulfamerazerine and its acetylated form are more soluble in urine than the comparable forms of sulfadiazine. The complication appeared to be due to the extrarenal precipitation of crystals resulting in the mechanical obstruction of a free flow of urine. There is evidence that an adequate fluid intake and alkalization of the urine may prevent such complications.

Visceral Lesions Associated With Rheumatoid Arthritis. Fingerman, D. L. and Andrus, F. C.: Annals. Rheum. Dis., 1943, 3:154.

Fingerman and Andrus examined the records of 192 cases with a diagnosis of arthritis. There were 61 cases of rheumatoid arthritis. The authors apply the term rheumatoid to the severe deforming type of chronic infectious arthritis. The criteria used in selecting these cases of rheumatoid arthritis were as follows: The disease must have been chronic, been present a minimum of several months. It must involve two or more joints. It must have caused deformities of the joints and their adjacent structures. It must be of a nonsuppurative type. The authors examined the clinical records and available pathologic material from 61 patients who had died with chronic rheumatoid arthritis. Lesions indistinguishable from those found in the rheumatic heart were encountered in 19 cases (thirty-one per cent). Six of the patients with rheumatic heart lesions had congestive heart failure as evidenced by chronic passive congestion of the liver. Only 3 patients in the entire group had "Felty's syndrome," or chronic arthritis associated with splenomegaly and leukopenia. There were 6 other patients with splenomegaly along with the arthritis deformans who did not have leukopenia. Amyloidosis involving one or several organs was found in 13 patients (21 per cent). Glomerulitis was found in 8, of which 6 were in early subclinical stages, and the remaining two had clinical evidences of glomerulitis.

Special Aspects of the Problem of the Renal Origin of Hypertension. Page, I. H.: Bull. N. Y. Acad. Med., 1943, 19:461.

Page examines the evidence concerning the following three questions: (1) Whether experimental renal hypertension, human essential hypertension

and hypertension induced by angiotonin are similar and hence study of one will lead to elucidation of the others? It was concluded that allowing for differences in organization of quadruped and man, the similarities especially as regards hemodynamics are great. (2) Whether "ischemia" in the sense of anemia of the renal tissue is the factor initiating and maintaining hypertension? It was concluded that it was not a necessary factor and that the wide use of the term is unjustified by the evidence. (3) Whether the so-called, "amine intoxication" theory of hypertension is consonant with the clinical and hemodynamic picture of experimental and human hypertension. It was concluded that while interesting and important evidence has been presented, there are many serious difficulties that have not been explained which, on the whole, militate against its playing an important part at least early in the course of the disease.

PRIMARY ATYPICAL PNEUMONIA. Dingle, J. H. and Associates: War Med., 1943, 3:249.

Dingle and his associates report that clinically, epidemiologically, and etiologically atypical pneumonia at Camp Claiborne, Louisiana, was in general agreement with the observations of other investigators. The infection occurred in epidemic and in endemic form. The causation has not been ascertained. The most characteristic clinical feature of the syndrome was the late development of physical signs in the lungs in contrast to the comparatively extensive X-ray evidence of the lesions. This observation emphasizes the need for early and repeated X-ray examination and for frequent physical examination during the course of the acute illness to determine the true incidence of the disease. The clinical and epidemiologic data support the possible relation between atypical pneumonia and certain of the minor acute illnesses of the respiratory tract without demonstrable pulmonary lesions observed by Reimann and his associates. The agent or agents, undetermined as yet, causing atypical pneumonia may produce a constitutional reaction of varying degrees of severity both with and without obvious pulmonary involvement. At present there is no specific measure for determining the proportion of the minor illnesses which are of the same causation. The factors determining the incidence and the conditions incident to the epidemic remain obscure. The existence of a non-human reservoir of infection was not discovered, but neither was its possibility completely excluded. Its widespread occurrence at the camp and its scarcity among the population suggested that susceptibility to the pneumonic form was low. Its epidemiology is consistent with the hypothesis that the disease is communicable from person to person and that in apparent instances act as the effective spreading source of the infection. No evidence was obtained that predisposing factors, such as chilling, fatigue or previous infections of the upper respiratory tract were important in the pathogenesis of the disease. If an appreciable number of minor illnesses are of the same origin, as some evidence now indicates, the infection must be considered an important disease of the respiratory tract which causes disability not only in the armed forces, but in the civilian population.

MENIERE'S SYNDROME AND MIGRAINE. Atkinson, M.: Ann. Int. Med., 1943, 18:797.

In an earlier report Atkinson demonstrated that cases of Meniere's Syndrome can be divided into two groups by means of an intradermal

histamine test. There is a small group which is sensitive to histamine and which presents a primary vasodilator or allergic basis. This group can be satisfactorily treated by desensitization to histamine or by elimination of the specific antigen. In a second group, which constitutes the large majority, there is no sensitivity to histamine and the attacks are the result of a primary vasospasm. In this group relief can generally be obtained by administration of vasodilator drugs, of which the most satisfactory is nicotinic acid. In migraine also there is evidence of a dual etiology of the same nature as in Meniere's syndrome. Allergy as a cause of migraine attacks has been generally accepted as applying to at least a portion of the cases. On the other hand, Wolff and his collaborators have shown that migraine attacks can be the result of a primary vasospastic process. Thus the syndrome of Meniere and migraine are identical as far as the mechanism of their production is concerned. They differ in the location of the impact—in the one case it is on the labyrinth, in the other on the cerebral hemisphere. What determines location or laterality is not apparent. The two syndromes differ too in the frequency of occurrence of the two groups. Whereas in Meniere's syndrome the primary vasodilator group is a relatively small one compared with the vasoconstrictor, in the migraine syndrome the position, if not reversed, is at least more nearly equal. Allergy as a cause of migraine is common, as a cause of paroxysmal vertigo is uncommon. This fits in with the age groups in which the two syndromes arise—paroxysmal headache is a condition of youth, like the vasodilatation which produces it, paroxysmal vertigo a condition of middle life or later, like the vasoconstriction which is its usual cause. Nicotinic acid is used in the treatment of the vasoconstrictor group not because it is a part of the vitamin B complex but because it is a powerful capillary vasodilator. It is this basic vascular mechanism which presumably explains the satisfactory results reported with such divergent substances as thiamine hydrochloride and estrogens—both have a certain vasodilator action apart from their specific replacement function. The author directs attention to the frequent association of migraine and Meniere's syndrome. Migraine attacks have been known to merge into Meniere attacks. Treatment which has proved successful in relieving the vertigo of patients with Meniere's syndrome has also relieved the migraine headache in those cases in which it also has been present. Treatment of this syndrome, whether characterized in the main by vertigo or by headache, to be successful depends on accurate grouping of cases. No single method will achieve success in all cases, for there is more than one cause.

Obesity and Appetite Control. Colton, N. H.: Amer. Jour. Med. Sci., 1943, 206:75.

According to Colton and his associates the restriction of food intake is still the basic principle in all successful attempts at treatment of obesity. Dietary restriction over a long period of time is exceedingly difficult in most cases without the aid of some agent that depresses the appetite. The authors treated 300 cases of obesity by dietary restriction and appetite control. Appetite was best controlled by dextroamphetamine, although amphetamine and propadrine hydrochloride were found to be effective. A treatment was aimed at correcting eating habits so that the patient would have less desire for the high caloric foods. Various therapeutic agents (thyroid, ammonium chloride, salyrgan-theophylline and decholin sodium) were added successively

to eliminate each refractory period. The average weight loss for the entire group for the therapy was two pounds a week. The greatest weight loss was during the first month of therapy and averaged two and one-half pounds a week.

INFECTIVE HEPATITIS. Ford, J. C.: Lancet, 1943, 1:675.

Ford reviews 300 cases of infective hepatitis which occurred in an outer London borough. These 300 hundred cases formed part of a larger outbreak extending over surrounding districts. The only death among them was that of a boy aged 16, who was hospitalized in coma and died of hepatic failure three days later. Water, milk or foods could not be suspected as sources of infection nor could the infection have been spread by rodents. With few exceptions the patients all reported known close contact with other persons who either were suffering from the disease or had just recovered. Most patients showed well defined prodromal symptoms such as mental depression, irritability, drowsiness, with loss of appetite and constipation often accompanied by headache, with pain in the right epigastrium, sometimes diagnosed as acute appendicitis.

Many patients complained of shivering attacks, and a few of muscular tenderness or photophobia. After three or four days, nausea and vomiting appeared and there was a rise of temperature. Bile in the urine appeared on the fifth or sixth day of the illness and was followed in twenty-four to forty-eight hours by jaundice. The jaundice commenced always in the occular conjunctives and often spread to the face, neck, abdomen and the whole body. With the onset of jaundice there was in most cases a remarkable improvement in the patient's general condition. The liver was found to be moderately enlarged but the spleen could not be felt. Many patients lost several pounds. The jaundice usually cleared within one to three weeks. Confinement to bed for a few days with restriction of fats and increase of carbohydrates were effective measures. Calomel was a useful purgative. Both home and school contact could be blamed for the spread of infection. As the infective agent has not been isolated and as it appears that the incubation period is long, the only suggestion put forward for the control of the infection is that, during an epidemic, children who vomit in school should be excluded for seven days.

TOTAL GASTRECTOMY: EFFECTS ON NUTRITION AND HEMATOPOIESIS. Farris, J. M.: Surgery, 1943, 13:823.

Of 29 total gastrectomies performed at the University of Michigan Hospital, 24 patients survived the operation. The mortality rate following total gastrectomy is not prohibitive. The stomach does not play an essential role in the digestion of fats and protein. There is no experimental evidence that removal of the stomach will produce pernicious anemia. Primary anemia is rarely encountered following various gastric operations. Gastrectomy interferes with the metabolism of iron. The absorption of dextrose is more rapid than normal. This results in a transient hyperglycemia phase that is followed by hypoglycemia. The latter phase may produce characteristic symptoms. A high protein, low carbohydrate diet is efficacious in preventing these abnormalities. A woman aged forty is living and well four years and seven months after a total gastrectomy. Intestinal motility is decreased

rather than increased. This may be due to intra-abdominal section of the vagus nerves.

PERINEAL PROSTATECTOMY VERSUS TRANSURETHRAL RESECTION. Young, H. H.: Surg. Gyn. & Obs., 1943, 77:1.

Young analyzed the histories of all patients (now totalling 200) who have come to the Brady Urological Institute complaining of imperfect results following transurethral resection elsewhere. He concludes that in patients with considerably enlarged prostates complete enucleation of the hypertrophied lobes through the perineum gives better results and is no more dangerous than transurethral resection. Prostatitis and painful urination are certainly less common after perineal prostatectomy than after transurethral resection. Another great advantage of the perineal procedure is the opportunity which it affords to make a diagnosis and effect a cure of carcinoma of the prostate. Many conditions, particularly bars, contractures and small hypertrophies, can be dealt with efficiently by transurethral resection, but perineal prostatectomy is distinctly superior for the larger hypertrophies, calculi in the prostate and chronic prostatis. Prostatism is so complex in its symptoms and so varied in pathologic aspect that it can be handled satisfactorily only by careful selection of the operative procedure best suited to obtain a radical cure. The exclusive use of transurethral resection for all types of prostatic obstruction, even the large and the cancerous, is indefensible.

E. DAVID SHERMAN, M.D.
Abstract Editor

Personal Interest Notes

HIS many friends in Nova Scotia will be very pleased to hear that Dr. Malcolm B. Dockerty has been made Associate Professor of Pathology in the Mayo Foundation. Dr. Dockerty graduated from Dalhousie in 1934 after an exceptionally brillant career in Medicine. He went almost immediately to the Mayo Clinic with a Fellowship, where his early promise of success has been fully realized.

Brigadier G. B. Chisholm, Director General of Medical Services, R.C.A.M.C., and Lt.-Col. Thomas A. Lebbetter, Medical Consultant, R.C.A.M.C., were elected members of The Association of Military Surgeons of the United States at the recent meeting of this Association held in Philadelphia, October 21st to 23rd. Some 2,000 physicians were in attendance.

Twelve Nova Scotians received their diplomas at the annual graduation exercises at the Children's Hospital in Halifax on October 28th. Dr. H. E. Kendall, Lieutenant-Governor of Nova Scotia, gave the address to the graduates.

The wedding took place at Halifax on October 27th of Helen Loraine, only daughter of Mr. and Mrs. Gordon McLaren Daley, and Lieutenant Gordon Wallace Bethune, R.C.A.M.C., only son of the late Mr. and Mrs. J. H. G. Bethune of Toronto. Dr. Bethune graduated from Dalhousie Medical School on September 1, 1943.

Dr. J. Fenton Argue, registrar of the Medical Council of Canada, announced on November 5th, that 157 candidates had been successful in passing examinations held October 6th at Halifax, Montreal, Edmonton and Vancouver centres, and are now eligible to practise medicine in any province without further examination upon meeting provincial regulations.

The candidates included:

Halifax Centre—T. A. Anderson, Fredericton; S. S. Bland, J. H. Charman, F. A. Dunsworth, B. F. Graham, D. V. Graham, B. R. Wilson, J. G. Wiswell, Halifax; David Gaum, Patrick Madore, R. M. Ritchie, Sydney; G. W. Bethune, Baddeck; J. B. Crowe, Annapolis Royal; L. G. Dewar, New Perth, P. E. I.; J. B. Downing, Summerside; K. A. Fraser, Whycocomagh; J. F. Keays, Newcastle, N. B.; Louis Kristal, New Waterford; H. D. Lavers, Parrsboro; Louis E. Lawton, Wabana, Nfld.; C. M. Leighton, Moncton; A. S. Lewis, J. H. Molloy, D. C. Simms, St. John's, Nfld.; R. G. MacKenzie, Truro; L. A. MacLeod, F. N. Macneill, Glace Bay; R. M. Rowter, Bear River; W. A. Shea, St. Louis, P. E. I.; J. R. Sullivan, Fairville, N. B.; D. F. Sutherland, W. R. C. Tupper, New Glasgow; H. O. Tonning, Black's Harbour, N. B.; L. M. Veniot, Bathurst, N. B.; J. S. Wright, Bedeque, P. E. I.

Montreal Centre—P. H. LeBlanc, Digby; C. H. Read, Amherst.

The marriage took place in Sydney recently of Surgeon-Lt. R. M. Mac-

Donald, R.C.N.V.R., son of Dr. E. M. MacDonald, and Miss F. MacLeod of Toronto.

Nine student nurses graduated from the Yarmouth Hospital and received their diplomas at the annual exercises held at Zion United Baptist Church in Yarmouth in September. Dr. J. S. Robertson, District Medical Officer of the Department of Health in the Province of Nova Scotia was the speaker and Dr. L. M. Morton, one of the soloists. Following the exercises the class were guests at a dance at Lake Milo Clubhouse.

Dr. R. E. Pugh, formerly of Great Village is now practising in North Sydney and is occupying the home of the late Dr. A. K. Roy.

Dr. R. M. Rowter, who graduated from Dalhousie Medical School on September 1, 1943, is practising in Bear River.

Dr. Stuart D. Dunn, son of Dr. and Mrs. G. A. Dunn of Pictou, who graduated from Dalhousie Medical School on January 5, 1943, and who was with Dr. R. M. Benvie of Stellarton for several months, has been appointed to the staff of the surgical department of the Montreal General Hospital for a year.

The BULLETIN extends congratulations to Dr. and Mrs. A. A. Macdonald (Marie Grant, R.N.) of Neil's Harbour on the birth of a son, Brian Lee, on July 13th; to Dr. and Mrs. E. I. Glenister of Dartmouth on the birth of a son on September 24th; to Dr. and Mrs. G. G. Simms of Pictou on the birth of a son, George Graham, on October 6th, and to Flight Lieutenant and Mrs. D. C. Cantelope of Lunenburg on the birth of a daughter, Linda Lee, on October 22nd.

Dr. and Mrs. Edward DuVernet of Vancouver, have returned home after spending two weeks vacation during October with the former's parents, Dr. and Mrs. E. DuVernet of Digby.

Dr. Wm. Earle Pollett, son of Mr. and Mrs. A. J. Pollett of Sydney, has successfully passed his examination overseas leading to a degree of Fellow of the Royal College of Surgeons. Dr. Pollett graduated from Dalhousie Medical School in 1934, and practised in New Germany until 1939, when he went to the Old Country to prepare himself for his latest achievement. Dr. Pollett is a member of the British Medical Service in Edinburgh. His wife, the former Hope Hatfield, daughter of Mr. and Mrs. G. C. Hatfield of Halifax, is overseas with him.

Dr. H. R. McKean who has been practising in Truro, has enlisted in the R.C.A.M.C. Mrs. McKean and little daughter are leaving for the former's home in Newfoundland, where they will remain for the duration of the war.

Dr. A. C. McLeod of Caledonia, Queens County, who has practised medicine in his native county for more than thirty years, was visiting his brother, Arthur McLeod and Mrs. McLeod of Yarmouth during November.

Dr. and Mrs. M. D. Brennan of Dartmouth left for Chicago in October where Dr. Brennan intended to take post-graduate work.

Captain J. S. Miller of Halifax, who graduated from Dalhousie Medical School in 1939, and who went overseas in December of that year with the West Nova Scotia Regiment, has been promoted to the rank of acting major.

Dr. P. E. Belliveau of Meteghan attended the medical convention in Toronto in October.

The marriage took place on October 19th in Halifax of Miss Louisa Andree Wetherell, only daughter of Mr. and Mrs. Robert P. Wetherell of Attleboro, Mass., and Lieutenant Bentley Robertson Wilson, R.C.A.M.C., youngest son of Mr. and Mrs. Wm. D. Wilson of Halifax. Mrs. Wilson graduated from Acadia University and continued her studies in the State Mental Hospital at Taunton, Mass., later accepting a position as psychiatric social worker at the Clarinda State Hospital, Clarinda, Iowa. She came to Halifax two years ago and assumed the same position with Dr. R. O. Jones in the Psychiatric Department of Dalhousie University. Dr. Wilson graduated from Dalhousie Medical School on September 1, 1943.

Dr. S. H. Keshen of Halifax spent some time in Boston during November visiting clinics.

Lt. Colonel J. Arnold Noble, now in command of a Canadian Field Ambulance Unit, is stationed in Italy, with the Eighth Army.

Dr. R. O. Jones spoke on "Psychiatry and Drugs" at the banquet of the Halifax Retail Druggists' Association held at the Nova Scotian Hotel on November 18th.

Obituary

THE death occurred at his home at Bedford on October 31st of Dr. Stephen Augustus Adlington, son of the late Dr. Robert Adlington and Edwardina Augusta Wilkinson, Derbyshire, England. Dr. Adlington was born in Edinburgh, and spent the earlier part of his life in England, coming to Toronto with his parents where his father practised medicine for many years and during which time he graduated from the Royal Military College, Kingston, and from the Baltimore Medical College in 1896.

Dr. Adlington practised at St. Margaret's Bay and Brookfield, Colchester County for several years, before going to Bedford where he practised twenty years, before retiring in 1937.

Dr. Adlington is survived by his wife, two daughters, Annie, on the teaching staff of Joseph Howe School, and Edwardina, at home; one son, Montague, on the staff of Beatty Brothers, Limited, Halifax. A younger son, Howard, was lost at sea in the sinking of H.M.C.S. "Ottawa."

The funeral services were held on November 2nd from his late residence in Bedford, with interment in the Anglican cemetery, with Rev. A. E. Gabriel officiating.