

Men, Money, and Medicine

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THE reconciliation of medicine as a benevolent avocation and its practice for gain constitutes a perennial conflict for most of us. Driving the ox, utility, in double harness with the thoroughbred, idealism, will always be vexatious. When we think of medical practice in terms of its compensations, we find our ideas strangely confused and discordant. If we go farther and attempt to assess cash value, we are likely to feel a little embarrassed or even furtive.

Medical rewards come in three relatively separate and distinct forms: the emotional, the intellectual, and the material. Doctors are rewarded, in part, by living up to the highest ideals of the profession; they are rewarded, sometimes, by the satisfaction of having contributed to the science or art of medicine; and they are rewarded, occasionally, by accumulating material things of life. A doctor's compensation is the sum total of what he receives from these three sources and the proportion from each varies widely among individuals. Some there are, like the famous McClure, who by acts of kindness and self-sacrifice consider themselves well rewarded. Some are engrossed in science, and are happy. Others put medicine on the same foundation as a trade and rarely rise above thoughts of its emolument. Most of us are by nature and by necessity a mixture of these three types; we are forever torn between the instincts of love, curiosity, and acquisitiveness.

The sources of medical rewards have varied a good deal throughout history. In all the great philosophies, Greek, Confucian, Christian, Moham-medan, and others, the humanitarian and altruistic ideals of medical practice are inherent. To succour those distressed in mind, body or estate, is the main object of the charitable. In the fourth century, the martyrs—Damian and Cosmas—were doctors who practiced purely for the love of mankind; they took no earthly reward. For this they were canonized and are numbered, with St. Luke and St. Bartholomew, among the medical saints. The conception of medicine as the outlet for pure charity dominated practice for some centuries; it still affects all of us—though it must be admitted that it has at times become highly attenuated. It was natural that it should have prevailed during the early Christian era, when most medical practice emanated from the church. Such hospitals as existed were monastic and operated by ecclesiastics who were obliged to practice in accordance with the tenets prescribed by the martyrs.

Early in the Christian era, the purely charitable practice of healing was modified so that the acceptance of voluntary contributions was approved, though to name a fee was frowned upon as sordid materialism. Much of the wealth accumulated by monasteries throughout Europe in the middle ages is said to have come as thank-offerings from grateful patients. Thus was altruism encroached upon by materialism—or should we say “better business methods?”

The gratuity method of paying for medical service finally became the recognized system and it continued in general use long after practice had passed out of the hands of the church. At a time when only the wealthy

consulted doctors, the system often reflected more guile than charity. A rich, grateful and anxious patient with an ignorant and superstitious belief in the occult power of medicine, often bestowed, as a gift, much more than cupidity might dare to ask as a legitimate fee. Fabulous fees at times have been paid on this basis. The old physicians understood the subtlety of the method. They appreciated the fact that it was wise to get the gift while the patient was still in danger or in his early convalescence; in the one case fear, and in the other gratitude, might loosen his purse strings. "Accipe dum dolet" was one of their slogans. Cordus (d. 1535) wrote:

Three faces wears the doctor: when first sought,
An angel's—and a God's, the cure half wrought;
But when, that cure complete, he seeks his fee,
The Devil looks then less terrible than he.

Perhaps the largest income ever enjoyed by a single medical man was collected when gratuities were in vogue. According to Al-Qifti, who attended the Arabian Caliphs and their courts in the 9th century, he received about 18 million dollars for 36 years' service. He gives some details of his duties and the gratuities attached, e.g.,

For bleeding Caliph twice a year—100,000 dirhems (\$20,000.00).
For administering a biennial purge—20,000.

It must not be thought, however, that Al-Qifti's appointment was a sinecure. Though he lived in an opulent atmosphere, it was thick with intrigue and alarm. Eastern potentates at the time were usually vicious, cunning and unscrupulous; and their diplomacy was anything but subtle. A bold caliph had no compunction at smuggling deadly poisons into the food and drink of any who seemed to threaten his despotism, and to this practice the chemical proficiency of the physician no doubt made him an accomplice. The doctor may also have had a hand in protecting the Caliph against retaliation in kind. Also, if the physician's therapy did not suit the Caliph's peculiar taste, or if the bleeding had not the expected result, the doctor might be invited to swallow some of his own poison. To have survived for 36 years in a Caliph's court must have required finesse and cunning of the first order—perhaps worth \$18,000,000.

Other large gratuities are recorded by history. Thos. Willis received £1500 a year for 20 years for attending George III, and his son received £650 annually for life. Such a handsome reward for the man who discovered glycosuria by the gustatory method must be applauded.

The story of another large fee that was almost collected, is told by Evelyn, who writes:

1685, Feb. 4, I went to London, hearing His Majesty had been, the Monday before, (2 Feb.), surprised in his bed-chamber with an apoplectic fit; so that if, by God's providence, Dr. King (that excellent churgeon as well as physician) had not actually been present, to let him blood (having his lancet in his pocket), His Majesty had certainly died that moment, which might have been of direful consequence, there being nobody also present with the King save his doctor and one more, as I am assured. It was a mark of the extraordinary dexterity resolution, and presence of mind, in the doctor, to let him blood in the very paroxysm, without staying the coming of other physicians, which regularly should have been done, and for want of which he must have a regular pardon, as they tell me.

For this promptitude and courage, the Privy Council ordered 1,000 pounds to be given to Dr. King—but he never obtained the money. Since Charles II, in due course, paid the debt of nature, in all probability the conservators of the national honor thought that enough had been sacrificed to honesty. The story does not tell us whether or not Dr. King had recourse to a collective agency.

The largest medical income a hundred years ago was enjoyed by Sir Astley Cooper (1766-1841). He received as much as £21,000 in one year; and for many years always collected more than £15,000. He once received a gift of £1,000 for a single operation. There was propriety in large surgical fees at that time. A surgeon needed great dexterity, speed, and courage to operate without anaesthesia and asepsis; and to face a mortality from haemorrhage and sepsis that ran close to 50% was a job for a big man.

When Dr. Dimsdale, a colleague of Jenners, went to Russia and innoculated Katherine the Great against smallpox, he received £12,000, a pension of £500 a year, and was made a Baron of the Empire.

In modern life, the only trace of the gratuity system is the retaining fees still sometimes paid by Royal families. Even these are commonly fixed by precedent and should be regarded as salaries rather than voluntary gifts. It is interesting to note how completely the tables have turned. Until recently, a doctor who stipulated a fee was considered unethical; now only quacks habitually accept gifts or voluntary contributions in payment for their work.

About 100 years ago it became a common practice for doctors to make stipulated charges, keep books and render accounts. This now is a universal practice; in fact, it is almost a legal and moral obligation. The change has come about for several reasons. First the doctor, who in medieval times was regarded as a higher servant, has risen in the social scale and now feels himself to be, and is regarded as, independent and above accepting what would now be regarded as "tips." Also, medical service is no longer limited to those who are wealthy; the vast majority of the laity have become independent, though not rich. The profession has grown in size and complexity, and the large cost of maintenance could not be supported by the spontaneous and sporadic contributions of the people. Reckless extravagance among patients has largely disappeared since much of the mysticism and superstition has, fortunately, gone out of medicine. Although the principle of fees for service has been approved during the last century, there are no fixed universal standards to direct the profession. From time to time laws have been made prescribing how much a doctor may or may not charge. One of the earliest of these was in Italy, early in the 13th century, when the proposed fees were comparable to those of to-day. No such laws exist in this country, except that Workmen's Compensation Boards dictate prices in a limited field, and the various relief projects have formulated tariffs. However, these have only an indirect influence on private practice.

Because there have been no rules governing this three-cornered problem involving men, money and medicine, we have seen many anomalous situations arise. We have seen great men espouse the cause of idealism, slave among the sick, poor all their lives and leave their families in poverty. We have seen some consecrate their lives to medicine as a science and receive a shameful

compensation. Unhappily, also, we have seen hard-headed and calculating practitioners grow fat without regard to ideals or ethics. All these, however, are exceptional cases which are far too frequently quoted as representative of medical practice at large. Such exceptional cases are seen in every line of human activity. No amount of legislation and control can ever prevent some men from eschewing materialism and becoming martyrs to an ideal or to science. Nor can we prevent wealthy people paying fabulous fees to acquire fashionable medical service, any more than we can prevent them from contributing millions to the brawn and co-ordination that can knock a baseball over the fence—or deliver a knock-out punch.

Setting aside these exceptional cases, we can say that although there has been no legal control, medical compensation in this country has, on the whole, come to a fairly reasonable standard. On the average, medical men have received decent remuneration and, as a result, it has not been necessary for doctors as a class to face harsh economic problems.

During the past twenty years or more, circumstances have arisen which seem to threaten this happy state of affairs. May I indicate and discuss some of the, main causes for this change?

1. Individual wealth is gradually disappearing. The effect of this upon medical practice can best be illustrated by what has been occurring in many large centres throughout the British Isles. In the days before the first war, all the large hospitals were heavily endowed private institutions. Any poor patient received the best medical and surgical treatment without charge. All the medical work was done by an honorary staff. It was possible for doctors to give long hours of free service to hospitals only because in their private practices they received large fees from the same group of wealthy people that endowed the hospitals. In recent years, the gradual disappearance of large fortunes has reduced the size of private fees but has increased the amount of work expected in charity clinics. The same tendencies are evident in this country; they apply through all forms of practice. The number of people who can pay full fees is decreasing and those who can pay in part or not at all are increasing. In most civilized countries, except Canada and the U. S. A., an effort has been made to correct this anomaly by various insurance schemes.

2. Increase in cost of medical diagnosis and treatment brings still more individuals into the charity or part-charity class. The proper investigation and treatment of certain cases have become very costly. X-ray and laboratory examination particularly have added to the expense. There is a disposition in some quarters to say that these modern refinements are overdone and that the good old-fashioned Doc, with his stethoscope, pills and common sense, was equal to any young fellow with all his elaborate machinery. There is just enough truth in this cliché to make it sound plausible. No doubt mechanical and chemical investigation is sometimes overdone and allowed to dominate the diagnosis. However, in spite of the inevitable over-enthusiasm for new and expensive devices, no one can deny that many of them are indispensable in modern practice. If one thinks otherwise, let him consider the fact that failing to have an X-ray plate of a possible fracture is universally regarded as criminal negligence. Also, consider the fact that in England, some years ago, the courts allowed a claim of £5,000 against a doctor who had failed to make a diagnosis of pulmonary tuberculosis. The charge of criminal negligence

was confirmed because only one sputum examination had been done and no X-ray had been taken. Furthermore, lay persons themselves over-estimate the value of mechanical aids to diagnosis and most of us spend a good deal of time dissuading our patients from fruitless expenditure along these lines. Thus we find ourselves permanently bound to expensive investigation.

3. Socialistic tendencies is a third influence which swells the ranks of those demanding free treatment. Socialization of medicine has a strong popular appeal. It is probably the best vote-getter that any party can adopt. I have not the temerity to discuss socialized medicine in any of its aspects; I wish merely to show its effects on present-day practice. Thousands of people sincerely believe that the state owes them medical care and, as a consequence, they do not hesitate to take advantage of as much free treatment as possible. Much of the former pride in being able to pay their own way has vanished, partly because of governments that are paternal, partly because of doctors who are indulgent and uncritical, but largely because people have not the money to meet the inevitable high cost of modern diagnosis and treatment. It has been said that we have too many clinics and too few cynics. There is much truth in this; but it is also true that the elaboration of medicine has recently been so exuberant that no ordinary purse can keep up.

Many other reasons for the ever growing demand for charity medicine could be given. The profession has always met these demands; indeed, most medical charities have been initiated and organized largely by doctors. In the past ten years, it has become increasingly evident in Canada that the profession has been indiscriminate and haphazard in the dispensation of free treatment. Governments, hospitals and private organizations from time to time have taken various unfortunate groups under their protecting wings. It has been easy and it has been pleasant for doctors, individually and as a profession, to fall in with these altruistic movements and give their support gratis. Such a course has been consonant with our ideals. The majority of us would like to go through life doing our medical work without a thought for finances. The great majority of medical men are irked by being forced to give attention to money matters. Many times we have sincerely envied the medieval monk who lived a monastic life with only his books and his patients and his prayers. How pleasant such a life could be with, possibly, some minor modifications. But how futile such a dream!

Doctors to-day must be a part of their community. It is impossible to be detached if they would be good practitioners. Their lives cannot be aloof from urgent material considerations; and they must, perforce, face the problem of medical economics.

How much money should a doctor receive for his work? Too often, positive statements upon the matter are made without due regard for the unique details peculiar to medical education and practice. There are many cogent reasons that a doctor's income must be among the highest in a community.

1. Young men coming into medicine to-day are rigorously selected. Only those who have shown themselves to be successful students in their pre-medical course are now accepted in most medical schools, and the scholastic standards are higher than in any other profession. A pre-medical Arts or Science course is almost universal. It is not suggested that the medical profession is an aristocracy of intellect; it may better be called an aristocracy of

industry. Many older doctors have come through the medical course without much difficulty; but to-day one can be assured that no lazy student, no careless student, and no very dull student, can successfully meet the hazards of the medical curriculum. Having run the gauntlet of this rigid training, reasonable compensation should be expected. Failing this, the quality of medical recruits and the quality of practice will deteriorate.

2. The cost of medical education must be brought into the equation. When a doctor begins practice, he has already spent from seven to fifteen years in university and hospitals—from the age of about 17 or 18 to the age of about 25 or 30. This period is usually almost completely barren so far as earning is concerned and represents an investment of from \$5,000 to \$15,000. There is nothing comparable to this in business training; and in other professions the investment is, on the average, much smaller. It is sound economy to reason that this capital investment must be considered when thinking of returns. It should be made up out of the practice of the individual.

3. The productive life of a doctor is short—he starts late and, as a rule, finishes early. This is in contrast to almost every other vocation. Business men begin to produce 10 years earlier and go on longer.

4. A practitioner's operating overhead runs from 25% to 35% of his gross income. Every third or fourth dollar he collects is used for running expenses.

5. A doctor's income ceases as soon as he stops work. If he becomes ill or dies, the plant shuts down. There are no retiring allowances or pension schemes for doctors. For this reason, a doctor must carry insurance against incapacitation and death.

6. A doctor should be in a position to get away from his work for two months each year. No one can keep up to the advances in any branch of medicine without frequent contact with other practitioners. One month a year is not too long, counting in medical meetings. Another month should be spent resting. Most doctors work at high pressure and are on call 24 hours a day. There is probably no occupation in which one is more prone to becoming stale. A month of post-graduate work and a month holidays is, of course, a counsel of perfection. Most doctors think about it vaguely and wistfully but never come near its realization. This is unfortunate for them, for their families, and for their patients.

Taking all these things into consideration, how much is the smallest annual income upon which a medical man can live and work and die decently? The three main items that must be met have been indicated. They may be assessed as follows:

1. To restore the 5 or 15 thousand dollars spent on education and to keep up to date will require \$500.00.

2. To provide protection for wife and family in case of death or disability will require at least \$500.00.

3. To run a car and meet the minimal expenses of travel will cost at least \$1,000.00.

4. Office expense, books, medical societies, and instruments will add another \$1,000.00.

This means that \$3,000.00 a year is the necessary and legitimate overhead. Added to this must be living expenses for wife and family. This certainly cannot be done on less than \$2,000 in an ordinary community. We can say, therefore, that a minimum of \$5,000 a year is necessary to keep a practicing doctor in a position of relative security and solvency. There are institutions and even governments hiring doctors for half of this amount, though they must know that it means economic and professional suicide for a young man—except in very exceptional circumstances.

Anyone who practices in an ordinary community for any length of time for less than \$5,000 a year in cash or in kind is riding for a fall. Either he is not paying for his capital expenditure or he is neglecting to secure the future of his family; or he is stinting himself or his children of the amenities of life. Many a young man has found himself stifled early in his career by such economic stringency. The pretty idealistic dream of medical life as a devotion to science and service becomes a nightmare of harsh economic emergencies and a perennial struggle for physical maintenance. What has been said refers to minimum returns. Above this, there should be a wide range for those whose training, industry or originality is exceptional. An upper figure cannot be fixed, but it can be said that the acquisition of great wealth is not consonant with the highest type of practice. Those who crave opulence should not practice medicine. At the same time, opportunity for reasonable economic advancement must be offered. Medical men are fundamentally not unlike others; they must have the lure of financial solvency besides other stimulation to bring out their best efforts.

Having made this tour into economics and having considered cash returns, I wish to revert again to the other rewards of a medical life that were indicated previously. There is no profession or occupation so rich in intangible and imponderable rewards—let them be called spiritual, emotional or intellectual.

First of all, there is a possibility of satisfying the primitive urge to construct material things. This disposition to use our faculties and dexterity to fabricate or build objects that are useful or beautiful is inherent in all of us and demands fulfillment. It is shown in all primitive races by their crude products—architectural or artistic. We see it in adults who indulge in photography, art, knitting, weaving, carving and carpentry; and it is the source of all art craft. In medicine, this fundamental inherent demand is satisfied by the practice of surgery in all its branches. The planning and performance of a nice operation fills a surgeon with a warm elemental glow, just as painting a picture stirs an artist, or the carving of an ivory elephant thrills a savage; in each case, the urge to create has been consummated.

An obstetrician may get a similar satisfaction when by the work of his hands and the sweat of his brow he takes a vicarious part in the introduction of a new individual.

Many physicians are denied these semi-material rewards, but there is much that is less tangible and even more satisfying. There is no human occupation that can be more absorbing or more exciting intellectually than differential diagnosis, which occupies all doctors every day. It is the highest type of scientific detective work. It implies the energy and the cunning of a sleuth in the pursuit of clues, and superior ingenuity and subtlety in their interpretation. Every day doctors are confronted with mysteries, the proper solution of which

may mean life or death. The pursuit of the correct solution can be a thrilling adventure and its capture may be a soul-satisfying triumph. It is regretted that in the realm of medicine there are so many problems that remain unsolved because of the inscrutability of their nature and man's puny understanding. The apparent futility of the best effort may often cause depressed and vain longing for that millenium when medicine shall have been reduced to laws of physics and chemistry; but it is largely the mystery and complexity of medicine that lend allurements and make so many her willing but restless slaves. A great Chinese philosopher has said, "Pursuit is ecstastic; possession is static." There can, indeed, be ecstasy in the pursuits of medicine.

Fortunately, there are moments of triumph. There are diseases in which intervention effects a cure or amelioration under desperate conditions. Also, nature is a most powerful ally who frequently, if unhampered, will effect a happy issue out of trouble. In such cases, the medium of her ministrations may shine in a reflected glory and may strut a bit as he tacitly accepts some of the credit due to his silent and uncomplaining partner.

There are other medical returns that could be defined and described, but above and beyond these, there is the appeal of medicine as a cultural pursuit and a philosophy.

These rewards can be captured and fully appreciated only on a background of social and economic security. Doctors who are harrassed by the immediacies of existence, who must spend a large part of their time struggling with urgent demands of a material world, cannot give the best they have to their work, nor can they enjoy the finer solace of medicine. Practice to them becomes a dull mundane business—not an art, not a science, but a plodding tedious trade dominated by the necessity for money. If the best standards of practice are to be preserved, and the finer features of medicine perpetuated, then protection must be insured against the devastation of sordid insecurity. This is the chief reason that serious thought must be given to medical economics, not so much for to-day, but for the future and for the young men who are coming up.

Some Recollections of a Year with Field Medical Units in the Middle East

J. A. NOBLE

THE fighting in Sicily and Italy, which began on July 10, 1943, saw a different tactical role from that of any of the previous campaigns. The scope for deployment, so successfully employed in the wide spaces of North Africa, was absent among the precipitous passes of Italy. The depth of front which characterized the earlier fighting, had necessitated long lines of evacuation. But in the Italian "show," except at the beginning before hospitals and Casualty Clearing Stations had arrived, there was little time lost before the casualty received his hospital care.

To keep pace with the mechanized mode of fighting, the medical corps itself had been revamped, with streamlined forward elements; and new types of units were introduced. In Great War I the principle of the time element in relation to the treatment of war wounds had been well recognized, and in many instances the surgeon, with improvised equipment, proceeded forward to deal with casualties. In Great War II this lesson was further demonstrated, but this time the forward surgery was completely organized, and made to fit into the regular plan.

There are six different field medical units. First, the Field Ambulance, so dear in the memory of medical officers of the last war, and still the popular choice among many of this war. This unit alone is responsible for the collection of casualties, their primary treatment, and their evacuation to the rear. Also this unit is employed for the many varying roles required to fill modern medical demands.

The hand carrying of patients by stretcher, over more than very short distances, was a procedure of the past. There were two reasons for this: Modern mobile warfare keeps the fighting troops pretty close to the F. vehicles—those used in the actual combat zone, and ambulance transport has been adapted to negotiate trails and rough country inaccessible to older types of car. The American Ambulance Corps of volunteers had a splendid car completely covered in, low silhouette, four wheel drive, and of light weight. For a great part of the time we had the pleasure of having attached to us a platoon of these vehicles. They were better than our modified jeep, or 4 cwt.—the familiar little buggy which we adapted for carrying stretchers. These jeeps would go almost anywhere, certainly up to Regimental headquarters, and the Battalion medical officer. He too had one of these, and used it magnificently in collecting forward casualties whenever possible.

The standard ambulance car was much too big for use forward of the Advance Dressing Station. The Brigade commander was inclined to intolerance when such a large vehicle approached his headquarters, but the jeep was always accepted. Even though modified for stretcher carrying it nevertheless resembled the combatant vehicles used by all other arms of the service. Now this was important to us, for I recall vividly one occasion when the proper ambulance cars, plastered with red crosses from top to bottom were the only vehicles allowed by the enemy to negotiate the road leading into Ortona. This may have been one of the reasons why we liked the American car. The Germans *did* respect the Red Cross.

In considering the surgery of modern warfare the work done forward tends to be neglected, but it is by no means a less important part. The successful recovery of a wounded man often depends upon how well he was treated at the beginning. From the point of view of evacuation alone a delay of an hour or two might mean months and years of invalidism, if not the difference between life and death. The treatment here was of a first aid type. The dressing tables always held tetanus toxoid and antiserum, and polyvalent serum containing gas gangrene antitoxin, sulphonamide tablets and powder. Suturing materials were never in evidence. A court of enquiry might be called over the evacuation of a casualty with a freshly sutured wound. Blood plasma was held and used in quantity. The Thomas leg splint earned our profound respect.

It was here we learned lessons in shock and the use of morphia, and of intravenous fluids. To restore the volume of circulating blood was the only possible way to revive many cases. Imagine how fervent our gratitude for the unlimited supplies of plasma. It worked wonders. Sometimes two and even three veins were used simultaneously in desperate cases. We learned that once resuscitated, the patient had a varying, but always short, time before he slipped back again. Therefore the continuous drip became popular. Casualties would arrive in an open jeep, with an orderly holding the bottle, and supervising its continuous flow. After his stop in the Field Ambulance, where he was warmed, nourished, and made comfortable, he was sent on his way, the continuous drip still running.

Such a severely shocked patient had probably received a half grain of morphia not long before. He was still in extreme distress. If no entry had been made on his field medical card, following our practice he was given a quarter grain intravenously. In a few minutes he became the victim of serious overdosage. The initial half grain, unrecorded, had not been absorbed at the time of the subsequent injection because of collapse of the peripheral circulation.

These two lessons are pertinent in civilian practice. An injection of morphia *must* be recorded. Its intravenous use is safe only when such control is possible, but when so guaranteed the effect is very worth while. A resuscitated patient must be treated to avoid relapse. It is ever so much more difficult to repeat the successful resuscitation. When faced with a long journey this can frequently be accomplished by maintaining a continuous drip. For this purpose the veins on the back of the forearm are preferred.

The next medical unit to mention is a new one—the Field Transfusion Unit. It has one officer, previously trained by the army at one of the blood transfusion bases in England. Through his depot in the field he maintained a constant supply of fresh blood, of universal donor type, in a refrigerated lorry. He was stationed at Corps level, and maintained for the more forward units as much plasma as they required.

The Field Hygiene Sections operated much as they did in the last war. Sanitation was of a high order. We were extremely grateful for their supervision in arranging small portable mobile baths, and for their instruction in the making of oil and water flash burners—the answer to our fuel problem in heating and cooking.

The Field Surgical Unit and the Field Dressing Station were both new units, designed to bring skilled surgical care forward, to reduce the time ele-

ment in certain cases of serious injury. Like the other units they were entirely mobile, and self contained.

The Field Surgical Unit was the glamour boy of forward units. The surgeon was well trained in general surgery; he was young and strong, and he had to be. In addition to his partner the anaesthetist, in the later stages of the campaign he enjoyed the comfort of a nursing sister as his operating room assistant. To him were dispatched with all speed the penetrating wounds of the abdomen, the severe compound fractures of the thigh, and the sucking wounds of the chest. It was life and limb surgery. He dealt with so-called priority I cases only. This unit required to be as close up as reasonable. It was unreasonable to choose to work under shell fire. This was necessary in certain instances such as the Anzio beach head.

Post-operatively these patients, especially the abdomens, required up to ten days' immobilization, and very careful nursing; so the Field Surgical Unit was always associated with another unit, such a combination being known as an Advanced Operating Centre. In achieving this the highly specialized Field Dressing Station was organized.

The Field Dressing Station was primarily a nursing unit. Frequently as many as 50-60 serious post-operatives were held, and by the time that number had accumulated, the Field Surgical Units attached had gone on to another unit which had moved further forward. When it became time for the rear Field Dressing Station to move up in its turn, the nearest Casualty Clearing Station from behind would have its advance party already busy reconnoitring a suitable location, and making arrangements to take over such immobilized casualties as had been left behind. And so it went on.

It was in this Field Dressing Station that the modern Florence Nightingale won her battle spurs, gave perhaps her greatest contribution, and earned for herself everlasting admiration and gratitude. Excellent as were our orderlies, no amount of training or skill could match the efficient handling of wounded men given by our splendid nursing sisters—even in battle dress. Ordinarily their most forward home was the Casualty Clearing Station, and such it is "on paper." But we had a vigorous and energetic D. D. M. S., who said it "could" be done, and it was.

All of the former units are parts of a Division. The last one to be considered is an Army unit which, in the field, operates under Corps Command. The Casualty Clearing Station is both an evacuating unit and a surgically operating unit. It was the parent home of the nurses who were loaned to the Advanced Operating Centres. Except when our base was very close to the front, as at the beginning of the Cassino battle and the drive up the Livi Valley, at which time all casualties possible were evacuated through our Casualty Clearing Stations direct to the hospitals in the Naples area, all battle casualties received their primary surgery here. If there were more priority I cases than could be looked after by the forward surgical units, the overflow came to us. Otherwise they were the ordinary run of casualties.

Among my impressions of this unit several features predominate. The close collaboration with the officer in charge of resuscitation was most essential. This officer kept his many eyes on the admission, the varying state of the casualties under his care, and the waiting list for the operating tent. In consultation with the surgeons he would dictate the order of priority.

Most of the operations were short, so that the anaesthetist was armed with a multitude of syringes containing pentothal sodium. There was an absence of ethereal vapours both in the Operating Room and in the post-operative tents. The resulting post-operative distress was minimized remarkably.

The actual surgery was simple in principle, and consisted mainly of:

1. Wound cleansing—an attempt to keep the contaminated wound from becoming an infected one, accomplished by a balanced nicety of excision and washing.

2. The removal of such foreign bodies as were readily accessible, including a particular search for clothing.

3. The dressing—wide open—a thin layer, not a pack, of vaselined gauze after insufflation of sulphur powder.

4. Immobilization—the constant use of plaster of Paris over padding, with immediate cutting of the plaster.

5. The compound fracture—the great value of the Tobruk splint—a varying combination of the Thomas splint with plaster and adhesive tape traction.

6. Incision of the penetrating wound. We were never sorry to have to perform lengthy longitudinal incision of the skin and fascia, nor to add transverse cuts to the fascia, in order to thoroughly open up the devitalized tissues commonly found beneath an innocent appearing penetrating wound. I mention this particularly because subsequently at a base hospital, when a patient with such a wound arrived from a Casualty Clearing Station, I have seen criticism offered. It was felt by those who had not seen these wounds at first hand, that a large scar could have been avoided by less heroic measures particularly as the wounds seemed clean and sweet with healthy granulations. But this radical procedure was absolutely necessary in order to reveal and eradicate the devitalized muscle, the contaminated blood clot and foreign bodies, as well as to relieve the oedema and restore active circulation. These penetrating wounds caused much more hidden destruction beneath the fascia than would appear from their small point of entry.

Some of the lessons that can be carried into civilian practice to-day concern the value of secondary closure of wounds, regarding which so much has already been written. Now, of course, a successful secondary or delayed closure within a few days can almost be guaranteed, with penicillin control. However, this success depends entirely upon adequate and thorough primary cleansing.

The successful healing of soft tissue wounds is tremendously augmented by plaster of Paris immobilization. It provides comfort to the patient, and it prevents meddlesome interference with dressings, especially in wards where it is not "the drill" to mask all present at a dressing, including the inquisitive patient.

In transporting patients with fractured legs, the proper respect for the Thomas splint, with a plaster of Paris slab posteriorly, and circular plaster bandages to encase the whole is a valuable procedure. In upper extremity injuries a body cast to include the flexed arm, well padded, provides great comfort.

Subsequently at a base hospital I was astonished to observe the degree of comfort and well being of those severely wounded patients freshly arrived from a Casualty Clearing Station, although they had been wounded a few days previously. I was even more surprised on opening up the cast in the Operating Room to find a beautifully clean wound. This was the common finding in most of the cases. In brief, it was due to prompt and efficient evacuation from the battlefield, early and maintained resuscitation, adequate primary surgical cleansing, comfortable evacuation to the rear and replacement of blood loss. Controlled chemotherapy from the time of injury onward, and early institution of penicillin therapy have made it possible to save many lives and to greatly shorten the healing process.

I suppose we have been spoiled by the plentiful supply of blood and plasma, without having to worry about cost, and yet its use has been definitely established as a necessity in many conditions. Ways and means should be found to maintain a blood bank in every community for our civilian needs. Successful healing of tissues was the rule, not only because the patients were young healthy men, but also because frequent blood examinations indicated the use of blood in combating anaemia, in maintaining adequate amounts of red cells, and of plasma protein.

Specialization. There was little place for treatment according to specialties because of tactical reasons. But there were three main exceptions: The head injuries called for special care. At one of the British Casualty Clearing Stations a trinity of maxillo-facial, neurosurgical and ophthalmological specialists were located. It was most comforting to know that the appropriate injuries could be directed there. The neurosurgeon formed an advanced echelon of a well co-ordinated organization which allowed for excellent follow up control. These cases were flown back to the base whenever possible—especially from the Western Front, and they travelled very well.

Psychiatric cases were grouped together for investigation by the divisional psychiatrist. Many of us felt that a large number of such cases should never have got back to the rear of divisional units.

Venereal disease cases were similarly concentrated. It was in Italy that we learned that the gonococcus can be immunized against sulpha drugs. The prophylactic doses enjoyed by the local population was held responsible for the blatant indifference which the infection showed to our therapeutic exhibition of the drug. But it became our turn to shout when penicillin was available for this use during the summer of 1944. It was like turning off a tap.

Gas Gangrene. All compound femora, buttock wounds, and severe muscle wounds were given 22,000 units of polyvalent serum at the Advance Dressing Station. Chemotherapy and penicillin treatment undoubtedly influenced these cases. There were many with demonstrable infection by the clostridia, both clinically and by the laboratory, whose wounds healed without gangrene developing—a form of cellulitis. To-day, the first clinical evidence of gas gangrene should not be the signal to prepare the patient for amputation.

Tetanus. I have yet to see my first case. Toxoid must surely be the answer.

Malaria for the most part was of benign type. It rapidly came under control after the therapeutic use of quinine. In a few cases with cerebral symptoms, recovery followed intravenous injection.

Atebrine or mepacrine was used as a suppressing agent, administered to the troops as a parade. No harmful effects were noted, although the pigment often appeared in the skin. Many who faithfully took the drug nevertheless developed malaria. Our conclusion as to the best protection was to avoid the mosquito whenever possible.

Relative to Professor Babcock's recent remarks on the effect of quinine, and its influence on the peptic ulcer patient, although no accurate statistics are at present available, I can say that among many thousands of sick soldiers examined, I cannot remember having seen a perforated ulcer.

It seemed there was nothing we could do about infective hepatitis. From all our studies we were unable to demonstrate any infective agent. The sickness demanded on an average a six weeks' period off duty. Our only treatment was dietary. There were some recurrences, especially if the patient returned to work and a full army diet before he had completely recovered. In these instances the condition was quite severe, with marked loss of weight. One of our officers had cerebral complications. His symptoms were similar to encephalitis and there were marked psychopathic changes. He was flown back to Sicily in a semi-conscious state, but subsequently made a complete recovery, and returned to his duties as a dental officer in the field.

Summary

The older doctors who saw service in the First Great War would have been heartened indeed to have experienced the medical work of this one.

Instead of having to deal with overwhelming numbers of casualties the medical units seldom had more than they could cope with at any one time.

Modern surgical equipment, used by highly trained personnel, was available in the field at the start of any battle.

The magnificent organization of the Blood Transfusion service made it possible for each regimental medical officer to have a supply of blood plasma with him at all times.

Intravenous anaesthesia; more extensive use of plaster of Paris immobilization; rapid restoration to health and well being by the administration of blood transfusions; the business like efficiency of the Canadian Nursing Sisters in the field: these accounted notably for the salvage of human life and happiness.

What a privilege to have been a part of such a service!

Intussusception In Children

Report of a Successful Primary Resection

A. GAUM, M.D.

Incidence:

Acute intussusception is essentially a disease of infants and small children; about 75% of the cases occurring in the first year—the highest incidence being between six and seven months. The condition is more than twice as common in boys as in girls, and the child afflicted with it is otherwise usually healthy.

Mechanism:

This has been the subject of much speculation. The modern hypothesis basing its arguments on the known production of intussusception by Meckel's Diverticulum and polypoid tumors, inclines to an organic explanation. It is thought that swollen lymphatic patches play the part of an irritant, and the predominance of the ileocaecal variety is attributed to the presence of large Peyer's patches in this region. The usual theory is that the polypus or lymphoid patches irritate the gut into strong peristalsis which drags the "foreign body" and its point of attachment distally—so starts the invagination.

Morbid Anatomy:

Typically, an intussusception forms a firm, curved, sausage shaped swelling composed of three concentric tubes or layers:

- (1) the entering layer
- (2) the returning layer
- (3) the ensheathing layer.

The former two constitute the intussusceptum and meet at the apex or more distal part of the invagination. The ensheathing layer forms the intussusciens and joints the returning layer at the neck of the intussusception with the concavity facing the mesenteric attachment, which at the same time drags it back towards the posterior abdominal wall. It thus constricts and twists the mesentery and sets up a congestion from the pressure on the veins, which is more marked at the apex and in the adjacent part of the returning layer. As a result, oozing of blood and mucus occurs into the bowel, and the apical part swells, sometimes enormously, thus obstructing the lumen. Later on, adhesions tend to form between the opposed serous surfaces of the entering and returning layers, and these adhesions, together with the apical swelling may seriously hinder reduction. Finally, the oedematous and congested intussusception is attacked by bacteria and gangrene may supervene. The sheath is not involved and acts as a protection. Sometimes, though very rarely, the entire intussusception is cast off as slough and a spontaneous cure results. More often the necrosis terminates in peritonitis.

Classification:

Actually there are three main forms:

- (a) Enteric—small gut into small gut; this accounts for about 10% of cases and occurs in older children and adults. Most of them show

an organic cause, e.g. an inverted Meckel's Diverticulum, an adenomatous polypus or tuberculoma or carcinoma.

- (b) Colic—colon into colon; this type occurs in older people (usual cause is polypoid carcinoma) and accounts for 5% of all intussusceptions.
- (c) Enterocolic—ileum into colon—the common variety in infants and embraces 85% of cases.
- (1) Iliocaecal—the ileum passing into the colon with the ileocaecal valve as the fixed apex.
- (2) Ileocolic—starts at the terminal ileum and then proceeds into the colon.
- (3) Enteric ileocaecal—starting as an enteric intussusception and becoming wedged in the ileocaecal valve, pushes this before it, and then proceeds as an ileocaecal intussusception, with the valve at its apex.

The common enterocolic intussusception of infants tends to traverse the greater part of the colon, swinging it around the attachment of the mesentery clockwise; the intussusception passes up the right colon, along the transverse, down the left colon, and may actually reach the rectum and even protrude through the anus.

Diagnosis:

In the common intussusception in infants, the clinical picture is usually very characteristic and errors of diagnosis are rare. The onset is usually sudden and typical, with severe pain, shock and initial vomiting. The child, generally a healthy male infant, suddenly screams with pain, draws up its legs and vomits. The face is pale, and the eyes widely dilated with fear. After a time the symptoms abate and the child seems better, but it is listless and may remain pale and shocked. This "interval pallor" is very suggestive. Very soon the colicky pains return and the child looks ill again and may have several such attacks of colic with varying intervals. Vomiting tends to occur with each attack but is rarely a pronounced symptom. The stools are very variable at any period; soon after the onset the child may pass a normal stool; subsequently faecal matter may be passed with blood, or only blood and mucus may be evacuated. Then in the absence of the bloody motions a finger passed into the rectum, is often withdrawn covered with blood and mucus. Careful examination of the abdomen reveals a lump, firm, and sausage-shaped in about three-quarters of cases. More often than not, this is felt in the transverse or ascending colon and it hardens during an attack of colic. Gentle palpation and a warm hand are essential. Occasionally, however, the intussusception cannot be felt, either because it is inaccessible (splenic flexure) or because the abdomen is rigid through crying. In such cases it is often palpated under anaesthesia.

Differentiale Diagnosis:

The conditions likely to be mistaken for intussusception are:

- (1) Henoch's purpura.
- (2) Simple colic.
- (3) Acute enterocolitis.
- (4) Tuberculous mesenteric glands which may cause pain, diverticulosis and a lump.

These are all of a more gradual onset and less acute. Where doubt arises a barium enema will provide conclusive evidence.

Treatment :

Everything depends on early and speedy operation. Every hour before operation and every hour at operation diminishes the chance of recovery. The techniques of operation are varied, depending on the condition found. Some might reduce under gentle traction, coinciding with a gentle squeeze on the apex. Sometimes it may be necessary to insert a finger into the neck of the intussusception between the entering and returning layers and sweep it round in this space, thus breaking down adhesions and facilitating the reduction. Sometimes where gangrene exists, and reduction is impossible, one might have to resort to resection.

After Treatment:

After operation the child is returned to its cot and a radiant heat cradle placed over it. Rectal or subcutaneous saline should be given if there is any evidence of shock, while a blood transfusion may prove a life saving measure in the worse cases. Breast feeding or the bottle can be started as soon as the child is able to take it. A nasal catheter should be passed in order to maintain the stomach in a state of decompression, during and after the operation. There can be little doubt that infants tolerate intubation poorly, but it is thought that the advantages outweigh the disadvantages, even with a very young patient.

Case History:

A white male, eighteen months of age was admitted to the City of Sydney Hospital on August 3, 1945, with recurrent attacks of abdominal colic, of fourteen hours' duration. The pain was extremely severe and sudden in onset.

The history is most interesting because only three weeks before this attack, the child had swallowed a coin and was brought to my surgery where he was fluoroscoped and the coin found to be lodged in the lower end of the oesophagus. A specialist was then consulted and an oesophagoscope was passed and the foreign body located and removed. The child was apparently well following this until three days prior to the present attack; I was consulted because the child was vomiting and the mother feared that possibly he might have swallowed some other foreign body. Fluoroscopy, however, revealed nothing at the time and it was not until the night of August second, that the child was seized with the severe and spasmodic colicky attacks. Because of previous intimidation, it was very difficult to palpate the child's abdomen. It was explained to the mother that the possibility of an intussusception or even an appendicitis would have to be considered, and a close watch would have to be made for any change in the child's condition.

On the following morning I was hurriedly called to the house and the mother exhibited a bloody mucous bowel movement. This left little doubt in my mind as to the diagnosis, and the child was immediately admitted to the City of Sydney Hospital.

Doctor Corbett of the X-ray department attempted to do a barium enema, but because of poor co-operation it was difficult to achieve a satisfactory result. The following, however, is his report: "Examination of the large bowel by means of the opaque enema, revealed that the column of barium

freely passed to a point in region of the midportion ascending colon where it stopped abruptly with the bowel at this point somewhat dilated—the appearance suggesting a localized obstruction due to intussusception at this point.”

A consultation was held and it was thought best that a laparotomy be done immediately. A white blood count at that time revealed a leucocytosis of 12,600; urine examination was negative; temperature was 100 degrees, pulse 150 and respirations 28. The heart and lungs were found to be normal.

In preparation for the operation an infusion of saline—25-c.c.'s were given and at the same time the child was typed for transfusion. Rectal examination could not reveal any mass but the presence of blood and mucus was noted on the examining finger. Operation was performed six hours after admission—drop ether was administered.

Relaxed under anaesthesia, a mass for the first time palpated in the region of the caecum. The abdomen was opened through a right rectus incision. Exploration revealed a mass of intussusception bowel in the region of the ileo-caecal junction. This mass was delivered and it was found that the ileum had intussuscepted into the caecum. After applying hot sponges to this mass and using gentle traction, the intussusception was reduced. The distal end of the ileum, for about four centimeters, was found to be thickened and discoloured. Hot compresses were applied to this portion of the bowel for about fifteen minutes, but because it did not return to its normal colour, and because it was felt that over exposure might jeopardize the child, it was decided to do a resection. The terminal four centimeters of the ileum and the adjoining portion of the caecum were then removed. The caecum was inverted by a purse-string suture and then covered over with two layers of Lembert sutures. Likewise the end of the ileum was inverted with a purse-string suture and two layers of Lembert sutures used. An open side-to-side anastomosis was then done between the ileum and ascending colon. Linen was used for the anchoring suture and double O for the anastomosis. The peritoneum was sutured with No. 1 plain catgut, the fascia with No. 2 chromic catgut and the skin with black linen.

Following the operation a blood transfusion of 250 c.c.'s was given. Continuous gastric suction with the Wangenstein tube was maintained for six days. Oxygen was given continuously by nasal catheter for the first three days and glucose saline intravenously, twice daily for the same period. The temperature remained at about 103 degrees and the pulse ranged between 150 to 160. After the fourth post-operative day there was a gradual drop in temperature and pulse, and on the seventh day the temperature and pulse became normal. Penicillin, 10,000 units every three hours was given mainly as a prophylactic against secondary infection. On the second and third days after operation water was given orally, on the fourth day bouillon, on the fifth day milk, after which a soft diet was given. The sutures were removed on the seventh day and the incision was clean and well healed. The child made an uneventful recovery.

The pathological report as given by Doctor Smith is as follows: “The gross and histological appearances here reveal a segment of small bowel (4 cm.) showing an acute inflammatory change. Although slightly suspicious, I can find no definite tubercles indicate of tuberculosis.”

Normal bowel activity returned on the third day after operation without laxatives or enema. He was discharged on August 25, and has been well ever since.

The factors militating against the accomplishment of primary resection have seemed so numerous, and so formidable, that the procedure has been condemned by many experienced surgeons. Unfortunately, the alternatives to resection in the presence of irreducibility and gangrene, are associated with an equally forbidding mortality and are anatomically and physiologically less sound.

REFERENCES

Rodney Meingot—Post-Graduate Surgery.
 Lawrence S. Fillis.
 Kenneth W. Warren—Irreducible intussusception in infants.
 S. G. O.—Volume 81, No. 4.

Minutes of the Semi-Annual Executive Meeting of the Medical Society of Nova Scotia, 1945.

THE semi-annual meeting of the Executive of The Medical Society of Nova Scotia was held at the Dalhousie Public Health Clinic, Halifax, N. S., on November 22, 1945, at 2.30 p.m.

Doctor A. E. Blackett of New Glasgow presided. The following representatives of the Executive and members of Council of the Canadian Medical Association attended: Doctors N. H. Gosse, W. L. Muir, H. G. Grant, P. S. Cochrane, G. A. Dunn, J. S. Murray, J. C. Acker, R. O. Jones, H. W. Schwartz, A. R. Morton, A. G. MacLeod, M. G. Tompkins, W. T. McKeough, P. E. Belliveau, J. J. Carroll, R. A. Moreash, D. F. McInnis, W. J. MacDonald, J. C. Wickwire, H. K. MacDonald, J. G. B. Lynch, W. E. Hirtle and E. J. Gordon.

The President called the meeting to order and the first item of business was the preparation of a letter to be presented to the Premier of Nova Scotia the next morning, giving him the views of The Medical Society of Nova Scotia on the Federal proposals dealing with Health Insurance. Late in October a letter had been sent to the Premier asking for an appointment Thursday, November 15th. The Premier phoned Doctor Blackett saying he could not possibly see the Executive on that day and suggested Friday (November 23rd). Doctor Blackett and Doctor Grant had had a long conference with Doctor Archer when he was in Halifax on November 15th and a draft was prepared for the consideration of the executive, the idea being that this committee, or a portion of the committee, would call on the Premier the following morning at ten o'clock and that the views of our Society be presented to him in the form of a letter. We had hoped until this morning that either Doctor Archer or Doctor Routley would be present, but they were unable to attend. Doctor Blackett stated that the Executive should all be in agreement and that the more unanimity the better. Doctor Blackett then read the brief and each paragraph was discussed in detail. He stated that the meeting on November 26th at Ottawa would not be the final conference, but only a preliminary one, and that what the Society wanted was to be represented on the Planning Committee.

It was unanimously voted that the letter to the Premier be sent as written.

(The letter is appended at the end of the first executive meeting.)

It was moved by Doctor J. G. B. Lynch and seconded by Doctor W. L. Muir that a representative from each branch society and a representative from the Committee on Economics should be the ones to present the letter to the Premier. Carried.

The following were appointed to go with the President and the Secretary to call on the Premier: Doctor N. H. Gosse representing the Halifax Medical Society and the Committee on Economics, Doctor M. G. Tompkins representing the Cape Breton Medical Society, Doctor P. E. Belliveau representing the Western Counties Medical Society, Doctor J. J. Carroll representing the Antigonish-Guysborough Medical Society, Doctor R. A. Moreash representing the Valley Medical Society, Doctor W. J. MacDonald representing the

Colchester-East Hants Medical Society, Doctor J. C. Wickwire representing the Lunenburg-Queens Medical Society, Doctor W. E. Hirtle representing the Cumberland Medical Society and Doctor J. S. Murray representing the Pictou County Medical Society.

It was moved and seconded by Doctors M. G. Tompkins and W. T. McKeough that this committee report back at the meeting of the general executive on Friday morning at eleven-thirty. Carried.

It was agreed that Doctor A. E. Blackett be the general spokesman with the privilege of referring questions to Doctor H. G. Grant, or the First Vice-President, Doctor N. H. Gosse, if it seemed advisable.

Doctor Blackett stated that at the last annual meeting the Society had authorized Doctor J. G. B. Lynch to represent The Medical Society of Nova Scotia at a meeting in Ottawa dealing with the free treatment of veterans, and asked Doctor Lynch to give a report on the meeting.

Doctor Lynch stated that the nine provinces were all represented at the meeting and they were in session for three days, and that a number of changes had been made in the set-up. At first it was given out to the public that returned veterans were to be treated for one year after being returned home. That has all been changed; these men are to be treated for life, and the veterans amount to 540,000. After considerable discussion and argument it was decided that they would have free choice of their physician, and with the exception of elective surgery they could be treated in any hospital but teaching hospitals. The general practitioner will have an opportunity of attending returned veterans and that fee will be paid by the D. V. A. The fees were increased in a number of instances. The women in the forces are also to be treated, also paediatrics comes under this, so it looks as though children will also be treated. The responsibility of seeing that charges are just, will be that of the branch societies, and the societies are going to be asked to appoint representatives to work with the P. M. O.'s. Doctor H. K. MacDonald was at a meeting of the Canadian Medical Association and we were all agreeably surprised at the increase of fees.

Doctor Grant moved a vote of thanks to Doctor Lynch for having given so much of his time to this matter. This was seconded by Doctor P. A. Cochran and carried.

Doctor A. E. Blackett: "The next matter is the annual meeting in 1946. We usually decide at the semi-annual executive meeting the place and date for the next year's meeting. You will remember at Kentville Doctor Routley said there was every advantage in the three Maritime Provinces having their annual meetings consecutively so that the Canadian Medical Association team could make the rounds and New Brunswick had asked them to inform Nova Scotia that they were in favour of a fall meeting."

After some discussion Doctor M. G. Tompkins moved that the annual meeting be held in Halifax in conjunction with the Dalhousie Refresher Course, if there is one, the first week in October, and that if there is no Refresher Course, that we meet in Kentville in October or whatever time the Executive thinks is agreeable. This was seconded by Doctor D. F. McInnis. Carried.

It was unanimously agreed that the Society sell advertising space at the next annual meeting.

The Secretary read the following letter.

New Waterford, N. S.
November 10, 1945

Dr. H. G. Grant
Secretary, Nova Scotia Medical Society
Dear Doctor Grant:

At a recent meeting of the Cape Breton Medical Society a motion to raise the annual fee from \$2.00 to \$5.00 was unanimously adopted. The constitution of the Society provides that this be ratified by the Nova Scotia Society before being finally adopted.

Would you kindly bring this to the attention of the Executive at the Kentville meeting?

Yours very truly
(Sgd.) F. J. Barton, Secretary-Treasurer

It was moved by Doctor J. G. B. Lynch and seconded by Doctor M. G. Tompkins that the Cape Breton Medical Society be authorized to increase their fees. Carried.

Doctor N. H. Gosse moved that the out-of-town members attending the Executive meeting be paid ten cents a mile, one way, and that in addition the sum of \$5.00 be paid to each member for hotel expenses. This was seconded by Doctor R. A. Moreash. Doctor H. W. Schwartz moved an amendment that the \$5.00 be increased to \$10.00. This was seconded by Doctor A. G. MacLeod. Carried.

The Secretary then read the following letter.

West Pubnico, N. S.
November 9, 1945

Doctor H. G. Grant
Dear Doctor:

I have before me your letter notifying me of my nomination again on the Historical Committee.

I have been on this Committee for a few years and very little is done.

I have an idea in my mind. I should think that a historical paper should be given at all our conventions, and if suitable, at the banquet—before the wives and daughters of the doctors of this province. You know yourself that medical history is important, and very much so in order to awaken interest among the members of the medical profession. We would have no English literature if it hadn't been for Shakespeare, Johnson, Milton, Pope, Goldsmith, etc. We would have no French literature if Corneille, Racine, Miliere, Voltaire, Chateaubriand had not lived and at college, the thing we all do, the great thing we all do is to study the lives of great men. Longfellow gives us the very incentive to this in his *Psalm of Life*, which you know very well,

“Lives of great men all remind us
We can make our lives sublime,
And departing leave behind us
Footprints on the sands of time.”

There is a young group of medical men growing in this province, and young men who want to make their lives “sublime.” Why not consider the feasibility of going at this in the right way by authorizing the Historical Committee to begin this study, so precious to us all and so important.

Do not believe that I wish to blow my horn—I am merely suggesting this to you and allowing you to mention this to your best advisors.

Yours truly
(Sgd.) J. E. LeBlanc

It was decided that this letter should go before the Historical Committee, and that no action was necessary by the Executive.

There being no further business the meeting adjourned at 4.25 p.m.

November 22, 1945

Hon. Angus L. Macdonald
Premier of Nova Scotia
Province Building
Halifax, N. S.

Dear Sir:

The Nova Scotia Division of the Canadian Medical Association has studied the proposals of the Federal Government submitted to the recent Dominion Provincial Conference on Reconstruction and in particular those proposals relating to Health Insurance.

In the event of your Government accepting those proposals, the medical profession of this province as represented by us, feels that it should make certain observations which at the moment appear important, and we would bid to present them as follows:

In the event of the acceptance of *The Planning and Organization Grant* we recommend that a strong committee be set up for its utilization, and that those who would be expected to give service under any system of Health Insurance, i.e. medical and allied professions and the hospital association; and the larger groups receiving service under any such system, be invited to nominate adequate representation to such a committee. It is also our view that the acceptance of this grant should be made unconditional. That is to say, that a study committee operating under this grant should not be restricted to the formulating of any plan provided in advance.

It is our view that the manner and detail of implementation of Health Insurance in this province should be subject to the recommendations of the Planning Committee and not necessarily restricted to any particular "stage."

We are further conscious of the fact that the costs of various benefits as stated in the proposals, are estimates only: we would therefore suggest that the clause (p. 31, b, ii) be made to read "One-half the additional *actual* cost incurred by each Provincial Government of providing each benefit."

We further recommend that the Planning Committee should consider the hospital needs of the province as part of its study.

The above recommendations are respectfully submitted for your consideration by the Nova Scotia Division of the Canadian Medical Association.

Yours sincerely

(Sgd.) A. E. Blackett, M.D., President
H. G. Grant, M.D., Secretary

The second semi-annual meeting of the Executive of The Medical Society of Nova Scotia was held at the Dalhousie Public Health Clinic, Halifax, N. S., on November 23, 1945, at 11.30 a.m.

Doctor A. E. Blackett of New Glasgow presided. Present: Doctors W. T. McKeough, G. A. Dunn, P. E. Belliveau, D. F. McInnis, W. E. Hirtle, J. S. Murray, J. C. Wickwire, W. J. MacDonald, W. L. Muir, J. J. Carroll, M. G. Tompkins, N. H. Gosse, H. G. Grant, E. J. Gordon, H. W. Schwartz, J. G. B. Lynch, A. R. Morton, A. G. MacLeod, R. O. Jones, R. A. Moreash, and W. G., Colwell, Chairman of the Dalhousie Refresher Course.

The President reported that the Premier had received the members of the Executive very courteously, and had called in Hon. F. R. Davis, Minister

of Health. Both the Premier and the Minister of Health said they felt that our opinions on the Dominion proposals were very reasonable and agreed very closely with theirs. The Premier said the meeting he was attending was not final and there would probably be two or three more before negotiations between the Dominion and the provinces were completed. There were a few questions asked in explanation of our letter. The Premier then retired and turned the meeting over to the Hon. Dr. Davis. From then on for about an hour there was a general discussion of Health Insurance including the present Dominion proposals. Doctor Davis invited the Society to keep in touch with him regarding future developments through our Committee on Economics. We left the Premier's office about 11.30 a.m.

Doctor J. C. Wickwire moved that the Economic Committee be authorized to keep in touch with the Provincial Government, and to report back to the Executive when necessary, and that Doctor Grant also be included in this Committee. This was seconded and carried.

The following letter was read by Doctor Blackett.

184 College Street, Toronto 2-B
November 19, 1945

To Secretaries of Divisions re Bulletins

Dear Doctor:

Herewith enclosed is a copy of a resolution passed by the Executive Committee with regard to Divisional Bulletins:

"That the General Secretary be instructed to communicate with each Division publishing a Bulletin, to inquire if the members of General Council, numbering 125 (more or less) could be added to the mailing list to whom their Bulletin is regularly sent, and at what cost to the C. M. A."

The suggestion came from our President, Dr. Gerin-Lajoie, and was considered by the Executive Committee to be a very excellent one. If all members of General Council receive the Provincial Bulletins regularly, they are more likely to become familiar with what is going on in medicine throughout Canada.

Would you please let us know at your convenience what the cost to the C. M. A. would be for this additional number of Bulletins published by your Division?

Yours sincerely

(Sgd.) T. C. Routley, General Secretary

It was moved by Doctor J. S. Murray and seconded by Doctor N. H. Gosse that this be turned over to the Secretary with authority to act. Carried. The following letter was next read by the President.

184 College Street
Toronto 2-B, Ontario
November 16, 1945

**To Secretaries of Divisions
Re Special Meeting of General Council**

Dear Doctor:

A letter from the Saskatchewan Division suggests that, if the Canadian Medical Association should consider it advisable to call a *special* meeting of General Council, some arrangement might be made whereby the expenses of delegates would be pooled.

In the discussion in the Executive Committee, it was pointed out that two points are involved:

1. The payment of travelling expenses to a special meeting of General Council.
2. If expenses are paid, would the Divisions be agreeable to a pooling arrangement?

It was duly moved, seconded and agreed that this matter be referred to the Divisions, asking them for an expression of opinion with regard to the principle involved, that is, whether such expenses would be paid by the Division or whether they should be a charge on the individual delegate.

A reply at your convenience will be appreciated.

Yours sincerely

(Sgd.) T. C. Routley, General Secretary

After considerable discussion it was moved by Doctor G. A. Dunn that the Secretary reply to this letter and say that we are not in a position to pay the expenses and we regard it as a legitimate tax on the Canadian Medical Association funds. This was seconded by Doctor J. S. Murray.

Doctor N. H. Gosse moved the following amendment to this resolution—that this matter be left to the President and Secretary for them to make such decision as they feel advisable after they receive information from the Canadian Medical Association. This was seconded by Doctor J. C. Wickwire. Carried.

Following some discussion on the question of alterations and amendments in the present Constitution and By-Laws of the Society it was moved by Doctor N. H. Gosse that at the next annual meeting there be introduced an amendment to the By-Laws, Article XIII, to enable the publishing of a notice of motion in the NOVA SCOTIA MEDICAL BULLETIN three months before an annual meeting to have the same force and effect as a special meeting under the wording of the present By-Laws.

Doctor M. G. Tompkins suggested that a levy of \$5.00 be put on each doctor for the next three years in order to raise funds for special purposes and this was unanimously agreed to.

Doctor R. A. Moreash moved that the Executive go on record as being in favour of the continuance of the Dalhousie Refresher Course. This was seconded and carried.

After some discussion regarding the collection of fees each year Doctor W. T. McKeough moved that the Secretary write to the Presidents or Secretaries of each Branch Society asking them if they would approve of a list of doctors who had not paid their fees, say three months after the drafts and bills had been issued, being sent to them, and if they would speak to each man personally asking him if he wished to continue his membership. Representatives from the Western Counties, Cumberland, Valley and Antigonish-Guysborough Medical Societies, who were present, agreed that this be done. Doctor N. H. Gosse suggested that as the Society has a Committee on Membership they should receive notice of what has been done so that there would not be any overlapping.

It was moved by Doctor J. C. Wickwire that if the Canadian Medical Association does not pay the expenses of the Society's representative to the Council that the Society pay the expenses of one member to the annual meeting or any special meeting.

It was suggested that members of General Council be appointed for three years so that they would become familiar with the workings of Council.

There being no further business the meeting adjourned at 12.55 p.m.

Halifax Medical Society "Welcome Home" Dinner.

ON October 17th, at the Nova Scotian Hotel, the Halifax Medical Society tendered a "Welcome Home" Dinner to its members who have returned from Active Service with His Majesty's Canadian Forces.

During the entire evening, which was one of the most delightful in the Society's history, there was not a single dull moment, reflecting great credit on the Committee responsible for such a clever and well-organized program.

Doctor N. H. Gosse, the President, who was Master of Ceremonies, spoke simply, but feelingly, of Doctor Gerald Ross Burns, who died in 1941, on Active Service, and the Society stood in silence for a minute in remembrance.

Eighteen members were welcomed on their return from Active Service, each being introduced by a member of the Society. These introductions were extremely clever, and contained a brief resume of each member's record while in the Forces, as well as other illuminating features of his career.

Two absent members, who have, as yet, not returned were remembered. They were Squadron Leader D. W. Rankin, R.C.A.F., and Colonel G. A. Winfield, of Canadian Military Headquarters.

Following are the members welcomed home, with the list of members introducing them:

	Presented by
Major T. B. Acker, R.C.A.M.C. - - - -	Dr. Don MacRae
Major C. M. Bethune, R.C.A.M.C. - - - -	Dr. W. L. Muir
Colonel J. G. D. Campbell, R.C.A.M.C. - - - -	Dr. F. V. Woodbury
Surgeon-Lieut. B. K. Coady, R.C.N.V.R. - - - -	Dr. R. O. Jones
Major H. C. S. Elliott, R.C.A.M.C. - - - -	Dr. J. W. Reid
Surgeon-Lieut. Commander	
H. D. Hebb, R.C.N.V.R. - - - -	Dr. J. W. Corston
Major M. Jacobson, R.C.A.M.C. - - - -	Dr. A. M. Marshall
Major C. M. Jones, R.C.A.M.C. - - - -	Dr. F. R. Little
Flight-Lt. B. C. LePage, R.C.A.F. - - - -	Dr. A. L. Murphy
Major C. J. MacDonald, R.C.A.M.C. - - - -	Dr. H. L. Scammell
Colonel V. O. Mader, R.C.A.M.C. - - - -	Dr. H. K. MacDonald
Lt. Col. F. F. Malcolm, R.C.A.M.C. - - - -	Dr. A. G. MacLeod
Lt.-Col. J. A. Nobel, R.C.A.M.C. - - - -	Dr. N. H. Gosse
Lt.-Col. H. D. O'Brien, R.C.A.M.C. - - - -	Dr. J. V. Graham
Lt.-Col. E. F. Ross, R.C.A.M.C. - - - -	Dr. W. A. Curry
Lt.-Col. T. M. Sieniewicz, R.C.A.M.C. - - - -	Dr. A. R. Morton
Lt.-Commander C. C. Stoddard, R.C.N.V.R. - - - -	Dr. J. W. Merritt
Major H. E. H. Taylor, R.C.A.M.C. - - - -	Dr. R. P. Smith

During the dinner, very pleasant music was provided by Harry Cochrane's orchestra, and two vocalists.

The highlight of the evening was when Doctor H. B. Atlee and Doctor W. L. Muir appeared in appropriate, though hardly regulation, uniform, and in original verse to the air "John Peel," recounted the exploits of the guests.

The Halifax Medical Society is to be congratulated on such an enjoyable and successful function, and to those members who were the guests, it was a truly heart warming welcome.

C. M. B.

THE NOVA SCOTIA MEDICAL BULLETIN

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Abbreviations used: Ab. for abstract; anon. for anonymous; biog. for biographical note; C. for correspondence; C. R. for case report; diagr. for diagram; Ed. for editorial; illus. for illustration; Pers. for personal item; Obit. for obituary; port. for portrait.

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PENICILLIN IN SUBACUTE BACTERIAL ENDOCARDITIS. Bloomfield, A. L., Armstrong, C. D. and Kirby, W. M. M.: *Jour. of Clin. Invest.*, 1945, 24: 251.

Bloomfield and his associates administered penicillin alone to 11 patients with subacute bacterial endocarditis. These patients had positive blood cultures; their strains of nonhemolytic streptococci were sensitive to penicillin in the test tube; their condition was not desperate and they agreed to stay in the hospital for from six to eight weeks. They were given 200,000 to 300,000 units in twenty-four hours by continuous intravenous drip for three weeks and thereafter 120,000 to 200,000 units per day in eight intramuscular injections (5,000 units per cubic centimeter of isotonic solution of sodium chloride) for three to five weeks. Most of the patients were treated for eight weeks without interruption. All of the patients were promptly made "bacteria free" except one who died early in the course of treatment. Eight were clinically cured of the infection after follow-up periods up to six months. One patient, apparently cured of the infection, died of cardiac failure. Cocci were seen in the depths of a scarred mitral valve. There were no clinical relapses or reinfections. Petechiae and emboli continued for some time after the blood cultures were negative. Renal lesions as evidenced by studies of urinary sediment were not as a rule completely eliminated by the treatment.

PENICILLIN IN PNEUMOCOCCIC PNEUMONIA. Meads, M., Harris, H. W. and Finland, M.: *New Eng. Jour. of Med.*, 1945, 232: 747.

Meads and his associates report the results of treatment with penicillin in a series of 54 cases of pneumococcal pneumonia. Penicillin was used alone in 37 of these cases, whereas in the remaining 17 cases it was given only after sulfonamide drugs had either failed to bring about a satisfactory response or produced untoward effects. Intermittent intramuscular administration of penicillin was the most feasible method and was generally used. Most of the patients with moderately severe symptoms were given from two to six injections of 15,000 units every two hours, and then the same amount was given every three hours until there was clinical improvement and the temperature had remained below 100 F. for twelve hours. Additional doses of 10,000 units were then given every three hours for another two or three days. In the severe cases the same general scheme of dosage was used except that a single dose of 5,000 or 10,000 units was given intravenously in some cases at the time of the first intramuscular injection and from six to twelve injections of 15,000 units were given at two hour intervals. The average total dose varied between 317,000 and 735,000 units. Bacteremia cleared rapidly. Fever and acute symptoms subsided in most cases within twenty-four to forty-eight hours. Subjective improvement often preceded the drop in temperature. There were ten deaths. Seven of these were of patients who were moribund at the time treatment was begun; the other three deaths were associated with severe complicating conditions. Purulent complications did not develop following penicillin therapy. Penicillin was equally effective in cases in which it was used alone and in those which had previously failed to respond to sulfonamides.

LOW BLOOD PRESSURE. Hamilton, J. G. M.: *Edinburgh Med. Jour.*, 1945, 52: 166.

Hamilton says that 90 mm. should be regarded as the lower limit of normal rather than the more commonly accepted figure of 110 mm. Systolic blood pressure in the range 90 to 110 mm. is frequently found in normal persons at all ages and is compatible with long life, good health and a high degree of physical efficiency. Adults possessing blood pressures in this range are unlikely to develop essential hypertension. Poor vasomotor control and systolic blood pressure of 90 to 110 mm. do not necessarily occur together. The symptoms of persistent fatigue, dizziness, and fainting attacks are not due to persistent hypotension, being frequently found in association with "normal" or elevated blood pressure. These symptoms are frequently due to psychoneurosis. He examined records of 53 patients whose predominant complaints were prolonged fatigue, lassitude, fainting turns, "blackouts", dyspnea and dyspepsia in explanation of which no organic lesion could be demonstrated and of which emotional disturbance was held to be the cause. Six had systolic blood pressures of 110 mm. or less; 13 had diastolic pressures of 70 mm. or less; 11 had diastolic pressures of 90 to 105 mm. With certain exceptions such as coronary thrombosis, paroxysmal tachycardia, cardiac tamponade and aortic stenosis, hypotension is not an expression of heart disease. Attempts to raise the blood pressure are usually unavailing and misguided as far as relieving the symptoms is concerned. When symptomatic benefit occurs, it is usually temporary. In view of the normal day to day fluctuations in blood pressure an increase of 5 to 10 mm. in the systolic pressure, sometimes hailed with joy as indicating successful therapy, cannot be regarded as of any significance. It is notable in psychoneurotic patients with blood pressure of 90 to 110 mm. that, at such times as the anxiety or other underlying emotional disturbance is less evident, not only are the general symptoms relieved but the blood pressure reading may be somewhat higher. Conversely, when the emotional disturbance again becomes prominent, the blood pressure may gradually fall to the lower levels. Postural or orthostatic hypotension is characterized by the occurrence of faintness or loss of consciousness on rising from the recumbent to the erect posture. Bradbury and Eggleston first described this disorder and gave details of 3 cases in which the blood pressures fell sharply from normal or elevated levels in the recumbent position to pressures of the order of 40 to 50 mm. systolic and 25 to 40 mm. diastolic in the erect position with loss of consciousness. It is usually considered that postural hypotension is due to a failure of splanchnic vasoconstriction to offset the gravitational effects of the assumption of the erect posture.

PENICILLIN IN TREATMENT OF INTRACTABLE BRONCHIAL ASTHMA. Leopold, S. S. and Cooke, R. A.: *Amer. Jour. of Med. Sciences*, 1945, 209: 784.

Leopold and Cooke present the histories of 2 patients with intractable continuous bronchial asthma. The first patient was given intramuscular injections of penicillin until a total of 1,375,000 units had been given, the daily dose being 100,000 units. The second patient was given the same daily dose for ten days. In the first patient, following treatment, there was complete remission of asthmatic symptoms for almost four months, although frequent

examinations of the lungs during this time revealed the almost constant presence of sibilant rales. No such remission had occurred in the fifteen previous years. An acute upper respiratory infection produced the expected recurrence of asthma; its subsidence has been followed by subjective relief, although sibilant rales were usually present. In case two, four months have elapsed with no subjective asthma. Twenty-five additional patients with intractable asthma have either been treated with penicillin very recently or are under treatment at the present time. Penicillin is not a panacea for all cases of asthma due to infection, for some patients have shown no improvement after penicillin therapy. It is possible that this drug may be helpful in treatment of two groups of asthmatic patients: those with both extrinsic and intrinsic asthma, provided the extrinsic factors are properly controlled, and those who have only intrinsic disease. It is possible that penicillin may be of value in that group of cases in which the bacteria recovered from the sputum or from the upper respiratory tract are shown to be sensitive to penicillin *in vitro*.

TUBERCULOSIS AS A MILITARY PROBLEM. Long, E. R.: Amer. Review of Tuber., 1945, 51: 489

According to Long, exclusion of tuberculosis from the Army in the First World War was carried out by physical examination. Auscultation of the chest was skilful and possibly superior in character to that practiced to-day. It was far inferior in the detection of tuberculosis to modern X-ray methods. While physical examination of the chest is an integral part of induction station examinations, maximum reliance is placed on the X-ray appearance. Nothing illustrates more clearly the value, and at the same time the limitations, of pre-induction X-ray examinations than a comparison of the admission rates for tuberculosis in the First World War and in the recent war. The rate in the war of 1914-1918 was approximately ten times that for the recent war. It must not be assumed, however, that the difference is entirely due to improved methods of detection in the recent war. Fewer cases, relatively, were to be excluded in the recent war, for the incidence of tuberculosis in the general population at the present time is approximately one-third of that prevailing in the period of the First World War. Cases developing in the United States Army in the recent war for the most part represent extension from small areas of infiltrative tuberculosis not previously detected. Extension from scarred and calcified primary lesions has not been demonstrated. Statistics suggesting an increasing amount of exogenous infection overseas have been reported in the Canadian army, but indications are not yet at hand of a comparable situation in the American army. The predominant type of tuberculosis occurring in the United States Army is the chronic, ulcerative, pulmonary form. Acute forms are relatively rare, at least in the white race, and up to the present, while numerous advanced cases have been returned from overseas, indications are not evident that climate or any specific environment is a factor in the development of fulminating disease. Great progress has been made in the evacuation of patients, particularly by air. All active tuberculosis is cause for discharge, but arrangements are in effect for preliminary treatment in the Army and indoctrination on the great importance of continuation of care after separation from the service and establishment of veteran's status.

DIABETES TOMORROW. Joslin, E. P., Root, H. F., White, Priscilla, Sheridan, E. P. and Bailey, C. C.: *Med. Ann. of Dist. of Col.*, 14: 63.

Joslin and his associates think that a consideration of the future of diabetes must be based on the startling increase in the number of people with diabetes in the population. Three causative factors are evident: (1) more intensive search for and discovery of cases by better methods, (2) the aging of the population and (3) the prolongation of diabetic lives as the result of better treatment. Formerly diabetes beginning before the age of 15 years was fatal in less than two years. Now with insulin such patients live long. Actually among 1,657 children seen and treatment begun since the discovery of insulin in 1922, only 137 have died. In the first seven years of this period 82 per cent of the deaths were due to diabetic coma, whereas the incidence of deaths in the last few years has fallen to only 18 per cent. Diabetic coma is preventable, but it continues to be a major cause of death. An analysis of 601 coma cases treated at the New England Deaconess Hospital between 1923 and 1944 has convinced the authors that it is the amount of insulin given in the first three hours of treatment which is of primary importance in determining the recovery or the death of the patient. Among 478 patients in coma treated from 1923 to 1940, 12 per cent died. When the insulin given in the first three hours of treatment was increased from 83 units to an average of 216 units among 123 consecutive cases treated between August, 1940, and May 1, 1944, the mortality was only 1.6 per cent. Important aids in treatment are (a) the use of isotonic solution of sodium chloride intravenously or subcutaneously (4,000 cc.) or, when necessary to overcome shock and impending anuria, up to 10 per cent or even 15 per cent of body weight and (b) gastric lavage. The administration of glucose is harmful in diabetic coma. There has been improvement in the treatment of juvenile and pregnant diabetic patients.

TREATMENT OF SPRAINS WITH ETHYL CHLORIDE SPRAY. Bingham, R.: *Military Surg.*, 1945, 96: 170.

Treatment of sprains and minor injuries in which the skin is not broken by means of surface anesthesia combined with active motion is an effective method of therapy. The ethyl chloride spray is more advantageous than injection of procaine hydrochloride. The technic is simpler and requires no special instruments, sterilization or special surgical skill. There are no systemic after-effects and no danger of introducing infection into the injured area from the needle or skin. Large painful areas can be treated. The one possible complication is frostbite, which can be prevented by application of camphor liniment to the skin after spraying. A mild reactive hyperemia seems to improve the local circulation and is followed by a decrease in the swelling of the joint. The patients secure symptomatic relief and a return of useful function to the injured part. The immediate recovery varies from 60 to 90 per cent, depending on the severity and duration of the injury. Disability averages less than three days. No strapping with adhesive tape or the application of plaster casts is required. The treatment will not mask fractures, severe deep tissue injury or disease. In this respect it is superior to the injection of a local anesthetic. The treatment is simple and not expensive, and disability and hospitalization are reduced.

E. DAVID SHERMAN, M.D.
Abstract Editor

Society Meetings

Cape Breton Medical Society

The last regular meeting of the Cape Breton County Medical Society was held at Harbour View Hospital, Friday, November 16th, at 8.30 p.m. Doctor Munro, President of the Society was in the chair, and the guest speaker for the evening was Doctor Kenneth M. Grant, Halifax. Doctor Grant gave papers on the diagnosis and management of pre-eclampsia and eclampsia. The papers were excellent, very timely and were followed by a fruitful discussion. There was an excellent attendance in spite of inclement weather.

The local Society has always enjoyed having the Halifax men come down and give papers, and its members are very appreciative of the co-operation they have received in getting guest speakers in spite of the added pressure of work incident to the war.

F. J. Barton, M.D., Secretary-Treasurer

Any Physician May Exhibit "When Bobby Goes to School" to the Public

Under the rules laid down by the American Academy of Pediatrics, their educational-to-the public film, "When Bobby Goes to School," may be exhibited to the public by any licensed physician in the United States.

All that is required is that he obtain the endorsement by any officer of his county medical society. Endorsement blanks for this purpose may be obtained on application to the distributor, Mead Johnson & Company, Evansville, Indiana.

Such endorsement, however, is not required for showings by licensed physicians to medical groups for the purpose of familiarizing them with the message of the film in advance of public showings in the community.

"When Bobby Goes to School" is a 16-mm. sound film, free from advertising, dealing with the health appraisal of the school child, and may be borrowed without charge or obligation on application to the distributor, Mead Johnson & Company, Evansville, Indiana.

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