

Pleurisy With Effusion – Its Significance and Modern Treatment*

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UNFORTUNATELY there is very little to be said about pleurisy with effusion that is new or startling. However, in a rather short, though concentrated experience in public speaking at medical gatherings, it has become evident that one way to arouse interest is to make a few startling and controversial statements at the outset.

This paper, therefore, will begin with two sweeping statements which are distinctly controversial.

The first is this—"Pleurisy with effusion is not, in itself, a disease entity."

The second is this—"The frequently heard statement that pleurisy with effusion is tuberculosis until proven otherwise, is a dangerous one."

Let us take up the first of these two statements.

It can be demonstrated that, if one were to collect a large number of cases of pleurisy with effusion, one would find that, except in an extremely small percentage, the source of the pleural effusion did not arise in the pleura itself, but in the lung, heart or oesophagus, the chest wall, or an extrathoracic organ. Pleurisy with effusion is an out-pouring of fluid by the pleural membrane in response to some noxious stimulus. This stimulus may be irritative, dynamic or miscellaneous. If irritative, it may be

- (a) Infective
- (b) Traumatic
- (c) Neoplastic
- (d) Other

This stimulus to the out-pouring of fluid may be also dynamic, a point to which reference will be made later.

Let us discuss the etiology of pleurisy with effusion under the headings just outlined.

(1) Let us take up the cases in which the precipitating factor is irritative. As pointed out, this irritative stimulus can be (a) infective, (b) traumatic, (c) neoplastic) or (d) other.

(a) The infective causes of pleurisy with effusion are, of course, tuberculosis, bacterial and viral pneumonias, lung abscess, and other inflammatory processes within the lung.

(b) Injury to the chest wall may in many cases result in haemothorax but, in some cases, where the injury is not lacerating in character and there is no bleeding, the response to trauma may be a serous pleural effusion without blood.

(c) Another irritative cause of pleurisy with effusion and one of the most common causes, is tumour. This can, of course, occur in the lungs, e.g. bron-

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chogenic carcinoma. However, there is one primary tumour of the pleura that can lead to pleurisy with effusion, presumably by irritation, and that is mesothelioma of the pleura. It would appear that mesothelioma of the pleura is practically the only condition leading to pleurisy with effusion that arises in the pleura itself.

(d) Other. Finally, there should be mentioned one additional irritative cause of pleurisy with effusion which is frequently ignored, that is, pulmonary infarction. This condition, and the resulting pleurisy with effusion, are becoming more and more frequently recognized; and, since the infarction occurs in the lung, and produces a pleural effusion, presumably by irritation, it points up again the accuracy of my original statement that practically all cases of pleurisy with effusion arise elsewhere than in the pleura itself. In this connection, it should be pointed out that the effusion in pulmonary infarction may be blood-tinged. Consequently, not every blood-tinged pleural effusion is indicative of neoplasm.

(2) Dynamic—As mentioned earlier, the precipitating cause of pleural effusion may be irritative, dynamic or miscellaneous. Since the pleura is a semi-permeable membrane, fluid can penetrate into the pleural sac as the result of alteration of pressure relationships on the opposite sides of the pleural membrane. The outstanding example of this type of pleural effusion is that which occurs in congestive heart failure. This is a rather frequent cause of pleural effusion and should not be ignored. Furthermore, this again points up the original statement that the source of pleurisy with effusion is practically never within the pleura itself. In the case of congestive heart failure, the original source may be classified as being in the heart, or at least in the pulmonary vascular bed.

(3) Miscellaneous—A few miscellaneous causes of pleurisy with effusion should be mentioned. These include rupture of an intrathoracic viscus, such as the oesophagus or the thoracic duct. Papers describing spontaneous rupture of the oesophagus are becoming more and more frequent in the thoracic surgical journals these days, and this should certainly not be ignored as a cause of pleurisy with effusion. Rupture of the thoracic duct happens infrequently, but when it does occur, it is of extreme importance, and I believe that Dr. V. D. Schaffner, has had a certain amount of experience with this condition. Naturally, rupture of the thoracic duct will result in a chylous effusion, a point which will be discussed later.

Finally, an intra-abdominal organ may be the source of a pleural effusion. This is extremely rare, but one could quote rupture of an amoebic abscess of the liver into the pleural cavity as a very occasional cause of a pleural effusion.

It is true that many of the sources of pleural effusion that have been mentioned are not common; in fact most are far less common than tuberculous pleurisy with effusion. They are mentioned not to create confusion, nor to upset a neatly-packaged conception in our minds, but for two reasons. First, because they exist and must be treated with diagnostic respect; and secondly, to emphasize my second original statement, that it is unsafe to stand or fall with the conception that "pleurisy with effusion is tuberculous until proven otherwise."

The statement that pleurisy with effusion is tuberculous until proven otherwise is based on statistics. As such, it suffers from the common fallacy, inherent in many statistical summations, of ignoring the source from which the statistics are collected.

It is quite true that pleurisy with effusion will be most frequently tuberculous in origin if the statistics are those collected by a tuberculosis institution or by a Department of Health. The statement will be distinctly and glaringly untrue, however, if the statistics are collected from a general hospital or from an office practice of medicine.

To illustrate this point, it is worth quoting to you a report of a statistical study of 436 patients with pleurisy with effusion, which appeared in the *New England Journal of Medicine*¹ in January of this year. These figures were collected at random from the charts of a general hospital. Most of us may be rather surprised to note that in this study the most common cause of pleural effusion was not tuberculosis. Of the 436 cases of pleural effusion, actually 50 per cent were caused by a malignant neoplasm, mostly carcinoma of the bronchus. 10 per cent were the result of congestive heart failure, 10 per cent were the result of infections, including tuberculosis, so that it is quite clear that tuberculosis played a very small part as a cause of pleurisy with effusion in this particular collection of figures. Twelve per cent were caused by miscellaneous conditions excluding tuberculosis; and the final 18 per cent were the result of undiagnosed conditions, in which tuberculosis had apparently been excluded. It is quite clear, therefore, that, depending on the source from which statistics are collected, tuberculosis may play a very large part as a cause of pleural effusions, or it may have a very small and unimportant role.

Having made a broad and sweeping generalization, I should now like to particularize. I have no intention of suggesting that tuberculosis is unimportant as a cause of pleurisy with effusion; actually the contrary is true. But the fact is that the statement "Pleurisy with effusion is tuberculous until proven otherwise", has been so heavily emphasized that there has arisen a tendency to disregard the last three words, "until proven otherwise," and to transform the statement into "Pleurisy with effusion is tuberculous." It is this tendency which is to be deplored. It is true that, in any given case of pleurisy with effusion particularly in the younger age group, if no other cause can be found, the effusion is probably tuberculous. But this is no occasion for disregarding the other causes. It might therefore be wise, if we require a succinct statement for teaching purposes or purposes of emphasis, to alter the statement to something like this: "So-called idiopathic pleurisy with effusion is almost always tuberculous."

I think we have established rather clearly that, in the overwhelming preponderance of cases, the source of pleurisy with effusion is not the pleura itself. I think I have also established the fact that the statement "pleurisy with effusion is tuberculous until proven otherwise", is one which must be handled with great care, and with due regard to the source from which statistics are collected.

The second part of this paper has to do with the modern treatment of pleurisy with effusion. Since I have already indicated that pleurisy with effusion has so many basic causes, it is quite clear that treatment must be con-

sidered with due regard to the diagnosis. I propose, therefore, to discuss this section of the paper as the management of pleurisy with effusion, to fall into two parts—(1) diagnosis and (2) treatment.

(1) *Diagnosis.* In view of the diverse aetiology of pleurisy with effusion that I have stressed, any discussion of the diagnosis must of necessity be rather sketchy. Nevertheless, I should like to take a few moments to stress certain diagnostic points which I have found to be very helpful.

(1) *Physical Examination.* The usual physical signs of pleurisy with effusion are obvious to any trained observer, and, in any discussion of pleurisy with effusion, physical examination is usually passed over lightly. However, I think a word of caution is in order here. We should not "sell physical diagnosis short" in pleurisy with effusion. There are at least two diagnostic points that I should like to stress here—and both are based on physical examination. One of these is in connection with clubbing of the fingers. In my experience, clubbing of the fingers never occurs in tuberculous pleurisy with effusion. When the diagnostician notes clubbing of the fingers in a patient with pleurisy with effusion he should immediately become suspicious of one of two conditions. They are:

(a) *Empyema*—and I can recollect a patient who was treated for several months as a case of tuberculous pleurisy with effusion, without aspiration, and who was subsequently admitted to our hospital. One of the obvious features in her physical examination was clubbing of the fingers, which made us immediately suspicious of empyema, the presence of which was confirmed by the aspiration of 1,000 cc. of thick purulent material from the pleural space. The second condition whose presence is suggested by clubbing of the fingers is:

(b) *Pulmonary Neoplasm.* In other words, therefore, when clubbing of the fingers is noted on physical examination in a case of pleurisy with effusion one should be suspicious of either empyema or carcinoma of the lung.

The second diagnostic point is that physical examination is the only procedure, or at least the simplest procedure that may classify a pleural effusion as due to cardiac disease with congestive failure, rather than a condition arising in the lung or the pleural space.

(2) *X-Ray of Chest.* The diagnostic procedure which is usually carried out earliest in a case of pleurisy with effusion is the chest X-ray. I mention this merely to indicate that it is surprisingly uninformative in most cases. As a general rule, X-ray examination of the chest indicates that a pleural effusion is present, but usually gives no information as to the cause or underlying background of the effusion.

(3) *Diagnostic Aspiration.* This is probably one of the most important procedures in the aetiological diagnosis of pleurisy with effusion, even though it is a very old and undramatic procedure. Perhaps for these reasons, it has been ignored in a surprising number of cases. The case that I mentioned a few minutes ago in connection with the discovery of an empyema is a case in point. Had this patient's chest been aspirated months previously, the true diagnosis would have been obvious at a glance. I should like to stress, therefore, that of all things, diagnostic aspiration should not be neglected, in any case of pleurisy with effusion. A very large amount of valuable information may be obtained by this procedure. For example:

(a) The character of the fluid may be determined, that is, whether it is serous, purulent, chylous, etc.

(b) Bacteriologic examination of the pleural fluid may aid in the diagnosis of tuberculosis or other infective cause. Here I should like to make a rather important point. In a tuberculous pleural effusion, if one expects to demonstrate tubercle bacilli, one must remove all the fluid, centrifuge it, and examine the sediment. One cannot expect to demonstrate tubercle bacilli in a test-tube-full of pleural fluid. It is commonly stated that it is difficult to demonstrate tubercle bacilli in a tuberculous pleural effusion. If the method outlined is followed I believe that tubercle bacilli will be demonstrated in a large percentage of cases.

(c) Cytologic examination of the pleural fluid may help in ruling out or establishing the presence of a pulmonary or pleural neoplasm.

(4) There are certain more recent and more specialized investigations that may be of assistance in establishing the basic cause of a pleural effusion. These are as follows:

(a) Scalene Node Biopsy. This is not always of assistance, but it is surprising how often this procedure may give one a diagnostic lead, particularly in cases of tuberculosis or pulmonary neoplasm.

(b) Pleural Biopsy. This may be done in one of two ways: (i) Needle Biopsy. Biopsy of the parietal pleura may be carried out using a Vim-Silverman needle, a procedure which may, at times, aid in the diagnosis of tuberculosis or neoplasm as a background for the pleural effusion. I have had no experience with this method, but it is quite obvious that in certain cases it may be of great help. In this connection, I would refer you to a recent paper by Nicholas DeFrancis and others,² which appeared in the *New England Journal of Medicine* in June of this year, in which two cases of tuberculous pleurisy were diagnosed by needle biopsy of the parietal pleura when bacteriologic investigation had been of no assistance. (ii) Pleural biopsy may also be carried out through a small thoracotomy incision. In this connection, I would refer you to a recent paper by Small and Landman³, in the *Journal of the American Medical Association* in July of this year. This report discusses the results of pleural biopsy in five cases in which the aetiology of a pleural effusion could not be established by bacteriological methods.

I mention these procedures not to indicate that they are usually required, but merely suggest that our diagnostic resources are not exhausted after aspiration and bacteriologic and cytologic examination of pleural fluid. (iii) At this point, I should like to take a few moments to discuss actual diagnostic thoracotomy in pleurisy with effusion. As a result of the numerous advances that have been made in thoracic surgery in recent years, diagnostic thoracotomy has become much more common, and is now being extended to the etiologic diagnosis of pleurisy with effusion. In this connection, a very interesting paper by Stead and his co-workers⁴ appeared in the *American Review of Tuberculosis* in April of this year. In this investigation, the writers, for certain reasons, did diagnostic thoracotomy in 15 patients with tuberculous pleural effusions. In 12 of these 15 cases, a definite parenchymal tuberculous focus was actually found. In these cases, it appeared that the cause of the pleurisy was actual rupture of a caseous parenchymal nodule into the pleural space.

I should like to stress this point, not for the purpose of indicating that all pleural effusions should be diagnosed and treated by thoracotomy, but to emphasize that a very large proportion of tuberculous pleural effusions are caused, not by some mysterious agency such as pleural sensitization, but by the presence of an actual tuberculous focus in the lung, which has ruptured into the pleural space. In other words I submit to you that tuberculous pleurisy with effusion is actually pulmonary tuberculosis complicated by an effusion, not an entity in itself. This is the reason why statistics always indicate that pleurisy with effusion will be "followed" (and I place the word "followed" in quotes) by pulmonary tuberculosis in a large proportion of cases. It is not a case of pleurisy with effusion being "followed" by tuberculosis. It is the case that pulmonary tuberculosis was originally present, either masked by the pleural effusion, or of too small extent to be visualized by X-ray. If we accept this as a usual situation, and I think we must, we are being somewhat remiss in our treatment of tuberculous pleurisy with effusion. It would appear from this study, that tuberculous pleurisy with effusion should be treated as actual pulmonary tuberculosis. That being the case, perhaps we should treat our patients with pleurisy with effusion longer and more intensively than we have done in the past.

Treatment. Since I have stressed throughout this discussion that pleurisy with effusion is never primary, and is brought about by a variety of causes, I have placed myself in the unfortunate position of being unable to outline a routine regimen of treatment in this condition. It is obvious that, if pleurisy with effusion has many causes, it is not the pleurisy with effusion which must be treated—it is the underlying cause to which our therapeutic efforts must be directed.

(A) For example, in tuberculosis, we believe in aspirating pleural fluid so long as the fluid continues to reform. But, other than this, we treat our patients with pleurisy with effusion in the same way as those with pulmonary tuberculosis, namely by bed rest, antimicrobial therapy, and surgery. In the case of pleurisy with effusion, the surgery should consist of decortication, and resection of any tuberculous foci which may be present in the pulmonary parenchyma.

(B) If the pleurisy with effusion has its origin in pneumonia, either viral or bacterial, it is the pneumonia rather than the effusion which must be treated. In other words, the patient must have bed rest, nursing care and antimicrobial therapy. If this pleural effusion becomes an empyema, it must, of course, be treated by topical and general antibiotics or by enzymatic digestion with either streptokinase-streptodornase or trypsin, or, at a later stage, surgery may be necessary, such as open thoracotomy or decortication.

(C) If the effusion has a neoplastic origin, it is the neoplasm which must be treated by surgery, radiation, radioactive gold or some similar procedure.

(D) If the pleural effusion has its origin in congestive cardiac failure, it is the heart which must be treated, for example, by digitalis, diuretics, and a low sodium diet. In such cases, it is usually wise to aspirate the effusion, at least on one occasion.

(E) If the pleural effusion has its origin in a pulmonary infarction, treatment must be directed specifically to the prevention of further embolism and

infarction, usually by the use of anticoagulants or vein ligation, or both.

(F) Spread to the pleural cavity of fluid from other intrathoracic organs may occur as a result of rupture of the thoracic duct with chylothorax. In such a case, it is the underlying condition that is treated, (i.e., the rupture of the thoracic duct) by aspiration, high fat diet, surgery, or all three. A condition that is now receiving widespread emphasis in the literature as I mentioned earlier, is spontaneous rupture of the oesophagus, which usually results in a pleural effusion. In such a case, treatment is directed at the underlying condition, and consists of emergency surgery to close the oesophageal rupture.

(G) If the pleural effusion is traumatic in origin, usually resulting in a hemothorax, again it is the underlying condition which is treated, and surgery is frequently required to close a bleeding vessel. If it in such cases also, that enzymatic digestion assumes great importance, and many cases have been reported of satisfactory treatment of haemothorax by the use of SK-SD or trypsin.

If there is any feature of this discussion that strengthens my thesis that pleurisy with effusion is practically never primary, I believe that it is this outline of treatment. It is quite obvious that every point in this discussion of therapy indicates that treatment of pleurisy with effusion is never directed toward the pleura itself, but always consists in the treatment of the underlying condition that has resulted in the pleural effusion.

To summarize, therefore, I shall merely re-word the two sweeping and controversial statements that I made at the beginning of this discussion and which I hope are now no longer considered controversial; namely, (1) that care must be exercised in interpreting the statement that "pleurisy with effusion is tuberculous until proven otherwise" and (2) that pleurisy with effusion is practically never primary, even when it is tuberculous in origin.

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Dermatology for the General Practitioner

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DERMATOLOGY is not emphasized in the teaching of medicine, and once in practice the average general practitioner seldom gets time to take even a short course in the care and treatment of skin diseases. He therefore tends to depend upon what he can read in books and to use the preparations which the pharmaceutical firms recommend. However a large number of his patients put up with a lot of suffering, discomfort, and loss of time from work because of skin conditions many of which would be quite amenable to treatment, if the attending physician would just take time to study the subject of dermatology a little more thoroughly. This article is an attempt to clarify the subject to some extent for the benefit of those who have not as much time to study it as the writer. It seems best to write it in the first person as though I were talking to you.

In the first place do not be confused by the name-calling which is done by dermatologists. I think this has done much to prevent the average doctor from becoming more familiar with the nature and treatment of skin diseases. For the most part this labeling of skin diseases is a rather old fashioned way of describing the appearance of the lesions (either gross or microscopic), and the description is usually in Latin! Very frequently this description, which is called a diagnosis, reveals nothing concerning the actual nature or cause of the condition so described. Right here some of my fellow dermatologists might well cry out with horror, but please note that I am not saying that it is not important to diagnose skin diseases but merely that the names usually applied to them do not solve anything! Consider an example or two. One common "diagnosis" is *erythema multiforme*, which states in Latin that the patient has red blotches of many shapes. Any grandmother could have made the same diagnosis,—in English! *Dermatitis* merely means an inflamed skin. *Eczema* is an old fashioned name for a variety of appearances and reactions. *Alopecia areata* merely means patchy baldness. *Psoriasis* is the label applied to a well known appearance, but gives no explanation of the existence of that appearance. These examples should serve to illustrate what I mean,—that you have done nothing (and the dermatologist has done nothing) to relieve the patient's condition by applying such names. Certain ideas and implications are often associated with these names. Sometimes these are very helpful, and sometimes they stand in the way of any real understanding as to what is really the matter with the patient's skin. Suppose that for a moment you forgot about all of these names and study the patient's actual condition with a certain idea or philosophy in mind, using the names only at a later date if, as, and when, they seem to be helpful.

I suggest that when you see an abnormal area of skin you should try to answer two questions. "Against what is this area of skin reacting?" Which of several types of reaction is it?" This suggestion is based on the underlying philosophy of sickness which may be summed up in the following sentence. "The signs and symptoms of diseases which are not due to actual destruction of tissue are usually due to the reaction of the body as a whole, or of some organ, against some offending substance or force."

This reaction may be an increase of some normal function, a decrease of some normal function, or an unaccustomed function or activity.

The skin is a large organ (some say the largest). As such it takes part in the biochemical reactions of the body. Being on the outside it probably meets more contactants which are actual or potential trouble makers than does any other organ. As a matter of fact one of its chief functions seems to be to meet such and deal with them. In this connection Sulzberger has coined the phrase "the brave skin." A number of years ago I published the following general classification of skin diseases which I find most helpful in their investigation and treatment. The majority of abnormal conditions of the skin represent *reaction against* one or more of the following:

1. Living offenders:
 - (1) Parasites, animal or vegetable.
 - (2) Bacteria.
2. Physical offenders:
 - (1) Mechanical, as by light blows, scratches, rubbing, etc.
 - (2) Forces, like heat, cold, electricity, X-rays.
3. Chemical Substances:
 - (1) Externally applied:
 - a. Destructive
 - b. Allergens
 - (2) Endogenous:
 - a. Syphilis and Exanthemata.
 - b. Allergic Dermatoses—Drug reactions, Food allergies, etc.

In addition to the majority of skin diseases which can be fitted into this classification there is a small group which may represent the reaction of the skin to the *lack* of certain substances, such as vitamins, hormones, etc.

Whether or not you apply one of the accepted names to the condition you are going to treat, if you can fit it into the general classification just given you will have gone a long way toward knowing what type of treatment to use. Also whether to help you to give it a name or to classify the type of reaction, you will be greatly aided by careful consideration of some of the following:

Area of skin affected.

Appearance of the reaction.

Subjective symptoms.

Signs and symptoms in other organs and in particular the history.

Skin Reactions to Living Offenders

It seems hardly necessary to state that the treatment for skin reaction to living offenders must include destruction or removal of the offender without further irritating the affected skin. However the last part of this statement is often ignored and preparations used which actually do cause dermatitis.

Probably the commonest animal parasite disease is scabies. Most practitioners recognize this but it is not always easy to be sure whether a certain type of allergic skin reaction is or is not due to scabies. I have frequently seen cases which have been treated as scabies with some persistence. If such a case does not respond to a few treatments of Benzyl Benzoate or other good scabicide it is always well to consider the possibility that condition is not due to a.

living offender at all. In any case it is well to remember that people vary greatly in their degree of reaction to the presence of the itch mite. Some skins seem to be very little troubled by its presence, whereas others will react with considerable violence around each tiny insect. In addition a degree of bacterial infection may add to the inflammatory reaction and require suitable treatment. Do not forget that a few people may develop allergic (sensitivity) dermatitis to the applications you are using to treat the original scabies.

Insect bites can be confused with what may more properly be called diseases of the skin. In a child or adult which associates with dogs or cats or who spends time on a sandy beach if an eruption develops in isolated spots and especially if it is on the lower leg it is always well to keep in mind the possibility that it is due to insects. The appearance should be some guide and one must often overcome the attitude of the patient or the patient's parents that you are implying some lack of cleanliness by suggesting the possibility of insects being the cause of the trouble. It often calls for some diplomacy to persuade the mother of a very clean little child to investigate such possibility. The history can be a great help but is often quite hard to interpret. I well remember the little girl who on several occasions had developed her rash within a few minutes after being bathed and taken outdoors in a completely clean change of raiment. About two days after I had repeatedly assured the mother I thought the rash was due to insect bites, she called up to tell me that she had discovered in the drawer in which she kept the child's clothing, *and only in that drawer*, a colony of minute insects!

The subject of skin irritation caused by plant parasites or fungi is often confused by articles and books which go into the subject very minutely. This is helpful for the specialist who may need to discover the particular type of fungus involved. It seems needlessly complicated however to spend time discussing the *locality* involved and labelling the condition as *tinea corporis*, *tinea cruris*, *tinea tonsurans*, *tinea barbae*, etc. The important thing is that the condition is a reaction to the presence of fungus, and as already suggested treatment should aim to kill out this fungus and at the same time soothe the reacting area of skin. In the writer's experience ung hydrarg ammoniatum is still one of the best preparations to meet these two requirements, although one or two of the newer preparations seem to be very useful if somewhat more expensive. It is well to advise the patient to apply the ointment on the healthy skin a little beyond the advancing border.

In the rare case where the fungus is of some special type which does not respond to simple treatment both you and your patient may be much further ahead by having a consultation with a dermatologist. For example, there have been some quite severe *epidemics* of audouini infection with microsporon in Toronto and some other parts of Canada but the writer has not heard of this condition having occurred as yet in the Maritimes. This condition can be diagnosed by the use of a Wood lamp and must be taken much more seriously than the average tinea. Treatment often includes X-ray epilation.

Bacteria are practically always present in and on the skin and mucous membranes. They are also available from such external sources as dust, clothing, fingernails, etc. In fact they remind one a bit of the famous toast to the ladies, "we can't live with them, we can't live without them"! While it is true

that some bacteria elaborate severely poisonous and destructive materials (toxins) which actually destroy tissue cells, probably the majority of skin lesions which are due to the presence of bacteria merely represent the intense inflammatory reaction developed by the affected tissue. Vessels dilate, serum permeates through their walls among the cells (swelling) or even out to the surface of the skin (weeping) and the leucocytes migrate. Isolated pimples, widespread superficial pustules (pyoderma), furuncles, carbuncles, can be the result. Surgical interference is not required so much now as at one time in the latter two conditions. The systemic use of antibiotics added to local treatment, such as heat, and mild non-irritating antiseptics often control the immediate situation very well. A warning should be given at this point that it is *never* wise to use penicillin on the surface of the body, as there is too great a risk of sensitization. On the other hand some of the new antibiotics such as tyrothricin, polymixin, bacitracin, and neomycin are reasonably safe to use. Various combinations of these are available. Terramycin and Erythromycin may also be used.

Unfortunately there is frequently a tendency on the part of certain patients to have repeated *boils* and even repeated groups of them. In this case while it is true that the patient is probably spreading infection to some extent it is also true that his primary problem is that he seems to be lacking in ability to make enough antibodies to protect himself. Of course, it is wise to do a urinalysis and make sure such a patient is not diabetic. Apart from that I find it is always possible to immunize such a patient by the high dosage method of bacterial antigen plus antibody ('Serobacterins'). Since the causative organism is usually staphylococcus or streptococcus any one of the several preparations containing these can be successfully used. The important thing is to use large enough doses. This last statement may be considered a personal opinion and open to controversial remarks. It is however actually a question of fact rather than of opinion and is open to demonstration rather than argument. While it is true that staphylococcus toxoids or standard staphylococcal vaccines or so-called autogenous vaccines will help some of these patients I have seen too many who have been given one or more of these antigenic preparations without marked benefit, and who cleared up entirely on the treatment I have described, not to feel sure that it is the best immunizing treatment available for such conditions. If you do not wish to follow me in this matter, but prefer to learn the hard way (hard on the patient!) the field is wide open! I have seen numerous patients whose total count of boils amounted to several score and whose doctors had been quite content to treat them with penicillin! This is treating the germ and not the patient, and just isn't good enough in the light of our modern knowledge of the immunity processes of the body.

Erysipelas is an acute localized inflammation of the skin in underlying tissue. Sulfa drugs and antibiotics have minimized the severity of this condition. I would like to stress more than the treatment of the condition itself, the fact that all inflamed discrete bordered conditions around the face are not necessarily erysipelas. I have occasionally been consulted by patients who had such a facial eruption with no temperature or other systemic symptoms, and who claimed they had suffered from a similar condition a number of times in the past, when it had been diagnosed as erysipelas. The condition seemed

to be rather a sensitivity (allergic) phenomenon, probably due to something absorbed from streptococci located elsewhere. It responded very well to high dosage vaccine therapy and after such treatment did not reoccur.

Impetigo, the ordinary scabby superficial infection of the skin, may be due to either staphylococcus or streptococcus. Removal of the crusts and application of ung hydrarg ammoniatum several times a day is still excellent local treatment. If you prefer to put the patient to the expense of one of the antibiotic ointments mentioned above you will probably cure the patient in about the same length of time, but for goodness sake do not be so old-fashioned as to use sulfa on these lesions! There is too much chance that you will produce an intense allergic dermatitis, and you cannot do anything with the sulfa that you cannot do with the ammoniated mercury with much less risk. Perhaps this is as good a point as any to mention that furacin preparations are also very prone to cause inflammatory reactions in too large a percentage of patients to make it reasonable to use them. Impetigo is not so much due to a virulent germ as to a non-resistant patient. It will quite frequently affect the clean and well cared for children from the better homes while those whose skins are ordinarily dirty frequently move about among their infected companions without contracting the infection. This annoys the mothers of the former, but gives a clue to the best treatment. As is the case in all other infections it is wise to treat the patient as well as the germs! In other words you will find that on the average your patients with impetigo contagiosum clear up more rapidly and have less difficulty if you give them some immunizing doses of bacterial antigen plus antibody, in addition to local treatment with mild antiseptics.

Acne vulgaris seems to be a chronic and subacute type of inflammatory reaction around the sebaceous glands. It usually occurs on the face and/or front and back of chest. In the occasional case the eruption may extend down over the shoulders and upper arms. Many writers seem to be rather pessimistic about the treatment of acne, and too many general practitioners tell patients or their parents that the condition will be "outgrown" in time. While there is some truth in this it is also true that five or ten years is a long time to wait to get rid of a disfiguring rash! This is especially true in the case of a girl in her middle or late teens. Moreover it is not necessary for the patient to wait so long. In my experience the vast majority of cases of acne are quite definitely curable. I would urge that you do not use X-ray treatment on acne. Apart altogether from any theoretical or real danger of later trouble it is my distinct impression that the patients I have seen whose acne was cleared up by the use of X-ray had a much greater amount of actual scarring than those whose condition is cleared by a more physiological method. The method I have used for over fifteen years with very close to 100% good results is as follows:

Avdoid chocolate which is said to contain traces of bromine.

Local Treatment:—Wash morning and night with warm water, rinse with warm water, and then apply cold water to stimulate the circulation. This is followed by application of lotio alba. A preparation put out by the Hartz Company (called albasuphidi) is very similar to the old hospital lotio alba.

Treatment of the Infective element:—The patient's blood serum resistance against staphylococci and other common bacteria is raised by a course of

Staphylo 'Serobacterin' Vaccine Mixed (Sharp & Dohme) given subcutaneously in the following doses: 0.2 cc 0.4 cc; 0.8 cc; 1.2 cc; 1.8 cc; 2.5 cc. Do not pay any attention to the doses of this product which the manufacturers recommend as they are too small to get good results and in some cases will probably actually sensitize the patient. The interval between doses should be about a week and the 2.5 cc dose can be repeated about every two weeks. If there is still a tendency to pustulation and the patient is not getting any particularly severe reactions it is often well to increase the dose to 3.0 cc or 3.5 cc. Of course it is to be understood that in the case of any very severe local or general reaction the next dose should not be increased, although the same dose which caused the reaction may safely be repeated. Reactions to this product in these doses are relatively uncommon.

Correction of the Improper Secretion of the Sebaceous Glands:—

Some recommend substitution therapy giving progesterone for this purpose. In my opinion it is more reasonable to give stimulation therapy so that the patient's own glands will continue to secrete properly. This means an adequate dosing with chorionic gonadotropic hormone. A.P.L. (Ayerst) comes in vials of 10 cc, 1000 units per cc. Antuirin S (P.D. & Co.) may also be used (500 units per cc). This product should be given intramuscularly in doses of 500 or more units once a week for boys and men. In the case of girls and women it is said to be probably not so effective when given near the time of menstruation and to be most useful at about the time of ovulation. I therefore usually give the 500 unit dose one week and three weeks after the first day of menstruation and 1000 unit dose two weeks after the first day of menstruation. In the occasional case where the sebaceous secretion is not becoming normal after two or three months of this kind of treatment it is often advisable to increase the dose to 1000 units or 1500 units.

Occasionally one sees a case of very oily or greasy skin where there is very little actual acne present. In these cases the treatment with A.P.L. alone will often normalize the condition in a matter of a few months.

Sycosis Barbae, an infection around the hair follicles of the bearded region of the face, as well as most other pustular skin infections will clear up very much more quickly when the patient's blood serum has a high antibody titre, no matter what local treatment is employed. In my experience it is therefore always advisable to give a course of the Staphylo 'Serobacterin' Vaccine Mixed, as recommended in the treatment of acne. In all these conditions it is extremely important to remember the fact which was well summed up by R.M.B. McKenna of Liverpool, "weak non-irritating antiseptics frequently applied are better than occasional applications of strong irritating antiseptics which damage the skin more than the bacteria."

Skin Reactions to Physical Offenders.

It is well to notice that in this brief section we are dealing not with the damage done to the skin by physical offenders, but with *the reaction* which the skin develops in response to that damage. In some cases such as dermatographism the damage would seem to be infinitesimal and yet the hypersensitive (allergic) reaction is quite definite, being shown by exudation of serum outside of the vessels giving a wheal reaction. Something I am afraid the average practition-

er does not realize is that a very similar type of reaction can occur in any area of skin which is affected with ordinary eczema. Whether the sensitizing material reaches the affected area of skin from within (blood borne) or from without (contactant), the eczematous reaction may be continued or aggravated by various irritations. It is amazing how little mechanical irritation can cause a violent reaction under such circumstances. Patients must be warned not only not to scratch, but under no circumstances to rub the area even gently. If the area is bathed, drying should be done with a blotting motion,—never by rubbing. I have seen the labels on good prescription ointments for the relief of itching eczema-dermatitis, given not only by general practitioners, but even by dermatologists, where to my amazement the directions said, “*rub on the affected area.*” The object of the ointment was to soothe the itching sensation, avoid irritation, and relieve inflammation, and yet these three conditions can all be increased by the physical offense of rubbing. The patient should be told to apply the soothing application as gently as possible *without rubbing!* Attention to this little detail can make the difference between success and failure in the treatment of eczema.

While not very common it is well to remember always that urticarial or eczematous reactions may develop as a result of exposure to cold.

Skin Reactions to Chemical Offenders.

Some of the cases in this group are due to the attempt of the skin to protect itself from chemical irritation; the blood vessels dilate causing the area to become red and hot, more serum is present, often passing through the vessel walls, probably serving to dilute harmful and irritating chemicals. Sweat glands may increase activity, helping to wash away the offending substance. This type of case often occurs in industry and initial treatment would obviously consist of such activity as removal of the offender (as with soap and water), neutralizing the offender (by its opposite chemical, acid or alkali), soothing and protecting the area from further insult (as by ointments), aiding in removal of heat (by evaporating lotions or powders which increases the radiating surface like fins on an aircooled engine), and avoidance of infection.

The larger group of skin reactions to chemical offenders are probably a special sensitivity or allergic reaction. In acute cases the patient is frequently aware of the substance to which he reacts. It may be almost anything; material contacted with his work, toilet preparations, clothing, plants, medicine, as well as practically anything which can be absorbed through the intestines, respiratory tract, or even through other areas of the skin itself.

In chronic cases the same type of substances as just mentioned may be causing the trouble, but it is often a very tedious and difficult task to find the offender. It must be remembered that it is possible for the patient to lose his sensitivity to one substance and acquire sensitivity to another even while the search is on.

The exanthemata may be thought of as special examples of skin reactions to chemical offenders,—the chemical substances concerned being those emanating from certain specific bacteria or viruses. Syphilitic rashes may also be included in this group. Some of us can remember the days when more attention was given to the allergic skin reaction in a case of scarlet fever than to the presence of the streptococci in the patient's throat which was the real danger, regardless of whether or not the skin was reacting.

In the case of allergic skin conditions it is quite obvious that the process is to find the sensitizing substance and either remove it from the patient's environment or make the patient less sensitive to it. A careful study and *re-study* of the patient's history is the first and best method of discovering the offenders. As Sulzberger suggests, if you have gone over the history thoroughly and not found some reasonable clues, you had better begin at the beginning and go all over it again!

A great many allergists are reaching the viewpoint of late years that skin testing has very little place in discovering the cause of an eczema-dermatitis, particularly in so far as foods are concerned. One trouble is that when the reaction occurs quite promptly after the ingestion of the food no test is needed, since the patient has usually made the observation (or will make it under guidance) that there is a relationship between the ingestion of that particular food and the occurrence of the rash. In delayed reaction cases, which are those where a reliable test would be a great help, skin testing is extremely unreliable. I think Dr. Jonathan Forman has summed up the place of skin testing very accurately when he says, "in explaining the significance of skin tests to our patients, we have adopted an analogy to our criminal court procedures and tell them we use skin testing as a detection tool comparable to taking finger prints at the scene of the crime. Finger prints thus taken may or may not aid in the identification of the person who committed the crime." Patch testing on the other hand is often quite useful in the investigation of contactants, as in industry.

In those cases where the allergic skin reaction is intermittent (eg., some cases of hives) the keeping of a food diary accompanied by the record of hour of outbreak of the skin reaction will sometimes give very valuable information if it is kept up for a month or two. On the other hand in somewhat desperate conditions the use of elimination diets is extremely valuable although very tedious and strenuous for the patient.

The treatment of allergic conditions naturally involves either separating the patient from the allergen, or else enabling him to live with it by so altering his reaction that it is similar to that of the average individual. Meanwhile of course we must relieve the uncomfortable symptoms. I have an impression that many of the failures with allergic skin conditions are due to inability or unwillingness of the doctor to spend enough time studying the individual case, yet he has a far better opportunity to do this than is available to the specialist who may see the patient on only one or two occasions. The family doctor can and should study the patient in his home environment and repeatedly observe the contactants to which he is exposed (both external and endogenous). Moreover he has time and opportunity to observe the results of treatment,—not only treatment by medication, but treatment by avoidance of certain contactants or food.

A Few Practical Procedures

When one sees a skin eruption for the first time the appearance, location, subjective symptoms, etc., will undoubtedly give some clues. One of the first questions to ask oneself is; is this a local infection (or immunity reaction), or is it a sensitivity reaction? I think the majority of cases will fall in the latter class, but if the case seems to be definitely a bacterial infection do not reach

for the penicillin, nor even write a prescription for an expensive antibiotic ointment. The majority of these cases will respond just as well to older and safer treatments. A good combination is warm compresses of magnesium sulphate solution and ung hydrarg ammoniatum. The Epsom salts solution can be used with absorbent cotton or gauze or ordinary face cloth. It is mildly antiseptic and slightly anaesthetic. I usually do not advise my patients to leave compresses on, as I am always afraid they will waterlog and devitalize the living skin cells. I therefore suggest that they have a bowl of warm solution, wring the absorbent material out slightly so that it does not drip, and hold it on the inflamed area for a few moments until it does not feel warm, then wring it out of the solution again and reapply. If this procedure is kept up for as much as five minutes several times a day it will usually serve to accomplish such ends as: Improve local circulation by heat, soften crusts, blot up serous discharge or pus, and more or less sterilize the surface of the area. Following this I suggest the patient should blot the surface dry (no rubbing!), and promptly apply the recommended local application (in this case ammoniated mercury ointment).

Of course in the case of the deeper pustular infections like boils and carbuncles you probably have your own favourite local treatment which I would not presume to suggest you should change so long as it is effective. I would however suggest that particularly in cases of repeated local infections as well as in the superficial pyodermas you can secure better and more lasting results if in addition to the local treatment you will proceed to relatively immunize your patient. As previously suggested the best method which I have been able to observe or read about is by means of inoculations of large doses of bacterial antigen plus antibody.

It is not always possible to be sure that a local pustular condition has not been secondarily infected with pyogenic bacteria in an area which was already reacting to the presence of fungus. This is another reason for using the ung hydrarg ammoniatum if and when you are in doubt because it is an excellent fungicide as well as a germicide. Moreover, not only is it not usually irritating, but as a matter of fact it is usually quite soothing. Here then you have a local application which is well designed to destroy both bacteria and fungus at the same time relieving many cases of eczema,—a veritable *shotgun* among ointments! You can increase its effectiveness as a soothing preparation by adding 5 grains of Phenol to the ounce unguentum hydrarg ammoniatum.

Suppose that as a result of your observation, experience, and history given by the patient, you are quite convinced that the eruption is of an allergic (sensitivity) nature, what should be the immediate treatment. If it is weeping or becoming crusted the Epsom solution compresses previously described are quite in order. Many of these sensitivity type reactions are itchy. It is the opinion of many outstanding allergists and dermatologists that one should never apply antihistaminic creams and ointments or any of the "caine" ointments. Too large a percentage of cases will develop acute sensitivity reactions to such applications. However, one or two local anaesthetic ointments have appeared during the last two or three years for which the sensitivity index is claimed to be extremely low and the drug itself is said to be not related chemically to the older local anaesthetics. These may well be worth using, but meanwhile I

prefer to use one or two preparations which I know by experience are not likely to sensitize the patient's skin. I have used the following prescription for many years as local soothing application and numerous patients have told me it is the most soothing thing they have ever had. This ointment should not be used too close to the eyes because the vapour of menthol and camphor may irritate them, but it can be used on mucous membranes as in the nostril or on a case of pruritis ani. Let me repeat that you should advise the patient *not* to rub it on but to apply it as gently as possible as many times as necessary to relieve the itching.

Mentholis
 Camphorae
 Phenolis
 Resorcinae as grs. X
 Calamin grs XXX
 Zinci Oxidi dr I
 Eucerin
 Petrolatum molle aa oz I
 Mitte ft ung

Sig. Apply freely to relieve.

Another ointment which is very useful in some weepy type eczemas and much cleaner than the black tarry preparations is the following.

Phenolis grs X
 Liq carbonis detergens dr I
 Eucerin
 Ung zinci oxidi aa oz I
 Mitte ft ung

Sig. Apply to relieve.

In the case of both the above ointments it will be noted that approximately one-half the base is eucerin. This base will absorb considerable water and therefore renders the entire ointment capable of absorbing a considerable amount of serum. If there is a tendency for the ointment to cake after several applications then magnesium sulphate compresses will usually give the patient and the affected skin area a fresh start.

Of course it goes without saying that along with this emergency local treatment you are endeavouring to discover to what the patient is reacting. This calls for a considerable degree of that ability which was so prominently displayed by Sherlock Holmes! In addition to local contactants and foods there is a very great amount of evidence accumulating to indicate that one of the principle causes of a great many cases of eczema-dermatitis, erythematous and papular conditions, and even psoriasis, is sensitivity reaction to the products of bacteria. This does not necessarily mean that the patient has a "focus of infection" somewhere else in his body. Just as in the pollen season everyone inhales pollen but only a few individuals react to it, so it is highly probable that everybody is absorbing into his blood stream the products of bacteria which normally live in and on his mucous membranes. Some people react in the sensitivity manner to these substances when they reach the shock organ causing areas of the condition mentioned. In my experience and that of many others it is possible to render these individuals much more immune and much

less sensitive by the high dosage antigen antibody treatment. This subject has been more thoroughly discussed in a number of publications. One of the latest was in the Nova Scotia Medical Bulletin, May, 1954.

This is not the place to argue in favour of the subject "bacterial allergy" as the cause of a great variety of tissue reactions or so-called diseases. If you read an extensive bibliography of recent articles on allergy you will find as Dr. Jonathan Forman points out that a large number concern this subject. Work by Norrlind of Sweden, Storek of Switzerland, Stokes and numerous other Americans all suggest sensitization to something from bacteria as the probable cause of a variety of skin conditions. A goodly number of workers in many parts of this continent have reported to me privately that they are obtaining similar results to those which I have reported in the paper above mentioned. Based on the success of treatment it seems that the following skin conditions are very frequently so-caused and will respond to the type of immunizing treatment which has been suggested; eczema-dermatitis, (including atopic dermatitis), psoriasis, pustular bacterids, seborrhoeic dermatitis, various erythematous and papular skin eruptions, lupus erythematosus, and many cases of chronic hives.

It must be realized that it is not often beneficial, but sometimes even dangerous, to give small doses of bacterial vaccines in such conditions. To be effective the dosages must be initially adequate, increased to a sufficiently high maximum, and often given persistently in order to clear up many of these always difficult and sometimes most intractable conditions.

In all cases of dermatitis, I think it is well to avoid water and alkaline cleansing agents as much as possible. This can be done by such means as the use of cotton-lined rubber gloves, and an acid detergent such as Lowila Cake, rather than soap.

As you now realize this paper has not attempted to discuss a large number or variety of skin conditions, but rather to offer a viewpoint and a few principles which it is hoped will be of some help to the busy general practitioner.

Canadian Public Health Association

Atlantic Branch

President's Address*

Phyllis J. Lyttle, R.N.

Director, Nursing Service, Department of Public Health.

AS President of the Atlantic Branch of the Canadian Public Health Association it gives me much pleasure to welcome all of you to this Fifth Annual Meeting in Kentville. I would like to extend to you my own welcome as a native of the Valley. Cape Bretoners, however, will understand that I will be able to return very quickly to my adopted country of Cape Breton now that the Dominion of Canada is joined to Cape Breton by the Causeway.

In the last five years, the Atlantic Branch of the Canadian Public Health Association has developed in a most fantastic manner. Many of you will remember that, at the thirty-seventh Annual Meeting of the Provincial Association of Medical Health Officer of Nova Scotia, in 1951, it was decided that the association would become the Atlantic Branch of the Canadian Public Health Association. At that time there were approximately 30 members.

Today we have 200 members which represents here people from at least twelve groups whose interest is Public Health and Preventive Medicine. Some of these representatives are:

- Divisional Medical Health Officers
- Medical Officers of Health
- General Medical Practitioners
- Medical Specialists in variety of fields
- Sanitary Inspectors
- Co-ordinators of health programmes
- Nutritionists
- Victorian Order of Nurses
- Halifax City Public Health Nurses
- Members of Three Armed Services
- Reverend Sisters
- Public Health Nurses
- Officials of Indian Health Services
- Rehabilitation Workers

At the annual meeting of the Canadian Public Health Association in Ontario, in October 1952, Dr. R. D. Defries, the President, emphasized in his presidential address, the need for "Partnership in Public Health." I think you will agree with me that, with all these groups represented here, we have become partners in the Atlantic Branch for our own benefit and for the benefit of those whom we serve.

*Presented November 9, 1955 at the Annual Meeting of the Atlantic Branch, The Canadian Public Health Association, Kentville, N. S.

I feel that the improvements made in various fields of health are due to the work of many people working together. Progress in solving health problems will only be made by the combination of all our efforts under competent leadership.

I would like to speak about several fields of public health efforts in which the co-operation of many partners has resulted in definite improvements in the health of the people.

1. Communicable Disease Control

(a) Tuberculosis

The death rate in Nova Scotia in 1950 was 27.7 per 100,000. In 1954 the rate was 11.3.

The case finding programme has not changed greatly and the need for its continuance remains the same.

Great advances have been made in the treatment of tuberculosis by means of surgery and anti-microbial drugs. Many more patients are surviving. Patients are returning to their homes and to work in a much shorter time. For those patients not able to return to their former work, guidance in rehabilitation is given.

(b) Immunization

The immunization programme is an excellent example of partnership with many participants involved, including voluntary helpers. This fact was realized more than ever this Spring, when so many personnel co-operated with the Salk vaccination programme.

2. Maternal and Child Health

This programme has been expanding over the past four years. In 1950 7 per cent of all home visits by provincial public health nurses were made to infants. This has risen to 30 per cent in 1954.

In the Department of Public Health in 1950, there were two Child Health Conferences organized and in 1954, there were 45.

The latest development is the organization of Prenatal Classes. These have been held at the Dalhousie Public Health Clinic and have proved to be very successful. A Guide for Prenatal Teaching has been written by the Division of Maternal and Child Health and the Nutrition Division. Classes will also be started in the near future in Springhill and Liverpool.

3. Mental Health

The facilities in Halifax and Dartmouth for caring for the mentally ill have improved tremendously in regard to both active treatment and prevention.

In Digby, the Psychiatric Clinic, in operation the past several years, has proved to be very beneficial to Digby County residents. Recently another clinic has been opened in Wolfville for the Fundy Division.

4. Occupational Health

Last year the Registered Nurses' Association of Nova Scotia asked the Industrial Nursing Group to name a chairman for an Industrial Nursing committee. This spring, this committee was renamed "The Occupational Health Committee", at the request of the Occupational Health Division, Department of National Health and Welfare, Ottawa.

At the present time, there are 13 nurses engaged in Occupational Health work in Halifax and its vicinity and about 10 other such nurses outside this area.

5. Geriatrics

Quoting from Health Facts published by the Health League of Canada: "It is agreed universally that 'geriatrics' or the science of the diseases of the aged, is the least developed field of medicine, and that, with the increasing percentage of aged persons in the population, it is the most challenging of all needs in the science of medicine."

I think you will all agree with the ideas expressed in this quotation, and realize that in the solution of the problem of caring for the aged, we shall all be required to work extremely hard to obtain results.

None of these developments and improvements would have been possible unless all the professional workers in Nova Scotia had played their parts to the utmost.

I would like to take this opportunity to thank all the personnel of the interested organizations and associations, including the voluntary helpers, who have so willingly given their time and effort to bring about the changing patterns which I have mentioned. We all realize that there are many other aspects of Public Health work not included in this short summary and that these are just as important as those mentioned.

As a branch of the Canadian Public Health Association, I feel that we should pay tribute to Dr. Robert Davies Defries in his recent award. Dr. Defries has been one of the many hard workers in our parent association. His work in connection with the Salk Vaccine Production Programme at the Connaught Laboratories, has been recognized with the award of the Lasker Foundation of New York City. It would appear that this award has come at a most appropriate time, as Dr. Defries has recently retired from his position as Director of the Connaught Laboratories.

In conclusion I would like to quote two definitions of health, which I feel illustrate the change of attitude to Health, through the last two hundred years.

Samuel Johnson's Dictionary 1755—"Health; freedom from bodily pain or weakness."

World Health Organization—"Health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity."

To attain this new ideal of health we must remember that no one person or group of persons can accomplish it alone. There is needed the help, not only of many professional workers, but also the help and interest of every possible person in the community.

Thoughts and Reflections About Mental Health and Democracy

O. J. Pudymaitis, M.D.
Dartmouth, N. S.

ONE-HALF of all hospital and institution beds in the United States are occupied by mental cases. A similar condition prevails in Canada—mental health has become a No. 1 problem, and the demand is still growing, in a land of freedom and exemplary democracy. Volens nolens arises the question of reciprocity.

No such gruesome picture is to be found elsewhere. Is this the result of constant strain and rush, or is it the abundance of freedom, freedom from everything, from authority, tradition, from any kind of ideal? There can be very little doubt that both causes are contributory. The radical break with the past which was brought about by the Industrial Revolution, has completely divorced the masses from the great traditions of western culture. On the other hand, the new mass-democracy has as yet failed to create a new body of traditions which would enable this society to live and function under the guidance of time-tested and wise control. In general this break with the past has brought about a complete lack of respect for anything. No awe, no authority, no humility. This set of conditions is strongly reminiscent of that which prevailed after the basis of Mediterranean civilization (the polis in Greece, the civitas in Rome) had collapsed, creating, in Gilbert Murray's ("Five Stages of Greek Religion") famous phrase, a "failure of nerve." Now is the time of transition for democracy.

In Dostoyevsky's "Brothers Karamazov" we find a brilliant chapter entitled "The Grand Inquisitor." In it Dostoyevsky describes how Jesus Christ descends once more to earth, this time to Spain, Seville, where at that time the awesome Inquisition maintains a state of utter spiritual and intellectual subjection. Christ wishes to renew his grant of freedom to mankind. But He is placed in custody and the old, wise Grand Inquisitor pays Him a visit. A monologue ensues in which the Inquisitor gives Jesus a very persuasive picture of the true nature of man. Man does not want responsibility; he always looks for someone to whom he could turn over this burden, and, once freed from this terrible weight, is as happy as a child. Somebody has always to lead him, to direct his actions and thoughts. Even Christ's teachings had to be transformed via miracles, mysteries and dogmas in order to become acceptable to the masses.

Ever since recorded time began we discern the masses being led by a few; tyrants, despots, emperors and kings (good or bad). There were outbursts against oppression (the French and Russian Revolutions are the most prominent examples), but again inspired and led by a few (encyclopaedists, Karl Marx, Lenin). The revolt of the Thirteen Colonies was the first attempt on a grand scale to create a true democracy, a land of freedom, governed by free men themselves. But already fifty years after Yorktown one of the most brilliant political analysts (Alexis de Tocqueville, "Democracy in Amerika", 1835-1840) writes: "I know of no country in which there is so little independence

of mind and freedom of discussion as in Amerika. . . .The authority of the king is purely physical and it controls the actions of the subject without subduing his private will; but the majority possesses a power which is physical and moral at the same time; it acts upon the actions of men and it represses not only all contest but all controversy. . . .The body is left and the soul is enslaved." A hundred and twenty years later Walter Lippman ("Public Philosophy") rediscovers that same ailment.

Thus not even the democracy of North America has succeeded in giving a true freedom for the masses. Again they are dependent on something; only now it is a strange, indefinable thing—the "majority." "The majority undertakes to supply a multitude of ready-made opinions for the use of the individuals who are thus relieved from the necessity of forming opinions of their own." Relieved! No burden of responsibility! That is the root for the understanding of the true nature of the masses. Mass-democracy rests not on tradition but on that peculiar phenomenon "the majority"—which has no roots in the past and hence possesses until now no real authority and therefore is conducive to two things only—uncertainty and the development of an immature personality.

Children are spoiled if brought up without control and authority since only that will impart to them a sense of responsibility. The masses of North America possess no such control and authority. Instead they are chained to a sham-tradition of Puritanism which makes them submit willingly to restrictions without reflecting that those restrictions may be absurd.

As a country doctor in Nova Scotia I have made strange observations. Once I was invited to a friend's home; the conversation was lively, on "high-brow" topics. We were having a few drinks when suddenly to my astonishment the hostess jumped up and began to remove the highball glasses—through the window she had seen the minister approaching the house. Again, the regular exodus of people during a barn dance. Whither? To the secret grove where the quart of Black Diamond is hidden, from the eyes of the minister and the R.C.M.P. constable. Why all the restrictions on liquor? Is it because the North American does not know how to drink—or is it because he has never been given the opportunity to learn how? In England one seldom encounters drunks despite "public houses" on every corner.

Unfortunately, hypocrisy leads to debasement of character, loss of integrity and hence instability. Some psychologists are trying to explain the trend to conformity by "fear to be alone", by the urge "to belong to." I think it is hypocrisy which leads to conformity by "fear not to be different" because this could make you feel alone indeed, since you may be ostracized. You have to hide your personality to be in a position "to belong to." Do we become sheep indeed? Will the "herd-instinct" triumph? What a step down from the dialogues of Socrates to the talk between our dear neighbour-conformists of to-day.

The average North American lives now in a world without spiritual and moral values, in a gloomy century of uncertainty and despair. Christianity, one of the foundations and the transmitter of Western Culture, is crumbling. No demagogic attempts like the revivals of Billy Graham will help. Not much trust can be placed in the chimeric conclusions of Toynbee ("A Study of His-

tory"), or on the sincere wishes of Christopher Dawson ("Understanding Europe"). The masses in other countries tried to obtain something concrete when they embraced National-Socialism and Fascism but the result was a tragic "Götterdämmerung."

The masses of North America have no need for Fuhrers or Duces. They are free, or supposedly free, but there can be no real freedom without responsibility. Thus democracy now stands between the horns of dilemma; she can endure neither complete slavery nor real liberty. Quo vadis democracy? Towards the "Brave New World" of Huxley? Towards "1984" of Orwell? Levelling in taste, habits, thought and opinions progresses rapidly. The will of the relentless "majority" compels each individual to believe in and live as the rest does. The press, the radio, and now especially T.V. with its brute force of advertising brings the average citizen down morally and intellectually. The development and refinement of the mind is almost impossible. No faith, no ideal, no hold whatsoever! The simple man who still sincerely believes in his Church, relieves his mind from the burden through confession to his priest. What is the proportion of mental cases in North America among real Christians and sham ones? I do not know but I think there could be found a very interesting answer. I am sure in Italy and Spain where there is still a strong attachment to the Church the proportion is small.

Our democracy is also a great stimulus to private enterprise, to the rapid advancement of technical, economical and social conditions not known before. Everything has become too complex and interlocked. The simple life man knew before the Industrial Revolution is gone forever. The habit of mind which we find now only occasionally (Isle of Man: "time enough"; "to-morrow will do." Nova Scotia: "Never do to-day what you can do to-morrow") is a relic of the past. Too complex social and economic conditions, the uncertainty, the feeling of insecurity (insurance companies multiply and enrich themselves more and more), the uprooting of the masses (everybody is willing to change the place and job for a few more dollars a week—the inner satisfaction does not count); the devaluation of higher values, no goal, no hold. Meaning of life? Let others think about it. Let the Grand Inquisitor tell us what is good for us. People become sterile in their emotions: "How nice?" "Isn't it lovely?" . . . Don't dare to express your true opinion—it will be shocking. The number of individuals is growing less and less. "Genius is an indiscretion which a democracy seldom forgives." Downward adjustment. . . Even if one wishes to be a true Christian one gets into conflict with the multitude (so-called Christians) and end up in a mental institution.

Every year on Christmas Day, the ex-boxer and saloon-keeper in Brooklyn, Joe Bonavita, gives away a few thousand dollars to the poor and needy. Ten years ago when he started his Christian charity he gave away \$3,500. The police put him in a mental hospital. Fortunately he found there wise psychiatrists who set him free again, as an example of a true Christian. ("No-voje Russkoje Slovo", 1955).

The complexity of external, material conditions, the instability and debasement of character (hypocrisy), the progressive ignoring of moral and spiritual values, the utter confusion about ways out of this—this transitional period of democracy—opened widely the door to our No. 1 enemy of public health.

The Function and Status of the Local Medical Health Officer*

J. C. Wickwire, M.D., Medical Health Officer
Liverpool, N. S.

IN the year 1938 when the Department of Public Health was expanded to include Divisional Health Officers, Health Nurses and, later, the Sanitary Engineer and Inspectors, several of the doctors surmised that this was the first and insidious move of the Government to establish nationalized health insurance. After more considered thinking, and when they became better informed of the philosophy of the Honourable Minister, Dr. Frank R. Davis, they realized that to interfere with the work of the private practitioner was far removed from his intentions.

The private practitioners of medicine are a prime essential for public health and social betterment. It would be unwise to handicap them with intolerable restrictions. Yet no single individual could supply a city or a town with pure water supply, nor could he obtain universal pasteurization of milk, nor could he adequately ensure immunization of the larger percentage of our population against such diseases as small pox, diphtheria, etc., etc. These are undertakings that concern a community as a whole, requiring organization best led by the Divisional Medical Health Officers and their team. It then becomes official and we have the backing of the Provincial Government with their various ancillary agents.

The Department of Public Health showed great judgment in the selection of their early Divisional Medical Health Officers. I think of those who have come our way, Dr. Beckwith, Dr. Hiltz, Dr. MacRitchie, Dr. Robertson and Dr. Bent who have all given incalculable assistance to the local Health Officers and to the private practitioners in our community. (It is interesting and encouraging to learn that North America has more full time, well trained public health people than any other continent.)

Included in the field workers are the Local Health Officers.

What is their function and status?—

They should work with the Divisional Medical Health Officers, Public Health Nurses, the Sanitary Engineer, and the local V.O.N., when one is available, to establish clinics for the inoculation against small pox, diphtheria, whooping cough, tetanus and poliomyelitis. They should periodically check the various water supplies, assist in restaurant inspection and certification, ensure proper sewage disposal, report cases of communicable diseases to the Department and assist in the control of infectious diseases, including tuberculosis and venereal disease. They may also co-operate in the provision of more adequate pre-natal care through the medium of pre-natal clinics. They should endeavour to educate the public re the value of chlorination and fluoridation of water supplies through lectures by recognized authorities to service clubs, releases to local newspapers, etc.

*Presented at the Annual Meeting of the Canadian Public Health Association, Atlantic Branch, Kentville, N. S. November 9, 1955, being one of the presentations on a Symposium The Function of the Local Medical Officer of Health.

Inspections of health hazards, housing of animals within town limits and near water supplies are within their province. They should also interest himself in the health of the school pupils, endeavouring to correct overcrowding in our schools, which is only too common. I well recall when my son first attended school. He suffered from a more or less continuous round of so-called "colds", tonsillitis, and otitis media, largely due, in my opinion, to school congestion. If I may digress for a moment, I feel that not only do we place too many children in one class room, but we seat them too closely together.

In summary, then, the private practitioner has a definite capacity for providing medical service; but there are some endeavours in which he should seek the co-operation and assistance of the Local Health Officer, Divisional Medical Health Officer and his effective team, if the health of the public is to be served best. The Government, through its Department of Health, has assumed some considerable responsibility for the medical care of the blind and their families, of widows and their families. It is inevitable that other problems will enlist the interest and action of both the community and the Government, such as the care of the aged with their concomitant diseases, the care of diabetics, clinics for early detection of cancer, training centre for the rehabilitation of those now disabled from paralytic diseases, tuberculosis, accidents, etc. These latter require the assistance and direction of the Department of Public Health.

This Continent at the present time enjoys the best medical service the world has yet known. We pray that our governments will consider long and well before they submit to a change from a good to a questionable better system. Every child must grow to become a man or a woman. Medicine is still a child. Let us see to it that it will grow in wisdom and stature to find favour with God and man. The Department of Health is growing. We hope that it will continue to study and develop even greater measures for the lessening of sickness, suffering and premature death. May the medical profession continue to cooperate with its great ally, the public health profession, in the dissemination of health education and to guide public opinion and direct measures which affect the community as a whole.

Relationship of the Local Medical Officer of Health To The Department of Public Health*

J. J. Stanton, M.D., D.P.H.
Divisional Medical Health Officer
Pictou, Nova Scotia

FIRSTLY, let us consider the appointment of the Medical Health Officer by the Municipal Council. Very often Municipal Councils select some doctor to be the Medical Officer of Health in order to fulfill the requirements. To-day it is becoming increasingly important to appoint a doctor who is interested in Public Health. I feel that it is wrong to coax a busy practitioner who has not the time to devote to the work, or a retired doctor who would prefer to be left alone with his hobbies, just to fulfill the law.

In order to bring out the necessity of interest in Public Health, let us consider some specific items. To-day we note that we are passing through a period of new school construction. I feel that the Medical Officer of Health should become interested in this phase of the work, right from the time discussion starts in a community on the need for a school. He should communicate early with the Divisional Medical Health Officer and the Sanitary Inspector. During the past few years we have seen some schools constructed costing 50, 70 or \$100,000 and already there are signs of overcrowding, yes, even in half sessions occurring. In the Divisional Office we can obtain a rough idea of the school population in Grade I, for example, five or six years hence, simply by counting the births for the year. Some of our Sanitary Inspectors have also done considerable work on lighting, glare, color, etc. Some of our architects still aim for the minimum of 20 foot candles of light. I feel that Dr. Solant of Toronto adequately proved the advisability of that minimum being raised to 30 foot candles. We are interested in seeing some work done to diminish glare by the correct placement of windows, blinds, desk tops, electric fixtures, etc. We are interested in seeing that the walls above the level of the desk have an 80 per cent reflective light factor. All of these items should be discussed when the school is in the planning phase and not when construction is completed. At the present time we hear about a new school construction when the plans are approved and we are asked to determine whether the sewage disposal is adequate. The Medical Officer of Health can be assisted by the personnel in the Divisional Office or the consulting staff at Central Office simply by asking for such assistance.

The same would apply to new construction of food handling or processing plants and restaurants. We have had some very fruitful results with restaurant construction when we had an opportunity of reviewing the plans be-

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fore the construction was started. These have been both satisfactory to the operator and to us. In fact the owners of two of the moderate sized restaurants with whom we had the opportunity of setting down when the projects were in the blueprint stage have experienced business returns far beyond their expectations.

In the matter of Sanitary Inspection, I feel that it would be of benefit to all concerned if the local Medical Officer of Health, in company with our Sanitary Inspector, could see his way clear to make a complete inspection of milk plants, water systems, restaurants, and other sanitary problems determined by the local area, once a year. I feel that the sanitation programme would be given new impetus by this innovation alone.

In the field of Tuberculosis Control and Venereal Disease Control, the co-operation of the Medical Officer of Health with the Department is excellent.

In the field of Immunization, the Medical Officer of Health can share the bouquets. Since the outbreak of diphtheria in 1941 and 1942, the Medical Officer of Health has been in the vanguard of the immunization programme. Here he has given of his time and talents unstintingly to produce in the Northumberland Division, for example, a school population that is 90 per cent immunized against diphtheria and whooping cough and 95 per cent vaccinated against smallpox. Not enough can be said for the work of the Medical Officer of Health in this regard. He, like the Department, has now shifted the emphasis from the school immunization programme to the infant immunization programme. This, of course, will maintain the level of immunization high in the school population because the children will be immunized when they reach school age. The family doctor is also adding impetus to the infant immunization programme by doing many infants in his own office.

Now, where are we going in Public Health in the future? Three men in the Department of Public Health are doing real spade work in programmes with which the local Medical Officer of Health must be familiar. The first is Dr. Dawson with his dental health programme. Much of this work will have to be done by his specialized team. However, we must be cognizant of his work and give it as much support as possible, particularly in bringing his work to the attention of the public.

The second futuristic programme is under the direction of Dr. Clyde Marshall in mental health. Like Dr. Dawson's programme, it too, is a programme to be watched and aided wherever possible.

The third programme, with which I am much more familiar is that of the Child and Maternal Health Programme, under Dr. Eagles. Already this man has cultivated a very large field. He has proverbially seeded a large portion by improving hospital equipment throughout all of Nova Scotia. The seedlings are up, so to speak. The Medical Officer of Health can contribute by seeing that adequate use is made of this equipment to insure the first crop of salvaged lives among the new-born.

The second portion of his programme is the infant visiting programme by the Public Health Nurses. This, to my mind, is a basic programme.

In the Northumberland Division, our nurses have now reached 80 per cent coverage in the neonatal visiting programme. The Victorian Order of Nurses who are participating in this programme have reached a higher percentage du

to the fact that their population is more concentrated. I say this programme is basic because it brings the nurse into the home where she is able to work with the infant and the mother in the natural environment of that infant. I am convinced from the incomplete study that I have made of the infant deaths so far that the element of poor home-making appears to be present in a large number of cases. Although I am not saying that this is an actual cause of death, I do say that it is a factor present in a high percentage of deaths. It is a factor which we may have to consider for future work.

From the infant visiting programme stems the necessity for the child health conference and the modifications of it. The Medical Officer of Health can play a great role in the organization of these conferences, if, after due analysis of the local situation it can be demonstrated that there is a need for such a conference or modification of it.

I believe Dr. Eagles is also conducting a pilot project in ancillary classes in pre-natal care. This also will require assistance by the Medical Officer of Health in its inauguration in local areas. I was surprised to note in the review of infant deaths over the past 18 months that less than 2 per cent had not had some type of pre-natal care. However, the necessity for these classes is borne out by that of which I spoke before, and that is they are aimed at the correction of the factor of poor home-making previously alluded to, as well as a more detailed elaboration of the family doctor's instruction to his patient. These classes are not designed to do away with pre-natal care as practised by the family doctor but are a supplement to it.

This preamble in brief, is designed to bring out the broader perspective of the Medical Officer of Health in relation to the Department of Public Health. The relationship up to the present time has been excellent, but we cannot use this traditional relationship as a rocking chair. We must go forward. Our present objectives should include holding the line against the return of those diseases that have become minor public health problems and shift gradually to a programme of general health conservation. Our criteria for selecting programs of the future should be based not only on preventing illness and saving lives, but on the newest theory that they promote health and physical and mental well being. This will tax the ingenuity of every worker interested in Public Health.

NOTICE TO BRANCH SOCIETIES

Nominations for Senior Membership in The Canadian Medical Association from the various Branch Societies should be submitted as soon as possible to the Secretary of The Medical Society of Nova Scotia for consideration at the next Executive Meeting.

The following extract from the By-Laws of The Canadian Medical Association is quoted for your information:

Chapter VI—Section 1(c)—Senior Members.

“Any member of The Association in good standing for the immediate preceding ten-year period who has attained the age of seventy years is eligible to be nominated for senior membership by an ordinary member of The Association. He shall be approved by the Executive of the Division in which he practised, but he may be elected only by the unanimous approval of the members of the Executive Committee in session present and voting. Not more than eleven such senior members may be elected in any one year. Senior members shall enjoy all the rights and privileges of The Association but shall not be required to pay any annual fee.”

Note: (1) In the case of the Newfoundland Division, the ten-year membership qualification has been waived until such time as the ordinary members of the Division shall have been eligible for membership for ten years.

(2) In the case of the Quebec Division, which is host to the Annual Meeting of The Association in 1956, two Senior Members may be nominated.

All nominations for Senior Membership in The Canadian Medical Association must be submitted to the Executive Committee at its Spring meeting which will take place on March 16th and 17th, 1956. Please let us have your nominations *not later than March 1st.*

It is suggested that more than one name be submitted in order of your preference for checking against our membership records to determine eligibility.

Personal Interest Notes

Doctor H. R. Roby of Windsor has received word that he was successful in passing the examination of The Royal College of Physician and Surgeons of Canada for certification in the Specialty of Diagnostic Radiology. Doctor Roby is the radiologist for the hospitals of Windsor, Wolfville and Kentville.

Doctor Myles Gregory Tompkins of Halifax has been granted a Fellowship in the Royal College of Surgeons of Canada.

Doctor Carl R. Adams of Springhill has passed his certified specialist examination in general surgery given by the Royal College of Physicians and Surgeons of Canada, and is now in practice in Woodstock, Ontario.

Doctor D. J. Topping of Halifax, Associate Professor of Medicine at Dalhousie University, and a native of Stavanger, Norway, was recently elected a Fellow of the American College of Physicians.

Doctor Harry Poulos of Dartmouth has received his certification in psychiatry as a result of recent examinations by the Royal College of Physicians and Surgeons of Canada.

The Bulletin extends congratulations to Doctor and Mrs. H. R. Roby of Windsor on the birth of a son, James Ernest on December 23, 1955; to Doctor and Mrs. J. Murray Snow of Halifax on the birth of a son, James William, on January 16 and to Doctor and Mrs. I. M. Murray at New York City on the birth of a daughter, Hester Jean, on January 19th.

Doctor and Mrs. C. E. A. deWitt of Wolfville are spending the winter in Florida, visiting relatives in Saint John, N. B. and Princeton, N. J. en route.

Doctor J. S. Manchester, a native of Saint John, N. B., has been appointed Head of the Department of Diagnostic Radiology at the Victoria General Hospital and Professor of Radiology at Dalhousie University.

Doctor C. W. Holland of Halifax has been appointed Consultant in Medicine to the Nova Scotia Hospital at Dartmouth.

Doctor Daghish, a graduate of Liverpool University, England, has been appointed to replace Doctor V. K. Rideout on the staff of the Roseway Hospital at Shelburne.

Doctor D. R. MacInnis of Shubenacadie is progressing favourably at the Victoria General Hospital following a collision between his car and a transfer truck on the Shubenacadie Bridge on January 12th. Doctor MacInnis suffered a fractured left leg, facial laceration and loss of blood.

The Bulletin extends congratulations to Doctor S. W. Williamson of Yarmouth who celebrated his 87th birthday on January 13th.

THE ANNUAL MEETING

The 103rd Annual Meeting of The Medical Society of Nova Scotia will be held in Halifax at the Nova Scotian Hotel.

The Executive Meetings will be held on Tuesday, September 4th, and the General Meetings will be held on Wednesday, Thursday and Friday, September 5th, 6th and 7th, 1956.

The Chairman of the Housing Committee is Doctor A. W. Titus, 32 Connaught Avenue, Halifax, who will look after all requests for hotel accommodation for the meeting.

Obituary

The Bulletin extends sympathy to Doctor S. H. Keshen of Halifax on the death of his father, Mr. Lewis Keshen which occurred at Halifax on January 10th at the age of eighty-one; to Doctor K. A. Fraser of Sydney Mines on the death of his father, Rev. James Fraser at Bras Big D'Or early in January at the age of seventy-four, to Doctor William MacL. MacRae of Halifax on the death of his father, Mr. William E. MacRae at Halifax on January 23rd at the age of sixty-three, and to Doctor H. C. Read of Halifax on the death of his father, Rev. William K. Read of Elmsdale on January 27th, at the age of seventy-three.