

# Asthma\*

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ASTHMA is a neglected disease, I think we must admit that the average understanding of it is poor, and that the average treatment received by the asthmatic falls far short of being consistently effective. The general medical attitude towards these patients is a pessimistic one and, because of this pessimism, they are apt to be passed over without receiving their full share of attention.

Since asthma affects from one to two per cent of the population it is an important medical problem and it is a problem that can be fairly effectually dealt with if we approach it in the proper fashion.

To understand asthma one must understand allergy because allergy is the most important etiological factor. The average medical man tends to stay as far away from allergy as he possibly can because he has little understanding of it. It is a sadly neglected part of medical education and there are so many fantastic things about it that are true, and still so many fantastic theories being put forward about it that are rapidly proved to be false, that there is little wonder the average opinion is a confused one.

I would like to make it clear that I am definitely not an allergist but am interested in it only from the point of view of internal medicine. Soon after starting practice I became convinced that allergy was necessary to the understanding of important problems in all fields of medical practice and especially in asthma. Knowing nothing of the subject an attempt to read it up was useless because of too flimsy a foundation and I was forced to some intensive post-graduate work to acquire the working knowledge I desired. My experience has convinced me that lack of general understanding of allergy is at present the greatest hindrance to the successful treatment of the asthmatic patient.

The word asthma is used simply as a term to describe a type of breathing which is characterized by prolongation of expiration. It is a symptom which can result from any one of a variety of causes. For the purpose of this paper I am going to take liberties with accepted classifications and use one that is unscientific but very practical from the clinical point of view as it labels fairly effectively the different types we meet in practice.

## *Classification of Asthma*

1. Allergic
2. Infectious
3. Mixed
4. Obstructive
5. Cardiac
6. "Essential"

If we meet each case of asthma with four things in our minds, allergy, infection, bronchial obstruction and cardiac failure we will be well on our way to successful treatment.

Allergic asthma is the most common type. It should be suspected as the diagnosis in the younger age group as it practically always starts before the

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age of thirty-five and, in the majority, before the age of fifteen. Its cause is something extrinsic, something outside the individual which he breathes in or ingests. Not everyone has the unfortunate ability to become sensitive to such an outside substance, it is a definitely inherited weakness and for this reason one can usually obtain a history of asthma or hay fever in the patient's family. This is important in diagnosis since it actually occurs in over seventy per cent of these patients and when we meet an asthmatic under thirty-five, with a positive family history of asthma or hay fever, we can be fairly certain we are dealing with atopic or hereditary allergic asthma.

It is in this type of asthma that skin testing is most important and it is important for two reasons. First, it verifies the fact that the patient is truly allergic. Second, it very frequently reveals the cause or causes of the patient's asthma. I do not want to go too deeply into the subject of skin testing because it will undoubtedly be fully dealt with in another paper later in the week but two examples will illustrate its importance in asthma.

Three years ago a patient was referred to me from our tuberculosis hospital for investigation of her asthma. The story was one of practically continuous asthma of almost four years duration, a routine chest X-ray having led to the discovery of early tuberculosis for which she was admitted to hospital and for which pneumothorax therapy was started. Her asthma disappeared very quickly after admission to hospital and she remained free of it until a few days after she was discharged home when it again became severe. Because it was felt that the severe asthma might interfere with her pneumothorax treatment she was readmitted to hospital where again her asthma promptly disappeared. A second time she was discharged but still again she had to be brought back into hospital because of asthma. It was obviously something in her environment that caused the trouble so, after some thought, she decided to hurry up plans of marriage and to leave hospital and go directly to her new home. She did this but despite matrimony and a new home she was soon wheezing as hard as ever and it was at this time that she was sent to me. The only common things between her old home and the new one were a dog and some very old over-stuffed furniture and this suggested either dog or dust, or both, as the cause of the trouble. However, she didn't believe this could be so because she had had asthma without any change during a two weeks period the previous summer when she had moved to the country without her dog. Skin testing showed three marked reactions, house dust, dog dander and grass pollen, the latter explaining her asthma while she was in the country away from her dog. She was reluctantly persuaded to get rid of the dog and the over-stuffed furniture and her asthma quickly disappeared. She has been treated by injections of a mixture of grass pollen and house dust and has been completely free of asthma since.

Another good example of the importance of skin testing in asthma is one that I remember from my post-graduate work in allergy. I was learning to skin test on a clinic patient who had returned to the clinic because of recurrence of asthma that had been apparently successfully dealt with three years before. Her old records showed reactions to feathers and house dust. She had been advised to remove all feathers and to use a kapok pillow and, in addition, was given a course of inoculations with house dust extract and these measures kept her free of symptoms for almost three years. Careful questioning revealed no clue as to the cause of the recurrence of wheezing but on repeating her skin tests it was found that in addition to her old reactions to house dust and feathers



she had acquired one new one, kapok. Her symptoms quickly disappeared when her pillow was covered with a dust-proof covering.

This latter example points the way to treatment of the allergic asthmatic, treatment that can be carried out even when skin testing is not available, and it cannot at the present time be readily available in any but a fairly large community because to properly carry it out requires proper protein extracts which are expensive. We know that these patients react to substances with which they come in contact because they inherit the unfortunate ability to become sensitive. We cannot cure them by changing an hereditary characteristic so we must cure them by removing the cause from their environment and not only must we remove that substance which is causing the trouble at the time we see them but we must remove all possible causes of future trouble, all possible substances to which these allergic individuals may become sensitive at a later date.

This sounds like a big order since the causes of allergic asthma are very numerous. Thousands of substances have been incriminated as causes in different patients. However, removal of the common causes adequately deals with the majority of cases.

What are the common allergens, the common substances which cause the allergic variety of asthma? In the great proportion of cases it is an inhalant, something that is breathed in by the patient. The most important of these inhalant allergens are house dust, feathers, animal danders and occupational dusts. Foods very rarely enter into the causation of adult asthma and are probably a factor in less than five per cent of cases. In children foods are important, and the younger the child the more important they are. As the child grows older he tends to lose his food sensitivity and acquires an inhalant sensitivity which rarely disappears.

As I have previously said, all the common allergens should be removed from the environment of the allergic patient even if he is not sensitive to many of them. If they are not all removed we leave him open to the acquisition of a new sensitivity.

In practice, after the patient has been skin tested, I advise the following; the removal of all cats and dogs from the house and the avoidance of all contact with animals; the removal of all feathers from the bedroom along with all dust collectors, such as rugs, drapes, stuffed furniture, et cetera. If after a months trial of this regime satisfactory improvement has not been made, or if symptoms do not subsequently completely disappear, I start the patient off on a course of house dust extract inoculations as they nearly all have a definite house dust sensitivity. This procedure brings about uniformly good results but one must be on the watch for other factors that may cause trouble with the patient, such as cosmetic powders, flour dust in the kitchen, also the dust from soap flakes. In other words all dusts should be eliminated as far as possible.

The occupational dusts form a more difficult group to deal with. These patients usually get a prolonged exposure to a high concentration of dust and it is usually impossible to desensitize them no matter how long treatment may be kept up. The cure here is a change of occupation which is difficult for the patient but usually necessary. We see many patients in Saint John sensitive to grain dust among the port workers. I have tried to desensitize three of these without success. One has been lost sight of but the other two are in different occupations and are completely free of symptoms.

Allergy in infancy and in the young child is a different clinical picture from



the adult type and it is a diagnosis that is very frequently missed. When one sees a young child with the history of frequent colds, which the mother states always go down into the chest, and which are usually accompanied by fever, suspect asthma whether wheezing is present or not. Ask if there is any asthma or hay fever in the family and if there is the case is practically certain one of childhood asthma. It is important to recognize this picture so that it will not continue and develop into an adult asthmatic or bronchiectatic patient.

Prophylaxis has a definite place in allergic asthma. We can guard the children in any family with a positive allergic history by eliminating from their environment the important etiological agents. They should not have any feathers in their bedroom and, of course, should not have any household pets. They may be saved much grief as they grow older if they are steered into occupations which are free from dust. It is easy to start a potential asthmatic in the right type of work but it is almost impossible to get him to change an occupation he has been in for years.

The second group in my classification is labelled infectious asthma, the cause being an infection within the individual and apparently he becomes sensitive to the causative organism. This infected focus is practically always in the sinuses, occasionally in the tonsils and rarely in the teeth and elsewhere in the body. I have seen two cases where rather long standing asthma has disappeared following the removal of chronically infected gall bladders but this must be considered unusual. These patients are distinguished from our first group by the fact that their symptoms usually develop later in life, usually after the age of thirty, and they do not usually have a family history of allergy. Treatment again is the removal of the cause but this is more difficult to do than in the first group and so results are not so good. It is a practical impossibility to remove every scrap of infected tissue from the sinuses, there is usually some left and only a very little is apparently required to keep the symptoms going. Treatment, therefore, should consist of careful sinus surgery followed by a real convalescence and the administration of vaccine. Probably the only type of autogenous vaccine that is of any use to these patients is one prepared from the sinus tissue itself to get the organism which is embedded in the chronically infected membrane. Nasal cultures and cultures from sinus washings show conflicting results if repeated on the same patient. The usual practice in some of the big clinics is to prepare an autogenous vaccine from material removed at operation and to combine this with a good mixed stock vaccine, the resulting mixture being used on the patient.

There are two important points about the administration of vaccine to these patients. The first point is that the dosage must be started small and raised with caution and the second is that treatment must be kept up over a long period.

The third group are the so-called mixed asthmas. Their etiology is a mixture of extrinsic and intrinsic causes, that is they are sensitive to one or more outside things, usually inhalants, and in addition have infection. The allergic part of the picture starts first and after a time the infection starts up, usually in the sinuses and usually because of impaired drainage due to the swelling of the nasal mucous membrane which is so common in asthmatics of the allergic type, what we call vasomotor rhinitis. The treatment of this group is a combination of the treatment of the two previous groups except that it is best to start treatment from the allergic side. If the allergic part of the problem is adequately handled the nasal congestion may improve and along with this there



may be improved drainage from the sinuses and more radical measures may be avoided.

Asthma due to bronchial obstruction, so-called Thymic Asthma, is relatively rare but it should be kept in mind as it does crop up every once in awhile. It should be suspected when the family history is negative for allergy, when skin tests are negative and when no evidence of infection can be found. The cause is anything which obstructs the bronchi, especially unsuspected foreign bodies in children and carcinoma in later life. The diagnosis is arrived at through X-ray, bronchoscopy and lipiodol instillation. Two years ago I had a very interesting patient of this type, aged forty-nine with asthma of six weeks duration. The family history was negative as were skin tests, X-rays of the chest and sinuses and bronchoscopy and lipiodol, no positive findings were obtained from any of these lines of investigation. Two months later the patient returned with the additional symptom of pain in the lumbar region and X-ray showed evidence of neoplasm in the chest and spine. He died a few months later and the diagnosis of bronchogenic carcinoma was confirmed.

The small group which I have termed cardiac asthma are the most interesting to me because cardiology is my favorite branch of medicine. I do not mean the common so-called cardiac asthma which is probably better termed paroxysmal cardiac dyspnoea and is due to recurrent, usually nocturnal, attacks of pulmonary oedema. My term includes patients that acquire typical asthma, usually after the age of fifty years and may have it for several years before finally dying of heart failure and in whom very careful investigation may be needed to uncover the causative myocardial damage. These patients may go the rounds of the profession and appear like any other asthmatic. In any patient who develops asthma after the age of fifty a very careful investigation of their heart should be carried out, including X-ray for heart size and an electrocardiograph. The long period of asthma in these cases is another example of how insidious and long drawn out the course of arteriosclerotic heart disease may be before clinical heart failure appears.

The final group, for whom I have coined the term "Essential Asthma", are those asthmatics whose symptoms are due to some cause which cannot be discovered. They are included by Rackemann in his intrinsic group and he postulates that there is some unknown factor within these individuals which is the cause of their asthma.

Probably some of these belong to our previous groups, either we are unable to find an allergic cause or we cannot root out a focus of infection which is present. The family history is negative for allergy skin tests are negative and the age of onset is usually after the age of thirty. These patients can only be helped symptomatically and they are practically never free of asthma. They resemble essential hypertension in three respects, the cause is unknown, the diagnosis is easy and the treatment very difficult. There is one other noteworthy thing about these patients, they nearly all possess a marked anxiety neurosis which is firmly set and impossible to untangle. They are also very open to suggestion and temporary improvement may result from almost any new form of treatment, no matter how ridiculous it may be and symptoms tend to become severe during any period of increased anxiety.

I have pointed out repeatedly in this paper that the successful treatment of asthma of any type depends on the discovery and elimination of the cause. However, something must be said of symptomatic treatment. Ephedrine, best



combined with a mild sedative to overcome its side-effects, is of value only in mild asthma. More marked cases may be helped by inhalation of a fine spray of epinephrin 1:100 from a nebulizer. If the asthma is still more severe the best remedy is epinephrin subcutaneously which is best used in small doses of about four minims repeated very frequently.

The best way of treating the patient with severe asthma is to place them in hospital. There are two reasons for this. First, it removes them from all probable outside causes and second, it allows for a continuous program of treatment, which should be continuous and not allowed to abate until the asthma is well under control. There is a tendency to let up on treatment as the patient starts to improve and this results in a continuation of symptoms. My own routine with severe asthma is a conventional one. The patient is started with one c.c., of slowly absorbed epinephrin injected intramuscularly twice daily, either adrenalin in oil or in gelatin. In addition small doses of adrenalin of the ordinary type are given regularly throughout the day along with a barbiturate. Oxygen is very helpful and especially if it is combined with helium, but I have had no personal experience with this latter mixture. Iodides are given and are pushed in large amounts and are a very definite help in loosening up bronchial secretion. Morphine should never be used in the asthmatic patient no matter how tempting it is to give the patient a rest from his wheezing. It is definitely dangerous as has again been pointed out in a recent article in the *New England Journal of Medicine*. In this series every case of asthma that died had had morphine a short time before death. Codeine by mouth is as far as one should go with an opiate.

If the above program does not quickly show results aminophyllin is added and used intravenously two or three times a day and it is usually very effective. In the last issue of the *Journal of Allergy* equally good results were reported with rectal suppositories of aminophyllin. I have tried these in my last two patients without success.

Histaminase has been widely advocated as a treatment of all allergic conditions. I have used it repeatedly in large continued doses but have not achieved any result in asthma.

Results are what count in the treatment of any disease and results should be good in over sixty per cent of all cases of asthma, more than sixty per cent should be able to resume a normal way of life although they may not all be permanently free of symptoms. Occasionally they may run into the substance to which they are allergic, since these are usually so common to all environments, and this may result in an asthmatic attack. I have one patient whom I first treated about three years ago who had had practically continuous asthma for four years. Excellent results were obtained with desensitization with house dust extract but I have since seen her with two isolated attacks of asthma, each one occurring after concentrated efforts at house cleaning, a type of work she had been strictly advised against. There is always the tendency for these patients to get a recurrence of their asthma after a severe upper respiratory infection.

In closing I would again like to reiterate the four important points which should be kept in mind when one approaches asthma. These are allergy, infection and to a much less important extent, bronchial obstruction and early concealed arteriosclerotic heart disease. If these four factors are carefully searched for and dealt with as successfully as possible results of treatment will be satisfactory.



# Outline of the Federal Draft Bill for Health Insurance\*

## A—THE DOMINION PROVISIONS OF THE PROPOSED ACT

### General Objects and Purposes

To enable the Dominion to enter into agreement with one, or more, of the Provinces to pay certain grants to the Province, to assist them in financing Health Insurance, and certain other Public Health Measures.

### Obligation of the Province

Any such agreement will be on condition that the Province makes provision for:

- (1) Health Insurance: (i) of the standards, (ii) under the conditions, (iii) for the classes of persons; set forth in the **Dominion Health Insurance Act**.
- (2) In order that the Province may share in Dominion Grants for Public Health Measures, the Province will have to undertake to include the services, and activities, as set forth in the Dominion Act.

### The Purposes for Which Grants may be made by the Dominion

- (1) Health Insurance Grant—**To provide for health insurance benefits.** An amount estimated at \$3.60 per person including children of those insured.
- (2) Public Health Grant—**To assist the Province in establishing and maintaining Public Health Services throughout the Province.** Estimated at 25 cents per person.
- (3) Tuberculosis Grant—**To provide free treatment for all persons suffering from Tuberculosis, including additional buildings, and bed accommodation.** Provided the Province provides for free treatment to residents of the Province. Estimated at 1 million per year for the Dominion.
- (4) Mental Disease Grant—**To provide free treatment for persons suffering from mental illness, and for mental defectives, including the provision of additional buildings and bed accommodation.**
- (5) Venereal Disease Grant—**To provide preventive and free treatment for persons suffering from Venereal diseases.**
- (6) Professional Training Grant—**To enable the Province to provide for the training of Public Health Work—Personnel, Physicians, Engineers, Nurses and Inspectors.**
- (7) Investigational Grant—**To enable the Province to carry out special investigation concerning Public Health or Public Health Measures.**
- (8) Youth Grant, Physical Fitness—**To help conduct a program for the Physical Development of Youth.** This will appear as a separate Dominion Act.

\*This concise summary was prepared by Dr. J. F. C. Anderson and is being reprinted in the Bulletin through the courtesy of the College of Physicians and Surgeons of Saskatchewan.



### Types of Services and Activities called for as Public Health Measures by the Dominion Act

The following are to be put into effect by the Province:

- (1) Preventive—distribution of vaccines and sera.
- (2) Consultative—advisory and for outbreaks of disease.
- (3) Educational—dissemination of matters of Public Health.
- (4) Mental Hygiene—Psychiatric clinics and educational classes for defectives.
- (5) Communicable Disease Control.
- (6) Food and Drug Control.
- (7) Nutrition Services.
- (8) Laboratory Services.
- (9) Sanitation.
- (10) Vital Statistics.
- (11) Hospitalization and Sanatoria Supervision.
- (12) Dental Hygiene.
- (13) Child and Maternal Hygiene.
- (14) Industrial Medicine.
- (15) Quarantine, including Air Navigation.
- (16) Public Health Nursing.
- (17) Housing.
- (18) Tuberculosis Control.
- (19) Venereal Disease Control.
- (20) Cancer.
- (21) Heart—Preventive and Diagnostic, for prevention and early detection of heart disease in children.
- (22) School Health Services.
- (23) Epidemiology.
- (24) Research.

Substantially as set forth, having regard to all circumstances, and for the special conditions affecting the Province as a whole, or any special areas therein.

### Other Provisions the Dominion Draft Provides For

- (1) **Dominion Approval** is required for any measure proposed by the Province not included in the present Act.
- (2) **The Methods** by which the Province and the Dominion may enter into an agreement.
- (3) Provision for the **maintenance by the Province of records** to show operations, and to maintain uniformity of the provisions of the Act.
- (4) **Provision for Duration of the Agreement**—The agreement continues in force so long as the Province is giving effective implementation of the Agreement, or until after the expiration of 10 years from the date of Notice from the Dominion that it wishes to terminate the Agreement.
- (5) **Provides for the Source of Payment by the Dominion** out of the Consolidated Revenue Fund of Canada.
- (6) **Provides for reduction of Grants** where the Province has failed to remedy a condition of agreement within one year of notice of such deficiency.



- (7) **Provides power to assist any Province**, at the Province's request, such as: (i) Situations of emergent nature affecting health; (ii) For special investigations or inquiries; (iii) For any specific problem in administration; (iv) To enable the Province to make the Act function.
- (8) **Provides for the Dominion Inspection of Provincial Records**, and the **right of entry at reasonable times** to the premises or places (except private dwellings or private offices) to examine records, documents, and accounts in possession of any officer, or employee, concerned in the administration of any agreement under the Act.
- (9) Provides for the **Dominion Minister** making a clear statement of transactions, and agreements, together with copies of regulations, and summaries of the operation of the Act to both Houses of Parliament.

### Dominion Administration of the Act

This is provided for by the setting up of:

- (1) The Public Health and Health Insurance Division of the D.P.N.H.
- (2) There will be a **National Council of Health Insurance** consisting of  
Chairman: **The Director of Health Insurance D.P.N.H.**: Members: The Deputy Ministers of Health of the Provinces; the Chief Administrative Officers of Health Insurance for each of the Provinces; one representative from each of the following: Canadian Medical Association, Canadian Hospital Council, Pharmacal Profession, Nursing Profession, Dental Profession, Labor, Industry, Agriculture, Urban Women, Rural Women, and such others as may be appointed by the Governor-in-Council.

Term of office of members, 3 years.

One annual meeting a year or oftener.

Travelling or living expenses only.

Duties and Powers.—Shall be charged with such duties and powers as the Governor-in-Council may prescribe. Amendments to the Act are to be referred to them and such other matters as the Minister may refer for consideration and advice relative to the operations of the Act.

### What Persons are Qualified to Receive Benefits of Health Insurance?

This depends upon what ceiling level the Province sets:

- (1) It could include all residents of the Province.
- (2) It may include only those below a certain income or assessment level, set by the Province in which case it becomes operative for all those below the level which is set by the Province.

### What is the Estimated Cost of Providing Health Insurance?

It was intimated that a total contribution of \$26.00 per adult would be adequate to carry the scheme. This amount will automatically take care of all the children of \*qualified members, up to the age of 14 years. From 14 years to 18 years of age there is to be a limited contribution. Above 18 years of age a still larger contribution, etc. The age has not been definitely settled.

\*Qualified members refer to insured members..



Breaking the \$26.00 down—\$18.00 is estimated at taking care of medical benefits. The extra \$8.00 will take care of the children who come into the scheme. Of this \$8.00, \$3.60 is to provide Dentistry for the children.

The **Dominion Government** will provide \$3.60 for each individual under Health Insurance.

Total cost, if operative throughout Dominion, \$260 millions. Administrative costs are estimated at 10%.

### **Who Are the Contributors and How Much Do They Contribute?**

Quoting from Dr. Heagerty's remarks, "Some money will be obtained from everyone who is earning. We have divided the insured persons into **employed contributors**, and into **assessed contributors**. This question of obtaining money has balked most countries, and we think that we have found the solution."

There are some persons who are employed who can pay the entire premium; for these the employer will contribute nothing. There are those who will be able to pay 75%; there will be those who will be able to pay 50%; there will be those who will only be able to pay 25%; in each of these cases the employer makes up the difference. There will be those for whom the employer will have to pay the whole premium.

The amount of money he will pay will be based on his ability to pay. The Province will be obliged to pay any difference for assessed contributors.

### **Indigents**

The people whom we have in the past been calling indigents are an assessed group, who are included in the Act. They come under assessed contributors. The indigent can pay nothing so the Province will pay all for him. It is the intention of the Act to not recognize there is such a person. A person has to be either an employed contributor or an assessed contributor. There are no loopholes left in the opinion of the legal advisors.

### **Children**

**No extra** contributions shall be required to be made for any child under the age of 14 years. Any children under the prescribed age who for the time being are under the care and control of an insured person are included.

### **Registration**

Every person resident in the Province shall whenever called upon to do so, register, but not oftener than once a year.

### **Benefits**

Such as to provide for:

- (1) Prevention of disease.
- (2) Application of all necessary diagnostic and curative procedure.
- (3) Treatment within the Provisions of the Act and its regulations.



### Types of Benefits

To be administered under the following heads:

- (1) Medical; Surgical; Obstetrical Benefits.
- (2) Dental Benefits.
- (3) Pharmaceutical Benefit.
- (4) Hospital Benefit.
- (5) Nursing Benefit.

The above benefits shall include such special and technical procedures and ancillary services as may be prescribed to make effective the said benefits to the insured.

However in Emergencies and Under Special Circumstances the urgency of need will be the basis for entitlement of benefit.

### Arrangement with Practitioners for Carrying Out Plan.

The Provincial Commission shall in accordance with regulations make arrangements with practitioners in medicine, surgery, and obstetrics, who are regularly qualified, duly licensed and in good standing in the Province. (In this Act referred to as "Medical Practitioners" or "Medical Advisors," as the circumstances may require) including specialists, and consultants in Medical and Surgical Diagnosis, Treatment and Procedures.

The regulations and arrangements shall be such as to secure that insured persons subject to the provisions of the Act shall receive from Medical Practitioners with whom arrangements are so made, all such adequate measures for the prevention of disease, and all such proper, necessary, and adequate medical, surgical and obstetrical treatment, attendance and advice as may be prescribed.

### Preparation of Lists of Medical Practitioners and Types of Service which the Medical Practitioner is Prepared and Qualified to Provide.

Provides for the preparation and publication of Medical Practitioners who have agreed to attend, treat, and advise qualified persons, and the class, or classes, of services each such Practitioner is qualified and prepared to provide.

It provides for the right on the part of any medical Practitioner, who is being desirous of being included, in any such list, of being so included, on making application to that effect in the prescribed manner.

### The Right of the Person to Select Practitioners

The right is provided for any adult, of selecting, at such times as may be prescribed, from the appropriate list, the general medical practitioner, by whom he wishes himself to be attended, treated and advised; and of selecting in a like manner the general practitioner by whom he wishes any qualified child, under the prescribed age, of whom he has for the time being, the care and control, to be attended, treated, and advised, and subject in each case, to the consent of the Medical Practitioner, so selected of being attended, treated, and advised by him.



### **The Right of Insured to Services of Specialists and Consultants**

The right is provided on the part of the insured individual, to the services of specialists and consultants (ordinarily after consultation with, and on the recommendation of the Medical Advisor) that person may have selected aforesaid, and the right on the part of that person, to select the Specialist, or Consultant, subject to any regulation made in that behalf.

### **Distribution of Persons Who Fail to Make a Selection of Practitioner**

Provides for the distribution of these among those on the lists, so far as is practicable, after notice is given to them of their failure to select, or where they may have been refused by the Practitioner whom they had chosen.

### **No Remuneration to Practitioners Who Exceed Professional Competence**

Provides that, except in the case of emergency, no medical practitioner shall be entitled to remuneration from the Fund for any service rendered to any qualified person, in the performance of which the medical practitioner exceeds his professional competence, as shown by the lists aforesaid. **It was pointed out that a practitioner's name might appear on more than one list.**

### **Keeping of Clinical Records**

To be adequate, and satisfactory records, as prescribed.

### **Remuneration of Practitioners**

Provides: "That the method or methods of remuneration of Medical Practitioners and the rate thereof, **whether by fees, by capitation, or by salary, or by any combination thereof, or otherwise,** shall be subject to revision from time to time as may be provided for in the arrangements aforesaid.

Dr. Heagerty: "The first step to be taken by the Provincial Commission is to survey all the facilities of the Province and then enter into an arrangement with the Medical Profession to provide medical benefits. . . The various professional groups (Medical, Nursing, Hospitals, etc.) will form committees whose duty it will be to arrange the necessary details."

### **Arrangements with Approved Groups of Practitioners**

May include arrangements with approved clinics, or groups of medical practitioners practising in co-operation, whereby qualified persons may select any such groups in lieu of selecting a general practitioner.

### **Arrangements for Establishing Classes of Professional Services Other Than General Practitioners.**

Regulations shall prescribe the class, or classes, of professional services other than General Practitioners. Modifications may be required to meet certain regions of the Province, etc.



### Dental Benefits

At first these will only be provided to children, but it is the intention to extend these services to all persons under Health Insurance.

### Pharmaceutical Benefits

The Commission will make arrangements for the supply of proper, and sufficient drugs, medicine, prescribed materials, and prescribed appliances to qualified persons.

Arrangements will be made only with Registered Pharmacists, except in emergencies, or in remote areas.

A list of Pharmacists will be prepared and published.

The person has the right to select his own Pharmacist.

Prescription for drugs, medicine, and appliances, shall be priced by a central board for the Province, in accord with a tariff agreed upon by the commission and representatives of the Pharmacists.

A provincial Drug Formulary for the purpose of the Act may be prescribed.

### Hospital Benefits

Hospital treatment only on order of Medical Practitioner.

Person has the right to select his hospital.

The Governing body of each hospital shall have the right to determine Medical Practitioners who shall have the right of treating patients therein.

General ward service only, except where better is required for the welfare of the patient (governed by regulation).

Semi-and Private wards may be had by the person paying the difference in cost.

All those in General wards shall be available for clinical observation by the teaching staffs of Medical schools and hospitals, for the instruction of students in medicine, and nursing.

### Nursing Benefits

Nursing services beyond hospital care, only on order of doctor. It may provide for nursing services from Registered nurses, and in certain circumstances from Semi-qualified persons.

B—GENERAL ADMINISTRATION OF THE PROVINCIAL SCHEME  
is provided by the setting up of:

#### 1—The Provincial Health Insurance Commission

Chairman—"The chairman of the commission shall be a doctor of medicine, regularly qualified, duly licensed, and in good standing in the province, and having practised medicine for at least ten years, and shall be appointed by the Lieutenant-Governor-in-Council."



Members—"The Provincial Health Officer shall ex-officio be a member of the commission. One representative from each of the following organizations, 'after consultation with organizations representative of, respectively': Medical Practitioners, Dental Practitioners, Pharmacists, Hospitals, Nurses, Insured Persons, Workers in Industry, Employers, Agriculturists, and such other groups or classes, as may from time to time be determined.

The Chairman has supervision over and direction of the work of the commission, and of the officers appointed for the purpose of carrying out the work of the commission. He shall be a full-time appointment.

Members of the commission shall be without salary. Commission has to hold at least two meetings yearly. The Commission can contract—can sue and be sued.

## 2—Administrative Regions Within the Province

**Division of the Province into Public Health Regions, or Health Insurance Regions. Regional offices will be established in charge of the Regional Medical Officer and such number of Assistant Regional Officers (as necessary). These may be employed on part-time or full-time basis.**

### **Regions may be further subdivided into Divisional Offices. Duties and Responsibilities of the Regional Medical Officer**

- (1) To advise practitioners in the discharge of their duties.
- (2) To assist practitioners in raising standards of service.
- (3) To examine and satisfy himself of the accuracy and sufficiency of the clinical and other records of practitioners.
- (4) To investigate any case of alleged excessive prescribing of drugs, medicines, and appliances.
- (5) To perform such other duties, and to assume such other responsibilities as may be prescribed.

[ Salary is to be payable out of the Provincial Fund.



# A Modern Aeneas

VICTOR F. CONNOR, M.D.

Digby, N. S.

YOU have asked me to describe a few of the happenings during my recent travels as surgeon aboard ship, which included some six voyages around the globe.

We left Halifax Christmas Eve, and headed for St. John's, which route I had chosen, as I had not previously visited Newfoundland.

Having earlier inspected the ship, I saw the third class accommodation was equal to a lot of the first class of the days when I had formerly been at sea, so it was good enough for me, and the price was also more than equal. The catering, and service, were very good.

The weather stayed fine, and in the evening the Captain came down to see how we were getting on, as he was disgusted with the saloon eighteen, two of whom stayed in the lounge all day, the other 16 in bed, not one showing up to the lovely Christmas dinner prepared by the chef.

We had eaten ours and were having a sing-song and a bit of a dance, in which he joined, finishing with a toast to the King.

Two days in port, the last two hours of which kept the sister ship outside waiting for us to leave, and we could see her tossing like a chip. Nice prospect!

However, as soon as we turned the corner, we rode like a duck, and, passing Ireland and the Isle of Man on New Year's day, arrived in Liverpool, after an absence of nearly thirty years.

The previous June, I had visited a steamer in Halifax, and on the doctor mentioning that he was leaving at the end of the trip, I said I'd have to go over and take his place.

I asked for an appointment in Liverpool, and there were two vacancies, but answers were awaited for offers of both. Call next week. A visit to Glasgow to see the "Queen Mary," and a tanker launched; with a ride back through the country by coach, fills the time in, and there were four vacancies. As time was no object to me, a ten month's voyage was as good as three so I was appointed to a steamer sailing from Hong Kong to New York and on round, with various ports between. When matters had been fully arranged for me to leave for Singapore to join her in a few days, I mentioned the joke, as this was the very steamer I had been aboard in Halifax. Some six of us supernumeraries went to join boats.

A wireless message called us in to Port Sudan on our way down the Red Sea to pick up some 200 tons of cargo for Japan. A couple of days later, in the Gulf of Aden, a dhow was seen showing distress signals. On turning round and going to her, we found she was out of water, so gave them three or four buckets full, and proceeded.

A week in Singapore awaiting my boat enabled me to look it over and note the great changes in thirty years, since my former visit. I looked it over on foot, on the busses and from the air, having a very nice trip in a training plane one afternoon. I had asked the officers on the way out what the place was like now, and described it as it was in my time. They disagreed with my statements till I later showed them some picture postcards of the earlier days, when the port consisted of a two-berth wooden wharf, a dirt road lined with



mangroves and a swamp, with a dry dock near. Now, a four mile stretch of wharf, a basin capable of berthing twelve large liners and a lot of junks (the old swamp); two up-to-date large dry docks and works, big electric power station, etc., etc., which the Japs are enjoying, as well as the naval station on the back of the island. The last time I was there, a steamer had not followed the proper course, so blew up on a mine and went down. Another boat was travelling fast and touched another mine but her speed carried her just beyond its influence in time.

When in the U. S. the officers and engineers had to stand opium watch to try and prevent smuggling of narcotics, and in some of the steamers my name was left off the list, but I insisted in taking my two hours between 6 p.m. and 6 a.m., with the rest, as a protest for one thing, and to make the number thirteen and change the hours on duty each day. The others appreciated the sportsmanship, and *it was cold* in December and January, believe me.

There was not much medical work to do, a few accidents and burns; the chief duties meeting the Port Health doctors, seeing the ship kept clean and healthy, and being there if required.

This was some job when you were taking up to a couple of thousand hadji pilgrims to or from Jeddah, the port for the holy city of Mecca.

They used to be supplied with four by six feet of deck space, two sticks for firewood, and so much water. Supply your own grub and bedding. Nowadays water is on tap at certain hours and all food is supplied and cooked and served out. The families rig themselves private rooms with mats and curtains etc., and have to keep these tidy for daily inspection. The last day, they usually do not tidy up, and some of the crew do that after they have gone, with shovels and brooms and hose. A few deaths usually occur among the aged going, and perhaps coming back on account of the privations suffered when saving up for the pilgrimage, and the hardships endured while in Arabia. The loss is made up by the births en route. The women look after each other, so the floor of the hospital for privacy and plenty of cold water is all that is required. Two or three days later mother is out showing off the new arrival.

In this connection a funny thing occurred at Jeddah while some new passengers were coming aboard. One woman stopped for a moment while passing the galley, and gave birth to a child. Hubby, following immediately behind, grabbed baby and threw it over the side, when a shark had a feed. The ship's doctor came along and had her taken to the hospital whence she emerged a couple of days later as right as rain. Hubby had the idea that he had paid the fares and didn't want to have to pay for another. The incident took less time than it takes to tell it.

One Chinese cook caught cold going down the Atlantic and this developed into pneumonia. By the time we reached Durban, he was about convalescent, and did not wish to be left in hospital there. So we agreed to take him on to Fremantle, Australia, and transfer him to another boat of the company for Singapore, Hong Kong and home. Some days later, when he was doing very well, he took it into his head to sit upon his bunk, wrap his forearms in a blanket, rest his head and face on it and pass on.

We had a funeral that evening.

I suppose here I could relate the narrative of our fatal voyage. A Chinese second steward started acting queer, according to his mates. He was watched and disrated, and on arrival in Liverpool put ashore. He was placed in a



mental hospital under observation, but nothing found wrong. Signed on in another steamer; as he was so good a steward, the captain took him as his boy. All went well till on the return from Australia, coming up the African coast, he started throwing things overboard, and the captain's best uniform suit was just saved from the briny. He lost his job, and another sojourn in the hospital. He was later put aboard our ship at the last moment for passage to Hong Kong. The chief steward would have refused to have him even as a passenger if he had come earlier, being the one who had him for the first spell. However, he was seen one morning in the Gulf of Aden, prowling along the deck at 4.30, and was reported missing at 6 a.m. A search was made and the ship turned back in her track but no signs of the man.

Some weeks later our baker decided to try shore living by opening a bakery in Hong Kong, his home town. He had saved up his money, got a cousin to replace himself while trying his luck, for the voyage on to Japan and back. The night after we had left, he had come down to the public convenience on the street outside his lodging, and while busy, someone struck him five or six heavy blows with an axe. In spite of his awful injuries, he managed to ascend to the third floor and fall on his bed, and lived for five days. This we learned on our return, and was number two casualty.

Getting back as far as Shanghai, I was called out of bed about 6 a.m. by the report that one of our crew was murdered or suicided in the crew wash-room. Proceeding there, I found the man dead and the room all covered with gore. Calling the chief officer, we sent for the police, etc.

The Japs were in charge, and a Japanese medico came too. Verdict of the formal enquiry—"Suicide." He had been on watch, finished and come up; bathed, shaved and written a note enclosing some money for his pal, putting this where it would be found, then gone and cut his throat with his razor, wiped and folded it and put it in his tin-can holder under the door step, and laid down with his head over the scupper, so as not to mess up the place too much. This was number three muerto and the last.

Now for saving life for a change.

### Man Overboard

My diary noted that we left Capetown about 9 a.m. on Nov. 1, 1939, and an hour later, our Chinese crew cook, who was sitting on the rail aft, chatting with a ship-mate, fell overboard backwards.

The shipmate rushed along the deck shouting to the bosun, who happened to be near, that the cookie was in the water. Bosun ran to the bridge, reported "Man overboard," and immediate action was taken. The captain was talking to the watch officer and at once ordered the ship to be turned round, and scanned the wake to find the cook. The steamer came round in a circle, the quickest way to get back to the spot.

Noting the queer actions of some albatrosses which were circling round one place and settled in the water in the position of the angles of an equilateral triangle of twenty-foot sides, in the centre was seen the bald head bobbing on the waves. A boat had been manned and partially lowered, and when within a few yards of the cook dropped into the water, about six minutes after the alarm, and picked him up at once.

The way of the ship carried us on, and a stiff breeze was blowing the boat to leeward, so another turn was necessary to pick it up.



We came round, and some hard pulling brought the boat alongside. Steam was on a winch, and up it came. We were all prepared for resuscitating the man, but when he was hauled into the boat, he threw up all the sea water he had swallowed, and was now only cold, from immersion in the icy water. That was remedied with hot blankets and drinks, and he prepared the evening meal. The steamer had proceeded on its way, the delay in all only taking 47 minutes.

As most of my ships, and they used me as handyman, shifting me anywhere, or route, were cargo vessels, we could only carry up to 12 passengers, and these were mostly replacements, and company men.

Occasionally we would take, say, 40 or 50 Chinese from Jamaica to China; pilgrims as mentioned; and sometimes passengers.

I got a full description of the Burma Road from one gentleman, who had just been over looking at the possibilities of supplying China that way. From another, a report of the gold mining in the Philippines, I was in Hollywood the afternoon Carole Lombard was buried, but they did not offer me her role.

We anchored just off the breakwater at San Pedro, the port of Los Angeles overnight, and the next morning all the unoccupied Chinese crew and the 50 odd Chinese passengers lined the rail, hauling in fish by the hundred. A bright hook and a line were all that were needed for results. My large breakfast mackerel was only from water to galley to table to tummy, a matter of minutes. We went inside later for fuel and some more cargo. Three weeks after, we had slowed down to lose 300 miles, so as not to catch up to a typhoon. These are nasty blows. One we experienced had such force of wind, that at 125 miles an hour the anemometer at the Observatory of Kowloon flew off the spindle, as did a brand new one at the Power House after it had overrun the recording paper by a measured four miles above the 160, giving a 164 mile wind record at least. This was the greatest force known there. We were almost blown ashore, and in dry dock a few days later, the bent tips of our propellers and a bent shaft were evidence. While in dry dock I notified the Harbour Police of a body in the dock entrance. They came, found two, and told us they completed the two hundred picked up that day.

A large tug was lost and to the relief of all hands, it managed to emerge 3 days later from the thousands of junks packed in one of the typhoon protection harbours in Hong Kong. A steamer grazed us, and when I got up at 4 a.m. I saw our crew all huddled round the engineroom door and alley. Among them were two small boys about 8 or 9, with a lifebuoy each. Knowing all outsiders had been ordered ashore before we left the wharf at four the previous afternoon, I could not understand their presence, but on looking the forty odd over, I saw they were not ours, and learned that they had jumped from their boat as she slid along us, crushing our gangway ladder, stanchions, rail boat davits, and as a final gesture, gave us a kick under the stern, making a hole twenty-five feet by four in the steward's store room in the counter. Her captain and chief engineer were the only ones left aboard, and some time later she blew across the harbour along the Kowloon Ferry wharf to the next berth, where each of these threw a wire rope-end ashore and tied her up without a scratch on her paint. Her boilers and engines had been left at the dockyard when she was hauled into the stream for safety, but her chains had not stood the strain, and parted. Some very funny incidents occurred. One, a steamer



blew in back of a wall through an opening just a foot wider than her beam, there was just room to float her, and her chains led out of the opening. A boat squeezed round her, enabled an examination to be made; one propellor blade tip was bent. At high tide, hauling on the anchors pulled her out. When she went in, the water was some fifteen feet above high tide, with the wind. She was otherwise uninjured.

The "Conte Verde" dragged, so her captain hove his anchors, ran into the Jap "Asama Maru" cutting her adrift and then into a British India boat doing ditto. The last ran ashore and partially sank, bows under but stern out. The Asama blew across under the cliff, so close that the boats could not be lowered on the shore side, and floated inside a reef. The Conte Verde shot off at another angle over another reef and stayed a couple of months, till another much lesser typhoon helped blow her off, the reef being mostly blown up by dynamite in the meantime. What the skipper of the Asama Maru thought of the C. V. one, he expressed, and declared diplomatic relations severed. The British allowed a Japanese salvage firm to come in and free the Asama, and walk all over the floor of Hong Kong harbour.

The day after the storm, some Chinese residents walked down to the edge of the cliff above the vessel, then got some bamboo sticks and collected skulls from nearby graves, put the latter on the ends of the sticks and planted them overlooking the castaway, with certain remarks and curses. These were justified, as the Japanese had only the week before bombed Canton, a few miles away, slaughtering many inhabitants. The Chinese workers in the dry-dock would not do a hand's turn in her repair, so the British staff had to do the work, and repair one engine, on which she made her way back to Japan, and was soon in commission again, and has been used as a transport for troops. She'd carry 12,000 or 15,000, and I fancy she has been sunk since. I hope she was full.

A curious case was a Chinaman who caught a cold, which became 'flu, then pneumonia. When getting over that, he became paralysed. Arriving at an East Coast Port, I placed him in hospital for diagnosis for three days, and on the way to the U. S. figured it was the start of beri-beri, which was confirmed in New York. Under treatment, he gradually improved, and by the time we arrived in Singapore via Java, he was able to walk up to his home there.

A lot of our time was spent out East and many things happened there. One of the apprentices sustained a very oblique fracture of the tibia when boating at Osaka. At a private hospital there, I assisted a very skilful Japanese doctor to plate the bone. Some weeks later, as X-ray showed absorption instead of union, the plates were removed in Hong Kong and a plaster cast put on, and in six or seven weeks he was able to proceed home to Australia for a vacation. I met him in England about a year after.

Off the Australian coast, Chips, as we call the carpenter, was putting in a ventilator plug in the ceiling of a refrigerator hold. He stepped back too far on to nothing and descended 20 feet or so. When he landed on his back, the plug, about 24 inches square and seven thick, arrived with him on his head. How he did not get squashed, I do not know, unless he still held it in his hands and this cushioned the blow.

He was momentarily stunned, and the next day, after a severe verbal castigation from the mate for his carelessness, was at work as usual. I tore the seat of my pants sliding down a plank to him.



# Editor's Column

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Your editors propose to publish a synopsis of the Health Insurance Bill now before Parliament to be followed by a statement of what the Progressive Conservative Party would hope to do under like circumstances, and finally the plan that the C.C.F. have in mind. There would appear to be general agreement in the desirability of improved medical services for our people and it is hoped that an idea from this proposal and another from that may help to eventually formulate something really worthwhile to suit the peculiar needs of this province and yet to harmonize to the required degree with a Federal Act.

The Bill now before Parliament is said by a Minister of Health of another province to require an army of evaluators, councillors, and minor officials and that its financing is cumbersome, vexatious, expensive, and possibly inquisitorial, and would seem to dictate to a dangerous degree the manner in which things must be done by both public health and private medical services. Whether or not this is a just and well deserved criticism you will have to decide but one would suggest that all the plans should be read in the light of such observations.

What may appear ideal on paper may turn out to be very troublesome in actual practice, and the discovery and correction of such defects will involve more or less expense to the weary tax-payer. The suggestion of one of our colleagues that restricted areas be set apart as proving grounds seems to contain an element of common sense.

An ideal district should be sharply defined by Nature and its physical features diversified. Its inhabitants should speak many tongues denoting their racial origin, their religious and political views varied but definite. They should be found in densely populated communities, friendly villages, isolated hamlets, and well and sparsely sprinkled countryside, with the original British and French stock predominating. They should be engaged in a variety of gainful occupations such as farming, fishing, lumbering, mining and manufacturing. Some portion of the people should have a very old experience in prepaid hospital and medical service. Cape Breton fulfills all the requirements to represent Canada in miniature. As a laboratory for experimental medical plans where can a better set-up be found? The chemicals are all on the shelves and a laboratory rather than the expensive plant is a good place to find out whether or not their association ends in a much to be desired synthesis or a devastating explosion.

During the preparation of this Bill the views and claims of exponents of methods of treatment other than those regularly adopted by the medical profession and which have received the support of such influential groups as Labour and Agriculture have doubtless added to the difficulties of the framers of the measure now before Parliament. When the Medical Act of Nova Scotia was up for revision in 1923 the members of the House of Assembly were confronted with the same problem. After listening to the presentations of all the interested parties the legislators arrived at the conclusion that possibly there was some good in all the methods of treatment but were of the opinion that certain requirements must be made basic before a candidate for any be turned loose on the public whose duty it was for them to protect. Consequently the Act requires that anyone entering upon the study of so difficult a



subject as the prevention and cure of disease must have a certain minimum of academic training. All must be familiar with the structure, that is the gross and microscopic anatomy of the body they propose to treat: and know the working and purposes which these structures serve, that is, physiology: and the modifications of structure and function, wrought by disease, that is, pathology. Furthermore, it was deemed essential that a future practitioner of the healing art, regardless of what he might call himself, be able to distinguish between pulmonary tuberculosis and piles, pregnancy and a quinsy, pernicious anaemia and measles, diabetes and a hernia, cancer of the breast and a bunion, and therefore must study the subject of diagnosis. In short, all must be on speaking terms with the fundamentals. Once a diploma is secured certifying this minimum of proficiency the possessor is at liberty to enter practice or to further qualify to a greater or lesser degree in any of the specialties: those of a general character such as obstetrics, paediatrics, osteopathy, chiropractic, and general surgery, or limit himself to the more restricted fields of ophthalmology, otolaryngology, pathology or radiology.

It would be difficult to conceive of legislation that could be fairer to both the public and the practitioner, the one is protected against gross ignorance and the other can qualify in the specialty of his choice and be examined and certified by those acknowledged to be experts in any of these advanced studies.

When reading some observations on the administration of the proposed Act it was noted that one of the duties of the sub-sub-sub-sub official called the Assistant Regional Medical Officer will be "to insure the accuracy and sufficiency of the clinical and other records kept by practitioners". Knowing the appetite many governmental organizations tend to develop for multiple forms in triplicate what do you think that may mean to a doctor who is away to hospital at eight in the morning and makes his last call at eleven in the evening, and was out on a confinement the night before?

We are of the opinion that some arrangement must be made to guard against the unnecessary call or the right call at the wrong time. It is suggested that the patient be required to present a ticket or stamp each time a visit is made, either at home or in the doctor's consulting room, such to be secured at the local Post Office. The trifling amount involved could only be dignified by the term tax in strictly legal circles. It would not be the cost that would act as a damper so much as the nuisance of having to keep them always on hand: five cents for a day stamp, and fifty cents or a dollar for attendance between seven in the evening and eight in the morning. Such a procedure would eliminate the pests, provide better service for the deserving, the doctor's time could be utilized to greater advantage, and the government would have a new if only a minor source of revenue.

H. W. S.



# State Medicine in China \*

CHINA is committed to a program of State Medicine, based upon the *hsien* (County) health centres of the provinces, which will fit in with the government's policy of making all *hsiens* autonomous units of local administration. In this autonomous unit of local administration, health will be organized parallel with education, public safety, cooperatives, and other constructive experiments. The system is based on three principles: (1) To utilize the limited available medical personnel as a basic staff with which to train local auxiliary health workers. (2) To consider the prevailing disease and health problems of the people as a whole, with specific emphasis on prevention. (3) To make fundamental health service available to the people, with due consideration of their economic limitations.

These *hsien* health centres are responsible to plan health programs and control medical supplies, to provide medical relief in hospital and dispensary, to report, investigate, and institute measures for the control of epidemic and endemic diseases, to control environmental sanitation (water supply, refuse and night soil, delousing, control of food dealers, eradication of harmful insects and rodents), to provide for maternal and child health, to institute health education (school health, health campaigns, etc.), to prepare vital statistics. Lest it be thought that this is a paper program, attention is drawn to the remarkable figures that follow: There are already set up in Free China 16 provincial health administrations and 783 *hsien* health centres. We note that this rapid increase has occurred largely during the six years since Japan's attack began. In 1937 there were only 7 provinces with health organizations. In 1942 there were 16. In 1937 there were but 217 *hsien* health organizations in existence; the number grew to 783 by 1942. This is apart from 175 field health organizations controlled from the capital, and 185 health organizations under provincial control.

Still another vivid illustration of Chinese organization for health is the expansion of the highway health service. With the coastal provinces largely blockaded by the enemy, China is compelled to keep open her many highways in the northwest and southwest. Curative and preventive service must be rendered to the large number of travellers, refugees, highway laborers, and villagers, who use these highways. Accordingly, highway health stations have been set up, including, in each case, an out-patient dispensary, a small diagnostic laboratory, and facilities for the regular health program of education, for environmental sanitation, maternal and child health, etc. In 1939 there were but 18 highway health stations; the number increased to 57 in 1942.

Wounded soldiers and civilians, air-raid victims and sick refugees, have been treated by two chief agencies—One, the National Red Cross Medical Relief Corps; this provision supplements the medical service for wounded soldiers provided by the Army and the Ministry of Transport. The Red Cross Medical Corps operated nine divisions in 1942, each for a single war zone, and consisting of 150 medical units (curative, preventive and ambulance); these help the field and base hospitals and the receiving and dressing stations along the main lines of evacuation. There is also a Transport Corps with 29 convoys of ambulances, trucks, mules and boats, each with its associated repair shops and service stations. Two, the Mission Hospitals. There are less than 400 peace-time

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hospitals in China, 300 of them non-governmental institutions. Of the 300 non-governmental hospitals, 235 are conducted by the Protestant missions. The Government, gratified at the service rendered by this important group during the emergency, is continuing to subsidize them for the free treatment of wounded or sick soldiers and refugees. In this way the mission and other non-governmental hospitals are playing an important role in China's medical relief work. 220 of the 235 Protestant hospitals are giving cooperation to the government in its time of need. Of the 220, over 70 are in occupied China. Subsidies reach them through the help of the Chinese Medical Association. From January 1940 to October 1942, the sum of \$2,033,619.42 National currency, has been spent for these non-governmental hospitals by the National Health Administration. In addition to this government help, the International Relief Committee of China, supported by funds from both Britain and America, has cooperated by donating to the Protestant mission hospitals and other non-governmental institutions, further supplies of medical equipment.

Never before in China's history have communicable diseases been so thoroughly recorded and reported. The major communicable diseases reported during 1941, were: Malaria, 351,431 cases; dysentery, 101,686 cases; typhoid, 15,218 cases; relapsing fever, 12,808 cases; smallpox, 11,966 cases; typhus, 5,320 cases. The wonder is, not that these numbers are so large, but that they have been kept so low and that no major nation-wide epidemic has been reported during the two years, 1940 to 1942. However, bubonic plague showed 626 cases in 1941, with 395 deaths. Cholera was active in the three preceding years, but was on the decline in 1940. There was a flare-up in 1942, with a total of 11,923 cases.

The tables of medical personnel show how pathetically inadequate the supply of Chinese doctors is. In 1942 there were 12,018 doctors, 793 pharmacists, 322 dentists, 5,796 registered nurses, 5,003 midwives, and 4,010 dispensers. Authority was given in 1939, and thereafter, for the registration of practitioners of native Chinese medicine. Even with this privilege made available, only 513 persons, up to the end of October, 1942, have been registered as practitioners of native Chinese medicine.

Prevention is a significant item in the Chinese health program. The two Epidemic Prevention Bureaus are located in Kuming and Lanchow. Provided the materials necessary for the manufacture of vaccines and sera are available in sufficient quantity, these two institutions are capable of producing sufficient quantities to meet the country's total need. During 1941 the major production in these two bureaus was of cholera vaccine, cholera and typhoid vaccine, plague vaccine, small-pox vaccine, together with anti-toxin for diphtheria and tetanus.

An interesting development in the training of public health personnel consists in the provision of fellowships. Several have been sent on Rockefeller fellowships to the United States; others have been sent for malaria training in India; still others have been sent to the Haffkine Institute in Bombay for training in plague prevention; while still others have been trained in the National Institute of Health.



## WHAT EVERY WOMAN DOESN'T KNOW—HOW TO GIVE COD LIVER OIL

Some authorities recommend that cod liver oil be given in the morning and at bedtime when the stomach is empty, while others prefer to give it after meals in order not to retard gastric secretion. If the mother will place the very young baby on her lap and hold the child's mouth open by gently pressing the cheeks together between her thumb and fingers while she administers the oil, all of it will be taken. The infant soon becomes accustomed to taking the oil without having its mouth held open. It is most important that the mother administer the oil in a matter-of-fact manner, without apology or expression of sympathy.

If given cold, cod liver oil has little taste, for the cold tends to paralyze momentarily the gustatory nerves. As any "taste" is largely a metallic one from the silver or silverplated spoon (particularly if the plating is worn), a glass spoon has an advantage.

On account of its higher potency in Vitamins A and D, Mead's Cod Liver Oil Fortified With Percomorph Liver Oil may be given in about one-fourth the dosage of ordinary cod liver oil, and is particularly desirable in cases of fat intolerance.

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## AND SO YOU WANT SOMETHING FOR THE BULLETIN

Well Ed. you see it's like this we get here so early and we leave so late that there just ain't no time for nothing but an inlay here an inlay there and an amalgam over yonder you see we are working the belt system now we tighten it up a notch at lunch time and a couple of notches at dinner time between times the phone keeps a-ringing and my "girl" keeps a-running to and fro had to fro two lately it sure is tough to be having girl trouble these days and the door keeps a-opening and a-closing must have an appointment this afternoon to have my teeth cleaned that old inlay has fallen out again I have a terrible toothache I'm being inducted on Tuesday I'm going to New York tomorrow those false teeth just don't look like me that old wisdom tooth is sure raising the top of my head right off. I'm in defense work now and can't come until 4:30 well it's a long way up from San Pedro and I just can't make it before 6:30 I'm on the graveyard shift and so must see you the first thing in the morning say I've just gotta have a raise or I'm quittin' say are you coming to the meeting sure you betcha and don't forget this is the night for the fire watchers wardens nutritionists decontaminationists Kiwanians Rotarians Optimists now just a little more drilling right here gee this world is a big funny place dammit my old back aches let's see is this an inlay or an amalgam drill a little more here maybe huh no more burrs like that s'funny no more burrs let me see the red ones are for meat and blue for—all the burrs have gone to war I guess who wants burrs anyway never did like burrs diamond stones that's the ticket diamonds gold and old A coupons are all gone nice fishing here in the mountains gee it's nice here and nice soft padding all around bars on the windows too they can't get me here we fixed 'em they'll never find me here Ha Ha Ha Nuts to you.