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Vol. II

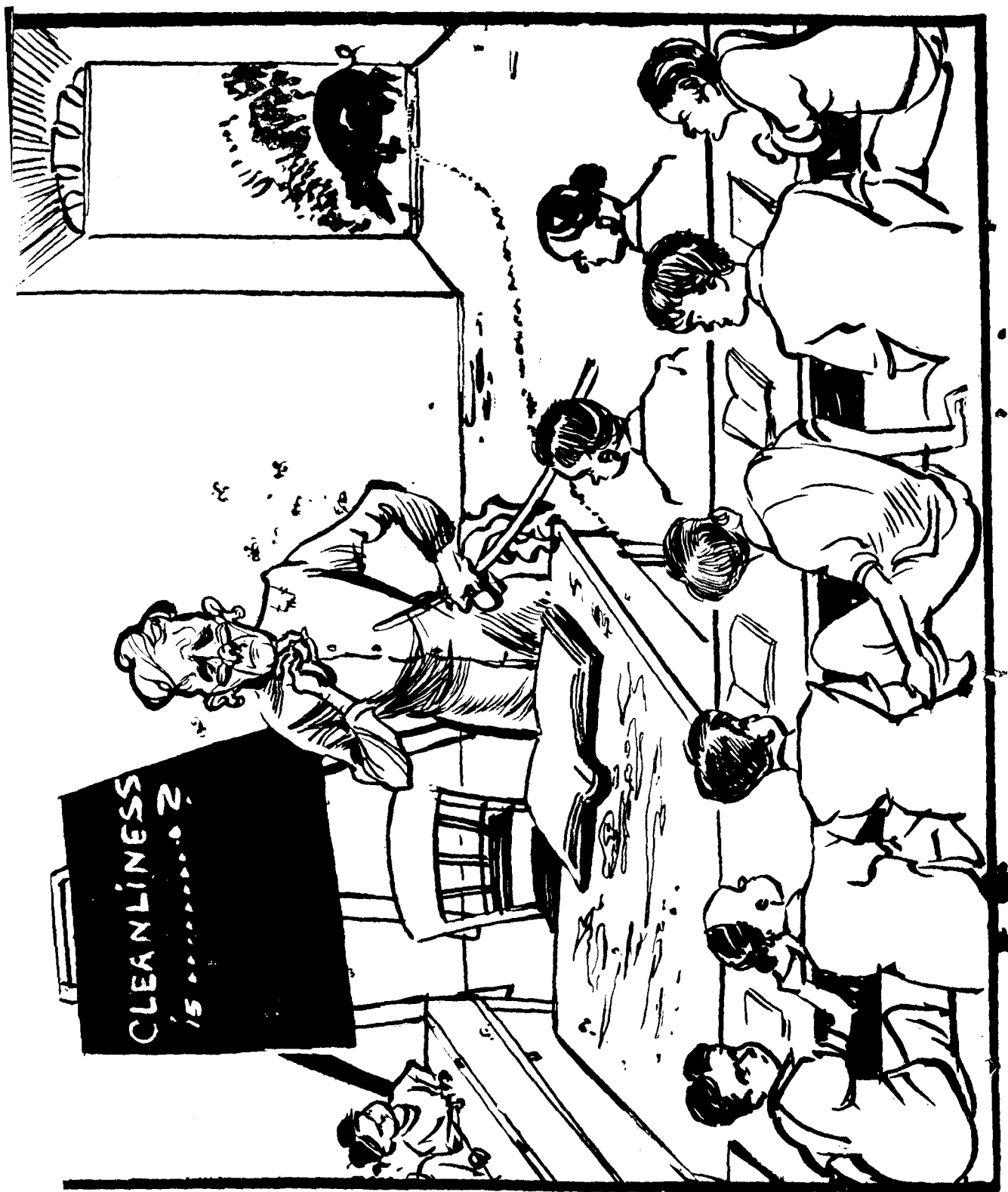
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VOL. II No. 8

MAY, 1948

ISSUED MONTHLY

EDITORIAL . . .

MAHATMAJI'S MEMORIAL

A SUGGESTION

While no definite decision seems to have been taken on the major question of methods of perpetuating Mahatmaji's name, the Press is however full of news of attempts to collect funds for the said memorial. In this connection, we would suggest that, pending final schemes, suitable steps be taken at once to collect and organize in one section all references to Mahatmaji's passing in the World Press arranged according to language and country. Six copies of such references might be gathered so that, at one view, posterity may see the extent of the reaction provoked by Mahatmaji's assassination. This step should be taken without further loss of time, since much of the periodical literature dealing with the tragic historic event cannot be easily gathered later. We

urge the central committee, responsible for promoting the idea of a Gandhi Memorial, to take suitable steps at once to gather the above said material from all the four corners of the world. The material will form an important section of the Library and Museum which are certain to be established in the name of Mahatmaji.

MADRAS WATER SUPPLY AGAIN!

A further stage in the art of circumlocution has been reached in the evolution of what still remains a remote ideal of an unfailing, adequate and wholesome supply of water equitably and evenly distributed to the consumers. According to a recent announcement bearing on this subject, the Government have sanctioned plans

and estimates amounting to Rs. 77.50 lakhs with a view to installing a battery of mechanical filters towards solving the problem of the quality of water.

In our last issue we made a few comments on this question. But in view of the latest decision of the Government, we make no apology for returning to it again, since in our view the principles involved in it, are of such great importance that they deserve to be reiterated as much in the interest of economy and financial propriety as in the interests of the citizens of the metropolis.

FOOLS—AND FOOLS!

It was a favourite remark of Lord Morley that there are two kinds of fools—those who give advice and those who *do not take it!* We are reminded of the grim truth of it in connection with our persistent but futile efforts to make the authorities see their elementary and obvious duty concerning the basis on which the city water-supply should be efficiently designed. In the bad old bureaucratic era, officialdom was so sensitive to public opinion and so unnecessarily offended at it, that no advice was ever taken because of mistaken ideas of prestige. Rather, it used to be a case of bureaucracy shaping its policy on the principle of going-by contraries. If you wanted a thing done, you should not so much commend it, as condemn it. But

it is a matter of regret that a system of Government which is ostentatiously and ostensibly based on popular consent and shaped by popular opinion, should show a worse degree of resentment at public criticism especially when such criticism is, much more disinterested, than was the case in the past.

The question of the City's water-supply is a case in point. Let us reiterate the facts briefly so that the public and, if possible, the Ministry may understand the question in all its intricate and complicate bearings.

Seeing that the City water-supply has been baffling expert knowledge for quite a long time, and we had such sensations and unsatisfactory expedients as "Molony's mixture" and so on at one time or another, the Government constituted nearly three decades back a committee of experts to carry out experiments to arrive at a satisfactory scheme. Without tracing here all that past history in detail, suffice it to say, that the committee, at the instance of one of its members, carried out experiments based on fundamental scientific truths on the subject. The *modus operandi* was as follows:

RIVAL METHODS

The raw water in the Red Hills tank is loaded heavily with organic debris—fermenting and fermentable—with all the natural and concomitant

evils arising therefrom. Experiments were conducted even during adverse hot-weather conditions. The raw water was proved capable of being 'conditioned' for potable purposes by means of filtration through sand filters using a series of fixed spray jets. The results were quite satisfactory. The Government were kept informed of the results of this experiment. While no orders were passed on the final report, it is interesting to note that the City Corporation authorities seem to have pushed forward their present proposal to instal a battery of mechanical filters without reference to the results of earlier experiments. Even so early as 1939 when the proposals for installing mechanical filters were put forward to Government, they were kept pending the final report of the Water Purification Committee on the new experiments which were then started.

From 1939 to 1948, a long period of unnatural incubation, no further light was thrown upon the Government's intention as to the choice between the two methods, but now suddenly and with suspicious haste, the mechanical system of filtration has been approved, and estimates sanctioned on the usual Government terms of giving half of the cost as grant and the other half as loan.

WHY MAKE THE WORSE APPEAR THE BETTER?

The question which we now raise is this. Of the two systems of puri-

fication above mentioned, granting for the sake of argument that both are equally good, is it not elementary good sense and sound economics to choose that which would entail less cost both initially and ultimately? In the present case, what would the public think if we inform them that the choice has fallen upon the costlier method, for reasons not known to the public. Has not the Ministry a duty to explain to the public the reasons for which the costlier method has been chosen in preference to the cheaper one? Is it a case of muddle due to concurrent or confusing jurisdiction of two Ministers; or is it a case of the right hand not knowing what the left hand does?

We have been agitating against the continuing anomaly of two departments of Government messing about with one subject with the inevitable result of making a hash of it, and complaining for a long time that the Local Administration Department and the Public Health Department both suffer from what may be described as split personalities. After a long and bitter struggle, in England the old Local Government Board had to give way to a Ministry of Health, which is now held solely responsible for all activities of Local Self-Government excepting Education for which a separate Board has been set up.

OVER-LAPPING JURISDICTION AND DIVIDED RESPONSIBILITY

The position in regard to our Ministry seems to be that one Minister is in charge of Tammany Hall, while another Minister is in charge of drains and ditches without however, having any sort of control over technical personnel from Engineers to maistries, who are supposed to be responsible for their construction and maintenance. If there had been any rational distribution of functions between the Ministers, this glaring instance of a major work being passed without public scrutiny would have been rendered impossible.

Further still, though the present estimates are given as Rs. 77.50 lakhs, we have no doubt that as is the way with all 'catalogue engineering' estimates, by the time the work is brought into operation, the actuals would almost certainly exceed a crore of rupees. We may here mention that it is significant that neither the Corporation nor the Government have revealed to the public the cost of maintenance of the proposed mechanical filtration plant. The authorities have given only the capital cost and not the maintenance cost. We have never heard of a major project of this kind sanctioned without the public being given a full picture of the scheme and an idea of the capital cost as also its annual maintenance charges.

WHY SHORT CIRCUIT?

Most curious and disquieting of all the features of this proposal is the failure—accidental or intentional—to invite public criticisms of the plans and estimates of the scheme before they were so light-heartedly approved by Government. Is it not incumbent on the part of the Government to subject such proposals for healthy public scrutiny so that their implications are fully understood before Government set their seal of final approval on them?

PROFESSIONS AND PRACTICE

The Ministry is fond of quoting democratic precepts and precedents, wherever they suit them; but they are given the go-by wherever they find them irksome or calculated to circumscribe ministerial freedom of action! For instance, in Britain, all local schemes for which assistance is sought from the Exchequer, are subjected to a preliminary public enquiry, and only thereafter are the plans finalised. Even the formality of publishing these proposals in the 'Gazette' and inviting public criticisms within a specified date, did not seem to have been followed in the present case for reasons best known to the authorities concerned.

On these general considerations, we deprecate the haste with which a major scheme of this kind has been sanctioned.

May we not, therefore, expect the Ministry to retrace their steps before it is too late? We are prepared to lead, if necessary, expert evidence before any Expert Committee of Enquiry to show how improvident, risky and unnecessary the present proposals are in their technical no less than in their financial implications?

Why this Euphemism?

It is curious how often plain, blunt but unpalatable facts are camouflaged so as to convey just the opposite of what one really means. For instance, under the misleading caption, "Health Reports," what we are actually given are some figures of the incidence of epidemics. Why not call them straight Weekly Reports of Epidemics and be done with it?

In America, which is perhaps the most advanced country today in all matters pertaining to health, they are honest enough to call them Incidence of Diseases or Weekly Reports of Epidemics. In health matters, more than in most others, it is eminently desirable to call a spade a spade.

We, therefore, strongly urge that this practice which has been handed down to us as part of the undesirable bureaucratic tradition and which indulges in misleading circumlocution, should be put an end to. We hope the Central Government will take the initiative in the matter.

End It

It is a bold stroke which only a C. R. could have put through to have superseded the Calcutta Corporation, as an absolute essential for salvaging the cause of Local Self-Government itself. Of the history of the Calcutta Corporation and the events that led upto the supersession, it is not necessary for us to expatiate at any length in this context; but about the seasonableness of the action, there can be no two opinions, specially after the new era dawned in Bengal. We refer to this only to express our sincere hope that something analogous might be done in Madras to end the present Corporation. It is an out-moded and discredited body which has been kept going since 1936 by all the arts of rejuvenation which political quackery could hit upon, and which has been a growing incubus, a civic Sindbad the Sailor, pressing down upon the patient shoulders of the public and proving a hundred times worse than the worst nightmare imaginable. It is a reproach to public decency. It is a blot on our Ministry and it is a fraud on the fundamental rights of citizens for, due to a variety of causes, the premier city of the Province is being mocked with the shadow and semblance of parliamentary methods while cheated of the essence of democracy in all vital respects.

CIVIC BODY OR AUGEAN STABLE ?

The Madras Ministry does not seem to have either its own good name or good government of the city at heart ; but it is using the Corporation as one of the numerous props by which it sustains itself in office. The debates of the Corporation are of lamentable reading wherever they are found worthy of being reported. Major questions of policy involving expenditure of lakhs of rupees are neither discussed nor intelligently understood by any section of it. Indeed, the major decisions which are supposed to be the exclusive responsibility of the Corporation are taken at bureaucratic levels and are imposed on it through ministerial indolence, if not worse. It is truly an Augean stable of insufferable stench and indescribable extent which we have allowed to spread and grow amidst us ; and he will be a great benefactor who would have the courage to clean it out at one stroke. There is no use in mending this Corporation because it was past all mending long ago. It must be ended and elections which have been postponed for trumpery reasons so long, must be postponed for another one or two years in the name of efficiency ; and the entire administration should be put in the hands of strong men with supreme devotion to duty and with sufficient knowledge of civic affairs so that the rot which had set in the sphere of local

self-government more than a decade ago might be stopped. However, as we have already stated in a different context, ours is a lone voice ; it will be a pleasant surprise to us if the Madras Ministry which has a genius for incurring unpopularity for trivial reasons should, for once, muster courage to displease vested interests in order to save the cause of the city.

WHY NOT A PUBLIC COMPLAINT BOOK ?

One more suggestion. We cannot pawn self-government for ever. But in restoring the reality of self-government to our local bodies, we must take care to provide automatic checks against their vagaries. Here again, Bengal leads with a request to the public to bring to the notice of a standing enquiry commission all errors and irregularities of commission and omission. A complaint book in short should be opened and communications received through this channel should be diligently and zealously inquired into. This is one way of preventing an accumulation of wrongs rendering their redress remote, if not impossible.

Bengal Leads

We are obliged to the Government of West Bengal for a Press note outlining a scheme of educational survey of West Bengal with a view to organizing and reorientating the educational

activities in a truly national sense. An appeal is made to the public to cooperate with the Government in supplying the necessary data. We commend the scheme as both appropriate and necessary, and wish other Ministries of Education in the country would follow such an excellent lead.

In the Madras Province, educational activities have been much more hectic while at the same time much more diffused also. Not only are first things not placed first, but irrelevant considerations are threatening to destroy all chances of either a fruitful or rapid development of educational activities.

The Madras Ministry has recently published a series of revised syllabuses for the reorganized secondary school courses. According to the Bhore Committee's Report, health education should be an integral part of our secondary course at a fairly early stage. To gather the statistical data concerning our rural population on the lines suggested by the Bengal press

communique, is the first condition of any progress which we may make in this field. The mere inclusion of subjects in syllabuses is no guarantee that they will be taught in the proper way. We must see that the environmental hygiene is properly studied and the habits of the young corrected at the right stage actively and as a practical part of the course itself. We hope that in the survey ordered by the Bengal Government would be included a study of environmental sanitation of our educational institutions with a view to improving them and inculcating in the young, habits of cleanliness from their earliest age possible.

It is necessary in this connection to draw attention to the fact that every Congressman under the revised pledge is expected to declare that he would work to further the cause of sanitation in the country. How far is this pledge going to be carried out in the policies and programmes of the Ministries, both of education and public health ?

BAD HABIT : GIVE IT UP

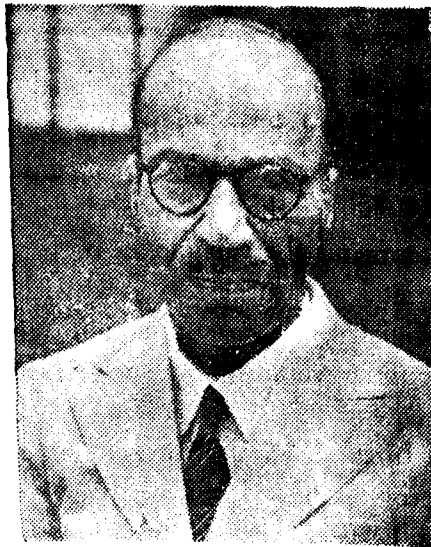
Promiscuous spitting is a bad habit on which I have commented often enough. It is all part and parcel of the incredible ignorance that exists in our land among all classes of people in regard to the elementary laws of sanitation and hygiene. It is a habit which we must give up, if we should avoid certain diseases—*Mahatma Gandhi*.

(From *Harijan*, dated 21-7-46).

CARE OF THE SKIN

by

Captain. S. THAMBIAH, M.C.
M.R.C.P., D.T.M&H., F.D.S.



STRUCTURE AND FUNCTIONS OF SKIN

Before one can get to understand the disease processes in the skin and their prevention, one should have some idea of the structure and function of the skin. The skin is the largest organ in the body. In surface area, it covers $1\frac{1}{2}$ sq. metres or 20 sq. feet. It completely invests the outside of our body. It is not to be regarded as the brown-paper round a parcel. It is bound up with a good many vital activities of the body. There is a liberal supply of nerves with special nerve-endings to bring us into relationship with our environment. The sensations of touch, pain, heat and cold, pressure, are mediated by the nerve filaments in the skin. The central nervous system makes all the adjustment through the information derived from the skin. Again, the skin is richly supplied with blood which to a certain extent helps in the

maintenance of a constant temperature of our body. This large blood supply is also required to give proper nutrition to the skin in general and also to the numerous sweat glands and sebaceous glands and hair, both downy and long hair. The skin is able to hold as reservoir, nearly $\frac{1}{6}$ of the whole blood of the body, hence it is called the peripheral heart. This capacity of the skin acts as a life-saving measure in cases of congestive heart failure. When the sweat glands and the sebaceous glands are fully active, the gloss and brightness of the skin will be maintained and the skin prevented from becoming dry. There are $2\frac{1}{2}$ -3 millions of sweat glands and an equal number of sebaceous glands. If the skin is to function properly in all its various aspects, it should be maintained in a high level of healthy

condition. The first and most essential requisite in this direction is the maintenance of the general health of the individual: a well balanced diet with a generous allowance of vitamins, a properly adjusted activity-play-rest period, avoidance of mental stress, suitable clothing and satisfactory personal cleanliness. Modern civilisation has tended to increase mental stress, decrease the use of big body muscles and made available a plentiful food supply. A regular technic of sleep is a profitable physiological investment. Restful sleep may be secured by putting aside the tension of the day, and keeping up a reasonably consistent bed-time schedule.

IMPORTANCE OF PERSONAL HYGIENE

Personal hygiene is undoubtedly a factor of importance. At the outset, it may be pointed out that there is a personal factor to be taken into consideration. An individual skin will vary as regards colour, texture, thickness, amount of oil, etc., and the actual daily care of the skin may vary in accordance with the type of skin which an individual possesses. Of soaps, there are many kinds. The wrong kind of soap will give rise to discomfort and may even accentuate certain skin conditions already present. A thin-skinned, fair person may not tolerate a soap with an excess of alkali while a person with

a dark oily, thick skin may have many baths with the same soap with no noticeable change or discomfort. In dry skinned people and ichthyotic, persons, soap is definitely harmful, and may cause superficial abrasions: superfatted soap will suit a good many skin. Hard-water is harmful to dry skins only. Skins of adolescence are benefitted by soap and water washings, and the tendency to formation of pimples and dandruff may be kept under check. Diet is also of importance, Undernutrition will produce dryness and wrinkling of the skin. Slightly excess calori in the food is stored as fat underneath the skin which give it the youthful complexion. When the diet is deficient in Vitamin A, the skin becomes dry and in long-standing cases, assume the condition known as toad-skin. Purpuric rashes and ecchymoses may disfigure the skin when food is deficient in Vitamin C. Want of nicotinic acid in the diet will cause pellagra—a dry condition of the exposed areas of skin in addition to mental and bowel symptoms.

CLEANLINESS OF SKIN

The skin by the very nature of its structure and function requires that its surface be kept free from extraneous material, if it is to serve its purpose as a protective, heat-regulating apparatus, and as a supplementary excretory organ. In addition, a clean active skin

is a more efficient sensory receiving station. The surface layers of the outer-skin are gradually transformed into dead, horny scales that require removal or they will interfere with the function of the skin glands. The secretion of the sweat glands produces some waste material that need to be removed. During insensible perspiration, and, sensible perspiration from vigorous, muscular exercise or exposure to high temperature, the dissolved solids, alkaline salts, urea, uric acid, creatinin, aromatic acids, and ethereal sulphates get deposited on the skin surfaces and in the direct openings of the glands. Sebaceous glands throw out a waste-material in addition to the oily secretion designed for lubrication of the skin surface and hair. Blocking of these duct-orifices causes the unsightly "block-head" of the face.

Efficient working of the skin may be interfered with through being overlaid with dirt and particles of substances handled in trades (occupations) by the person. This dirt mixed with solid particles of dried secretions may be a potential source of infection when there is a solution in the continuity of the skin. Again, over clothing with garments lacking the appropriate qualities of absorption of perspiration and heat regulation may hinder the efficient functioning of the skin.

Bath for cleanliness of the body must secure the removal from the

surface of debris composed of dead epithelial cells, dissolved solids from the sebaceous and sweat glands and the dirt deposited from the outside. Friction by towel or clothing may remove some of the material, but dissolving it in water, or soap and water is the only effective method. Good cleansing baths keep the ducts of the skin glands open so that the skin may function freely; unpleasant body odours are also removed by good baths.

COMMON DISEASES OF THE SKIN

The skin is host to a number of organisms that waver between innocuousness and harmfulness under certain conditions; they cause diseases or aggravate a previously existing lesion of the skin. Four diseases of the skin are commonly met with. They are impetigo contagiosa scabies, fungus (ring-worm), louse infection and a fifth one leprosy. Impetigo contagiosa is caused by streptococci to start with and in a short time is super-imposed by staphylococci. Some recognise that both group of organisms may equally give rise to lesions of impetigo contagiosa. Infection takes place by contact with an infected individual by pus or serum laden with the cocci. So exposed parts, as face, neck, ears, hands-forearms, knees (in those who wear shorts) etc., starts as a reddened area and in a few hours a blister forms.

This blister ruptures by pressure or scratching, and lets out the serous exudate. In some cases, the blister becomes turbid showing presence of pus within 6-12 hours from the formation of the blister. The serous or pus exudation rapidly dries up with formation of a honeyed or amber coloured, crust or scab. The under surface of this crust is moist, and so it comes to be loosely attached, giving rise to the classical name of "stuck on" scab. The first lesion from the serous exudate, will give rise to number of daughter and grand-daughter lesions by inoculation into fresh areas by finger nails, scratches becoming infected. In the same way, others coming in contact with the infected person will get inoculated in their turn (hetero-inoculation). Thus the same person may have more lesions forming or those round about may get the disease. On account of the exposed position of the skin, number of diseases in the skin may become infected by pus organisms to which the name of "impetiginisation" is given. Scratching of the head in a lousy patient or ringworm infection of the skin, or dandruff of the head, or itch infection of the hands, buttocks, etc., may become impetiginised.

Most of the blister forming diseases of the skin like shingles, pemphigus, or chicken-pox or small-pox may be impetiginised.

After careful diagnosis, simple remedies will effect a cure. The time-honoured white precipitate ointment is being discarded. 2% gentian violet in an aqueous solution has been popular. 1-2% cibazol in 8 ounces of calamine lotion, applied thinly 2 or 3 times a day, has a good drying effect and thus prevents the auto-inoculability of the serous discharge. Penicillin intravenously and topically has given good results. Combined staphylo and strepto to vaccine 100 million of each twice a week or once in 4 or 5 days helps rapid resolution. Scabs or crusts should be removed if they are numerous, by painting with hydrogen peroxide or washing with warm boric lotion.

ITCH OR SCABIES

Itch or scabies is caused by a mite, the *acarus scabies*. The disease is prevailing in winter-months, as is the case in all other verminous diseases. Overcrowding helps the spread of the infection. In the cold months, children sleep with the older folks for warmth, and the infection spreads from one to the other. It is not to be considered a disease of the poor, as people in better walk of life may acquire the disease from unconscious contact with infected persons or sleeping in infected beds. The disease is always a result of the deposition of an impregnated female on the skin. The female burrows

into the superficial layers of the outer skin to lay eggs. These hatch out and when a certain concentration is reached, give rise to the characteristic symptoms.

There is intense itching at night and especially about the time of undressing and getting into the night clothes. Itching is about the places where the burrows are found. Sides and web of fingers, wrists, inner sides of thighs, buttocks, genitalia, folds in front and behind the arm-pit, elbows and about the nipples in the female. Face and ears, palms and soles, are badly affected in young children, when infection by cocci takes place, fever is present along with pain and discomfort in the impetiginised areas. Some people, especially children, develop a slight inflammation of the kidneys evidenced by puffiness of face, general swelling of body and decreased flow of urine; when one person in a family reports for scabies, other members are also affected in a similar way, though not in a severe form. All should be inspected and treated at one and the same time. Good soap and warm water bath should be taken. A belzobenoate emulsion may be rubbed in for 2 or 3 consecutive days, followed finally by a cleansing bath and putting on dhoby-washed clean clothes. Even servants in the household should be treated along with others.

RINGWORM

Ringworm infection is another common infection of the skin. It takes one of four forms. The scalp is affected in children before the age of 15—school-going children forming the bulk. The hair is bent, broken or twisted in the affected area of the scalp, and there is a general scaliness in this area. The hair has generally become dry and the gloss replaced by dull colour. In India, the affection is rare. Treatment by X-ray exposure and thallium acetate internally has given satisfactory results.

Ringworm infection of the non-hairy parts of the body is very common. It appears as a round lesion of an inflammatory nature, spreads from the border in an irregular fashion. Later, scaling or healing may appear in the centre, while spread is taking place in the periphery. The centre of the lesion may be dark in colour or assume a pale appearance. Itching is present both by day and night. Sweating aggravates the itching—spread takes place by finger nail—scratching and inoculation of fingers into the abrasion. Groins and upper part of thighs are often affected. Arm-pit and flexures of the knees being sweating areas, infection is easily implanted and kept up. A host of external applications are useful. If the condition is badly inflamed calamine lotion or cream is all that will be tolerated. When pain

and inflammation have subsided, Whitfield ointment may be employed. Chrysarobin in zinc ointment with a few drops of Ichthyol, though ungainly, prevents itching and hastens the healing process. Proprietary preparations as Mersagel jelly (Glaxo) or Mycozol (Parke-Davis), or Benzo-Salicylic ointment (Upjohn) may be used with profit. Appropriate remedy at suitable time should be employed to secure satisfactory results.

ATHELITE'S FOOT

Athelite's foot is another manifestation of the fungus infection. Feet and hands are commonly affected. Those who constantly soak their feet in water containing fat, oil or grease develop the condition. Women engaged in household work as cleaning vessels and plates are badly affected. Servants handling plates, cups and saucers in tea-shops and coffee houses, get both their hands affected. The manifestation of these is varied. In some condition, it is dry. The outer skin becomes thickened and fissured. The fissures are extremely painful on movement, as nerve filament is exposed at the bottom of the fissure. Some become exudative. All conditions may become secondarily infected with pus-forming organisms. People who walk constantly barefooted in moist ground after early rains are prone to acquire the disease. Farmers are often suffering from this condition in winter.

Bath-rooms should be aired and, if possible, exposed to sun to prevent persistent stagnation of water. Proper platforms should be provided for washing vessels without soaking the feet. Servants should be instructed to dry hands and feet as soon as work is over. Regular medical inspection should be carried out to detect susceptible individuals.

Nail infection of fingers is a very intractable condition. The nail becomes discoloured and adjoining soft tissue inflamed and swollen.

LOUSE INFECTION

There are 3 kinds of infections by 3 types of lice. The head louse is so well known and needs no elaborate description. Children are greatly affected. The infection spreads by direct contact from child to child through toilet articles as combs, brushes, or from pillows and beds used by infected individuals. Unclean children, whose hair is not regularly washed or clipped, keep on the infection. The bites of the louse become impetiginised as well as the scratches by the finger nails. In some individuals, the exudation causes matting of hairs with a malodour. The lymph glands in the back of the neck and below the ears become enlarged. Some may suppurate. Slight fever and loss of sleep may bring the general condition of the sufferer below par.

Cleanliness and medical inspection of children periodically will help in stamping out this condition. Toilet articles should not be shared. Sleeping in infected beds prohibited. Hats of others should not be worn.

Body louse is a disease of uncleanness often seen in the poor, during winter months and in those who have no facilities to wash and change their clothing. Armies on the march suffer badly and also in camps where bathing and washing facilities are poor. Proper bathing places and washing and ironing of clothes should stamp out the disease.

Public louse or crab louse infests the public hair. Contact with an infected person, especially venereal exposure, will spread the infestation. Articles of clothing and bedding also contribute to the spread; shaving the part well, washing with soap and water and some bland ointment for impetiginised cases, will be all that is required.

LEPROSY

Leprosy is another condition that is so commonly met with in an out-patient department of a general hospital. The number of patients suffering from this

disease and reporting for treatment are as numerous as those suffering from impetigo, a common out-patient disease. As the public and the profession have been sufficiently awakened by incessant propaganda by the British Empire Leprosy Relief Association, I need not touch on this subject.

HOW TO PROTECT YOUR SKIN

The skin should be maintained in a high state of efficiency to hold its own as a protective envelope of the body, as a heat-regulating apparatus, as an organ of sensation, secretion and excretion. Instead of being persistently clad and covered with excess of clothing, it should be exposed for an hour or two to the surrounding atmosphere. Suitable baths will mechanically dispose of the deposited dirt, dried secretions and malodours. Food should be wholesome with a liberal allowance of vitamins. Shell fish, as crabs, prawns, lobster, oysters should be avoided when they are learnt to be harmful. Refreshing sleep, out-door exercise, and avoidance of mental stress will contribute to a satisfactory general state of health, which, in turn, will nourish a healthy skin.

WHAT IS SOCIAL MEDICINE?

Work Of Roffey Park Rehabilitation Centre

by

Dr. T. M. LING, M.D., M.R.C.P.



"Indeterminate illness"—illness in which physicians and surgeons are of little help—is being diagnosed and treated at the Roffey Park Rehabilitation Centre, in Sussex, which was established by British doctors and industrialists in 1944. In the article below, the Medical Director of the Centre, describes how Social Medicine, now being practised at Roffey Park, is helping employers to solve one of their major problems.

Indeterminate illness among industrial workers and office staffs has long been a problem which employers have found difficult to solve. It is general medical knowledge that such forms of breakdown follow common lines, but how to treat such cases, where patients are neither ill nor injured in the accepted sense of the word, has caused a great deal of thought among Britain's progressive doctors and prominent industrialists.

Resulting from this closer liaison between industry and medicine is the formation of the first industrial rehabilitation centre for civilians, a pioneer

establishment in social medicine. It is the only centre of its kind in the world.

In 1943, Britain's National Council for the Rehabilitation of Industrial Workers appealed to employers to help in establishing a model centre for the investigation and treatment of those civilians who are "indeterminately" ill, a state of health for which no ordinary physician could prescribe or surgeon operate.

INDUSTRY'S CONTRIBUTION

As a result, nearly 200 British firms, from the largest to the smallest, sent

contributions ranging from £5,000 (Rs. 66,550) down to three guineas (Rs. 42 approx.), towards the cost. This fund was used to purchase a large mansion at Roffey Park, near Horsham, Sussex, formerly a millionaire's home surrounded by beautiful grounds of 300 acres.

An executive committee was set up with Lord Horder, the King's Physician, as chairman, and the late Mr. Samuel Courtauld, the rayon industrialist, as vice-chairman. Lord Horder has been actively interested in the work from the outset.

The centre was opened on June 1, 1944, a period in Britain when manpower shortage was acute. The need for such a centre is now obvious, and its success is borne out by the fact that approximately 86 per cent. of the patients are returned to full employment. There is accommodation for 120 patients, both men and women, and the average length of treatment is six weeks.

There is a dance room in the mansion as well as common-rooms for men and women, bedrooms, each accommodating three or four patients, dining-rooms and offices, while in the grounds are fully equipped occupational workshops, a gymnasium and facilities for swimming, tennis and badminton.

Men and women work together during the day, and in the evenings brain trusts, programmes of music, film show,

concerts, mock-trials, debates, talks from informed guests and a weekly dance are arranged for their recreation.

CLUB ATMOSPHERE

The atmosphere reflects a club spirit, rather than a hospital with regulations and restrictions. The patients help to run the centre, assisting in the kitchens, with the domestic work generally, and in the grounds, all of which is additional to the planned occupational work which forms part of their treatment.

They elect their own committee, appoint a chairman, meet each week to plan social activities and make suggestions to the Medical Director and the staff. When new patients arrive, the committee members look after them for the first 24 hours. Cases are referred to the centre by firms associated with its foundation, by local authorities and by hospital, while industrial medical officers send a number of patients. The patients are the misfits of industry. Enlightened employers know that to discharge them is no solution to the problem. So they are sent to Roffey Park. More than 1,000 patients a year are treated.

A recent case was that of a young clerk in an insurance firm. She was frequently absent from work and her general standard of efficiency was decreasing. Eventually she came to Roffey Park where it was found that

general depression was aggravated by the wrong environment at home. When she left the centre she returned to her job, but not to her home. She is contented now and has been promoted to a more responsible position.

The problems of the patients do not all arise from personal or family situation, but some from bad group morale, unsuitable work or poor supervision. It is sometimes important that on discharge the patient does not return to the surroundings, or the particular job, which caused the illness. For this reason the clerk in the insurance office was advised to find living accommodation outside her home.

At Roffey Park patients follow a planned course of treatment in which their time is fully occupied. A large part of the day is spent in the occupational workshops and on physical training.

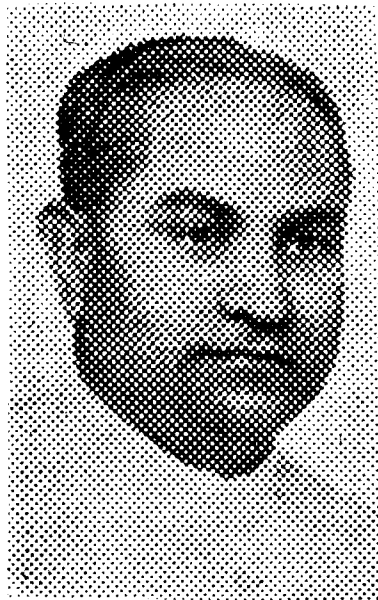
EXPERT SUPERVISION

On admission they are examined medically and psychologically, and the necessary X-ray or laboratory investigation is carried out. Modern psy-

cho-therapeutic methods are used if needed; electric therapy is given and frequently shortens the course of the illness. Apart from the Medical Director, there are three doctors, a social worker, a horticulturist, and nurses. Whether in the vegetable or fruit gardens, in the hot-houses, or workshops, the patients are under expert supervision.

The maintenance cost of each patient is six guineas (Rs. 84 approx.) a week, and those who are able to pay for themselves are expected to do so. Others are sent under the auspices of their employers, assisted by local authorities, or through hospital contributory associations.

In matters of social welfare once again Britain is leading the world, and the establishment of the centre at Roffey Park is an important step towards better human relations in industry. The work has been extended to research and training for industrial executives, as well as to international post-graduate courses for doctors and social workers.



ENVIRONMENTAL HYGIENE ITS IMPORTANCE

by

Dr. JIVRAJ MEHTA,

Director-General, Health Services, Government of India.

Sanitation is derived from the Latin word 'sanitas' which means healthy state or condition. The health of the individual and of the community is dependent on factors which are partly of a biological and partly of a social nature.

Biologically man is but one among the innumerable species inhabiting the earth and he is competing with all the others for the securing of food, shelter and other conditions essential for survival. Fortunately for himself, man has attained, in comparison with the other species, at least partial mastery over his own fate by his ability to control his environment to serve his needs. Thus, he is able to produce food while other animals are dependent on such supplies as nature provides; he has secured for himself immunity against changing conditions of temperature,

wind and rain by evolving suitable housing and clothing; and, above all, he has succeeded through the progress of scientific knowledge and its application to life, in eliminating in an increasing measure the menace to his health and wellbeing which results from the invasion of his body by various types of intruders such as disease-producing bacteria, many kinds of worms including the hookworm, tapeworm and guineaworm and pests like those responsible for malaria and filariasis. •

ADEQUATE LIVING SPACE NECESSARY

Social factors influencing health include those which arise mainly from men living in communities under varying degrees of crowding. There arises, in such circumstances, the need for

continuous effort to remove from the residential area filth and refuse, the accumulation of which would prove inimical to the life of the people. Congestion promotes the transference of infection from the sick to the healthy. Control over housing conditions so as to provide adequate living space and proper ventilation becomes therefore a necessity. The growth of industries and other forms of occupational activity also produce their problems such as the pollution of air by smoke and of natural waters like rivers and lakes by trade wastes. Thus, organised community effort becomes essential for eliminating the detrimental effects produced by such industries and trades. The term sanitation is used to indicate the application of scientific knowledge to the control of the environment in which human beings live in groups in order to reduce hazards to health arising out of biological or social factors as well as to promote those conditions which help to create and maintain reasonable standards of convenience and comfort.

THE EXAMPLE OF PANAMA

The best example of how sanitation can change a pestilential region, where high rates of morbidity and mortality kept the population sparse in numbers and at a very low level of health, into a place as healthy as any part of the world can be is, perhaps, the Panama

in Central America. The history of the Panama Canal is, apart from its being a record of engineering triumph, an outstanding example of what scientific knowledge and organised human effort can achieve in the eradication of conditions inimical to man's health and well-being. Through several centuries from the time of Sir Francis Drake, the great English explorer, various efforts to make the place habitable had completely failed. In 1881 de Lesseps began the construction of the Canal and, in 13 years, not even one half of it had been finished, although about 260 million had been spent on it. The reasons were that the three scourges of yellow fever, malaria and dysentery sapped the vitality of the labour force and technical personnel employed on its construction and killed them off in great numbers. Thus, it was at last brought home to all concerned that conquest of disease was the first and most essential step for ensuring the success of the scheme. President Roosevelt selected Colonel Gorgas of the United States Public Health Service for this task on the strength of the great work he had accomplished in making Havana free of yellow fever for the first time in a period of 250 years. The results of the large scale measures which were undertaken were outstanding. Yellow fever was completely rooted out by 1906 and since then it did not appear.

Within a period of 8 years from 1906 to 1913 the admission rate to hospitals from malaria per 1,000 of the labour force was reduced from 821 to 76 and, within the same period, the annual death rate from all causes was reduced from 40.7 per 1,000 to 8.3, a decrease of 80 per cent. These figures indicate what can be achieved by the application of scientific knowledge to control the environment and make unhealthy regions habitable to man.

PROBLEM OF CHECKING MALARIA IN RURAL INDIA

This brief reference to what has been accomplished in Panama as the result of sanitation has a bearing on conditions in India today. Malaria, the most important health problem in the country, can be solved only as the result of improved sanitation. Malaria is primarily a rural disease and, in many parts of the country, the malarial season is coincident with the latter part of the monsoon period and the succeeding one or two months. In India about 85 per cent. of the people live in villages and most of them are dependent on agriculture as their main occupation. Therefore the prevalence of malaria, by reducing the health and working capacity of the rural population, vitally affects their economic status and the country's food production, because it is during this period that the maximum agricultural effort is

needed in connection with harvesting operations. Apart from this, there are large tracts of land in India the development of which is considerably hampered owing to the prevalence of malaria. Examples of such tracts are the Wyanad, the Malnad of Mysore, a large area in the contiguous territories of the provinces of Madras, Orissa and the Central Provinces and a long stretch of Sub-Himalayan belt of territory. These areas are all sparsely populated but they possess large natural resources and their full development is today very much handicapped by the wide prevalence of malaria. If this disease can be controlled and the territories properly exploited, the food problem of the country can largely be solved and the pressure of population in congested areas can be lessened through a more equitable distribution of the people than that which exists at present.

Apart from anti-malarial operations the prevailing unsatisfactory sanitary conditions of Indian towns and villages are mainly responsible for the high incidence of a number of other forms of illness, particularly the bowel diseases such as cholera, dysentery and typhoid fever. A planned programme of rapid improvement of sanitation will help to reduce the incidence of preventable diseases at least by 50 per cent. The consequent gain in the health and working capacity of the people and the

increase in the community's general sense of well-being must be enormous.

NEED FOR PLANNED EFFORT

Having thus briefly indicated what insanitation costs India let us examine the field that ought to be covered in organising public effort for the improvement of environmental hygiene. The Bhore Committee has suggested the following :—

- (a) town and village planning ;
- (b) housing, rural and urban ;
- (c) water supply for towns and villages ;
- (d) general sanitation, including conservancy and drainage ;
- (e) river and beach pollution ;
- (f) control of insects, rodents and other vectors of disease, such as mosquitoes, rats, fleas and flies ; and
- (g) control of certain trades, industries and occupations dangerous and offensive to the community.

The mere enumeration of these subjects is sufficient to indicate the vast field to be covered and the enormous extent of combined governmental and private effort which will be needed for making our towns and villages and the homes that exist in them clean and sanitary in order to make it possible for our people to lead healthy lives. There is no short cut to such achievements. They can be realised only

through planned effort on a comprehensive basis, such effort being continued relentlessly many years. The first step should be the preparation of a detailed programme of action taking into consideration, in the early stages of the programme, our existing deficiencies in funds and trained personnel. The Bhore Committee put forward certain valuable proposals under each of the heads I have mentioned ; but concerned as that Committee was with the investigation of the health problems of India in all their aspects, it could not naturally devote such detailed attention to environmental hygiene as the subject required.

GOVERNMENT SETTING UP NEW COMMITTEE OF EXPERTS

The Government of India in the Health Ministry is therefore considering the desirability of appointing immediately a small committee of technical experts to be known as the Environmental Hygiene Committee. It will be its duty to examine the recommendations of the Bhore Committee as well as the plans put forward by Provincial Governments in their five-year programmes of health development and to suggest an integrated scheme of organised effort intended to promote a co-ordinated advance in this field over the country as a whole, the Central and Provincial Governments working in close co-operation towards

the attainment of the objectives to be achieved. One of the immediate purposes of such a programme should be the establishment of adequate facilities for the production of the required trained personnel such as town planners, architects and public health engineers. The Committee will no doubt be up against the problem of finance when constructional activity on an unprecedented scale is to be organised and carried out through a long period of years. One of the tasks of this Committee will therefore be to suggest ways and means as far as possible, to raise funds for the execution of its own proposals. The responsibility for the successful fulfilment of the programme will no doubt rest on Governments, but its achievement can be secured only through sound technical advice and guidance and the work of this Committee, if it results in setting in motion the machinery necessary for the continuous supply of such advice and guidance, will have amply justified the purpose with which it is being brought into existence.

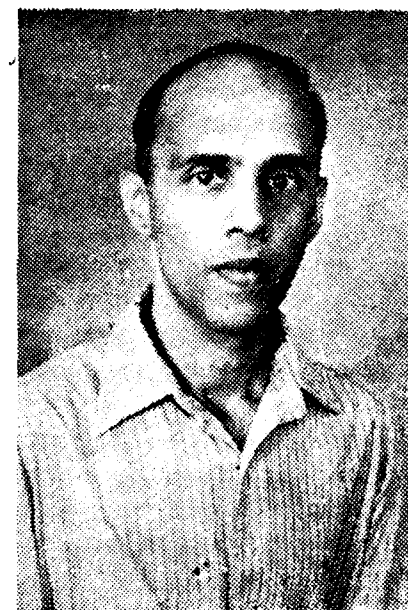
(Courtesy—A. I. R., New Delhi)

LACK OF COMMUNITY HYGIENE

The general lack of cleanliness in villages is due to the absence of any organised effort to dispose of refuse and nightsoil in a manner which will render them innocuous to the health of the people. The general belief seems to be that what is undesirable in one's own premises can, without any compunction, be thrown into a public drain or any common open space. This lack of regard for community hygiene can be remedied only by an awakening of a health consciousness among the people. Experience shows that, in the absence of such awakening, improvement in the sanitation of the environment is difficult and often impossible even with the provision of appropriate public services.

(Bhore Committee Report, Vol. II—p. 45).

STATISTICS IN MEDICINE AND PUBLIC HEALTH



M. S. VENKATARAMAN, M.A.

It is often remarked that a scornful and distrustful attitude towards statistics is the praiseworthy attitude of a robust personality. Some even consider that this attitude is a prerogative of the Medical profession. This, however, is not surprising. In the daily practice of his profession the Medical practitioner is more concerned with particular individuals rather than with the concept of a group. He is taught in his clinical training to concentrate on average results rather than on the variation round the average. Further the practice of medicine is a profession in which controlled experiment is very difficult.

There is every reason to hope that this attitude is gradually changing. Even a casual reference to any Medical journal gives ample testimony to this fact. While such increased usage of statistical reasoning in medical science is very encouraging, it has also its dangers unless proper precautions are taken. An imperfect understanding of the methods of statistics and its indiscriminate use by those not adequately trained in the subject may mislead the untrained by giving a semblance of mathematical exactitude to results of experiments which in fact are incorrect. Every medical student has therefore to be taught the elements of statistical methods so that the above contingency may be avoided.

It is in the field of social or preventive medicine that statistical reasoning is more commonly used at present. The statistics of mortality and morbidity play an important part at every stage in the planning, execution and assessment of the results of Public Health programme. To study the national trends of disease and death, and to solve the problems of epidemics and sickness as a community phenomenon, statistical methods are of great use. It is therefore remarked that all eminent sanitarians are efficient statisticians. Without understanding the essentials of statistical methods, no medical officer can ever aspire to become a good Public Health Administrator. The meanings of the common rates and indices used in vital statistics, their uses and limitations have to be clearly understood. Many complain that the recorded statistics in this country are often incorrect and hence valueless. I should, however, maintain that in spite of their imperfections, they give at least valuable indications of population characteristics and their changes in space and time. If we are to wait for perfectly ideal conditions and accurate registrations of vital events, we may well wait for the millennium. Apart from this field of vital statistics, every medical social worker and Public Health administrator who has need to use

statistical methods may have occasion to appreciate results and arguments having a statistical basis. For example, a medical man assessing the clinical trials of a method of treatment or tests of preventive inoculation or nutrition officer conducting a controlled experiment to find out comparative merits of different diets in a school feeding programme would surely have occasion to use statistical methods. Finally in the working out of any Public Health programme effective statistical controls are of fundamental importance. Without such controls the Public funds will be merely wasted and inefficient execution of the programme will go unnoticed.

There is yet another important reason for the study of statistical methods and vital statistics by medical students. The medical practitioners are not the consumers only of statistics. They are in fact the manufacturers of it. For the reports of the medical practitioners regarding deaths and infectious diseases are the raw material from which vital statistics are compiled. The laws of the land require every medical practitioner to report in a prescribed form every birth or death of which he has knowledge in his professional capacity. The accuracy of the statistics compiled depends therefore on the primary reports sent up by the medical practitioners. The medical practitioners thus play an important part in the recording of vital statistics. Their reports are not merely ephemeral bits of paper to satisfy legal requirements, but are fundamental to the national vital statistical system and serious contributions to the problems of the preventive field.

It is thus evident from the foregoing paragraphs that statistical methods have a definite plan in the field of social and preventive medicine. It teaches appropriate methods of handling and presenting data, enables appropriate tests of significance being made of results of experiments, measuring and interpreting associations of related

phenomena, and elucidating the laws of cause and effect. It enables also controlled experiments being performed to know the relative merits of different methods of preventing sickness or of improving health. Effective controls are also made possible of the Public Health programmes. Medical practitioners, medical social workers and public health administrators should therefore learn this subject and make use of it. Besides the above, there should also be a central organisation for the collection and study of the vital statistics of the country.

The only reason for the existence of statistical work is to help in improving the efficiency of governmental and public activities and enterprises; i.e., in its final analysis statistics like all sciences are a means to an end not an end in itself. Every Provincial and State Public Health Department should therefore have a central bureau of statistics staffed with efficient statisticians. This central bureau should be responsible for organising the collection, compilation, publication and analysis of the vital statistics of the country. It should also help in conducting periodical census of population and other special surveys. Every Public Health programme should pass through the bureau before it is sanctioned and finally implemented. Effective statistical controls should be devised by the bureau and arrangements should be made for the collection of information and assessment of the progress of the scheme. The work done by the Central Statistical Bureau in the U.S.S.R. is worth careful adoption in this connection. The Health Survey and Development Committee of the Government of India is also emphatic on the need for such Central Statistical Organisations. As correct statistics is the only reliable yardstick for measuring the national health and well-being and assessing the work of Public Health and Medical Departments, no time should be lost in organising such central organisations in every State and Province in this country.

PHYSICIANS AND SCHOOLS

SCHOOL HEALTH SERVICES

THE SCHOOL HEALTH PROGRAM WITH PARTICULAR REFERENCE TO ITS HEALTH SERVICE FUNCTION

It was suggested that in establishing a school health programme:

1. There must be school and community planning by means of a Community Health Council composed of representatives of the schools, the county medical and dental societies, and other organizations interested in and concerned with health.

2. Each school system and each school within that system should establish a health council of its own to provide leadership and direction for its health service and health education program and to cooperate with the community health council through duly appointed representatives.

There must be administrative leadership for each school system and for each school. This may be provided by a Superintendent, Assistant Superintendent, principal-health coordinator, director of health services, director of health education and service, director of health and physical education, or director of health and safety education; in short, there must be some one within each school who has a definite responsibility for the total school health program and for cooperation and coordination with the medical and dental professions and with community health agencies, public and private.

It was emphasized that this school health program concerns not only the school but the home and community groups as well, and that only as all participate and cooperate can an adequate health service programme be carried out.

3. All schools must have a school physician who will function as a school medical adviser.

It was emphasized that the medical examinations are not the only function or even the principal function of the school medical adviser. Wherever possible physical examinations should be done by a private practitioner of medicine, preferably the pupil's own physician, and recorded on the health record provided by the school. The examination policy must, however, be flexible and provide for examinations in school in those districts where private physicians and dentists prefer to have school medical and dental advisers make these examinations. Other functions of the school medical adviser were summarized as follows:

- (a) To assist in establishing sound school health policies.
- (b) To advise with school administrators with regard to health supervisory activities.
- (c) To coordinate school health services with community health programs, both public and private, especially in the fields of health education, communicable disease control, and medical and dental services.
- (d) To be responsible for formulating procedures in cooperation with the health officer and school and administrator for communicable disease control.
- (e) To make medical examinations: (1) to discover all structural or functional defects, (2) to determine the fitness of pupils to engage in school activities including athletics, (3) to note any need that may exist for modification of the pupils' school environment or program including special program for handicapped children.

- (f) To advise parents as to the correction of defects through the utilization of community resources.
- (g) To advise school authorities with regard to conditions which are conducive to the maintenance of healthful school environment.
- (h) To carry out a health service programme which is educational in nature and to act as a consultant to school health authorities in the development of a vital, functioning health education programme.
- (i) To work with community groups to assure the availability of necessary professional health services for all children. One of the weaknesses of the school health programme has been the fact that school physicians have too often functioned as defect finders with no provision by administrators of the school system for adequate follow-through and with little effort on the part of the community to provide needed health service.

This can often be corrected if the school health authorities will confer with the medical and dental professions in planning the follow-up and treatment programme.

These contacts with the medical and dental professions can best be made through a community health council with physicians, dentists, public health workers, and school health personnel all represented. The plans set up must be adapted to the particular community and to the medical facilities available locally. There should be no effort to set up one plan and apply it to all communities regardless of type or size.

4. Health departments and boards of education must budget for the school health programme. In the budget there should be adequate

provision for the salary of a well-qualified medical adviser.

5. The value of coordinators of school health or school health consultants at state and county levels to provide leadership and guidance in establishing school health programs in areas with inadequate programs has been well proven. This person should be an individual with a primary interest in school health and with special training and experience in this field.

THE WORK AND RELATIONSHIPS OF THE SCHOOL PHYSICIAN

Seven problems in this field were presented and possible solutions offered as follows:

1. Under what circumstances and in what way can school physicians give professional information to teachers about the health conditions and health needs of children?

The consensus was that physicians should appreciate that one of the most important functions of health appraisal procedures is to provide information that will help teachers to understand their pupils and the health problems related to their education, growth and development, and that this information could best be given through the teacher-nurse or physician-teacher-nurse conference. Medical findings must be properly interpreted to the teacher and she must be made thoroughly aware of the necessity for keeping many such findings confidential because of possibly serious effects upon the social life of the child should they be divulged and discussed.

2. Should contacts with local practicing physicians be made through the health department or directly by the school?

In general, if the contact is being made by non-medical personnel in the absence of medical personnel in the school, the contact should be made through the health officer. If a school physician is on the staff, however, the contact may be made directly, the health officer being

informed or consulted in matters of major policy or in cases of communicable disease.

3. Should school physicians and dentists be members of their professional organizations?

This is highly desirable for the best co-operation. In many communities school authorities have looked to their local medical and dental societies for a recommended list from which to choose the physician or physicians to serve the school.

4. How can school people help the local physician who is assisting with the school health program?

This can be done by interesting the medical profession in the school health program through requests that committees on school health be set up in the local medical and dental societies, through the organization of a community health council, and through the utilization of coordinators or health consultants at the state and county levels.

5. How can specialized health personnel, physicians, dentists, nurses, etc., be made available to schools on an efficient basis in rural communities?

The group recognized the unique problem of procuring medical, dental, and nursing personnel for school health services in rural areas and suggested that it is a matter requiring joint study at state, county, and local levels after full consultation with public health, education, medical, dental, and nursing organizations. The utilization of local practitioners as part-time school medical advisers, the organization of school hygiene districts large enough to justify full-time staffs, and the development of school health service staffs in the local public health unit were suggested as practical possibilities.

6. What is suggested as the correct policy in administering the immunization program?

While there were some who felt that the immunization of those who could afford to pay for the service should be left strictly in the hands of the private practitioner, the consensus was

that, though parents should be encouraged by every means possible to have the service rendered by the family physician, those children not cared for in this way should be immunized through the official health agencies. It should be stressed that immunization is primarily a pre-school requirement and that the school immunization program is merely to immunize those who have been missed in the infancy or pre-school period and to give those already immunized booster shots as necessary. Parents should not be encouraged to omit immunization of infants and pre-school children in the expectation that at school entrance it will be automatically taken care of.

7. How can the available school health services be more effectively and efficiently utilized?

The establishment of effective school health services requires a careful study of the unique contributions of various individuals. It is poor policy to use physicians for functions that can be carried out just as effectively by a nurse or a teacher. Various school health service functions should be studied to determine which parts of the whole program could and should be delegated to teachers or to nurses, and which services only a physician can render. It is not efficient utilization of a physician's time to burden him with medical examination of all pupils every year. It is preferable to provide such examinations only every three years and supplement this procedure with special examinations of children who may be selected by the teacher as particularly in need of such special attention.

GENERAL RECOMMENDATIONS

The Section on School Health Services makes the following general recommendations:

1. That state departments of education, state departments of health, and state medical and dental associations use every means at their disposal to further implement the school health program as outlined in *Suggested School Health*

Policies. Where it has not already been done this might involve encouragement of the study of this report by each local education and health, medical, and dental unit or organization.

2. That, because of the urgent need for source material illustrating the practical application of the recommendations in *Suggested School Health Policies*, the U. S. Office of Education be requested to establish and maintain a depository of such material with a bibliography for wide distribution upon request.

3. That increased attention be given to the evaluation of school health services and to the need of evaluating results in terms of progress towards specific objects. This health appraisal and counselling would not be evaluated solely in terms of how many children receive needed medical and dental care, but also in terms of educational outcomes related to the child, the increase of teachers' understanding of their pupils, and the number of children for whom appropriate and special programs of education were provided.

4. That every agency concerned with the preparation of health education and health service material, such as state departments of education and health, send six copies of all such

materials to the Bureau of Health Education of the American Medical Association.

5. That instruction as to the need and value of budgeting for medical, dental, and hospital expenses through prepaid insurance plans be stressed in the high school curriculum.

6. That state departments of health and of education and state medical, dental, and education societies be urged to organize conferences at the state and local levels on the implementation of *Suggested School Health Policies*.

7. That encouragement be given to the formation of community health councils as an important step towards the implementation of *Suggested School Health Policies*.

8. That in every state and community of the country there be a quickened interest in, and a more generous budgeting for, a type of school health service which in co-operation with other local agencies will offer each child during his twelve formative years in school an opportunity to grow and develop to the best of his inborn potentialities, free of remediable defects, diseases and faulty health habits and well prepared to meet the demands of modern life and society.

(Courtesy—*The Journal of Health and Physical Education*, Vol. 19, No. 2)

ODE ON COMMITTEES

All the myriad affairs of the nation

We reduce to a mystical norm, and intend

To rebuild the foundation

With concrete that's abstract in form.

We will print you a programme of planners

A polished, perfectionist plan

For throwing theoretical spanners

In the works of the practical man.

Hurray! for committees and yet more committees!

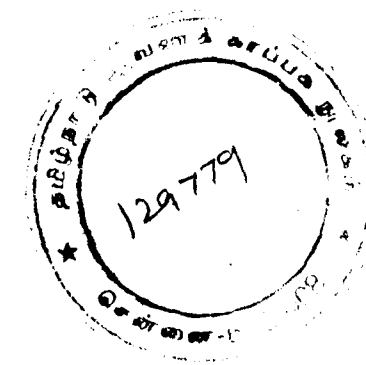
(—with apologies to TRUTH)

ANNUAL REPORTS

by

HENRY DAVIS NADIG

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Readers would be interested to read an extract which we give hereunder from the 'American City,' March, 1948. We commented on the method of drafting Administration Reports in the April issue of 'People's Health' (pp. 331—332). This extract gives an idea of the possibilities of making the Administration Reports serve the purpose for which such reports are expected to be published.

—Ed., P. H.

The municipal annual report seems to be improving steadily. Like individuals, I suppose, these must continue to reflect the temper, pace and tone of the community from which they emanate—each with its own concept and style, each thus creating its own effect.

As yet, to me at least, there are few, if any, that quite match the flavour of what was turned out by Berkeley, Calif., last year and what has again been brought forth by the same city. H. D. Weller, administrative assistant to the city manager, has sent along the new (1946-47) 32-page pictorial report titled "A 3½-Million-Dollar Pie". Mrs. Carter's Apple Pie and City Government are kind of parallel, Berkeleyans find from this report. Again this year, text a minimum, pictures a plenty; and the whole actually even better than last year's "Hawkins Family" report.

The report from Winnetka, Ill. is unique in being a question-and-answer style of report

to the people. The questions are just the type of queries John Q. makes—the questions he discusses from day to day, besides the kind of basic-fact question that he always wants to have the answer to but usually finds hard to get. This is a two-colour job, the questions being in blue.

Rochester's report is about letter-size and is also in two colours, being off-set in blue and black with much use of the reverse-plate style for white headings on blue strips. Rochester leans much to the pictorial, yet there is a large amount of text and many tables. The 24 large pages carry about 30 pictures.

Wilmington, N. C., seems to be also moving toward the pictorial, with a striking black and white photo cover and an attractive photo centre spread. In 40 pages, there are 18 pictures, not including the centre spread.

Incidentally, Mr. Weller of Berkeley writes: "I feel sure that the trend (to pictorial reporting) will become very definite in the next few years."

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A PLAN FOR DEALING WITH JUVENILE DELINQUENCY

by

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(Continued from page 370, Vol. II, No. 7,
People's Health, April 1948).



In my last article I endeavoured to state the problem presented by juvenile delinquency, and now I propose briefly to survey the measures at present in force in this Province and then to outline the plans which I propose to present in detail to Government for consideration.

At present the methods for dealing with the juvenile delinquents stem from the methods used in dealing with adult criminals. Certain changes have been made in recent years which are purely superficial and do not really affect the system, which is in essence the same as that used with adults. Little has been done to educate the public as to their responsibilities with regard to the behaviour and upbringing of their children. Nothing has been done to educate the teacher in methods of character training. Thus the preventive side of juvenile delinquency has been entirely lacking with the exception of work done by such organizations as the Scouts, Girl Guides, Y.M.C.A. Youth Activities and similar private bodies.

As regards the judicial side, juvenile courts are conducted by magistrates who, with all due respect, have had little in the way of special training in dealing with children. The tendency

is to place the child on probation or to commit him to a certified school for a number of years. The probation system, in its present form, is grossly inadequate to deal with its tasks. The Probation Officers have a dual function in that they are expected to deal with adults on probation as well as with children on probation. There are too many cases to deal with per Probation Officer and these cases are frequently widely scattered. In addition, these officers have, again with due respect to them, little special training in dealing with problems of child behaviour.

When we come to consider the certified schools where children are sent for a period of training, one finds that the organization and structure, and even buildings in some cases, are based on the jail pattern. There are warders (called Petty Officers); there are bars on the doors and windows; the children are dressed in jail clothes and are known by numbers rather than by names.

The teaching of school subjects and crafts is generally grossly inadequate, and boys leave the schools unfitted to take up any employment other than that of labourer. Here I may interpolate that I have with me at the moment a boy

who spent six years in certified schools. He cannot write or read, and he has no sound knowledge of the craft he was supposed to learn. It is not that this boy is unintelligent—he is a bright boy; the reason why he is so poorly educated must lie at the door of the certified schools.

Even more important than the lack of educational facilities which would so train a boy, that on discharge he would be able to earn a reasonable living, is the fact that there is no real system of character training in force. This is obviously, in school designed ostensibly to reform delinquent children, a matter of the first importance, because if these children are not reformed and rehabilitated these schools are failing in their primary purpose. I have asked many children their opinions as to whether or not a certified school would make a bad boy good and the universal reply is, "No" it would make a good boy bad, and a bad boy worse."

One at least of the certified schools is grossly over-crowded with the result that such facilities as there are for education are inadequate to cope with the numbers involved. This means that the whole efficiency of education must drop even lower. In some cases the facilities for games and recreation are grossly inadequate. For example, one school with over 600 boys has only one football pitch. There are no recreation and reading rooms in any of the schools and the children spend such free time as they have mooning about.

Let us consider some of the rules at present in force in certified schools. In accordance with jail tradition boys are not allowed to possess personal property other than their clothes and a small piece of soap. How is it possible to train boys to take their places in a world where everyone possesses some personal property and usually desires to possess more, without allowing him to keep any during the years which he spends in one of these schools? All that this rule does is to produce in a boy an intense craving to possess

things of his own which may well stimulate him to theft on his release.

Take another example. Boys are not allowed to possess money in the school and any money a boy may be given by visiting relatives is impounded and placed in what is known as his Mark Money Account. How is it possible to train a boy for life in a world where money is so important, when he has never been given an opportunity to handle it properly during the years he is confined in one of these schools? Again there is a strong incentive to steal on release.

The above rules have obviously been designed to keep temptation away from the boys while they are in school. It is easy to see that where large numbers of delinquents are collected together, a good deal of theft is likely to occur, were personal possessions permitted.

This policy is carried out to such an extent that boys are not even permitted to have pockets in their clothes. How much this is resented by the children is shown by the fact that boys are constantly being detected trying to alter their clothes in such a way as to make pockets.

Keeping temptation away is no way to train anyone, for training must be directed towards the individuals' becoming able to resist temptation. If a boy is to be trained not to steal he must be given the opportunity to steal. Let me give an example. If a boy, very addicted to theft, were locked up in a single cell for six months, it would be useless to say "Look how much this boy has improved. He has not stolen for six months". That is what the certified schools are in fact doing. The opportunity to commit wrong must always be there, if training is to mean anything at all.

There is a most cumbersome system in vogue in these schools called the Mark Money Account. The boys are able to earn a few annas per week by good conduct, work done, etc. As a punishment they may be fined by having a sum deducted

from the Mark Money Account, or they may be rewarded by having some additional money placed to their account. On the boy's discharge from school this money is handed over to a responsible person to use for the benefit of the child. Even after six years the boy I referred to above had only Rs. 15-15-0 in his account. This is a small sum which can hardly provide him with food for a month. How is a boy on his discharge from a certified school, unable to read and write, master of no craft, and with total possessions amounting to some sixteen rupees, expected to find his way in the world? What are his prospects? Have the certified schools done a good job on him? The keeping of the Mark Money Account involves much labour, since it is a complicated system. As a means of reward and punishment, it is completely and utterly useless. When a boy after spending three or four or more years in a certified school will not even be able to receive this money into his own hands, what does he care whether money is taken out, or put into this abstract account? From whatever angle one views it this system of Mark Money is useless, and it is not only useless, it is actually bad!

At present the certified schools do little more than segregate the delinquent children. This is not all; for in the absence of systematic character training a boy may quite well come out of them worse than when he went in. It is, therefore, obvious that the money spent by Government on these schools, as at present constituted, is waste, since boys are not turned out educationally qualified to stand on their own feet, nor have they been characterologically trained to withstand the manifold temptations of the outside world. It is not altogether the fault of the people who are charged with the training of these children in the schools, that they are so ineffective; most of the blame must be laid on the system which is founded upon jail practice. I shall not dilate more on the inadequacies of the Certi-

fied Schools. I have only spoken of them in this derogatory fashion, because it is necessary to show cause why reforms are so urgently needed. Now I propose to go on to discuss in broad outline the nature of the plans which I am proposing to submit to Government.

In considering the many problems which present themselves and the many obstacles which rear themselves in the path of idealism, one must always keep in mind the practical aspect. It would be of little value for me to make an ideal plan which was from the practical point of view impossible, as also from the financial standpoint. It will be understood, therefore, that the plans which I am going to discuss will be a mixture of realism and idealism.

We must first consider the preventive aspect of juvenile delinquency and this question is bound up with the much larger question of character training for all children. The first step must, of necessity, be an attempt to educate the public with regard to the duties and responsibilities of parents towards their children and society. It is little realized that the way children are brought up has a profound effect on the type of adults produced. We shall, therefore, endeavour by every means of education in our power to pursue this end—I hesitate to use the word 'propaganda' because now-a-days that word seems to connote distortion or over-emphasis of facts if not down-right untruth; I prefer the word 'education'. This can be done in a variety of ways including the use of the Press, Radio and documentary films.

The teacher, rather than the parent, should be the directing influence as regards the systematic character training of the school child. This is because a parent cannot spare the time to make himself, or herself, conversant with methods of character training. It is, however, the teacher's profession to train children and with the teacher directing operations as it were, and parents co-operating fully, substantial

results can be expected. I should like to see parent-teacher associations in connection with every school.

Next, we have to consider the child who does not go to school. For him we consider that children's clubs should be provided. There is no reason why these clubs cannot be instituted in every village and in every street in every town, using the resources of the locality served by the club. The leaders of these clubs would have to undergo a short course of training in how to run them. These leaders would be expected to work in close co-operation with the parents and would have to be invested with the parental powers, which the parents normally delegate to the schoolmaster. It is, of course, not envisaged that these clubs will spring up overnight everywhere; but once a start is made, they can be extended as rapidly as possible.

Now comes the problem of the destitute children, of whom there are several lakhs in this province. The first thing to realize is that it is economically impossible for the Government to build schools to accommodate them all as boarders, however desirable that may be in theory. No doubt Government will endeavour to increase the number of boarding schools under its control as rapidly as possible, but for many years to come one must accept the fact that complete institutionalisation of these children is impossible. What, then, is the answer? Something obviously must be attempted. To my mind there is only one answer, and that is that the five crores of people in this province must have their consciences so aroused that these children will be taken into private families and cared for. I don't ask anybody to do something which I am not willing to do myself, and at the moment I am looking after three such children. Surely, it is not too much to ask that a great province like Madras should find sufficient families to look after these poor and destitute children.

Next we come to the judicial side of the question. The present Juvenile Courts are most unsatisfactory. The child does not readily respond to a cold and judicial atmosphere. The child wants warmth and friendliness, and kindness from someone he loves. I shall propose that special magistrates be appointed, to deal with all cases where children have transgressed the law of the land. These magistrates should have undergone a special course of training, and should be men and women who have deep sympathy and liking for the children. I envisage a Children's Court which will be more like a Children's Club with the magistrate in the position of an uncle or big brother. I envisage the sweeping away of all talk of sentences and detention. I envisage these magistrates as being invested with parental powers so that a magistrate will, if it be necessary, punish the child as a father, or, should a child's environment be so bad that he has little chance of improving, he should be able to suggest that the child should become a ward of the Government until he or she reaches the age of twenty-one. I envisage the appointment of an officer of Government to be guardian of all Government wards. It will be he, with his advisers, who will decide whether Government should accept the guardianship of any child when application is made by Magistrates. This provision is necessary because I shall propose that the number of children in any one Certified School should under no circumstances exceed 400. This means that until more schools can be opened, the accommodation will be limited. The only exception to the above procedure which I shall propose is where a child has committed a serious felony such as murder. In such a case, the magistrate will be able to accept the child as a ward of Government without reference to the Guardian of Government Wards. It is proposed that these children's Magistrates would be peripatetic and should hold their courts in large towns in

rotation. These Courts should be held in a children's centre where the local club leaders and parents can meet and the Magistrate shall act as a guide and adviser to them on any problems presented by children in the area.

Once a child is accepted as a ward of Government he will remain so until he or she attains the 21st birthday. Government may send one of its wards to a Government Boarding School *not* a "Certified" school, or may delegate its guardianship to anyone whom it regards as a fit and proper person to take charge of the child.

Normally when a child goes to a Government Boarding School he or she will not leave the school until he or she has either passed the S.S.L.C. Examination, or passed a Government trade test. The structure, constitution and administration of Government Boarding Schools must, in my opinion, be radically different from that which at present obtain in the Certified Schools. First, the children must in every respect be regarded as students and not as prisoners. This means that the school buildings should be those of a school and not a jail. There must be nobody in the nature of a Warder or Petty Officer. These should be replaced by Chowkidars and peons. Clothing should be in the nature of a school uniform of which the boys and girls can be proud. The children should have a little pocket money weekly. The Mark Money Account should be abolished. There should be a school shop within the school where they can buy sweetmeats, pencils, notebooks, and so on, for their own use. Each child should have his own box in which he may keep his personal possessions. The distinction between Senior and Junior Certified Schools should go, together with age-limits and differences in diets. Teachers must take a much bigger part in the life of the school than they have done hitherto, taking part in games and other extra curricular activities.

As regards the educational side, I shall propose that each child on his attaining the age of twelve, or achieving literacy, shall be 'screened' by a board of teachers, and a decision made as to the child's future educational training. A clever boy who wishes to proceed with his studies should be put on wholtime school work and should pass his Middle school examination while in a Government Boarding School. His education to S.S.L.C. standard should thereafter take place in a local high school, the child returning to his Boarding School each evening. I estimate that ten per cent of students in Government Boarding Schools will be worth this academic training. After the S.S.L.C. has been passed, a small percentage should be chosen for study in Colleges dependent on ability. Others may possibly be trained in Shorthand and typing or for employment as teachers.

Those children who have not been chosen for a scholastic career should be selected for training in a trade. Thereafter the child should work wholtime (apart from educational lectures, etc.) at his chosen vocation. This training should continue until the child has passed a Government trade test and is fit to take his place in society as a skilled craftsman.

The character training side of things will be entirely in the hands of a teacher of the status of Assistant Headmaster who will be responsible for the character training of the children in the school. I shall not enter here into details of this training, but hope to do so in a subsequent article.

Every child should have ample opportunity to indulge in games and healthy recreation, and a reading room and library should be provided in every school.

Now comes the question of after-care. The reason why I have suggested the age of 21 as the child's majority for the purpose of this plan is that after the child has undergone his training, Government will be able to supervise his activities until he is securely settled in life. If the

proposals described are carried out, every child leaving a Government School will be employable, and it would not be difficult for an after-care organisation to place every child in suitable employment—the most suitable employer being the Government which has reclaimed and trained them. If they have been happy in their childhood, they will feel a debt of gratitude to the Government which looked after them and will make loyal Government servants.

This plan which I have sketched in rough outline has one great virtue, namely, that nearly every child accepted by Government for training will be turned out fitted both educationally and characterologically to take his or her place in society as a self-respecting individual. It will be possible to accept fewer children into the Government Boarding Schools than at present pass through the Certified Schools; but positive results will be achieved, whereas at present practically no results are obtained. It is better to train 1,600 children adequately and properly than to have a population in the Certified Schools

of up to 3,000 undergoing little, if any, training. Once this plan was in operation, Government could open new schools on the same lines as and when it became financially possible.

In order to train Children's Magistrates, teachers, club leaders and the like, it will be proposed that a teaching establishment be instituted and attached to one of the Government Boarding Schools so that practical and theoretical training may be given in the character training of children. It would always be possible for a Government to multiply these training institutions for teachers as finance became available.

I should be glad to hear comments and criticisms on the above skeleton plan from any of the public who have a special interest in these matters. A letter to the Adviser in Child Psychology to the Government of Madras, care of the Director of Publicity, Fort St. George, will always reach me.

(With acknowledgement to 'Madras Information' Vol. II, No. 4).

(Continued from page 426)

malaria, etc. The main difficulty in carrying out our post-war plans which have been suitably modified in the light of proposals of the Bhore Committee is lack of finance. Government will have to augment their income and spend a larger percentage of their revenues on health measures. As pointed out by the Bhore Committee, "A nation's health is the most potent single factor

in determining the character and extent of its development and progress and any expenditure of money and effort on improving the national health is a gilt-edged investment yielding immediate and steady returns in increased productive capacity."

Courtesy, A.I.R., Madras.

CONTRIBUTION OF THE SANITARY ENGINEERING PROGRAM OF UNRRA TO INTERNATIONAL HEALTH

by

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The sanitary engineering program of UNRRA (1944-46) was made possible through the full-time assignment of sanitary engineering personnel by the United States Public Health Service. In the early and developing phases of UNRRA'S operations, the sanitation officers were all from the United States Public Health Service. During the peaks of UNRRA's activities in the various parts of the world (November 1944-July 1946), 52 of the 65 sanitary engineering personnel on duty with UNRRA were commissioned officers of the United States Public Health Service. The remaining sanitary engineering personnel comprised United States civilians and sanitary engineers from the United Kingdom, Brazil, Dominion Republic, Haiti, Mexico and Greece.

The signing of the Constitution of the new World Health Organisation on July 22, 1946, was the first step in setting up an international agency concerned with all phases of public health. The organization will be concerned not only with the checking of epidemics and the application of quarantine measures, but will take steps to eradicate disease and promote health by preventive methods. Since the prevention of disease is considered the first objective of this new agency, the role of the sanitary engineer can be a very important one, especially in the control of insect, water, and food-borne diseases. The contributions of the United Nations Relief and Rehabilitation Administration in international health have been significant and tribute to sanitary engineering.

Sanitary engineering is construed to mean the application of engineering principles in the prevention of disease and the promotion of health through the control of environment factors (water, food and milk supplies, waste disposal, insect carriers, housing, and drainage).

Under the auspices of the Office of Foreign Relief and Rehabilitation Organization and later, the United Nations Relief and Rehabilitation Administration, there was developed for the first time a world-wide sanitary engineering program. Valuable contributions were made to the health of victims of World War II.

ORGANIZATION

In the administrative framework of UNRRA, the Bureau of Services was directly responsible to the Director General and consisted of the Division of Health, the Division of Welfare and the Division of Displaced Persons. Included in the Health Division were the following branches: Field Operations, Far East, Epidemic Disease Control, Nursing, Sanitary Engineering, Medical and Sanitation Supplies and Employee Health Services.

While in the beginning the headquarters' work was devoted to the planning and operational activities in Europe, administrative responsibility for the health work of UNRRA throughout

Europe and the Middle East was decentralized and placed under the European Regional Office in London, which in turn delegated responsibility to the country missions. Each mission had its individual Health Division with a Sanitary Engineering Branch. Headquarters became more concerned with broad policies affecting the over-all operations and was later responsible for actual operations only in the Far East. Contact with all field operations, however, was maintained through periodic reports supplemented by personal inspection tours by headquarters' representatives.

UNRRA'S sanitary engineers have served as consultants, teachers, and assistants in preventing epidemics in the liberated countries receiving UNRRA aid; as directors of sanitation services in displaced persons camps; and as liaison officers in paying countries. By means of these functions, UNRRA's sanitary engineers have contributed to the prevention of disease—a critical world problem which can be met only by an international organization equipped to combat pestilence and improve general public health conditions. UNRRA's contribution consisted not only in the quantity of sanitation supplies which have been shipped and distributed, but also in the determination of disease-prevention needs and the supervision of preventive services.

SPECIFIC PROBLEMS AND ACCOMPLISHMENTS

Certain specific problems and difficulties were encountered in connection with UNRRA's sanitary engineering programs. In most cases, the working conditions challenged one's training and inventive ability. The customary equipment and supplies usually were not available, making it necessary to improvise and utilize local materials and personnel. The highlights of these difficulties and how they were met, are presented here briefly.

Middle East.—In February 1944, the first health teams of the Office of Foreign Relief and Rehabilitation Organization, later absorbed by UNRRA, arrived in Cairo to work in the refugee camps of Egypt, Palestine and Syria. In this group were two sanitary engineers. The engineering personnel was gradually expanded to 24. The initial plans called for setting up sanitary facilities in the Middle East camps, and for giving practical training to sanitary engineering recruits for future assignment to country missions of the Balkan area.

The sanitary conditions of the desert camps were deplorable. No sanitation supplies or equipment were available in the El Shatt camp of Egypt which housed 30,000 Yugoslav refugees. Many of the refugees and camp staff were affected with bacillary or amebic dysentery. The source of infection was traced to the local kitchen workers who had no conception of proper sanitation. Dishes and kitchen utensils were never washed, but merely stacked on the floor and rinsed in a haphazard manner. The kitchen workers, most of whom had active diarrhoea, had no facilities for hand washing after visiting the latrine. Hand and dish washing facilities were provided. The dish washing consisted of a soap wash, rinse, sterilization in 200 p. p. m. hypochloric solution and air-drying in open racks. The lack of training of the kitchen workers in even elementary hygienic measures made it impossible to teach them how to use the facilities. Eventually it was found necessary to discharge them and substitute refugee women. A short time after the inauguration of proper kitchen sanitation the dysentery rate was greatly reduced, and dropped to nil among the UNRRA staff.

Nuseirat, the Greek refugee camp near Gaza, Palestine, housing nearly 10,000 refugees, reported a high incidence of amebic dysentery. The source of infection was traced to the fresh vegetables bought by refugees from the natives. In this whole area, human excreta were used for

fertilizing vegetable gardens. The refugees were advised to cook all vegetables before consumption. However, it soon became apparent that it was impossible to stop them from buying and eating uncooked vegetables. Upon the recommendation of the camp sanitary engineer, a central canteen was set up by the camp staff to buy all fresh vegetables and fruits from the natives and sell them to the refugees at cost. Within this canteen, all vegetables and fruits were immersed in a 200 p. p. m. hypochlorite solution for one-half hour and then rinsed in clear water to remove the chlorine taste. This operation brought about a substantial reduction in the number of reported dysentery cases.

The provision of safe water required constant supervision. In Egypt, the camps were supplied from a nearby British Army installation. The treatment consisted of alum coagulation, rapid sand filtration, and chloramine sterilization, providing residuals of 0.2 p. p. m. at the ends of the water distribution system. After treatment, the water was pumped to standpipes in the camp areas, from which it flowed by gravity to the taps. The source of water was a heavily polluted irrigation canal from the Nile River. Bacteriological tests of the treated water showed it to be safe for human consumption. In Palestine, the water was supplied from a well-water system installed by the Australian troops who had previously used the location as a military camp. Treatment consisted of hypochlorite dosing at 1 p. p. m. Except for a slight saline taste in the water, which contained 550 p. p. m. chloride measured as chlorine, no harmful results or disease were reported from its use.

Waste disposal was as important as the provision of safe water. The excreta-disposal facilities consisted of squat-type pits and bucket latrines. In the case of the bucket latrine, night soil was emptied by Arab contractors into closed metal carts and the contents were buried in the desert

waste water was directed through grease traps to leaching pits. Refuse, including garbage, was collected in metal bins covered with a creosote-treated burlap weighted down by metal hoops. This method was found to be very effective in keeping flies from access to the bins. The refuse and garbage were collected by local contractors in horse-drawn wooden carts and buried in the desert outside the camp area. The depository, as in the case of the excreta from bucket latrines, was sprayed with waste oil and provided with at least a 2-foot earth covering.

Fly control consisted of the use of Burton-type fly traps, baited with meat scraps, placed near kitchens and latrines, and the spraying of the latrine contents daily with a 2 percent cresol solution. Later on, 5 percent DDT solutions in kerosene were used with much better results.

For disinfection, refugees to the camps were given soap showers. Their clothing and bedding were subjected to steam disinfection in Serbian barrels and mobile Thresh steam units. When DDT became available, this procedure was abandoned and the refugees, as well as their personal effects and bedding, were dusted with a 10 percent DDT powder.

Malaria and mosquito control consisted of canalization of nearby swamp areas in Palestine, and larviciding with a 5 percent solution of DDT in kerosene.

The primary purpose of the camp sanitation program was to train the refugees to handle their own sanitation problems. A training course was instituted in all the camps and selected refugees became understudies to trained UNRRA workers, with a gradual increase in their responsibilities until only over-all supervision of a sanitary engineer was needed.

In some camps, the fouling of latrine interiors by improper usage was solved by assigning latrine attendants. As a result, the latrines were kept clean and all users were made to obey the

Greece.—In November 1944, shortly after the Germans had left Greece, UNRRA's sanitary engineers were sent in to work with the Allied Military Liaison group. The devastation and filth left by the retreating Germans was tremendous. In Salonika, for example, 2,000 tons of garbage and refuse littered the streets. Every possible means of transportation had been driven away by the retreating enemy. Anti-tank trenches were used in disposing of some of the refuse on the spot, and the remainder was carted away in military trucks to appropriate dumps outside of the city limits.

A typhus fever epidemic seemed almost inevitable in view of the concentration of large groups of louse-infested people in prisons, hospitals and refugee areas. Scattered cases of louse-borne typhus were being reported. The sanitary engineers trained local health teams in delousing by dusting with 10 percent DDT powder. The systematic delousing with DDT and periodic DDT dusting of all persons in contact with the sick and of their premises helped to prevent an epidemic.

The hospitals in Greece were in a deplorable state as a result of the civil war and the use of these buildings as fortresses. There had been severe damage to the buildings and their sanitary facilities. There were no windows, few doors, a lack of drinking water, and general infestation with lice and fleas. The engineers were responsible for having the buildings repaired and put into habitable condition. Water and other sanitary facilities were provided. In some cases, it was necessary to drill wells to provide a safe supply of water. General disinfection with DDT solved the insect problem.

Malaria, the scourge of Greece for decades, received first priority in the sanitary engineering program. In addition to the old methods of malarial mosquito control, such as screening of houses, draining and filling of swamps, and larviciding with paris green and oils, an all-out

attack was waged against malaria. The old methods were supplemented by the use of DDT for adult and larval control. DDT was utilized as follows:

1. Residual spraying of all houses and stables in malarious areas for adult control. A 5 percent DDT solution was applied to interior surfaces at the rate of 40 cc. per square meter, giving a residual of 2 grams DDT per square meter.
2. DDT thermal aerosol spraying of swamps with specially equipped PT-17 Stearman biplanes. A 20 percent solution of DDT in Velsicol NR-70 was applied at the rate of 0.1 lb. of DDT per acre of water surface (112 grams per hectare). Seventeen planes have been used in this phase of the operations for larval control. The training of native pilots and airplane mechanics was a part of the program.
3. Hand spraying with 5 percent DDT kerosene solutions and water emulsions, at the rate of 0.1 lb. DDT per acre, of all breeding areas in which airplane spraying was not practical.

During 1946, despite the fact that the anti-malaria program was greatly handicapped by the lack of adequate supplies and transportation, a considerable lowering of the malaria rate in Greece has been reported. In order of effectiveness, the malaria control methods are summarized as follows:

1. DDT residual spraying of all houses and diurnal resting places in endemic areas.
2. DDT hand spraying, searching out and treating the small isolated breeding places.
3. Airplane larviciding with DDT of the large lakes and swamps where hand control methods are impossible.

Approximately 300,000 houses and stables have been sprayed with DDT. Although

tabulation of malaria rates for evaluation purposes is not complete, there has been enthusiastic acclaim from the populace as a whole, due to the almost complete absence of flies, bedbugs, fleas, and lice. In connection with the residual spraying of stables and barns, it has also been reported that cattle are in better health and cows give more milk because they are relatively free from biting insects.

Approximately 280,000 acres of mosquito-breeding water surface areas have been treated by airplane with a total consumption of 18,000 gallons of 20-percent DDT solution.

Miscellaneous reports from DDT-sprayed areas in Greece are scientifically of little value. They do, however, show that the results are very impressive, not only in the lower incidence of malaria, but of other insect-borne diseases as well. The operated areas have been so free of flies during the summer months that it is reasonable to expect a substantial decrease in the mortality and incidence rates from infantile enteric diseases.

In the other fields of sanitation, the main problems have been: the provision of safe water; adequate drainage; disposal of excreta; disposal of garbage; and rat eradication.

In rat eradication, very successful results were obtained with the use of the new poison "1080," sodium fluoroacetate, in water solution. The use of "1080" has greatly reduced the risk of rat-borne diseases and the destruction of food materials by rats. The action of this poison as a rodenticide had been almost as significant as DDT as an insecticide. The Greeks have been thoroughly instructed in its use and warned of its hazards to other animals and especially to humans.

Italy.—The sanitary engineering program in Italy has been concentrated for the most part on malaria control, with some work in port sanitation and disinfection in hospitals and institutions. Public water supply and waste disposal

problems in general have been under the supervision of the military authorities.

The malaria control work carried on under UNRRA's supervision has consisted chiefly of DDT residual spraying to kill adult mosquitoes.

The summary of malaria control work shows a totally-controlled area of 1,890 square miles; population directly benefited, 595,000; number of rooms treated, 490,000; and total wall surface treated, 303,500,000 square feet.

Although the official figures were not complete, there had been no reported primary cases of malaria in the areas treated with DDT residual spraying up to July 1946. In control areas not treated, the number of primary cases reported up to the same date was comparable to the number reported the previous year before the program was started. In 1945, the total number of reported cases of malaria in Italy was 350,000.

The malaria control program has been confined almost exclusively to the use of DDT to kill adult mosquitoes, with little or no larviciding work being done. Therefore, as the final results become known and the DDT residual spraying has proved its effectiveness, it may be possible to offer evidence that only DDT residual spraying of houses and stables need be considered in a modern malaria control program. It is believed that nearly all potentially-infected mosquitoes which come to rest on DDT-treated surfaces are killed. Thus the chain of transmission is broken. It has already been proven that residual spraying is the most practical and least expensive of modern malaria control methods.

An outbreak of bubonic plague in the port of Taranto was reported during the last quarter of 1945. It was quickly controlled by the combined efforts of the Allied Commission, Italian civil and military authorities, British experts, and UNRRA sanitation personnel. The outbreak began early in September. Twenty-eight cases with 14 deaths were reported,

UNRRA sanitation supplies included DDT for the dusting of the population of Taranto and a truck for hauling equipment for cyaniding the ships. A comprehensive scheme for the destruction of rats in the city and port of Taranto was put into operation. The Italian health authorities also gave close attention to the enforcement of port shipping and quarantine regulations in other cities. No further outbreaks have occurred.

Training in the techniques of disinfecting hospitals and public institutions with DDT has been carried on by the UNRRA sanitation officers. A large number of institutions, including hospitals and jails, have been deloused with UNRRA sanitation materials.

Yugoslavia.—UNRRA's sanitary engineering program in Yugoslavia has been less on an operational basis than those carried on in either Greece or Italy. The main contribution has been by means of surveys, consultation, recommended procedures for disease prevention, and the expedition of the necessary supplies and equipment. A great deal of emphasis has been placed on the rehabilitation of the water, sewerage and refuse disposal facilities, as well as the bolstering of governmental sanitary services and the training of sanitary engineers in local universities.

UNRRA's sanitary engineers have been most successful in recommending programs and procuring the necessary equipment and materials to carry on wide-scale malaria and typhus control.

The chief sanitary engineer of the Yugoslav Government was granted a fellowship for 2 months of refresher training in the United States. He visited the leading universities in eastern United States, as well as Federal, State, and local health departments.

Poland.—The need for sanitary engineering services in Poland became evident when a large number of typhoid and typhus fever cases was reported. The program included surveys, re-

commendations and provisions of materials and equipment for the prevention and control of water, food, and insect-borne diseases. A comprehensive study of the milk situation was carried on.

The sanitary engineers in Poland have been most instrumental in drawing up plans for future sanitary engineering training in the universities of Poland, and the bolstering of the present sanitary engineering services of the government.

Albania.—UNRRA's sanitary engineering operations in Albania were confined for the most part to malaria control. A program for DDT residual spraying of houses and stables and air-plane larviciding of swamp areas was introduced. The training of native pilots and airplane mechanics was a part of the program. The results of this work are not yet known.

China.—The China program was the last of the UNRRA projects to get under way. The basic need for sanitation and sanitary engineering measures in China was even more apparent than in the other countries.

The first contribution was the assignment of two sanitary engineers, as part of an UNRRA team, to help to check the cholera epidemic in the Chungking area in the summer of 1945. The chlorination of the public water supplies, although not complete, was probably one of the factors which brought the epidemic to an end.

The most notable of other diseases of sanitary significance in China were malaria, typhoid, the dysenteries, typhus, and plague, all of which are endemic.

The sanitary engineering personnel with the Chinese health officials and engineers have set up control procedures in most of the regions. In co-operation with the Chinese engineers, UNRRA's sanitary engineers made studies of DDT solvents available, in order to find out the most practicable method of utilizing local materials for the residual spraying of houses for malaria control.

In some of the bombed-out cities, water-distribution systems were badly damaged. All the chlorine was put in the water mains at the treatment plant. By the time the water reached the ultimate consumer, it was unsafe due to sewage pollution en route. There was similar destruction to the sewerage systems. The immediate problem was the repair and restoration of the water and sewerage systems, with adequate chlorine sterilization in the case of the waterworks.

A serious potential for the spread of communicable diseases was found in connection with the displaced persons in refugee centres. Every effort to maintain proper camp sanitation and prevent filth-borne diseases was adopted. The health training program in China included a course for sanitary engineers and medical officers given by one of UNRRA's sanitary engineers. UNRRA's sanitary engineers in most of the regions have made recommendations to put all the waterworks back into operating condition, since they had been neglected during the Japanese occupation. UNRRA's engineers have been training local personnel to combat insect-borne diseases, especially with the use of DDT. Special emphasis has been placed on the control of malaria in those regions where malaria is endemic. The city health administrations and the American and British Army medical personnel have been most helpful to UNRRA in these operations.

Since the use of human excreta as a fertilizer is vital to Chinese economy, safe methods for the utilization of human excreta, rather than disposal, are being investigated.

Ethiopia.—The health protection of the people of Ethiopia will depend largely upon adequate sanitation. At present, the country is almost devoid of indigenous medical and public health personnel.

UNRRA's sanitary engineer has inaugurated practical instruction courses for training Ethiopians in the basic principles of sanitation. This

training includes practical projects and demonstrations. The provision of safe drinking water, the proper disposal of excreta, and insect-control measures are more important from the sanitary engineering point of view.

Germany and Austria.—The sanitary engineering work with the displaced persons in Germany and Austria was similar to the work carried on by UNRRA sanitary engineers in the Middle East refugee camps. The congregation of people always presents a specific health hazard, and if proper sanitation standards are inaugurated and maintained, the incidence of water, food, and filth-borne diseases will be greatly minimized.

SUMMARY OF FUNCTIONS

As the enemy were driven from the Balkan countries, and later from the mainland of Asia, the sanitary engineers of UNRRA moved from the Middle East refugee camps into Greece, and, later additional engineers went to Italy, Yugoslavia, Austria, Germany (Displaced Persons' camps), and China.

In the first stage, subject only to the over-all supervision of the chief medical officers of the UNRRA missions, the chief sanitary engineers and their staffs of regional sanitary engineers were responsible for inaugurating preventive measures to curb epidemics of water, food, and insect-borne diseases. After all possible emergency measures for curbing epidemics had been taken, the sanitary engineers dealt with the rehabilitation of existing sanitary facilities.

The over-all responsibilities of the sanitary engineers were as follows:

1. To give advisory assistance in the organization of sanitary engineering branches in national, regional, and local health departments and to aid the local sanitary authorities.
2. To act as advisors and liaison officers to UNRRA Divisions other than Health in matters pertaining to sanitation.

3. To plan and conduct investigations and surveys to determine needs for sanitary personnel, equipment, and supplies.
4. To expedite the procurement and distribution of sanitary equipment and supplies, and to give consultative service on their use.
5. To promote training programs for sanitation personnel and to take part in their technical direction.

In so far as possible, in all national and regional areas, local sanitary engineers were designated to serve with UNRRA engineers as their deputies during the UNRRA period, and were trained to carry on by themselves upon UNRRA's termination. However, in conformity with UNRRA's over-all policy, the primary function of the sanitary engineer was to assist and advise.

The peaks of UNRRA's activities in the various countries were reached between November 1944 and July 1946. The following tables shows the distribution of sanitary engineering personnel:

Distribution of Sanitary Engineering Personnel at the Peak of UNRRA's Activities.

Location	No
Headquarters (Washington, D. C.)	2
Albania	13
Austria (Displaced Persons Camps)	1
China	18
Ethiopia	1
Germany (Displaced Persons Camps)	3
Greece	* 15
Italy	8
Middle East Camps (Cairo Headquarters)	1
Egypt (El Shatt)	3
Egypt (Moses Wells)	1
Egypt (Tolombat)	1
Palestine (Nuseirat)	1
Philippeville Camp (North Africa)	1
Poland	2
Yugoslavia	5
SHAEF (on loan)	3

* Include 1 Pilot and 1 Supervisor of Aircraft Maintenance.

CONCLUSIONS

From the experience of UNRRA's sanitary engineering efforts, it is apparent that any international organization which is concerned with promoting health on a long-term basis must give first consideration to the prevention of disease rather than the cure. The application of sanitary engineering principles should be one of the bases for prevention work in connection with water, food, and insect-borne diseases.

A properly administered sanitary engineering program can be an important factor in promoting health. By the maintenance of adequate precautionary measures, a great many of our most serious communicable diseases, such as the dysenteries, typhoid, cholera, malaria, typhus, and plague can be prevented, thus eliminating or minimizing the need for expensive treatment and hospitalization. The sanitary engineer is one of our strongest guardians of health, and his services should be utilized to the fullest extent wherever an engineering prevention and control program is indicated.

ACKNOWLEDGMENT

The author wishes to acknowledge the contributions of the entire sanitary engineering staff of UNRRA whose activities have been summarized in this paper.

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- (P. H. Rpts. Vol. 62, No. 50.)

PUBLIC HEALTH MEASURES IN THE MADRAS PRESIDENCY

by

A. B. SHETTY

Minister of Health, Madras



The improvement of public health is of paramount importance in any plan for the future development of the country. The ill-health and premature death so common among our people offers a striking contrast to the high standards of health and length of life enjoyed by the people in many of the western countries. The rate of mortality here is double that of most other civilized countries; the average expectation of life is more than 60 years in several of the western countries while here it is only about 27. This shortened span of life is spent mostly in sickness, suffering and sorrow. The largest number of deaths takes place among infants and children. Half the number of children die before the age of 10. Yet the birth-rate is so high that our population continues to grow at a disquieting rate and this is in marked contrast with the decline in the growth of population in the West. This high birth-rate and the high death-rate which goes along with it means an appalling waste of human life and effort. The rapid increase in our population is widening the gap between the available quantity of food and the number of people to be fed. The low standard of health in our country may be traced mainly to unhealthy conditions of living, improper

nutrition, inadequacy of health services and lack of education. The root cause is poverty and the low standard of life prevailing among the vast masses of our people.

THE POSITION IN RURAL AREAS

In this Province we have 35,430 villages where 84 per cent of our people live. The great majority of the rural houses are unfit for human habitation. There is practically no conservancy or sanitary service in the villages. The soil is polluted by indiscriminate defecation and often water also is contaminated on account of people using the bank of a stream or the margin of a tank as a public latrine. In most places the drinking water available is either inadequate or unsafe for use. The great mass of the village population lead half-starved lives. Many unhealthy habits and practices prevail among the people due to want of health education. The environmental conditions are hardly better in urban areas. Our towns have grown in a haphazard way without any planning. The housing conditions are most unsatisfactory. Slums and over-crowding make the situation worse, particularly in industrial areas. Thousands live on pavements of roads. The collections and

disposal of refuse and excreta is not done properly. The number of private and public latrines is far below the requirements. Protected water-supply is available only in 46 of our municipalities. In 40 out of these 46 towns the supply is either inadequate or it does not cover the whole area. Drainage facilities have been provided so far only in 7 cities in this province but they are all partial schemes. Dusty roads are a source of great nuisance and danger to health in our towns. Flies and mosquitoes are found everywhere carrying infection. The major cause for the poor physical development and chronic ill-health of our people is undoubtedly faulty nourishment. Resistance power is weakened by lack of proper nutrition and they easily fall a prey to infectious diseases. If they don't die a premature death, they lead an enfeebled existence and their productive capacity suffers a great deal.

PAST POLICY

In the health programme so far followed in this country we have given precedence to the establishment of hospitals and the production of doctors. More emphasis has been laid on the cure and the alleviation of disease rather than on the prevention of illness and the improvement of health. As observed by a Committee of the British Medical Association, modern medical practice tends to stress more and more the importance of the environment and the methods of preventing disease and maintaining health. Good health is not entirely or even mainly a question of medical services. It does not depend so much upon hospitals or doctors or bottles of medicine as upon a suitable environment, adequate nutrition and the adoption of the rules of healthy living. Great results have been achieved in Great Britain by the improvements made there in the field of sanitation, hygiene, water-supplies and housing. The great epidemic diseases have been practically conquered.

Death-rates have been considerably reduced and the average length of life has gone up by many years. Factory legislation has led to better conditions of work. The newer knowledge of nutrition has enabled them to raise the standard of health in the nation.

PREVENTIVE SIDE STRESSED

While we need not relax our efforts to provide proper medical aid, particularly to the rural population, the time has come to give increased attention to preventive measures. The layout of our towns, the construction of hygienic dwellings, the production and supply of more and better food, the provision of protected water-supply and drainage and such other health creating services are of paramount importance for raising the standard of health and fitness in our people. The extent of sickness prevalent in the country is so large that we cannot hope to provide beds for more than a fraction of the people requiring hospital treatment even if we are able to multiply several times the number of our hospitals and dispensaries. The reduction in the demand for curative treatment can be secured only through successful preventive work. With the limited staff and funds that are now available to us, we can achieve more effective and lasting results by creating conditions of healthful living instead of concentrating too largely on the expansion of medical relief work.

GOVERNMENT MEASURES RECOUNTED

There is no doubt that increase of food production is the most important single measure required for the maintenance of life and health. The "Grow More Food" campaign started during war time is, therefore, being steadily pursued and large funds are being allotted for providing major and minor irrigation works and for supplying more manure and better seeds to the ryots. The area under all food crops has

increased from 26.43 to 27.63 million acres. This means an increase of 1.20 million acres. Diet surveys and nutrition research work are being carried on. A housing scheme has been launched and Co-operative House Building Societies are being organised for this purpose. The amendment of the Town Planning Act is under the active consideration of a committee with a view to make it more effective in determining the physical conditions under which people have to live and in controlling the future development of our towns. The eradication of slums, the abatement of over-crowding and the provision of new decent houses at low rents must form a part of our national health policy. The most outstanding problem connected with the improvement of public health is the provision of adequate and safe water-supply and proper drainage system for our towns and villages. The committee constituted in last June to consider the question of expediting the investigation, design and execution of urban and rural water-supply and drainage schemes have submitted their report to the Government. They want that the State must assume the entire responsibility for the provision of water-supply and drainage all over the Province and that a ten-year plan for water-supply and fifteen-year plan for drainage should be programmed and followed and that a public health engineering department should be organized for the purpose. The report has been made available to the public and suggestions have been invited from persons interested in the matter by the end of this month. Government will soon have to consider the far-reaching recommendations made by the Committee and take necessary steps in the matter. Government have already constituted a rural water-supply fund of rupees one crore and they propose to make a contribution of 15 lakhs of rupees every year for this purpose. Improvement of nutrition and provision of suitable housing and good drinking water will

do more than anything else to prevent ill-health and to reduce the need for costly, and often unsatisfactory, curative services. These will have, therefore, to be given high priority in our health programme. A conference of eminent medical and public health experts both official and non-official was convened in June 1947. They discussed a wide range of subjects relating to medical education, medical relief and public health work. Two sub-committees which were formed at the conference for a detailed study of these problems have made important recommendations which will soon be considered by the Government. Government have, in the interest of medical education, given their approval to all the expansion schemes relating to the Stanley and the Andhra Medical Colleges and the attached hospitals. When these building schemes are completed, each of these colleges will be able to take in 100 medical students every year. A College of Indian Medicine has been started this year with 50 students. It has been proposed that the School of Indian Medicine should also continue to be run alongside the College. Steps are being taken to provide the additional buildings, staff and equipment required for the expansion of this teaching institution and to start a research department also.

The needs of rural India have long been neglected. The establishment of combined medical and health centres in villages linked with taluk and district hospitals has been proposed with a view to bring remedial and preventive services within the reach of the people in rural areas. Government have sanctioned the opening of these primary centres at the rate of 30 every year. The post-war schemes of health development are awaiting to be implemented. There is a twenty-year plan for the reconstruction and improvement of District and Taluk Headquarters Hospitals and for adopting further measures for combating tuberculosis, leprosy,

(Continued on page 415)



"Books are Weapons in the War of Ideas." "Some Books are to be tasted, others to be swallowed and some few to be chewed and digested." . . . and some to be eschewed!

Invitation to Health

A guide to successful living.

Author :—Harry J. Johnson.

Publishers :—Prentice Hall, Inc. New York.

Published in May 1944—Second printing July 1944, Third Printing June, 1946.

Pages :—249. Size : 9" x 6".

Price :—\$2.75.

THAT in matters of public health, the State and local authorities have certain definite obligations (in respect of water-supply, public cleansing, trade control and the like) is now fairly well recognized in all countries claiming a modern public health administration. But what is not so well recognized even in such countries, is the responsibility of the individual in the maintenance of his own health.

In this book "Invitation to Health", a Medical Director of Life Extension Institute and Examiners, effectively impresses on the readers the part which each individual has got to play in the maintenance of his own health. The author gives a clear and concise account of the normal, important physiological functions, in simple language without the use of technical jargons and then proceeds to point out how these are likely to go wrong. "Food and Digestion," "Lungs and Respiration", "Heart and Circulation", nerves, kidneys, teeth, skin are all

thus dealt with. The great Indian thinkers of yore, have repeatedly emphasized the importance of *Shanti*. In the modern stress of life, men are racing against time and their nerves are kept all the time in high tension. The importance of rest and relaxation in the maintenance of health is given a deserved prominence in a separate chapter.

The story of the "week-end athlete Mr. Smith" should serve as a warning to the growing tendency among a section of the population of programming and ordering a thoroughly hectic and exhausting week-end 'relaxation'.

The author has dispelled many fallacies and fads. He does not take an alarmistic view of the various ills which "flesh is heir to". He does not disguise his firm views against "cure alls" and "secret remedies". Throughout the book, the author appeals to the common-sense of the reader. This is important. In simple, easy and attractive language, he makes out a strong case for a periodical and thorough medical 'check up' and an 'efficient servicing and tuning up'. Do we not get our motor cars periodically 'checked up' and have the engine tuned to ensure efficiency of service and to avoid breakdowns? Take another instance, a dwelling however well-built requires maintenance,

periodical inspection and repairs to save it from ruination. The human frame is far more important and delicate. Why not have it periodically checked up and tuned up?

The general medical practitioner is a busy overworked man. He does not usually find time to talk to his patients on the essentials to be observed in the maintenance and promotion of their health. This book contains a wealth of useful and authoritative information. It should find a place in every home.

The author and publishers have placed the English knowing people under a debt of gratitude to them.

The Editor, 'People's Health' may consider the desirability of producing a similar book in the regional languages of this country. In the midst of a widely prevalent fatalistic outlook on health and sickness, such a book will be of great educative value especially among the members of our local authorities and legislative bodies.

B. K.

Furniture and other Designs

Author :—V. R. CHITRA.

Publishers :—Silpi Publications, Mount Road, Madras 2.

Published :—1947.

Pages :—48. Size $10\frac{1}{2}'' \times 7\frac{1}{2}''$.

Price :—Ordinary edition—Rs. 7-8-0.

* * *

THIS attractive catalogue is the first of a series of books on the subject which Silpi Publications have in store for the prospective designer. India sorely needs advice on the matter of furniture designing. We, in India, are notorious for keeping a lot of unwanted and unused and even unusable furniture in our homes. We often forget that building costs money. We fill in valuable space with lumber, as it were. The few pieces of furniture that we may actually use

are imitations of western designs, which are woefully unsuited to our tropical conditions. As such, this book comes in time to educate the cabinet makers and *connoisseurs* in the matter of designing furniture.

The author Mr. V.R. Chitra is a widely travelled craftsman. He has also served for a while as the Superintendent, Crafts Department in the Madras School of Arts and Crafts. He is deeply devoted to his craft. He is therefore the most competent person to tell us all about designing. The public should feel grateful to him for offering to publish a series of booklets on designing.

As Mr. Gangooly in his foreword has said, there are four points that should be satisfied by a good piece of furniture, *viz.*, (1) sound construction and efficient craftsmanship, (2) exquisite treatment of materials, (3) elegant shape and (4) comfort and convenience. The designs in the book under review satisfy all these requirements and are therefore worthy of the attention of anyone desirous of making new pieces of furniture.

The book is well-got-up. Besides a few pages of valuable reading matter, 32 plates are appended. These plates contain the actual photographs of many articles of furniture which the author has designed. The plates in the book were printed in Japan in 1939. They are sure to impress the readers.

A noteworthy point about these designs is that all of them are entirely hygienic. Designs of furniture which contain unnecessary crevices that may harbour dirt and insects have been carefully avoided. In our country, one cannot be too careful to avoid the pest of bed-bugs. The designs without exception have artistic, oriental touch about them which makes them ideal for Indian homes. In short, the book should be in the hands of everyone interested in making one's home a 'sweet home'.

"Peer"

FROM EVERY WHERE



WHAT DO THEY SAY ABOUT IT?

Readers can contribute to this section. They are requested to send extracts of current literature which, in their view, would interest the people. (—Ed. P.H.)

CYANOSIS IN INFANTS CAUSED BY NITRATES IN WELL WATER

Comy, H. H.

J. Amer. Med. Ass. 1945 Sep. 8,

Two examples of a previously unrecognized condition of cyanosis in babies which, it is maintained, is due to a high nitrate content of the water consumed, are described. It is stated that the condition is not by any means rare in the rural areas of Iowa State.

The first case was that of an artificially fed baby of 4 weeks old, with a history of diarrhoea and vomiting, who was admitted to hospital as an emergency case of cyanosis with drowsiness. Oxygen treatment was ineffective. Injection of 1.0 per cent. solution of methylene blue (1.1 cc. for each kgm., of body weight) under the scalp restored the child within 30 minutes. The baby

was sent home after a week but was readmitted twice with the same signs and symptoms, which on the second occasion were extremely severe. The father of the child had a theory that the well-water used in making up the artificial foods was the cause of the condition. This theory was considered. The child had had a high normal value of methaemoglobin in the blood, and reports in the literature of infantile methaemoglobinaemia caused by bismuth subnitrate suggested that nitrates in the water might have been the causative agent in this case.

The water on examination was found to contain an amount of nitrate equivalent to 1.0 gm. of potassium nitrate per litre, and bacteriologically highly polluted. The mechanism of causation of the cyanosis is accordingly believed to have been the conversion of haemoglobin into methaemoglobin by the chemical

action of nitrites, absorbed through a damaged intestinal mucosa, after having been produced by the action of bacteria in the intestinal tract on the nitrate in the water used in making up the artificial foods.

It seems advisable to recommend that well-water used in infant feeding should not contain more than 1.0 or at most 2.0 parts of nitrate per hundred thousand.

—M. E. Delafield.

RURAL WATER-SUPPLY SANITATION RECOMMENDATIONS OF THE JOINT COMMITTEE ON RURAL SANITATION

Public Health Reports Supplement 185

This, the second of the reports produced by a joint committee on Rural Sanitation, set up by the United States Public Health Service in 1941 for the purpose of co-ordinating recommendations in the development, operation and maintenance of safe water supplies, and measures for the disposal of sewage in rural suburban areas.

The problem of sewage disposal was considered first and the committee's recommendations were published in *Public Health reports*, 1943, v. 58, No. 11 (See this bulletin, 1943, v. 18, 851).

The present report "is limited to the sanitation aspects of small water supplies used by one or possibly several families and by rural schools, recreational areas, camps, and similar developments, which are without access to a public water-supply system."

The committee's recommendations have for their objective the establishment of a uniform line of approach and procedure for those concerned with the sanitation of individual water supplies; they deal with new supplies, alterations or extensions to existing supplies, and with general problems of management.

The report is divided into five parts and has two appendices:

Part I.—Basic requirements for rural water supplies: Quantity, Analyses, Quality.

Part II.—Ground water:

(a) Elements of ground-water geology, rock formations in relation to their water-bearing properties, movement of ground water, rock structure in relation to contamination, sanitary quality of ground water.

(b) Sanitary recovery of ground water, exclusion of surface water from the well site, distances to sources of contamination types of wells, infiltration galleries, well-construction details, reconstruction of existing wells, protection during construction, disinfection after construction and repair, testing wells for sanitary quality of water, abandonment of wells, sanitary development of springs.

Part III.—Surface water: cistern supplies, cistern location, design and construction, other surface water supplies.

Part IV.—Water purification: aeration, sedimentation, filtration, disinfection, emergency disinfection, softening, algae control.

Part V.—Pumping, distribution and storage: Pumping equipment, hand-pump installations, power-pump installations, distribution, storage.

The appendices deal with procedure for cement grouting of wells for sanitary protection, and the disinfection of wells, springs and appurtenances.

A partial (American) bibliography of references to rural water-supply sanitation is given.

Then any technical details dealt with in this report cannot usefully be abstracted. The report should be studied by all concerned with the provision and maintenance of rural water supplies.

Henry H. Clay.

EFFECTS OF MASS PRODUCTION OF FOOD

The staple foods may not contain the same nutritive substances as in former times. Mass production had modified the composition of wheat, eggs, milk, fruit and butter although these articles have retained their familiar appearance. Chemical fertilisers, by increasing the abundance of the crops without replacing all the exhausted elements of the soil, have indirectly contributed to change the nutritive value of cereal grains and of vegetables. Hens have been compelled, by artificial diet and mode of living, to enter the ranks of mass producers. Has not the quality of their eggs been modified? The same question may be asked about milk, because cows are now confined to stable all the year round and are fed on manufactured provender. Hygienists have not paid sufficient attention to the genesis of diseases. Their studies of conditions of life and diet and of their effects on the physiological and mental state of modern man are superficial and incomplete and of too short duration. They have thus contributed to the weakening of our body and our soul. And they leave us without protection against the degenerative diseases, the diseases resulting from civilisation. We cannot understand the characteristics of these affections before having considered the nature of our mental activities. In disease as in health, body and consciousness, although distinct, are inseparable. (*"Man The Unknown"* by Dr. Alexis Carrel pp. 115—116).

MALARIA, OTHER INSECT-BORNE DISEASES AND INSECTS

Insecticides against Bed-Bugs In Air-Raid Shelters.
Public Health, London, (April, 1942).

In this article the Bed-Bug Infestation Committee of the Medical Research Council recommends 3 insecticide formulae for use in air-raid shelters. These formulae consist of:

- (1) Pyrethrins in kerosene, 0.6 to 0.8 percent.
- (2) Thiocyanates, 6 per cent "Lethane 384" in kerosene, or 3 per cent lauryl thiocyanate in kerosene.
- (3) Heavy coal-tar naphtha with cresylic acid; 5 per cent cresylic acid dissolved in heavy coal-tar naphtha.

The precautions to be observed in the use of these preparations are given together with methods of application. It is stated that the elimination of harbourages is considered effective in preventing infestations.—C. H. ATKINS. (*P. H. Engng. Absts. Vol. XXII, No. 9*).

RATS-THE LOSS THEY INFLICT

A rat census is obviously impossible. It is quite certain, however, that they breed more rapidly than they are destroyed in many places in the world. We can appraise the rat population only by the numbers that are killed in organised rat campaigns and by the amount of destruction they cause. In about 1860, Shipley tells us, there was a slaughter-house for horses on Mont-faucon, which it was planned to remove farther away from Paris. The carcasses of horses amounted to sometimes thirty-five a day, and were regularly cleaned up completely by rats in the following night. Dusaussais had the idea of trying to find out how many rats were engaged in this gruesome traffic. He set horse-meat in enclosures from which the exit of rats could be prevented, and in the course of the first night killed 2,650. By the end of a month, he had killed over 16,000. Shipley estimates that there are about forty million rats in England at one time. In 1881 there was a rat plague in certain districts of India. The crops of the preceding two years were below average and a large part of them had been destroyed by rats. Rewards offered for rat destruction led to a killing of over 12,000,000 rats. Shipley estimates that a single rat does about 7s. 6d. worth of damage in a year,

which makes a charge of £15,000,000 upon Great Britain and Ireland. It costs about three to eight shillings a year to feed a rat on grain. Every rat on a farm costs about two shillings a year. Lantz adds to this hotel manager's estimate a pound a year as a low estimate of the loss inflicted by a rat. He thinks that in the thickly-populated parts of the country an estimate of one rat per acre is not excessive and that in most of our cities there are as many rats as people. He investigated, in 1909, the approximate total damage by rats in the cities of Washington and Baltimore. From the data he obtained, he calculated the annual damage in the two cities as amounting to £100,000 and £175,000 respectively—which, considering the population, amounted to an average loss of 5s. a year per person. On the same basis, the urban population of the United States, at that time 28,000,000 people, sustained an annual direct injury of \$8,750,000 a year. In Denmark the estimated rat cost is about 5s. a person; in Germany three and six a person; in France, a little over four shillings. Add to this the inestimable depreciation of property and the costs of protection.

(Extract from "Rats, Lice and History" by Zinsser. Publishers: George Routledge & Sons Ltd., London E.C. 4).

SQUALID HOMES

Factory conditions were disgraceful. Men and women alike spent the long hours of the working day in buildings badly designed, badly lit, badly ventilated, and always overcrowded. Sanitation was almost non-existent.

Homes were worse than factories. An investigation in 1898, reported by the Moscow City Council, covering 16,478 lodgings in Moscow, shows that 17 per cent of the population were living under inhuman conditions.

"The stairs which led down to the dens which the people inhabited are covered with all

kinds of filth, the dens themselves are almost filled with dirty boards, upon which there is only dirt. The smell is heavy and close. There is hardly any light, because the dens are half underground and little light obtains entrance through the dirty windows. Beneath the window it is absolutely dark; the walls are damp and covered with mould."

Only one degree less vile than the cellars were the insanitary wooden shacks on the outskirts of the towns. Such conditions in country and town, coupled with the inadequacy of the medical service, both in numbers, quality, and equipment, amply account for a death rate of 29.4 per thousand, mounting in the case of infants to 32.7.

In such a land, then, and confronted with difficulties and handicaps so inconceivably great, a mere handful of leaders, with very slight practical experience, began the early stages of the world's greatest experiment. Could the scales have been loaded more heavily against them?

(From "The Socialist Sixth of the World"—By The Dean of Canterbury.—F.S.U. Publication).

EMPLOYMENT AND HEALTH

—Ferguson, T.

Edinburgh Med. J. 1945—July-Aug.

A sound health policy should effect a close link between the general health services and those associated with industry. Though the association between disease and occupation has long been recognized, ill-health in a particular industry is not solely dependent upon a particular occupation, but also upon the general environment associated with the industry. Insufficient attention has been given to fitting the individual to work for which he is most suited, and experiments have shown that a change of occupation may be necessary to prevent a breakdown in length. For both young and old, closer study should be made of vocational aptitudes. There is still room for great improvement the general in

conditions found in the factories. Working hours are still excessive, and, when taken in conjunction with domestic responsibilities and other war-time difficulties, the results are often detrimental to health.

Despite the work of the Industrial Health Research Board, industry in general still fails to satisfy the worker's fundamental need to be treated as an individual human being. Works Medical Officers and Nurses are often unable to be fully effective since, by the very nature of their appointment, they may be regarded by the workers as an instrument by which management carries out its industrial policy. The family doctor has great difficulty in knowing what effort is required in specific factory work, or of knowing the psychological background of the factory environment, and it is difficult for him to decide whether his patient should be advised to take up a different job. The problem of rehabilitation requires further study and should extend from the period of disablement to the point of successful return to suitable work. A few firms adopt such a policy, but it is still rare. The period of light work following incapacity requires intelligent supervision. Serious economic and psychological consequences arise if a skilled worker is compelled to give up his work. Knowing this, he will often attempt to continue work that is beyond his capacity. On his return to his job sympathy and understanding are necessary from management, foremen and workmates. In Denmark a system of dealing with "invalids" and potential "invalids" by notification and vocational training seems to have proved successful and its lessons could well be followed in Britain, where results of replacing and training disabled persons have been somewhat disappointing. It has been found essential that contact should be kept with a disabled person for at least six months after his return to work.

—HERRY G. MAULE.

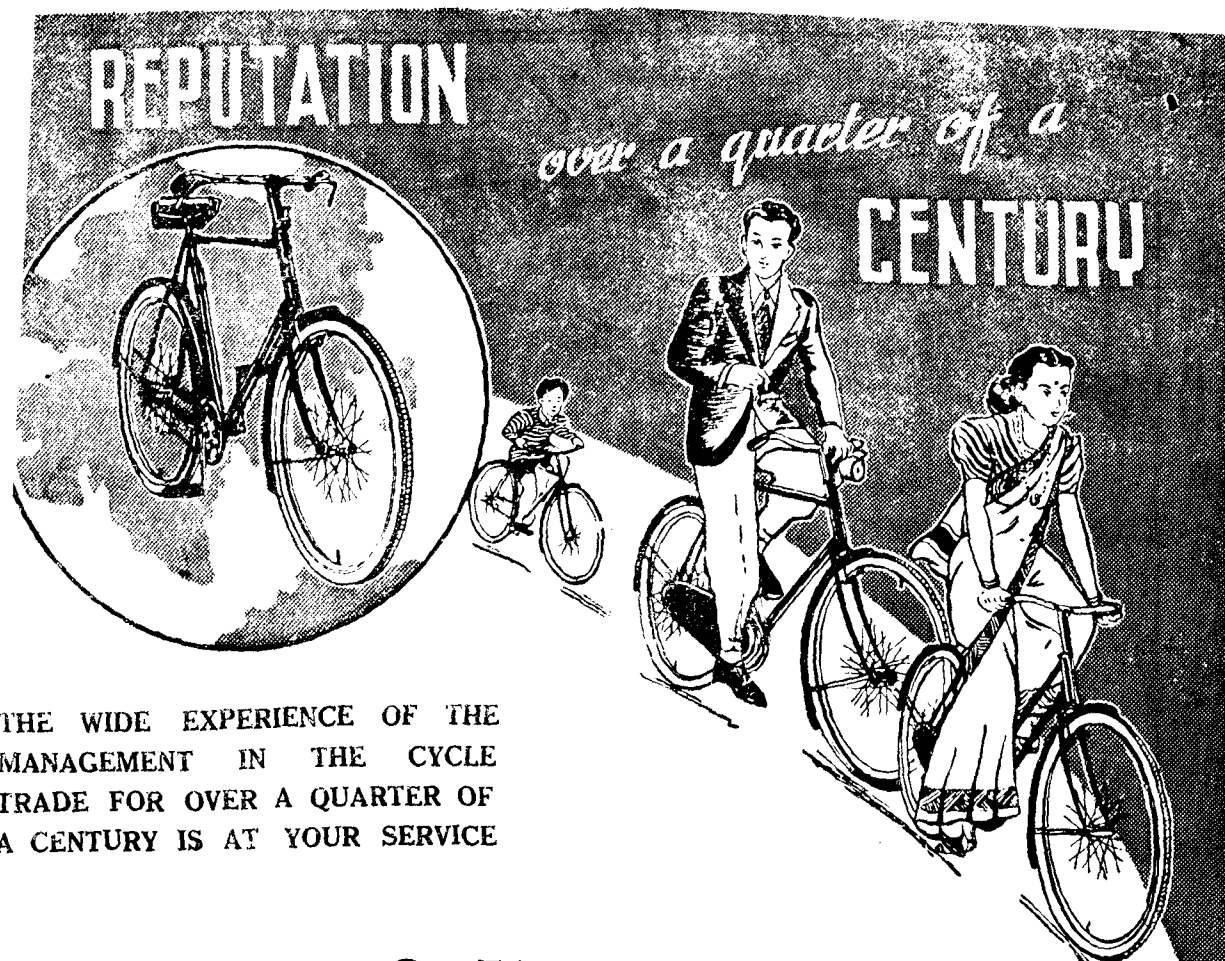
VENTILATION IN THE SPREAD OF CHICKENPOX AND MEASLES WITHIN SCHOOL ROOMS

Wells, Mildred W.

(J. Amer. Med. Ass. 1945, Sept. 15).

IT is a function of 'sanitary' ventilation to reduce the concentration of infecting organisms in the air to a level low enough to prevent the spread of the disease that they cause. This level probably depends partly on the concentration of susceptible people in the environment; the fact that, in schools, chickenpox and measles show explosive and spreading outbreaks only in the lower grades, with the greatest number of susceptibles, might mean that ventilation of present standards dilutes the organisms to the extent that spread of the disease occurs only when there is a relatively high proportion of susceptibles. It is difficult to increase ventilation above a certain point, and the tests reported in this paper were undertaken to see whether radiant disinfection of the air by ultra-violet lamps could be used instead. The tests were carried out in two private schools in Philadelphia, and in two groups of public schools in a nearby suburban area. The class-rooms and other gathering places of the children in the younger grades in three of the schools were irradiated by the methods described by WELLS, WELLS, and WILDER (this Bulletin, 1942, v. 17, 303). Children were regarded as susceptible if they had no previous history of the disease in question; in view of the evidence for the existence of sub-clinical attacks of mumps, the method was not regarded as very satisfactory for this disease.

For analysis, the classes were divided into five groups according to the proportion of susceptible children that they contained, and the results are presented in table showing, for each susceptibility group and each school, the number of exposures to cases of measles, chickenpox and mumps that failed to result in any secondary



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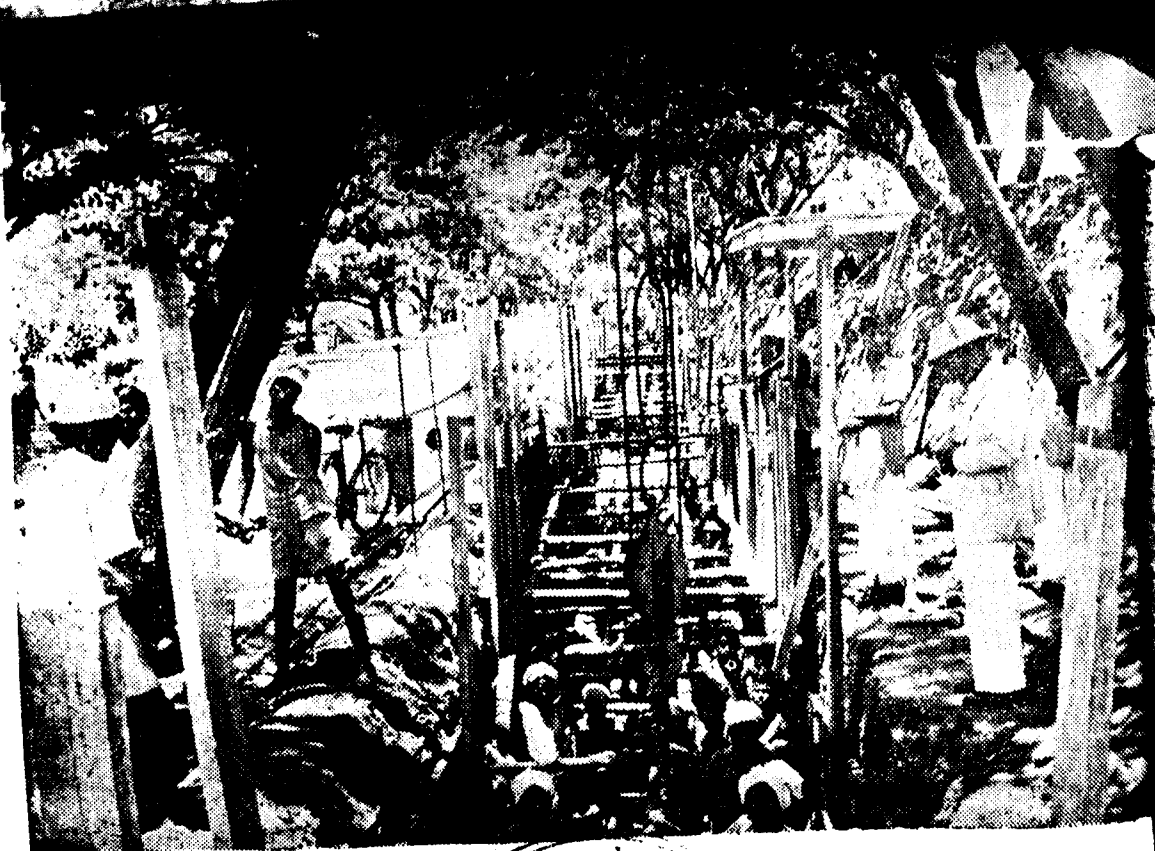
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