New Lamps for Old

The Advance to Social Medicine

An Inaugural Lecture

GIVEN IN THE UNIVERSITY COLLEGE OF RHODESIA

Professor W. Fraser Ross

UNIVERSITY COLLEGE OF RHODESIA

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by

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THE ADVANCE TO SOCIAL MEDICINE

"Social Medicine is the whole of those relationships which exist between medicine and society."—Jules Guérin (1848).

THE expression Social Medicine was first used in March, 1848 by Dr. Jules Guérin, the editor of the French medical journal "Gazette Medicale de Paris." The late Professor René Sand, who was Professor of Hygiene and Social Medicine in the University of Brussels, in his classical book, "The Advance to Social Medicine" (and I make no apologies in using the title of his "magnum opus" as the sub-title of my address) quotes Dr. Guérin as saying:

> "Truly, social medicine is the key to the burning questions of this hour of regeneration, and this declaration should be the marching orders of the medical profession. . . . Social Medicine, called to the nation's council, will henceforth hold sway over purely scientific medicine."

To what extent is this prophesy, made 120 years ago, true today? Have the recent advances in scientific medicine, particularly those of the last 30 years, made a statement such as this untenable? Is it the case that, despite these advances, many of which have captured the imagination of not only the public but also the medical profession, social medicine does indeed today hold sway over purely scientific medicine?

In the Second Report of the Medical School Planning Committee appointed by the University College of Rhodesia and Nyasaland, it is stated under the heading of Social Medicine that—

> "Environmental, psychological and social aspects of health and disease should receive as much emphasis as the purely organic, and the student, who should by now know something of what he is trying to prevent, is ready to begin his proper study of epidemiology, hygiene and public health."

Is it perhaps fair to say that in referring to Social Medicine in this way the Planning Committee was indeed trying in

terms, not very dissimilar to those of Dr. Guérin, to emphasise that the scientific advances of medicine must be closely allied to the needs of prevention and the social organisation of the health needs of the community?

History reveals that elements of public health have been practised from ancient times. Pre-Biblical literature indicates the use of public water supplies and sewerage systems by the Greeks and the Romans. All principal cities of antiquity prided themselves enormously on their aqueducts, their sewers and their public baths. In the Old Testament, in the Book of Deuteronomy, written about 621 B.C., we read:

> "Thou shalt have a place also without the camp, whither thou shalt go forth abroad; and thou shalt have a paddle upon thy weapon; and it shall be, when thou wilt ease thyself abroad, thou shalt dig therewith, and shalt turn back and cover that which cometh from thee."
> (Chapter 23, Verses 12 and 13.)

There was, therefore, awareness 2,000 and more years ago of the need not only for public sanitary measures, but also for personal hygiene measures. Some of the private houses in Ur of the Chaldees had bathrooms and sewers 3,000 years before the birth of Christ. However, we must concede that for the most part these personal hygiene measures were only available for the upper and privileged classes. The ravages of disease and war have continued over many hundreds of years and the public conscience does not appear, until recently, to have been much disturbed. Some measure of these ravages are seen in the slow growth of the world population until recent times. Gibbon in his monumental work "The Decline and Fall" records the population of the Roman Empire as 120 millions and in A.D. 1000 the world population was estimated at 275 millions. It is not clear how these figures were arrived at and it can only be concluded they were a "guesstimate." However, we have some figures for the population of England and Wales and in 1086 at the time of the Domesday Book the population was estimated on a count of families to be $1\frac{1}{2}$ million. Six hundred years later, in 1695, when a hearth tax

was introduced, it was estimated at 5½ million, while in a further 250 years it had risen to about 44 million people.

The considerable rise in the population during the last century reveals the effects of improved living conditions, better nutrition, more adequate protection against disease and the effects of increasing use of public health measures. The rising world population, particularly in the last two centuries, has been due not to recent scientific advancements with the consequent improved therapeutic abilities of the physician. It is because of the value of simple measures such as improved water supplies, adequate sewage disposal, decent housing, better working conditions and increasing social conscience. There is no doubt that a better understanding of the sciences of physiology and pathology and the advancing techniques in therapeutic and surgical skill have all played their part in the improvement of health. Nevertheless I suggest that on a global basis their contribution is insignificant compared to those due to the introduction of generally accepted public health measures.

Let us look, therefore, at some of the evidence on which I base this statement. It would seem easier to examine a particular situation rather than the general one, and I suggest we consider the developments in the British Isles from the middle of the eighteenth century. J. H. F. Brotherston, in his book "Observations on the Early Public Health Movement in Scotland," says:

> "In the study of so large a movement as this increase in population throughout the eighteenth century we must look for an equally large force as the cause. The only factor which has been shown which meets this requirement is the improvement in the nutrition of the people. Increase in medical knowledge and the waning of certain diseases may have had some effect, but it can only have been subsidiary."

By the mid-nineteenth century, due to the increasing urbanisation brought about by the industrial revolution and the flocking of people to towns in search of work, the houses in which many of these wretched folk lived were appalling

beyond our wildest imagination. A medical pamphleteer of the day, quoted by Brotherston, had this to say:

> "So little is house drainage in use that on one occasion I saw the entire surface of a backyard covered for several inches with green putrid water, although there is a sewer in the close within a few feet into which it might have been drained away. There are no domestic conveniences even in the loftiest tenements, where they are most needed."

It does not require a great deal of imagination to understand the pathetic state of the people of the time. Nor is it difficult to see why there grew up the opinion, still held by many, that a rural life is preferable to a town life. However, understandably I would be at fault if I left you thinking that because all was not well in the Scotland of this time, that the position was any better in England and Wales. Conditions there were equally bad. Again rapid urbanisation had taken place, thanks to the Industrial Revolution, and the living conditions of the lower classes were wretched in the extreme.

Fortunately at this time there appeared on the scene two remarkable men whose names must forever be identified with the development of modern social medicine, although neither would probably have recognised it as such. One was Dr. William Farr, one of the greatest pioneers of social medicine, who laid the foundations of medical statistics. The other was Mr. Edwin Chadwick, later to be knighted for his efforts, a lawyer, who as secretary to a commission set up by the then Home Secretary, framed perhaps the most remarkable document in the history of English public health.

Dr. Farr was Compiler of Statistics in the Office of the Registrar General and his "little sums about human lives," as he used to call them, were the foundation of modern medical statistics. These figures, contrasting as they did mortality rates in urban and rural areas, highlighted the harm which was resulting from the industrial environment.

Chadwick and his Commissioners revealed in their report entitled "An Inquiry into the Sanitary Conditions of the Labouring Population of Great Britain," which was published

in 1842, the poor housing conditions, the inadequate water supplies, the considerable deficiencies in sewerage and that

> "the annual loss of life from filth and bad ventilation are greater than the loss from death or wounds in any wars . . . in modern times."

This report, together with the untiring efforts of Chadwick himself, led to the passing of the Public Health Act of 1848, which was the first attempt at systematic public health legislation. It is worth recalling that this was the year in which Dr. Guérin in Paris first defined social medicine.

From the middle of the nineteenth century the public health movement was to gain increasing tempo, not only in Britain, but throughout Europe and North America—in fact, in those countries of the world that today we refer to as developed countries.

Although it is not my purpose to trace the history of the development of public health which led to the modern discipline of social medicine in any great detail, nevertheless, I would be failing did I not mention the name of Dr. Johan Peter Frank (1745-1821). He was, among other things, Director General of Public Health of Austrian Lombardy and also Professor of Clinical Medicine of the University of Pavia. The late Dr. Henry Sigerist, one of medicine's greatest historians, in delivering the Heath Clark Lectures at the School of Hygiene and Tropical Medicine in London in 1952, said of Frank's great book entitled "The Healing Art in General and its Influence upon the Welfare of Society," that it was

> "a grandiose monument of eighteenth century public health and social medicine."

Sigerist further said:

> "I called Frank a pioneer not only of Public Health, but also of Social Medicine, because he studied the influence of the entire social environment upon the individual."

Although many of the measures described by Frank were somewhat Prussian in character and didactic in the extreme, nevertheless, his doctrine of "police medicine" was years ahead of its time and, indeed, many of his teachings were

incorporated in subsequent public health legislation throughout Europe.

During the second half of the nineteenth century many measures of public health importance were introduced. Improved water supplies and sewage systems were constructed, the quality and distribution of food was improved. Prior to this time, again consequent on urbanisation, the storage and distribution of food for public consumption had been appalling. There had also been a good deal of adulteration of food with additives and so-called preservatives, many of which were toxic. In Britain in the great Public Health Act of 1875 legislation was introduced which was 50 years ahead of its time, dealing as it did with such items as water supplies, sewage disposal, housing, food distribution, working conditions, air pollution and many other related matters. Consequent upon these and earlier measures, there had begun an improvement in living conditions in Britain which was to eliminate cholera (last seen in Britain in 1866), diminish the incidence of tuberculosis, improve health conditions in factories and promote improved health standards by better nutrition. It should not be forgotten that all the improvements were not taking place as a consequence of the work of Pasteur, Koch and the other prominent bacteriologists of the day, but, indeed, it was preceding many of their discoveries and was due to an awakening social conscience of the need to improve the living conditions of the common man. As far as Western Europe is concerned we may, therefore, regard the latter half of the nineteenth century as the great sanitary era when sweeping changes with consequent population increases came about such as never before had been seen. Thus had the first phase towards social medicine been begun and the lessons derived therefrom are of vital importance today to those concerned with community health measures in the developing countries. Nor indeed should it be forgotten that consequent upon the improvements in physical health which were taking place, early attempts were also being made to improve the conditions of those who were mentally ill. Their treatment up to this time had been one of removal from the

public scene into the most frightful conditions. Although the Lunacy Act of 1890 still meant the removal of mentally afflicted people to mental hospitals and it was to be so until the Mental Health Act of 1959, nevertheless there was at least a glimmer of awareness breaking through.

Before leaving the nineteenth century there are two significant events which occurred during its latter half which are relevant to any discussion concerning the development of modern academic departments of social medicine. The first of these was the establishment in 1858 of the General Medical Council in Britain in terms of the Medical Act, 1858. Prior to this time there had been little or no control over the practice of medicine and the training of medical practitioners was haphazard in the extreme. With the passing of this Act the foundations of the traditions of modern British medical training were laid and, coming as it did only 10 years after the passing of the Public Health Act in 1848, this was not without significance. The second was 30 years later in 1886, when the Medical Act of that year, which modified the previous one, made provisions in Section 21 for fully registered medical practitioners, who had followed an appropriate course and attained sufficient standards in public health, sanitary science or State medicine, to register their diploma with the Council. When the Diploma in Public Health became a registrable qualification with the Medical Council, no local authority with a population in excess of 50,000 people could employ a Medical Officer of Health who did not possess a registered qualification in public health. It is apparent, therefore, that long before the present stress on higher qualifications in medicine, in the field of public health an adequate and proper training in this postgraduate field was seen as a necessity.

At the beginning of the twentieth century Britain was involved in the Boer War. Although at that time military service was not compulsory, many young men volunteered for military service. This was the first military campaign in which reasonable pre-enlistment medical examinations had been carried out. The public alarm was understandable when it became apparent that some 40 to 60 per cent. of the volun-

teers were found medically unfit for military service. The late Professor James Mackintosh in his Heath Clark Lectures in 1951 was of the opinion that an article by Sir Frederick Maurice entitled "Where to get Men" was the immediate cause of the setting up of the "Inter-departmental Committee on Physical Deterioration" in September 1903. From the findings of this Committee stemmed much of the progress in personal health measures which were instituted during the early part of the twentieth century. It was realised that besides the great benefits which were brought about during the great sanitary era to society as a whole, it was necessary on a national basis to be concerned with the welfare of the individual member of society.

Let us not forget there was little in the way of personal medical services for the common man. Medical attention from a personal physician was still only available to the wealthier classes and it was only with the introduction of the National Health Insurance Act of 1911 that medical care was put within the reach of 16 million workers, but not their wives and families. The recommendations which stem from the findings of the Inter-departmental Committee on Physical Deterioration are, therefore, of greater significance than they might appear in this day and age.

What were these recommendations? Professor James Mackintosh, to whom I have referred previously, notes that:

> "The most interesting feature of the Committee's attitude is that, having decided that no sufficient data were available to enable them to come to a conclusion about physical deterioration, they then proceeded to take abundant evidence and to make a series of bold recommendations."

It must be concluded, therefore, that the recommendations are trends of opinion rather than based on deductions from evidence presented to the Committee. They proposed, inter alia, the establishment of a Register of Sickness as opposed to the mere notification of infectious disease; they were concerned with the problems of overcrowding in houses and suggested that local authorities should lay down overcrowding

standards. They considered infant mortality and emphasised the need for education of mothers by health visitors; they advocated limitation on the early return to work by working mothers. They thought that the school-leaving age should be extended so that older girls would learn something of domestic management, and they called for regular schools medical examinations. The problems of feeding, purity of milk, industrial conditions particularly for young people, the need for pre-employment medical examinations, alcoholism, juvenile smoking and venereal disease were considered by them and diverse recommendations were made.

There can be little doubt of the wakening of social conscience concerning the many evils which beset the individual in the society of the time. The changes advocated by this Committee provided fruit for health and social legislation for the next 40 years. During this period, with increasing emphasis on personal services, better recording of information and progressive development in understanding of the social mores of the people, so do we move closer to the concept of social medicine as defined by Dr. Guérin in 1848. When we further remember that, with a few notable exceptions, the specific therapeutic era only commenced in 1935 with Domagk's discovery of the sulphonamides, I believe I have demonstrated that it was the great sanitary era and the development of personal health services such as ante-natal and post-natal care, schools medical examinations and health visitors which produced the dramatic health changes which came about from 1848 to 1948. Tuberculosis, which had a mean annual mortality rate of almost 3,500 deaths per million of the population in 1850, had diminished to 360 deaths per million in 1950, but specific therapy was only introduced for this disease after World War II.

We have seen that the practice of public health, sanitary science or State medicine as referred to in the Medical Act of 1886 was firmly established in Britain, and its pattern of training whether undergraduate or postgraduate had been firmly adopted by most of the medical schools in Britain. Notable exceptions from this pattern were the London medical schools,

which appear to have been guilty of gross neglect in this respect, a deficiency which even to this day has not been fully corrected. It is worth noting that in our Rhodesian Public Health Act of 1923, which is still extant today, it is laid down that the Chief Health Officer of the country must possess a Diploma in Public Health or State Medicine. The first Medical Director, Dr. Andrew Fleming, C.M.G., obtained his Diploma in Public Health in 1903 at Cambridge and he was responsible for the early legislation in health measures at the time of Responsible Government. The Health Department in Rhodesia and its successor, the Ministry of Health, has always been conscious of the influence of public health measures in protecting the health of the community.

In the advance to the modern concept of social medicine perhaps the most significant single steps were taken in 1940 and in 1943. Sir Arthur MacNalty, who was Chief Medical Officer to the British Ministry of Health, suggested to the Oxford University Court that—

> "public health should shift its emphasis from sanitation and the control of infectious diseases, to work which would foster the synthesis of the medical and social services."

This was supported by Sir Farquhar Buzzard, who was Regius Professor of Medicine at Oxford, and he commended the Nuffield Provincial Hospitals Trust to provide financial support for such an undertaking. As a consequence of this, the late Professor John Ryle was appointed to be the first Professor of Social Medicine at Oxford. He had previously occupied the Regius Chair of Medicine at Cambridge, but he had long been interested in what he called "the social pathology" of disease. In an address to the Royal Sanitary Institute entitled "The Social Pathology of Rheumatic Fever," he said—

> "the research of the social pathologist is related to **ultimate** causes, and more particularly to those environmental, domestic, occupational, economic, habitual and nutritional factors without which the **intimate** (or specific) causal factors cannot find their opportunity."

After the appointment of Professor Ryle the Nuffield Trust followed up this endowment with a further one in 1944 to enable the University of Birmingham to found a Chair in Social Medicine. This has been occupied since that date by Professor Thomas McKeown, with whom the Department of Social and Preventive Medicine in the University College of Rhodesia has a very close liaison because of our Special Relationship with Birmingham.

In October 1943 a report was issued by a Committee of the Royal College of Physicians in London, which had been charged with the responsibility of considering changes in the then courses of Public Health which were being taught in the medical schools. They recommended:

"(1) That every medical school should establish a Department of Social and Preventive Medicine, the size and scope of the department depending upon the facilities and personnel available.

"(2) That this department should organise a modernised course in Social and Preventive Medicine to replace the present course in Public Health, which, as with the clinical subjects, should be a curriculum founded securely on the basic sciences, growing and expanding through the three clinical years."

There is little doubt, therefore, that during the years of the Second World War there was a "wind of change" sweeping through the thinking concerning Public Health teaching. The great sanitary era of the latter half of the nineteenth century and the development of the personal services of the first half of the twentieth century were moving towards a new awareness of the changing needs of medicine in relation to society. The development of the study of the behavioural sciences was being felt and a "new look" was about to pervade the teaching. Much of the teaching of public health, in those schools in which it had been taught, was done by part-time teachers. As early as 1898 Professor Charles Hunter Stewart was appointed to the full-time Chair of Public Health in the University of Edinburgh. With the exception of the Mansel Talbot Chair of Preventive Medicine in the Welsh

National School of Medicine in Cardiff, which was established in 1921 on a full-time basis, it was not until 1943 that John Ryle was appointed to the first full-time Chair in Social Medicine in Oxford. From this date onwards there was to be an increasing number of full-time academic appointments in the Departments of Public Health and most, if not all of them, were to change their name in the process to some variant of Social and Preventive Medicine.

In 1966 a further report was issued by a Committee of the Royal College of Physicians of London and they found that:

> "Many medical schools in the United Kingdom have responded to the recommendation of the 1943 report that they should establish a well-staffed department of Social Medicine. The objective has not been realised in most London schools and has been only partially realised in some provincial schools, five of which have only a part-time head of the department."

It would appear, therefore, that this new academic discipline of Social Medicine had, by the time the Department of Social and Preventive Medicine was established in the Faculty of Medicine at the University College of Rhodesia in 1966, found its rightful place among those of the other branches of clinical medicine.

M. D. Warren (1965) has considered in some depth the various subjects and related subjects that must be presented by departments of social and preventive medicine and he considers that these are:

Statistics.
Epidemiology.
Human Growth and Development.
Medical Sociology.
Social Medicine.
Preventive Medicine.

He does not believe that all these subjects should necessarily be taught by the members of the department of preventive and social medicine. Brockington, Silver and Vuletic (1964),

in discussing the training of medical practitioners, emphasise that—

> "a programme of experience should be devised to ensure that every practising physician is equipped—
>
> (1) to think epidemiologically and socially;
>
> (2) to understand the part to be played by organisation of health services and its dependence upon epidemiological principles;
>
> (3) to comprehend his social role in relation to the individual, the family and the community.
>
> For this he requires not only technical knowledge and skills, but also an appropriate outlook, a sympathetic attitude of mind and an understanding of community problems."

The Society for Social Medicine submitted evidence to the Royal Commission on Medical Education which, under the Chairmanship of Lord Todd, has just published its findings, in the United Kingdom. They consider that the scope of academic social medicine comprises epidemiology and the study of the medical needs of society. In amplifying this they state that:

> "Epidemiology is concerned with the application of population methods to problems of human biology as well as of human disease. Investigation of the distribution and determinants of disease requires the support of observations on anatomical, physiological and sociological variables in the same population. Epidemiological investigation of disease often involves recourse to sources of data which can also provide valuable biological information.
>
> "Investigation of the medical needs of society requires: assessment of the nature and extent of medical problems; evaluation of the contribution of different influences to the health of the community; study of how medical services have evolved in response to social pressures and the prevalent patterns of disease; assessment of the effectiveness of existing services; study of the way in

which services may be improved; and estimation of future needs.

"It follows that research in social medicine is concerned with the application of statistical and sociological methods to the study of human biology and human disease and of medicine and related services."

Having seen what is considered to be the content of Social and Preventive Medicine in the more established countries of the world, let us consider in the light of these recommendations the organisation of a department in Rhodesia. It is necessary for each and every department in a Faculty of Medicine to assess its objects in the light of the needs of the medical practitioners of the future which it is currently training. A slavish following of a syllabus devised for other circumstances would not provide for the needs of our own community here in Rhodesia. Equally so, we must be aware of the need to devise a teaching and research programme for the department which will incorporate the principles worked out in the light of experience in other parts of the world.

We have seen in the change from public health to social medicine the influence of the great sanitary era and the growth of personal health services in producing this change. Here in Rhodesia in the 78 years since the influence of European settlement and Western European medicine were first felt, we are aware of enormous changes having taken place in the health of the community. Some of the major diseases such as tuberculosis and malaria are being brought increasingly under control. Many of the ill-effects of rapid urbanisation have been combatted, while on the other hand diseases such as bilharziasis have become more widespread and the toll of traffic accidents and accidents due to working conditions continue to mount each year.

We are fortunate in having a fairly complete health record of the country as seen through the eyes of successive Medical Directors in their annual reports of the Health Department or the Ministry of Health. Many of these earlier reports are lacking in information concerning health conditions among the African population, and later reports, because of inade-

quate statistical information and background, can only at best be regarded as a narrative appreciation of the problems in the light of such information as is available. Nevertheless, from this information we are able to build up a background of information from which the medical student can see the trends in the medical needs of our society. These medical needs must have their priorities assessed and the student must be encouraged to see these needs in relation to the opportunities which are available to overcome them.

During the early part of the course opportunity is taken to discuss with the student some of the problems which arise in the day to day management of patients. We have developed this bedside teaching in social medicine as a means of acquainting students with the problems, other than purely clinical, with which patients are confronted.

In the teaching of Social Medicine due emphasis is laid on the value to the community of simple health programmes in relation to major needs. The attempts to control the major diseases, such as malaria, bilharziasis, tuberculosis and others, are dealt with in some detail and emphasis is laid on the need for statistical evaluation of population trends in relation to health services and other community needs. In a country with a rapidly expanding population such as Rhodesia has today, emphasis is laid on the problems of nutrition and the growth and distribution of food in relation to population. In recent years not only has there been increasing development in agriculture, but also there has been a rapidly expanding industrialisation with a consequent increase in urban as opposed to rural development. The housing problems of both urban and rural development are considered and the consequences on health of employment in both these areas are subjects of study.

Many of these physical changes have brought in their wake mental stress which has a bearing on the whole health of the people. The mental health of a society is important to the well-being of that society and it is necessary to consider in what ways this can be assessed. Every effort is made to high-

light this need in assessing the changing patterns of health services in the present and in the future.

It must be evident, therefore, that many of these areas of interest of a department of social and preventive medicine can only be adequately dealt with if the medical practitioner of the future has been instructed in the methods of simple assessment of disease patterns and incidence from existing information or from information which could be more adequately collected than is done at present. It is for this reason that during the pre-medical and pre-clinical years a simple course in biostatistics is arranged. We prefer to regard this course as "The Use of Numbers in Medicine" rather than as a formal course in statistical methodology. When Dr. William Farr was doing his "little sums about human lives" he was indeed laying the foundations of the type of course we have devised for teaching medical students how to do and understand the mathematical manipulations done by themselves and other people. In devising a suitable course to teach this subject, opportunity has been taken to experiment with programmed learning as a teaching method. We believe that this method of teaching has much to commend it and Castle (1967) has devised a programme for teaching these simple mathematical concepts, which is being currently tested and adapted to suit our needs.

Associated with the study of the problems of health and the methods of dealing with them, our course is also designed to acquaint students of the services which are available to deal with the known problems and perhaps detect some of the unknown. This part of the undergraduate course is taught in the fifth year of medical study, as it is felt by this time he will have acquired sufficient knowledge of the main branches of medical practice to be aware of the needs for particular services. These service aspects, of necessity, must be dealt with on a broad basis, but the various aspects of medical services pertaining to both Central and Local Government are dealt with and encouragement is given to the student to see how these are related to the daily needs of medical practice.

It must be apparent to all that the opportunity for research in the Department of Social and Preventive Medicine is wide. In a country with, as yet, inadequate basic health statistics it is not easy to assess accurately the health problems. It must not be thought that inadequate information should provide an excuse for lack of tentative efforts to establish patterns of disease and from this to deduce what can be done. The work of Burkitt (1967) from Uganda over the past 10 years has shown what can be done with simple observation in the mapping out of disease distribution. He has shown that the lymphoma—a malignant tumour involving the jaw of children—has a particular distribution in Africa, and from these observations various predictions concerning the relationship of this tumour to mean temperature levels and levels above sea level have been made. Other workers in Africa, such as the late Dr. Manuel Prates in Lourenço Marques and the late Dr. George Oettle of Johannesburg, have been able to show the differing incidence in malignant neoplasms in the African as compared to the European. Similar studies have been initiated in Rhodesia, and Dr. M. E. G. Skinner, who has just conducted a five-year study of cancer incidence in Bulawayo in particular and Matabeleland in general, will shortly be publishing figures which will reveal the particular distributions of malignant disease among Africans in that area of Rhodesia. Lack of precise population figures for a particular area makes it difficult to determine incidence rates of disease, but some of these difficulties are being overcome. The Department of Social and Preventive Medicine has an important part to play in encouraging medical practitioners throughout the country to keep more careful records of what they see in their daily practice of medicine and then offering the facilities to these people to help them analyse this data.

Within the last few months considerable improvements have been effected in the medical record keeping at the interim teaching hospital at Harari, and before long we should be able to examine, with the aid of data processing facilities, much of the information which has been recorded. This should allow us to establish some base lines as to the commoner

disease entities, the sources from which patients are admitted, their duration of stay in hospital and the services which they required. All this information will have a considerable bearing on the planning of future hospital facilities, a matter in which, not unnaturally, the Ministry of Health is keenly interested. Ross (1960) was able to show that as few as 25 diseases or disease groups comprised 83 per cent. of all discharges from a large African hospital. This study has been continued, and at the end of this year a decade of medical records from Bulawayo will have been kept and analysed with some considerable care. Although these figures could not be described as sophisticated, nevertheless, an analysis of them provides us with trends in hospital disease incidence which should be of use in studying the medical needs of the future. It will be recalled that the academic discipline of social medicine concerns itself not only with the study of epidemiology, but also the determination of the medical needs of the society. Our research is, therefore, directed at attempting to throw some light on where these needs are.

At a time when we are about to produce the first Rhodesian trained doctors it seemed worth while to make a study of who were the present doctors in Rhodesia, where they had trained, where they practised and what types of practice they were in. Ross (1967) has published a study of the medical practitioners in Rhodesia as at the end of 1965. It is of interest to note that the vast bulk of these practitioners were practising in the six largest towns, while those practising in the country were carrying tremendous work loads if the crude ratio of persons per doctors has any worthwhile meaning. This paper gives support to the fact, well established in other countries, that medical practitioners tend to drift towards urban areas in which to practise medicine. In Rhodesia, according to information given in the 1962 African census, 59 per cent. of the African population live in the rural areas and consequently we must look into the ways and means of attempting to bring medical services to them. It might be thought by some that these are purely matters of concern for the Ministry of Health. This is not so, however, as the study of trends and ways and

means can be done by an academic department detached, it is hoped, from the pressures, both political and financial, which frequently bear on either Central or Local Government.

In considering the area of influence of a department of social medicine I have avoided mentioning general practice and occupational health unless insofar as the latter might be dealt with in the broadest terms. Although this might be a very proper trend in the more developed countries, nevertheless I believe in this part of the world it is the concern of this department. The Faculty of Medicine has asked us to arrange short attachment schemes for medical students in their fifth year to medical practitioners working in various fields outside the Medical School. These include general practice in small and large towns, mission practice, mining practice, estate practice and the Government medical service. These attachments are of considerable value to the student in providing him with a broader experience than that which he would obtain in the Teaching Hospital. Because it enables the Department of Social Medicine to become better acquainted with the diverse problems of practice by virtue of contact with these various medical practitioners, I believe this allows us to study yet another facet of medical services to the community. Rittey and Ross (1968) intend to publish their findings as a result of the first year's experience with this attachment and we hope to analyse some of the problems encountered by doctor and student alike.

In a developing country such as Rhodesia more and more people are moving from a rural based economy to an urban based one. With the increasing urbanisation which is taking place more people are being employed in an environment which is foreign to them. The increasing industrialisation of the country and the employment of men and women in industry brings in its wake new hazards to health. The employment of new techniques and new chemicals produces hazards in the working environment which must be constantly under review. As man spends almost a third of his adult life in gainful employment it is obvious that due regard must be paid to the health hazards of work. Occupational health has

now developed into a speciality of its own, and in certain medical schools, as in Manchester, there is a separate academic department of occupational health. However, as in the case of general practice, I believe in Rhodesia this branch of medicine can be most adequately dealt with by the Department of Social and Preventive Medicine.

In a country which is moving increasingly swiftly to an industrial environment there is a unique opportunity to study the health effects of employment in varying conditions. The African workman may find himself faced with a complex of machinery completely foreign to him, he may be working in the mining industry requiring considerable physiological adaptation or there may be the environmental hazards associated with large-scale irrigation programmes. All these provide an opportunity to assess the health hazards in a community and to attempt to improve working conditions so that the minimum deviation from good health results.

And what of the future? Is the population of Rhodesia so to outstrip its essential services that health matters together with financial, agricultural, commercial and other needs of modern living will be so swamped that progress will give way to stagnation and then regression? These are matters of grave concern and it behoves those of us whose prime concern is the study of health in its widest context to turn our attention to these matters. It must be obvious that in reviewing the development of social medicine we have seen enormous changes taking place, particularly in the last 150 years. Much of what is described as new is, indeed, a rediscovering of what has been previously stated. Many of the precepts of Dr. Johan Peter Franks are being followed today. New techniques are being developed to elucidate and clarify old situations.

R. F. L. Logan (1963), who is now Professor of Organisation of Medical Care at the School of Hygiene in London, has said:

> "No man is an island unto himself; and so the social needs and health of the individual cannot be isolated from those of the society in which he lives."

The academic discipline of social medicine attempts to pinpoint these health problems by the use of epidemiological methods. It further attempts by study of the medical needs of society to suggest methods of health care which will allow a particular society to benefit to the maximum extent. I believe that it is this awareness of relating our health services to the whole needs of society, bearing in mind the need for the possible rather than the theoretical, which allows us to say that there has been an advance to social medicine through the medium of new lamps for old.

REFERENCES

BROCKINGTON, F., SILVER, G. & VULETIC, A. (1964). World Health Organisation (Educ.), 126.

BROTHERSTON, J. H. F. (1952). *Observations on the Early Public Health Movement in Scotland.* L.S.T.M. and H. Memoir 8. London. Lewis.

BURKITT, D. (1967). *Abbottempo,* **4,** 26.

CASTLE, W. M. (1967). *Information Bulletin concerning Programme Learning Research in Central Africa,* Vol. IV, No. 2, p. 3.

GUERIN, J. (1848). *Gazette Medicale de Paris,* **III,** 183.

LOGAN, R. F. L. (1963). *Practitioner,* **191,** 287.

MCKEOWN, T. & LOWE, C. R. (1966). *An Introduction to Social Medicine.* Oxford. Blackwell.

MACKINTOSH, J. M. (1953). *Trends of Opinion about the Public Health,* 1901-51. London. O.U.P.

Report on Departments of Social and Preventive Medicine (1966). Royal College of Physicians of London.

RITTEY, D. A. W. & ROSS, W. F. (1968). In preparation.

ROSS, W. F. (1960). *Central African Journal of Medicine,* **6,** 341.

ROSS, W. F. (1967). *Central African Journal of Medicine,* **13,** 273.

RYLE, J. A. (1946). *Journal Royal San. Institution,* **66,** 277.

SAND, R. (1952). *The Advance to Social Medicine,* London. Staples Press.

Second Report of the Medical School Planning Committee (1959). *Central African Journal of Medicine,* **5,** 145.

SIGERIST, H. E. (1956). *Landmarks in the History of Hygiene.* London. O.U.P.

SKINNER, M. E. G. (1968). In Press.

WARREN, M. D. (1965). *Public Health,* **72,** 198.