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TRAVELLING SEMINAR ON ORGANIZATION AND ADMINISTRATION OF SCHOOLS OF PUBLIC HEALTH

*Visit to
Four Schools in Europe*



PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau, Regional Office of the
WORLD HEALTH ORGANIZATION
1964

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Travelling Seminar on
**ORGANIZATION AND ADMINISTRATION OF
SCHOOLS OF PUBLIC HEALTH**



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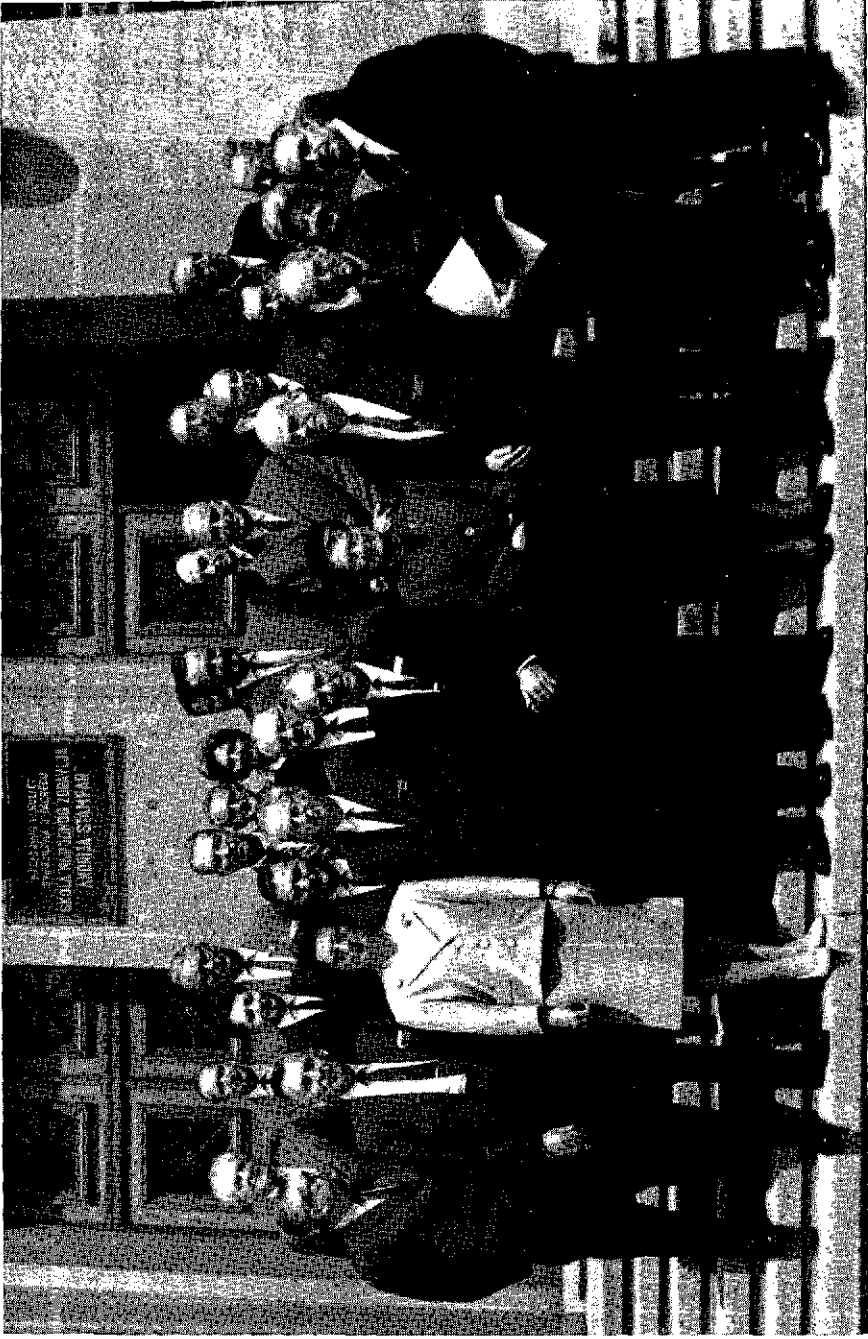
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Travelling Seminar on Organization and Administration of Schools of Public Health—Participants

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NOTE

The views expressed in this report are those of the participants in the Seminar and do not necessarily reflect the policy of the Pan American Health Organization or the World Health Organization.

Introduction

During a visit to the European Regional Office in Copenhagen in 1961, the Chief of the Professional Education Branch of the Regional Office for the Americas had an opportunity to discuss with the staff the methods and practical advantages of Travelling Seminars, which up to that time had not been used as a teaching technique in the Region of the Americas.

In later discussions on the assistance that could be given by the Organization to the development of schools of public health of the United States and Canada, it became evident that the greatest benefit could be gained through the organization of a Travelling Seminar in which representatives of U.S. and Canadian schools would have the opportunity to observe the operation of selected European schools and exchange views and experience with their faculties.

The deans and other representatives of eleven schools of the United States and Canada were invited to participate. The schools to be visited in Europe were chosen with the expert advice of Dr. E. Grzegorzewski, Director of the Education and Training Division at the World Health Organization Headquarters in Geneva, and of Dr. W. Hobson, Chief of Education and Training in the European Regional Office. Of the four institutions chosen, two were full Schools of Public Health (London, England, and Zagreb, Yugoslavia) and two served as Departments of Preventive Medicine, one part of a medical school (Edinburgh, Scotland) and the other attached to a research institute (Leiden, Netherlands). One of the Schools of Public Health and one of the Departments were primarily for national students (Zagreb and Leiden). In the other School and the other Department (United Kingdom), about half the students were from other countries.

For the last week of the Seminar, elective visits were programmed to a number of other schools (France, the Federal Republic of Germany, and Sweden), which were visited by several participants as a group. There was an opportunity also for a special visit to the World Health Organization Headquarters in Geneva, Switzerland, to the National Health Service and other educational and research establishments in England, and to the Health Ministry in Rome.

One of the most valuable assets derived from a Travelling Seminar of this type is that of contact between colleagues of two different regions of the world. While the North American schools exhibit a considerable range of differences among themselves, it is important for their representatives to note even greater differences between themselves and, in this case, the European schools. It is evident that similarities in objectives, faculty, student body, curricula, and teaching methods are also important to note.

During the Seminar the participants were able to learn how social and scientific factors influenced certain steps in education and training for public health work. In some cases, where the developmental features were important, some participants had an opportunity to observe several institutions in different stages of growth.

The North American participants have had considerable experience with students from abroad, but some have had no first-hand knowledge of the cultural backgrounds from which these persons came. The Seminar gave the visitors an opportunity to see for themselves the countries from which some of their former students came and from which they brought their concern about problems at home.

One of the obvious gaps in understanding between North Americans and Europeans is related to differences in their medical education systems. While the Travelling Seminar was primarily oriented toward schools of public health, much of the discussion touched on medical education. Perhaps now the visitors could more easily recall some of the difficulties of their former foreign students in a North American setting.

It is possible for a group of about a dozen in a short visit to make a considerable impact on an institution, and to derive therefrom an amazing amount of information. The local institution, when faced with such a visit by distinguished colleagues from abroad, is inclined to make a special effort to give the visitors what they want and to attempt to derive from the visitors some information in which they themselves are interested.

The value of having a group rather than an individual make the visit is obvious. A much broader and deeper area was covered because one person stimulated another in these sessions.

Among a country's social and cultural characteristics that would interest such a visiting group, the most pertinent concern relationships among the several health professions. Observations in this respect

helped to bring a better understanding of the factors influencing the development of each school of public health.

The North American experience with the education and training of public health workers other than physicians was useful to the European colleagues in several institutions.

An important part of the health program in many countries is that of organized medical care services. This visit afforded the North Americans an opportunity to study the advantages and disadvantages of these systems and to note how health personnel were prepared to administer these services.

The *esprit de corps* developed among the participants was equalled only by the warm and cordial relationships established with colleagues in several countries. From this point of view, the Travelling Seminar did much to contribute to "one world" in public health.

In the course of the Travelling Seminar, the visiting group spent several days in each of a number of institutions, electing rapporteurs for these visits. Based on the notes provided by the rapporteurs, a narrative statement on each visit was prepared and is presented in subsequent chapters. The differences in outlook of the individuals who made the reports are discernible, though extreme variation in linguistic style has, to a large extent, been reduced. However, a picture of each institution may readily be gained from these pages. Also included are notes made by persons who went, by themselves or in smaller groups, to a number of additional places.

It should be noted that any attempt at critical analyses of the schools of public health or of the systems within which they operate has been avoided, and comparisons between the schools in North America and Europe have been deleted insofar as possible. It is hoped that this account of a most interesting series of visits will stimulate people on both sides of the Atlantic to continue to make contact with each other and, if possible, to visit each other's scene of operations.

Background

While public health is now more and more recognized as a community endeavor which involves the skills and efforts of several kinds of professional workers, its origins in most countries were centered about the medical profession. Indeed, some of the earliest public health workers were described as "medical police," and their actions were considered as falling under the generic title of "state medicine." It is not unusual to note, therefore, that in some countries the preparation of public health personnel is today a responsibility of the medical school, or is closely affiliated with a medical faculty.

In Europe, a number of different patterns of education and training for public health may be noted, and an over-all view may be helpful. An historical approach provides the basis for such a sketch, with the focus, as mentioned above, on the medical aspects. The inclusion of other professional groups came later, or in some instances is only now coming into the picture.

One of the first steps taken to introduce physicians to public health practice was the development of courses of varying length within the respective health ministries. In all likelihood, these courses dealt with the problems of communicable disease and the steps which were then known to be effective against each of these pestilences. The policies of the ministry of health were drilled into the prospective employees so that these courses became a mixture of education in current scientific knowledge and in-service training outlining the responsibilities of the ministry officials. According to Grundy and Mackintosh,* courses of this type existed in six countries at the time of their report, 1957. These were Denmark, Finland, Norway, Spain, Sweden, and Switzerland, and the time devoted ranged from four months to a year.

In another sector, namely, the medical school, departments of hygiene or preventive and social medicine began to develop with the purpose of providing instruction in this subject to medical undergraduates. As was the case in both preclinical and clinical departments of the medical

* F. Grundy and J. M. Mackintosh. *The Teaching of Hygiene and Public Health in Europe*, Monograph Series No. 34, World Health Organization, Geneva, Switzerland, 1957.

school, young graduates joined the staff of a department of preventive and social medicine and gradually rose through the ranks to, in some cases, the professorship of the department. While this program of apprenticeship developed academic persons in preventive medicine and public health, it was not a productive system as regards community public health workers. The emphasis was placed largely on scholarship and research, so that an effective core of consultants was thereby developed. This system still prevails * in Italy and Portugal, though in a number of other countries it is combined with in-service training courses as described above. Such a combined program provides, on the one hand, workers for the field and, on the other, experts who will advise the ministry on scientific problems that come to the fore from time to time.

Some educational institutions, probably in response to a demand from the field, provided short-term courses for the preparation of public health personnel. While these courses were in a way similar to those provided by ministries, their orientation was more toward public health content and less toward the in-service type of instruction given by the operating agencies. In at least one country (Italy) this kind of beginning has developed or is developing into a school of public health with a full-year course leading to a degree.

From the evolution of a core of apprentices in a department of hygiene or preventive and social medicine, it was but a step to the creation of a diploma course for medical graduates within the department. Austria, Belgium, Ireland, and the United Kingdom follow this pattern. Diplomas in Public Health were limited to physicians and represent an early recognition that there is a special body of knowledge which should be taught to a group of people with specifically stated career objectives. A later step was a government requirement that persons entering certain positions in the field of public health must hold a diploma from one of these medical school graduate courses.

Another development in the training of public health personnel originated in institutes of tropical medicine, some of which later became known as institutes of hygiene and tropical medicine. As the name implies, the initial orientation was toward the field of tropical diseases and emphasis was placed particularly on research, though some preparation of health personnel was conducted in those countries that had colonial interests in tropical regions. Later developments saw the

* *Ibid.*

emergence of a broader spectrum of public health teaching in some of these institutes, and affiliation with university courses in preventive and social medicine is now not uncommon. In some countries, schools of public health were established in universities, without first passing through one or more of the stages mentioned above. In Europe there are now seven countries with schools of public health connected either with a university or an institute of tropical medicine. These are France, Germany, Greece, Netherlands, Turkey, United Kingdom, and Yugoslavia.

Although Denmark, Norway, and Sweden are listed by Grundy and Mackintosh as having separate in-service training programs in 1957, there has since been developed a Scandinavian School of Public Health in Gothenburg. Students from Iceland and Finland also attend and a full program comparable to those in the preceding category is being developed.

Grundy and Mackintosh have outlined the duties of a medical officer of health and the phases through which emphasis has shifted, and have related these changes to the evolution of courses for the preparation of public health personnel. It is clear that, compared with North America, the difference is largely one of timing of the several phases and the relative emphasis now placed on some of the basic factors.

Public health services in Europe developed through a pattern which emphasized the "medical police" functions dealing largely with chemistry in the pre-bacteriological era. When the infectious agents of disease were identified in the latter part of the nineteenth century and early years of the twentieth century, the emphasis shifted dramatically to this new phase of public health work. At about this time, the medical officer of health was required to give some attention to personal health, though social welfare problems were part of his responsibility from the beginning. Control of infectious diseases and public analysis of bacteriological infections comprised a large portion of his duties, as did clinical functions for individuals, but the trend later turned toward administration of health services, housing, etc.

The curriculum in a school of public health, or in other training courses, was influenced by changing social and technological conditions, but was also modified by factors within the student body. Considerable diversity was found in a class of students, depending on the medical schools from which they came. In some instances, marked differences

in quality of medical education from country to country were found. Another complication was introduced when other professional categories of personnel were admitted to the student body, and considerable adjustment was required to provide a good educational experience for all.

Schools of Public Health

Group Visits

Edinburgh, Scotland

USHER INSTITUTE School of Medicine, University of Edinburgh

Chairman: DR. A. J. RHODES

Rapporteur: DR. WILLIAM H. FORBES

On 22 April, the entire group gathered in Edinburgh at the Usher Institute, and Prof. J. H. F. Brotherston, of the Department of Public Health and Social Medicine, gave a general description of the school and its relation to the University. He emphasized that the Usher Institute was not a postgraduate semiautonomous unit like most of the schools of public health of the United States and Canada. It was rather an integral part of the School of Medicine of the University, and gave various kinds of education, both undergraduate and graduate, students in the latter group being in the minority. Their full-year course for the Diploma in Public Health currently has 16 students, which is somewhat above the average.

The history of professional education in public health in Scotland was traced, beginning early in the nineteenth century with "medical police" courses related to sanitary measures and quarantine. These were gradually changed in the early part of this century to include more social medicine and administration. Change is still going on in the inclusion of more of the behavioral and social sciences in the curriculum. Of the 39 medical schools in the United Kingdom, 12 have graduate departments of hygiene and public health.

The Usher Institute has primary responsibility for three diplomas: the Diploma in Public Health (D.P.H.), the Diploma in Tropical Medicine and Hygiene (D.T.M. and H.), and the Diploma in Medical Services Administration (D.M.S.A.), with classes of usually about 14 to 16, 20 to 25, and 12 students, respectively. The faculty also does a considerable amount of teaching in the General Practice Teaching Unit.

The curriculum for the D.P.H. is determined, to a considerable extent, by the General Medical Council of the United Kingdom. Every medical

officer of health (M.O.H.) must have a D.P.H. (assistant medical officers are not required to have one), and the subjects that they must have studied are specified. Consequently, if the curriculum did not contain the required subjects, it would not be taken by prospective medical officers as it would not fulfill the legal requirements. Presumably, a university could offer the diploma without including the specified subjects, but it would be a relatively useless and unwanted degree. No students without medical qualifications are accepted for the D.P.H.

The staff of the Institute faces several problems. A certain amount of rigidity is imposed on the curriculum by the rules of the General Medical Council, but these rules are expressed in rather general terms and are therefore not too confining. More difficult to deal with is the strong tendency of the staff members to insert more topics of their own interest into their courses, each item desirable in itself, but tending in the aggregate to produce at best a surfeit and at the worst an agglomeration which is beyond the absorptive powers of most of the students. Both the imposed rigidity and the overloading of the courses make it difficult to offer the student as much elective material as the staff would like to present. The time spent on electives is of the order of 10 per cent.

Some of the objectives of the Institute are:

a. To give a wider point of view to physicians who at the end of their medical course are apt to be narrowly "patient-oriented." In this, some success has been achieved.

b. To give the students a stimulus to take an intellectual interest in the theoretical and philosophical ideas connected with public health.

c. To train successors to themselves, that is, teachers in public health. In this, success has not been outstanding.

Support of the students during the course comes largely from their own resources. A number of the foreign students have support from their various governments, and a few of the native ones have some job from which they get a leave of absence with pay or partial pay while they study. For example, an assistant medical officer might take his regular leave plus some extra leave and continue to receive at least part of his pay while studying, if his superior feels it desirable.

Dr. H. E. Seiler, Medical Officer of Health for Edinburgh, then discussed the association of his department with the Usher Institute. He and his staff felt that contacts with the teaching group were very help-

ful in keeping them up to date. The staff of the City Department of Health, on their side, help the school by demonstrating what medical officers of health (M.O.H.) actually do. The students visit various activities and see them at work. Nowadays there is much more than water and sewage problems to concern the M.O.H. Social medicine and epidemiology (including that of the chronic diseases) come within his purview, and even though responsibility for water and sewage are now technically under separate departments, he must be in close touch with them. The City Health Department discusses with the students the relation of the M.O.H.'s to the National Health Service as well as to other departments. His department has 10 sections, which were described in some detail to the students.

Dr. R. C. Burgess then described the needs of the foreign students, who form about 60 per cent of the total number of 60 graduate students. On the whole they fit in very well. Most of the overseas students have already been working in public health, often for some years. The majority come from countries which were formerly British colonies.

Problems related to the overseas students include training, direction, and supervision of assistants in their own countries, where there are usually shortages of trained personnel. The students often emphasize the cultural problems which arise in all aspects of health work. Dr. Burgess felt that the curriculum could well contain more consideration of cultural implications.

Dr. Donald Cameron discussed the undergraduate medical curriculum and the part that the Usher Institute, as the Department of Social and Preventive Medicine, played in the teaching of undergraduates. The Medical School gives a six-year course which the students enter immediately after leaving high school, that is, at about the age of 18.* The first two years are occupied with preclinical subjects (biochemistry, physiology, anatomy, bacteriology, etc.). Then there is a transitional period, in the first part of which the students are given lectures by the staff of the Usher Institute on human heredity, demography, vital statistics, and some simple epidemiology (e.g., the changing patterns of disease).

Clinical studies occupy the students for two years, at the end of which the Institute provides them with a little teaching in the history of medicine and the development of social services, as well as some advanced

* It is generally believed that the last year in the better British high schools is roughly equivalent in content and challenge to the first year in North American colleges.

epidemiology. Toward the end of their medical course, they are divided into 10 groups of about 14, and each group takes up a few special subjects, many in public health, on which they report. At this time, they also are given a short course in statistics and make a few field visits to mines, industries, etc. In addition, at some time during his fifth or sixth year, the student makes a study of the social and occupational background of a patient and tries to relate it to his illness. This study is presented before the professor and the other students.

Dr. Richard Scott discussed the teaching of general medical care. The University operates a practice (under the National Health Service) of about 6,000 patients. The staff consists of two physicians, one public health nurse, and a clerk. This unit takes care of all medical problems not requiring the services of specialists. The staff has a conference, attended by the students, every day on all current cases.

In addition, the practice unit has six full-time and eight part-time physicians who each take on three students as apprentices. Each practitioner has one student at a time for a three-hour period, during which time the student is constantly with the physician seeing the cases as they come.

Dr. Alwyn Smith then discussed research in social medicine, which he said was close to modern epidemiology in that it relates to social customs and organization and to chronic and degenerative diseases. He pointed out that there was considerable epidemiological interest in etiological research, i.e., smoking in relation to lung cancer, physical inactivity in relation to arterial disease, and various factors in relation to malignant disease in childhood, as well as malformations and mental retardation. He noted how close sociological research came to this field, e.g., studies of why people smoke, and how social customs affect the natural history of diseases such as tuberculosis, atherosclerosis of brain or heart, bronchitis, etc. Another interest of social medicine was in the field of medical care studies, and still another in developing research methods and the analysis of data.

The above presentations were followed by group discussion. One of the visitors mentioned the fact that many, and occasionally most, of the students in United States schools are not physicians, but in Edinburgh almost all are M.D.'s. It was noted that this was due to traditional patterns of education. For example, health educators are trained in schools of education, and the great majority of nurses are not trained in universities.

In connection with the length of the D.P.H. course (one year), it was pointed out that it was too short to make people research-minded. For this to occur, a minimum of two years was needed. Also, the methods of statistics seem to evaporate very quickly from the students' minds though the critical sense remains. Even though statistics has more hours than any other subject, the research output has been disappointing.

During the afternoon of the first day, the seminar participants split into groups. One group attended a session in Dr. Robert Cruickshank's Department of Bacteriology in the University Medical School buildings. Dr. Cruickshank described briefly the diagnostic services they perform for two teaching hospitals, for three public health departments, and for private practitioners. His department is in fact the official laboratory for the Edinburgh Health Services. Four short papers were then presented concerning some of the studies currently under way. The first was a "Study of Diarrheal Diseases in General Practice," which dealt with a rising incidence in the past several decades. The infections seem to be closely related to primary schools, and it appears that children bring them back into the homes.

The next paper was on "Two Recent Paratyphoid B Epidemics," involving 35 cases in 1961, most of which were traced with a rather high degree of probability to some dried coconut from Ceylon. In January 1963, a 9-year-old girl developed paratyphoid B after a party attended by 180 children. Extensive investigations traced the infection to imported dried egg powder in a widely used cake mix. Some of the same shipment had been traced to London, but so far no cases had been reported outside the Edinburgh region.

The third paper dealt with a number of viruses isolated from the throats of children with acute respiratory infections. In many cases the viruses in the feces were also studied and often, but by no means always, there was a considerable overlap of findings.

The final paper described urinary infections in pregnancy. This work is similar to that of Dr. Edward Kass in Boston, except that (in sharp contrast to Kass) this study produces no evidence that such infections increase the chance of toxemia or prematurity.

The following morning started with informal talks with members of the Usher Institute, and then Dr. F. M. Martin discussed the increasing role of the behavioral sciences in curricula of schools of public health in the United Kingdom. He said that the term "behavioral sciences" was new in England. It includes human psychology, sociology,

and a dash of cultural anthropology. Though psychologists and anthropologists have been around in small numbers for some time, persons calling themselves "sociologists" are very few and recent, there being only about 100 in the whole of the British Isles, while there are over 100 historians in Oxford alone. However, the number of sociologists is growing rapidly. Various factors over the last 50 years have led to an increasing amount of self-questioning. Dr. Martin believed that this new aspect of British thought could be of great use in medicine and public health, but so far its influence has been slight and felt principally in three places, Edinburgh, London (School of Hygiene and Tropical Medicine), and Manchester (the University). At Edinburgh, courses are given on community structure and health education, with other aspects of the behavioral sciences dealt with only piece-meal and disguised under other names.

The future students of medicine receive very little liberal education after the age of 16, and Dr. Martin felt that studies in the behavioral sciences would have a liberalizing influence and would give more depth and breadth. He hoped to modify the stereotypes that tend to build up, and believed that in teaching the curious customs of the developing countries one should point out current analogies in Edinburgh.

Mr. R. M. McKenzie, an applied psychologist, then described his efforts in teaching. He first tried to work out a "job description" of a medical officer of health (M.O.H.) and failed to arrive at one that satisfied him. In his teaching he attempts to do four things: (1) to give the students a wider perspective on mankind; (2) to give information about psychology, including its vocabulary and concepts; (3) to give information about industry and the strains that it imposes; and (4) to broaden the students' definition of health. He discusses the leading concepts of various cultures and the adaptation of individuals to cultures and to microcultures, for example, the culture of a particular factory. He discusses sickness as one possible type of "adaptation." He goes into the uses and misuses of intelligence tests, vocational guidance, and job selection. He talks about attitudes and tries to get the student to think as logically as possible about attitudes as well as diseases. He discusses ethical problems and also the influence on health of satisfaction or dissatisfaction with jobs, marriage, etc.

The remainder of the day was spent in individual discussions of seminar participants with members of the staff, and in preparation for travel to London.

London, England

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE
University of London

Chairman: DR. JAMES A. CRABTREE

Rapporteur: DR. EDWARD M. COHART

History

The London School was founded in 1899, by Dr. Patrick Manson, as the London School of Tropical Medicine. The London School of Tropical Medicine and Hygiene came into being in 1924 as the result of a general feeling that the teaching of public health was far from satisfactory. A special committee report recommended the establishment of combined facilities for public health and tropical medicine. The Rockefeller Foundation donated two million dollars for a building which was completed in 1929. In 1931 the School became part of the University of London. In 1934 the Ross Institute (to commemorate the work of Sir Ronald Ross) was added. It is the tropical medicine branch of the School and has overseas branches in India, Pakistan, Ceylon, and East Africa. Dr. E. T. C. Spooner is the present Dean.

Organization and Administration

The School has a Board of Governors of 35 members that meets once a year, but the principal executive body of the School is the Board of Managers, which meets quarterly. It is composed of 20 members, five of whom are members of the faculty of the School. Among its major committees are those on Finance, Appointments, and General Purposes. There is also a special committee concerned with the management of a small field station connected with the School.

The library, and the catering, maintenance and installations, and photography departments are responsible to the Dean. The School has a finance officer, who is advised by two honorary treasurers.

Academic matters are handled by the School Council, which consists

of the Dean, the professors, readers, librarian, and two representatives of the recognized teachers.

The School receives from the University of London a grant, which is its chief source of revenue. The grant is made on the basis of the approved budget, but none of it is earmarked, so that the School can spend this money as it sees fit. The grant covers a five-year period, and the School prepares its budget proposal every five years. About one third of the total revenue of the School comes from research grants, donations, and gifts (the School receives very little in the way of training grants). Students' fees provide 6 or 7 per cent of the School's revenue. The School also has a small endowment.

The University appoints all professors and readers (tenure appointments), but the School has the right of veto. For each tenure appointment, there is constituted an *ad hoc* advisory board which has representatives from the School and the University, as well as several external members. The Vice Chancellor is chairman of this board. The external members in practice have veto power, since the Vice Chancellor will not consider nominees disapproved by the external members.

Departments

The School of Hygiene and Tropical Medicine has the following academic departments, which are fairly autonomous within the limits of their budgets: Bacteriology and Immunology; Biochemistry; Clinical Tropical Medicine (operates very largely at the Hospital for Tropical Diseases, which is part of University College Hospital); Entomology; Human Nutrition (linked with the Medical Research Council's Institute of Nutrition); Medical Statistics and Epidemiology; Occupational Health; Parasitology; Public Health; and the Ross Institute of Tropical Medicine. These are assisted by a number of common services such as the library and administrative offices.

Courses

Each year the School has about 150 students (this number is double that before the war). They are nearly all graduates, the majority in medicine. About two thirds come from overseas. Most of the students are nine-month diploma students, about 40 are research students who are working for higher degrees and stay on for more than one year, and a small number are special students who are not working for a degree or other specialized qualification.

The major degree courses are for the Diploma in Public Health, and for the University Postgraduate Certificate and Diploma in Tropical Medicine and Hygiene. (There is also the Conjoint Board Diploma in Tropical Medicine and Hygiene issued under the Royal College of Physicians and the Royal College of Surgeons, for the satisfactory completion of a five-month course.) Other university diplomas offered by the School are the Diploma in Applied Parasitology and Epidemiology, the Diploma in Bacteriology, and the Diploma in Occupational Hygiene (as well as a three-month course in occupational health leading to the Conjoint Board's Diploma in Industrial Health for those who already possess the D.P.H.). In addition, the School offers a number of short courses not leading to any professional qualification. Among these are: a short course (about three months) in medical statistics; a combined course (also about three months) in medical statistics and epidemiology; a short course (10 weeks) in medical services administration; a course (15 weeks) in environmental control (intended primarily for health inspectors from abroad); and short courses in tropical hygiene and in tropical nutrition for laymen. The School also prepares students for University of London M.Sc. and Ph.D. degrees.

Under a UNICEF five-year grant, the Department of Nutrition is giving, for the first time this year, an eight-month course in food science and applied nutrition. Half of this course will be given at the London School of Hygiene and Tropical Medicine and the other half (intensive work in the field) at the University of Ibadan, Nigeria. UNICEF is not only underwriting the cost of instruction, but is also providing stipends for student fellowships. The course is not intended primarily for medical graduates, but for people already in positions that give them an opportunity to do work related to nutrition.

A one-year postgraduate course in public health engineering is offered by the Imperial College of Science and Technology, with the School of Tropical Medicine and Hygiene giving the public health portion. Successful students are awarded a Diploma of Membership of the Imperial College (D.I.C.).

A Diploma in Health Education is awarded by the Department of Education of the University of London. The School of Hygiene and Tropical Medicine does the public health teaching for this course. It is also responsible for teaching undergraduate medical students in four London teaching hospitals.

Prof. G. Macdonald commented at some length on the course offerings in tropical medicine and hygiene. He pointed out that the Conjoint

Board offered to set up the diploma for tropical medicine when the School was founded. The Conjoint Board Diploma is awarded for an intensive five-month course that has remained very popular over the years. The course is given twice a year. A maximum of 65 students can be taken. Commonly, there are about 120 potentially suitable applicants for the course who must be turned away. Many members of the faculty believe that the course is too intensive.

The University Diploma in Tropical Medicine and Hygiene was initiated about 10 years ago. At that time parasitology, which is now a separate diploma, was an elective. The clinical portion of the University Diploma has been a success almost from the very start, but the hygiene part has not. Furthermore, the University and Conjoint Board Diplomas create many conflicts in teaching duties for the staff. As a result of these considerations, the following actions were to be taken in October 1963: (a) the first five-month Conjoint Board course will be discontinued, but the second will be continued for a while, with the hope, however, that it will be possible to abolish it eventually; (b) two separate University diplomas in tropical medicine and hygiene will be given, a Diploma in Clinical Tropical Medicine and a Diploma in Tropical Public Health.

In the visits by small groups to the Departments in the School, additional information was brought out about several of the courses and diplomas.

The Diploma in Applied Parasitology and Entomology is limited to 10 to 12 students. Physicians, veterinarians, and biologists may take the course. There are about 30 applicants annually. The Department of Applied Parasitology and Entomology does considerable teaching in the courses leading to other diplomas as well as the major portion of instruction to its own students.

Medical Statistics and Epidemiology are conducted as a joint Department, with Prof. D. D. Reid responsible for epidemiology and Prof. P. Armitage for medical statistics. The functions of the Department are threefold: (a) consultation (mostly performed by Prof. Armitage and his staff); (b) research, in which the epidemiologists (some have joint appointments in the School and in hospitals) have a primary interest in data collection and clinical surveys, while the biostatisticians are concerned with statistical analysis and research design; and (c) teaching.

The Department's teaching is directed to medical people and scientists who require a background in epidemiology and statistics. Statistics

is taught as non-mathematically as possible. Course time is roughly divided into one third lecture and two thirds exercises, demonstrations, and discussion. Epidemiology stresses general principles and their application to acute diseases, the translation of this to the chronic disease field, and the collection and analysis of data.

The Department offers no formal training for biostatisticians. An aspirant for this profession usually gets his Ph.D. in mathematics, followed by a year of practical work in statistics. After this, he usually goes to work in the field and learns on the job.

Prof. R. S. F. Schilling and his staff in the Department of Occupational Health indicated the courses that were being offered by the Department. It was pointed out that there is no recognized mode of entry into occupational health, which is outside the National Health Service. Occupational physicians are not a large group and are not offered much in career opportunities. Most of the students are from the United Kingdom, but one third come from overseas; some have had previous D.P.H. training and no experience, others have had experience but no D.P.H. training. The demand for training in occupational health is relatively small. The Department has 30 to 40 applicants for the three-month course leading to the Conjoint Board Diploma; it admits 15 to 18 students and feels that it is not missing very many good applicants. The Department is in the process of evaluating various teaching methods.

The Diploma in Public Health was discussed at length both in the general and in the small group sessions. The content of the D.P.H. course was described briefly. Prof. W. S. Walton pointed out that the D.P.H. program had to be approved by the University Council and the General Medical Council. He did not believe that the regulations of the latter were unduly restricting. Tutors (or faculty advisers) are assigned 10 students by lot, drawn from a stratified sample. The student brings both academic and personal problems to his tutor.

Prof. Walton felt that the requirement that each student keep a day book was desirable. The day book is not a diary, but contains selected comments on occurrences in school, field visits, reading, incidental experience, etc. It goes to the examiners and is considered in grading. An external examiner always forms part of the examining team, and he always participates in the oral and written examinations, while all of the student's work is also available to him. The Board of Examiners for the D.P.H. consists of one external and four internal examiners. The examination consists of four written papers of three

hours each, composite oral examinations, and a clinical oral examination on infectious disease. Prof. Walton believed this to be a valuable teaching and learning device.

The proposed change in the Diplomas in Tropical Medicine and Hygiene should be helpful to the D.P.H. program, in that it will permit greater concentration on temperate zone and European public health problems in the D.P.H. program.

Students

In the last five years, there were 315 students in the D.P.H. course at the London School. Of these, 164 were British, 51 from the Far East, 38 from Europe, and smaller numbers from other regions. The usual annual registration is: 60 to 65 in public health, 6 to 10 in tropical medicine and hygiene, 12 in bacteriology, 7 in applied parasitology and entomology, and 4 in occupational hygiene.

About half of the one hundred students at the London School are from foreign countries, with India, Pakistan, Malaya, Burma, Egypt, Iran, Nigeria, and South Africa having contributed sizable numbers over the years. There is a preliminary briefing of foreign students through correspondence. There have been some language difficulties for the D.P.H. students from the Far East, but generally the student coming to study tropical medicine and hygiene presents very little language difficulty. British members of the class have been very helpful in a basically informal way in orienting and "mothering" foreign students. Tutors also help. Of great help to the foreign student is a woman on the staff (Personal Services Officer) of the London School of Hygiene and Tropical Medicine, who does an excellent job of assisting students with housing and with many other personal and family problems. The University of London also maintains a Lodging House Bureau.

Several remarks by Prof. Macdonald set off a spirited discussion on selection of students and the "double standard." He stated that most of the overseas students were searching for a thorough academic training; some specifically wanted to study the U.K. system; others wanted to acquire basic training oriented to the problems of their country. He emphasized the great variation in caliber of men sent from overseas as well as in the standards of their previous training, which invariably introduced difficulties in the teaching of courses. This statement elicited comments from the visitors; for example, language has been a major stumbling block for foreign students in the United States and a specially

contrived English Language Test has not entirely overcome this difficulty. Often the schools must depend on the sponsoring agency for evaluating the student, an arrangement that is not always satisfactory. Preliminary orientation courses for overseas students, as conducted at some places, have failed to solve a number of problems, the most important of which is probably the orientation to different methods of teaching—the seminar and the discussion group rather than the lecture. Since specific course content is often not directed to the needs of the overseas student, he must learn to adapt rather than adopt. The matter of how to evaluate foreign students is still beset with unsolved questions: language problems; difficulties in answering the so-called objective tests; and emphasis on fact rather than on philosophy and problem-solving. It was thought there was some justification in having different standards for native and for foreign students.

In response, Prof. Macdonald stated that there was no unanimity about the double standard at the London School. It was his own feeling, however, that the double standard should be applied for the regular courses, but not for the special courses. There should be no compromise with quality in the selection of students for courses designed "to teach the teacher." However, the school was obliged to depend upon the opinions of people in foreign countries in the selection of students, and this did not provide uniformly good results. Another criterion was the university from which the student came, but here again, if the caliber of the institution had not been learned by experience with its graduates, it was difficult to employ this kind of measurement.

In response to a question about international efforts to accredit universities, it was pointed out that the World Health Organization publishes a world directory of medical schools which includes schools that have been recognized by relevant authorities in their own country, but that this does not imply accreditation by WHO. It was also mentioned that the American Medical Association had given up its effort to evaluate medical schools throughout the world.

One visitor asked what the School of Hygiene and Tropical Medicine did about foreign students who failed to earn the diploma, and Prof. Macdonald indicated that they formerly gave a certificate of satisfactory attendance, but that this document had been misused. Consequently, the School discontinued the issuance of a "certificate," and now gives the student a simple statement about dates of attendance with no indication of satisfactory performance. A visitor pointed out that most of the foreign students in the U. S. schools of public health are

accepted as special students initially and are not transferred to the status of degree candidates until it is fairly certain that they will be able to earn the degree.

Training of the "Public Health Team"

Another topic of lively discussion concerned the different practices in North America and in the United Kingdom with respect to training the public health team. It is quite common in the United States and Canadian schools to train the several members of the team in the same institution—the school of public health—and also not infrequently in

Awards of Diplomas in Public Health (D.P.H.)*

School	1953-1962		1960-1962	
	Total	Annual Average	Total	Annual Average
<i>A. Full time</i>				
Bristol	70	7	35	12
Liverpool	164	16	49	16
London University	606	61	187	62
Royal Institute of Public Health, London	375	38	124	41
Aberdeen	34	4	6	2
Edinburgh	164	16	44	15
Glasgow	135	13	30	10
St. Andrews	64	6	19	6
Belfast	56	6	17	6
TOTAL	1668	167	511	170
<i>B. Part time</i>				
Durham	52	5	19	6
Leeds	69	7	25	8
Manchester	65	6	19	6
Cardiff	60	6	20	7
TOTAL	246	24	83	27
TOTAL A and B	1914	191	594	197

* Data provided by Prof. W. S. Walton.

the same course (at least for some subjects). By contrast, the "schools" in the United Kingdom tend to restrict their teaching to a much greater degree to physicians, and limit the D.P.H. to physicians. It was pointed out that the D.P.H. was a registerable qualification under the General Medical Council, required by law for all M.O.H.'s. However, this still left a basic difference in the philosophy and assumption of responsibility for training between the British (and Scottish) and the North American schools.

Prof. Reid appeared to reflect the opinion and attitude of his colleagues in the London School of Hygiene and Tropical Medicine with respect to this matter. He stated that it was felt that the nurse and the health educator were not at the same basic level of education as the physician. There was undoubtedly more "coeducation of the public health team" in the United States than in the United Kingdom. This, however, slows down the speed of the class to that of the members with the least adequate backgrounds, and was therefore not desirable. Even among physicians (native and foreign, for example) there was often a wide enough range in educational experience and intellectual ability to make teaching difficult. Some of the visitors were quick to point out, first, that in certain subjects many of the non-physicians might be better qualified by previous education than the physicians, and second, that it was not necessary to teach all these students in the same courses even though they were taught in the same school.

Other Topics

There was some discussion of the differences in knowledge among students, even those in the same professional discipline. Prof. Reid commented that there was a difference between basic intelligence and content of knowledge, and that a deficiency in intelligence could not be remedied readily. Prof. Macdonald said that he used the different past experiences of the various groups of students to motivate them, and that no formal attempt was made to make up for gaps in knowledge.

Prof. Macdonald indicated that the London School was presently engaged in redesigning the course content with the general objective of giving parallel courses in each subject, one set designed to emphasize principles and the other set to deal with technical problems and applications. Thus, in tropical medicine, the first course would be all that was required of the D.P.H. student, but the student in Tropical

Medicine and Hygiene would in addition be required to take courses in the practical problems. Prof. D. G. Evans indicated that he was planning a course in bacteriology that would meet the needs of the various groups of students (bacteriology is required for each one of the diplomas), but that he would permit students to absent themselves from the lectures that were not pertinent to their field of interest.

Leiden, Netherlands

NETHERLANDS INSTITUTE FOR PREVENTIVE MEDICINE

Chairman: DR. ERNEST L. STEBBINS

Rapporteur: DR. PHILIP R. BECKJORD

Background

At a preliminary meeting on 1 May, Dr. P. C. Broekhoff, Director of the Institute, met with several members of the Seminar group for an orientation session. Arrangements were made for the two-day visit.

The following morning, the visiting participants were welcomed by Dr. Broekhoff, who outlined the history of public health training in the Netherlands. In 1878, a law authorized the Degree of Doctor of Medical Sciences, but specialist training is not now controlled by law. The Royal Society approves specialists.

The Netherlands has a population of 11 million in 12 provinces. There is a medical officer of health for each province and in municipalities. The Government does not obligatorily require a medical officer of health to have postgraduate training in public health, but probably will in the future. Since 1961 occupational medicine physicians need certification after training.

The "Cross" organizations (religious voluntary agencies) train nurses for public health outside of universities. Public health nurses do not work under health officers but under Cross organizations and private M.D.'s. The provincial chief medical officer coordinates all health activities, official and voluntary.

The Government has not supported students in the past, but it is now trying out a support plan on a pilot basis. There is indirect support, since tuition fees do not nearly cover the costs of training. Private industry does support occupational medicine and M.D. students in that field.

With respect to health insurance, the sickness compensation act was passed in 1913 and benefits started in 1930; occupational medicine is

required and controlled when there are over 750 employees in a plant. National compulsory health insurance is now in effect, though health centers for maternal and child care are largely locally controlled. There is active voluntary agency work also at the local level.

Seventy-five per cent of the Dutch are covered by compulsory national health insurance. Persons with salaries under 8,700 guilders must join the insurance program. Half of the premium is paid by the employer and half by the employee. Self-employed people (store-keepers, for example) can join voluntarily. Doctors are paid on a per-capita basis. The panel maximum is 3,500 persons per doctor.

The Institute

The Netherlands Institute for Preventive Medicine was founded in 1929 under the auspices of the University of Leiden. The national Prophylaxis Fund was skeptical at the time and refused its support, but by 1935 the Institute had a staff of eight scientists. Research was at first in bacteriology, serology, and immunology, and was later broadened to include public health. In 1939, the Prophylaxis Fund was willing to help finance the Institute. During World War II, the Germans allowed pure research to continue. A new building was constructed in 1942 for bacteriology, industrial physiology, and poliomyelitis research. The Department of Occupational Medicine was founded in 1941, and the Departments of Mental Health and Statistics were established the following year. The Institute was named an influenza center by the World Health Organization after World War II. In 1953 the Department of Health of the Institute was founded and emphasized maternal and child health. A Subdepartment of Genetics was founded in 1961, as was the Department of Chemistry and Physics. There is also a Department of Information, for communicating data obtained from scientific research. Forty scientists and 120 assistants were working at the Institute in 1961 and by that time over 300 physicians had been certified in public health.

The Institute has no foreign students since the Dutch language alone is used. It is primarily a research institute; teaching is secondary. No service is given except in connection with the research program. The proportions of teaching and research are about one fifth and four fifths, respectively. If industry asks for help, it is given as a part

of research. Routine requests are referred to regular service agencies. Service, when given, is usually reimbursed.

As to the teaching courses at the Institute, the basic public health course is four months, followed by five months in either Maternal and Child Health, Occupational Medicine, or Public Health Administration. The basic or core course has subjects on epidemiology, public health organization, sanitation, statistics, and social sciences. There are other main courses in human relations, statistics, town planning, etc.

In the course of the visit, question and answer periods were arranged for the Seminar participants, and Professor de Kock van Leeuwen, Head of the Department of Information, and other staff members gave information on the Institute and on the organization of research and of teaching courses.

In the training of medical students in the Netherlands, courses are rigid with but few electives. Many students go to medical school for 11 years instead of the minimum of seven required, postponing or delaying their examinations from year to year. The mission of the public health course is to give the M.D. a knowledge of statistics, epidemiology, and social sciences; to make him think and not trust only his own senses; and to develop his judgment.

The Institute offers no instruction to undergraduates. Professors of public health in university medical schools teach the undergraduate medical students. Officially there are no joint faculty appointments as, for example, with the University of Leiden, although some do exist on a personal basis.

Liaison in research is maintained between the Netherlands Institute for Preventive Medicine and the five other medical schools in the Netherlands only at the highest level and is not formally arranged between the universities and the Institute. However, there are informal working parties of several universities and the Institute. Professors of several universities do teach part time in the public health course at the Institute. Clinical teaching of occupational medicine to undergraduates is not done at Leiden, but at the University of Amsterdam.

Researchers in preventive medicine are trained at the Institute by Departments; the training takes at least seven years. They are trained only for the Institute's needs. Epidemiology is taught in all Departments, although not as an entity. There are few well-trained public

health people and not too much interest among young M.D.'s in research. The main interest of physicians is in curative medicine. Epidemiology of chronic disease is taught by departments of social medicine in universities, but only since 1956.

The Institute takes a special interest in maintaining close contact with schools in other countries.

Department of Health. Head: Dr. J. H. de Haas

The Department of Health of the Institute started in 1953. It emphasizes childhood and youth (growth and development, accidents, adolescents, maternal and child care, care of infant, preschool and school-age children) as well as medical demography and epidemiology, chronic diseases and social geriatrics, and school audiology.

The Institute does not have a Department of International Health per se. Prof. de Haas is Professor of World Health on a part-time basis. It is the first chair of its kind in Europe and is for postgraduate studies mostly. The Institute may start a Maternal and Child Health course for students from developing countries. Research is necessary to study, for example, maternal and child health programs abroad in order to plan proper curricula. The chair is in the Department of Social Medicine of the University of Leiden, but as yet there is no staff.

Maternal and child care—As to maternal and child health programs, there are 240,000 births annually (crude birth rate, 21) and 70 per cent of the infants go to well baby clinics. Currently, there are no serious maternal and child health problems in the Netherlands. Babies are generally overfed. There have been only 22 "flipper" babies from thalidomide so far. Phenylketonuria is being studied.

Seventy per cent of all deliveries are at home, but hospital deliveries are slowly increasing. Forty per cent of all deliveries are done by midwives. As to hospital deliveries, 20 per cent are done in villages and 45 per cent in large cities. Maternal mortality is now less than 4 per 10,000 live births. Women 35 years of age, it is thought, should be attended in the hospital.

The perinatal mortality is now 25/1,000 live births. Infant mortality ranges from 12 to 18 per 1,000 live births. The premature rate is 4 per cent. Perinatal mortality in hospitals is over 50, because difficult cases go to hospitals. In home deliveries the rate is less than 15. Homemaker services, provided by the Cross organizations, are good; of 240,000

births per year, 85,000 have homemaker services following birth. Half of all home deliveries have this service. Homemaker girls stay 10 days in a home and the family pays 5-10 guilders per day, about 50 per cent of the cost. The perinatal mortality in homemaker services deliveries is only 12.

Cooperation between obstetricians and pediatricians in hospitals, as well as that between general practitioners and midwives, need improvement. The conclusion is, however, that no radical change in the Netherlands maternal and child health system is needed, but that better selection of hospital delivery cases and better cooperation are probably in order.

Additional data of general interest on maternal and child health in the Netherlands, provided during the visit, are included at the end of this report.

Chronic diseases and social geriatrics—Research in aging, instigated by the Minister of Health, is being done at the Institute. Nine per cent of the total national population is 65 years of age or more, and 20 to 25 per cent of the total hospital population is over 65. The hospital stay of the 65-year age group is 1.5 times that of the average hospital population. There is a high consumption of drugs by the elderly.

One research objective is to gain information on chronic disease over age 40, such as the incidence and prevalence of disease and the medical needs of this group. Some data are already available on tuberculosis, blindness, arthritis, and disabilities in workers. Interview techniques are used and questionnaires are sent out to people. It is easy to obtain samples in the Netherlands, since all persons are registered with local authorities on punch cards. Pilot studies have already been done to test the questionnaire, and have proved it satisfactory, although personal interviews are somewhat better.

Department of Occupational Medicine. Head: Dr. F. H. Bonjer

Uptake of styrene plastic by workers according to physical activity is being studied here, as well as gas analysis of expired air of workers to determine energy expenditure during work. There is a heat chamber which simulates certain working environments, as well as a laboratory for determining work capacity of the individual; the latter relates capacity of an individual to the demands of his job. A sound chamber

is present for audiometric surveys and measurement of isolation values of ear protectors and intelligibility of speech. A continuous-range type of audiometer is in use to study noise levels in various industries.

Laboratory for Medical Microbiology. Adviser: Dr. J. D. Verlinde

This is a University of Leiden laboratory and not a part of the Institute for Preventive Medicine, although it shares the building of the latter. The laboratory's mission is to teach medical students and give postgraduate training; to provide teaching in the epidemiology of communicable diseases for the Institute; and to provide bacteriological and serological services. Research is another function, with tuberculosis, diphtheria, streptococcal disease, brucellosis, and toxoplasmosis at present under study. The bulk of research is in virology, including poliomyelitis, neurotropic viral diseases, and influenza.

Institute of Social Medicine of the University of Leiden. Director: Dr. P. Muntendam

This Institute is part of the University of Leiden and is synonymous with the Department of Social Medicine of the University. It is in the same building as the Netherlands Institute for Preventive Medicine, but is not part of it. The Director, Dr. P. Muntendam, is also the Director General for Health in the Ministry of Health. There are 11 scientific members of the staff, about half of them full-time. The staff includes a general practitioner, nutritionist, geriatrician, and social insurance expert. Some have dual appointments in the Netherlands Institute for Preventive Medicine, although the two Institutes have no formal relations with one another.

The main function of the Institute of Social Medicine (ISM) is research, not teaching. The word "institute," in common European parlance, means a department or a chair in a university, and is usually applied to a nonclinical field. There is a chair of international health in the ISM with a professor extraordinary paid by private funds.

Medical students (fourth and fifth years) receive 60 hours of lectures in social medicine at the ISM. Sixth and seventh year students have some field work in preventive medicine and public health. Hygiene (sanitation) is taught separately. There is some overlap on research projects between ISM and the Department of Health of the National Institute for Preventive Medicine (NIPM). The NIPM is a national institution, but may become a separate school of the University of

Leiden and still maintain its national character, as a School of Hygiene or Public Health. The ISM would then continue to be a Department of Preventive Medicine (Social Medicine) within the University of Leiden.

The ISM staff does some teaching in the NIPM courses. The term "social medicine" as used by ISM seems to be somewhere between preventive medicine and public health, i.e., the total medical care of a patient (not a group) to include social, welfare, mental hygiene, and other factors, as well as clinical services. Medical students get no training in statistics; the ISM recognizes the need but has no teaching staff for this subject. However, a number of young general practitioners do come to attend Prof. Haas' course in the NIPM, on a voluntary basis. There are behavioral scientists and a social worker on the staff of ISM.

Maternal and Child Health in the Netherlands Supplementary Data

Deaths in the perinatal period include stillbirths after 28 weeks gestation and all deaths up to end of the first week of life. Babies that live a few moments are not called live births by many practitioners, but are falsely recorded as stillbirths. However, reporting in this connection is improving. Infant mortality after the first month of life (1-12 months) is 3/1,000 live births.

The premature rate in the Netherlands is 4 per cent, using 2,500 gm as cut-off point. The average birth weight is 3.4 kg for girls and 3.5 kg for boys.

Social class data are not available on birth certificates in the Netherlands. The occupation of the father is not given. In the Netherlands, the length of gestation or state of nutrition is not calculated in arriving at a designation of prematurity; only birth weight is taken into account.

No provision is made for prematures in home deliveries. The country has no premature "flying squads," as are found in England. This is considered a weakness, for nurses are more important than incubators. Home-delivery premature babies in the Netherlands are sent to the hospital, of course, but there are no legal requirements for obstetrical equipment in Dutch hospitals. Breast feeding is much higher in home deliveries.

No comparison can be made between infant care in the home and hospital deliveries, because of the high percentage of difficult cases in hospitals. Even in non-difficult (normal) cases there are social differences.

It was pointed out that infant mortality rates in the Netherlands are low probably because so many cases go to well baby clinics (70 per cent). A comparison of infant mortality rates in the 70-per-cent group that go to well baby clinics and the 30 per cent who do not, has not been made. Such a comparison is difficult to make because of many factors, social and others. Also, free medical care is a factor.

A school health system is maintained, along with the good general practice services in the country, since the general practitioner gives treatment whereas the school doctor gives preventive services. The school doctor refers cases for treatment to the general practitioner. His chief task is to follow the development of the schoolchild, not to detect defects. More frequent examinations are therefore desirable.

Zagreb, Yugoslavia

ANDRIJA STAMPAR SCHOOL OF PUBLIC HEALTH Medical Faculty, University of Zagreb

Chairman: DR. L. S. GOERKE

Rapporteur: DR. JULES GILBERT

Background

Social Insurance, Medical Care, and Public Health Services

Yugoslavia consists of the Serb, Croat, and Slovene states, and originated in 1918 through the union of parts of the old Austro-Hungarian Empire with Serbia, and at a slightly later date with Montenegro. The declared basis of the union was ethnic, the desire being to group together all the South Slavs. The nation is composed of six Republics: Serbia, Croatia, Montenegro, Bosnia, Herzegovina, and Macedonia. Birth of the new nation found Yugoslavia in a very poor condition economically. The needs for curative medicine were so insistent that there was practically no time or energy to spare for preventive work.

A Ministry of Health was created which, 10 years later (1928), was amalgamated with the Ministry of Social Welfare. It was divided into four departments charged, respectively, with public health, hospital services, social welfare, and general administration. Funds were provided by the Government to maintain and improve existing health institutions and establish new ones. A considerable proportion of the reparations paid to Yugoslavia after World War I consisted of equipment for hospitals and medical schools. Within a few years over 300 social medical institutions, including tuberculosis sanatoria, bacteriological laboratories, institutes for research into epidemics, antimalaria centers, and maternity-child welfare centers were established. The Rockefeller Foundation gave great assistance and made it possible to establish additional social medical institutions. By 1961, Yugoslavia had 253 hospitals and more than 5,000 clinics and dispensaries.

There are now about 12,000 physicians, virtually double the number at the end of World War II, during which half the doctors in the army medical services lost their lives. Complete *social security* is in force, including unemployment, medical, and maternity benefits. About 50 per cent of the nation's more than 18,000,000 people are covered by the national social insurance fund. All employed persons, apprentices, students, elected officials, members of certain liberal professions, and pensioners fall under this newest legislation.

The employer is responsible for contributing at a rate which is fixed annually. The figure in the latest year for which statistics are available was 34 per cent of the payroll. There is an appropriate assessment for non-salaried people (such as peasants). The cost to an individual is about 75,000 dinars (about US\$100.00)* per capita per year. It is to be noted that in addition to health, the contribution also finances pension insurance, unemployment insurance, family allowances, and work injuries insurance. Medical benefits consist of medical examination and treatment in an institution or at home, medicines and supplies, dental care (extraction and fillings), and full cost of essential spa treatments. In all cases travel expenses are paid. Maternity benefits for insured women are equal to sickness benefits. Dependents receive the same medical benefits as the insured.

Under increasing socialization the private practice of medicine has entirely disappeared in Yugoslavia. Virtually all the nation's 12,000 physicians and surgeons work as staff members of health institutions, which are under direct government supervision and subsidy, and are paid on a salary basis. It is claimed that this has not lowered the quality of medical care; on the contrary, this system is credited with the development of a new team spirit among members of the medical profession.

According to the Federal Constitution, each of the six People's Republics is authorized to pass its own law on the organization of the *health service*, adapted to its specific conditions and needs. The People's Republic of Croatia (capital city, Zagreb) passed its law in May 1961, fixing the responsibilities of the community in the field of public health, the rights and duties of citizens, and the organization and functions of the health service and health institutions.

In accordance with the communal system, health care of the citizens is primarily the responsibility of the commune. The commune provides

* US\$1.00 = 750 dinars in May 1963.

for health care in its area through: (a) the health station; or (b) the public health center; or (c) the medical center. Which type of health institution is established depends on the development of the municipality, its population, and its socioeconomic and other conditions. Each commune has a health station at least, while medical centers are mostly in larger towns. These health institutions are organized on the principle of comprehensive medicine, providing curative and preventive care. The Law of the People's Republic does not advocate that separate establishments for the various aspects of general medical care be founded, but stipulates that all aspects be united in a single institution having the necessary organizational units.

The *medical center* provides for complete medical care, including all curative activities, hospitalization, and other sociomedical and preventive activities. In more extensive areas (one or more districts), the medical center provides care that cannot be given by local institutions (hospitalization for specialist services, some dispensary services, laboratories, etc.) and assists with expert help in those services in which the smaller units are deficient.

The activities of health institutions are coordinated and from the professional point of view supervised by the health center of the district. On the level of the Republic, this function is performed by the *Institute of Public Health of (in this instance) Croatia*. This is the health authority in the Republic; it is equivalent to a Ministry of Health.

On the basis of its studies and analyses, the Institute of Public Health submits to the Council of Public Health of Croatia and the Executive Council of the People's Assembly, respectively, suggestions for the promotion of the health services, including work in health institutions, and appropriate public health measures and actions. Moreover, the Institute proposes programs for health care and the development of health institutions and medical schools. As the supreme public health institution, the Institute gives suggestions and furnishes expert opinions from the whole field of public health at the request of these government agencies.

The organizational units of the Institute are made up of *expert committees* comprising specialists of the department in question and prominent experts from other institutions. These committees, dealing with important professional problems, cooperate closely with corresponding sections of the Medical Association of Croatia, which are frequently consulted before conclusions are adopted.

The health station is an institution providing health care through general practitioners and other health workers, comprising treatment, nursing, health education, and prevention and control of communicable diseases. The basic components of the health station are: one or more units for general practice; a maternal and child dispensary, with guidance center; a home-visitor service; a clinical laboratory; and a unit for hygiene and epidemiology.

Other units which may be included to supplement the basic staff are: a dental surgery with or without dental laboratory; dispensaries and auxiliary dispensaries; a delivery department; an antitrachoma station; an X-ray department; an insect and rodent control unit; and (exceptionally) specialist outpatient clinics and several hospital beds. The professional staff of the health station consists of one or more general practitioners, a midwife, a nurse or public health nurse, and a sanitarian.

The public health center is a more developed health institution providing health care through general practitioners, specialists, and other health workers. It has dispensary and epidemiological services; organizes and performs rehabilitation of the diseased and injured; and cares for patients in small hospital units. The public health center collaborates with the subordinate health stations in its area, assisting them with expert help and providing for those forms of health care that cannot be performed by the smaller units.

The School of Public Health

Organization

In his introductory remarks, Dr. B. Kesic, Director of the School, recalled the memory of Dr. Andrija Stampar, whom many of the participants had known, and for whom the School was named to perpetuate the reputation of his brilliant career as an international leader in public health. He was Chairman of the Interim Commission that organized the World Health Organization, and President of the first World Health Assembly (1948). His strong influence is still being felt in the WHO and, naturally, in his own country. Mrs. Stampar honored the participants with her presence at the first meeting of the Seminar group.

The Zagreb School of Public Health was established in 1927, largely owing to a grant of the Rockefeller Foundation, with Dr. Bereslav

Boric at its head. From its very beginning, as part of the Institute of Hygiene of Croatia, it had an active teaching program. After World War II, Dr. Stampar revived it and attached it to the Medical Faculty, with the usual duties of teaching, research (mostly in public health practice), and service (limited to some aspects of microbiology). The School assumed responsibilities toward undergraduate training of medical students, special training of general practitioners, and post-graduate training of public health workers.

The School now has eight Departments: Hygiene and Social Medicine; Bacteriology and Parasitology; Epidemiology; Applied Biochemistry; Virology; Environmental Sanitation; Occupational Health; and Public Health Administration.

In addition, the School has a Secretariat in charge of administration. It consists of a General Purpose Section responsible for the current administrative and financial work, a Documentation Section, a Photofilm Laboratory, a Standing Health Exhibition with a draftsmanship studio, and residential quarters for postgraduate students. A special feature of the School is the health museum, which is kept up to date by the addition of new exhibits.

The School has a separate budget within that of the Medical Faculty, and this is a part of the University budget. The School's budget in the 1961-1962 academic year amounted to some 112,000,000 dinars, or US\$150,000.

The publication of the School's journal *Adravstvene novine* (Health News) has been continued into its 15th volume in an improved technical form. Its purpose is to inform health workers, especially those in the field, about new achievements in hygiene, social medicine, and epidemiology. It publishes original papers, communications, reviews, abstracts, and various news from the field of public health. About 2,500 copies of the journal (five issues a year) are sent to various parts of Yugoslavia.

The Library holdings of books and bound periodicals now amount to more than 22,000 volumes. Three hundred current sets of periodicals were either purchased or received as gifts. A monthly accession list is regularly being circulated to affiliated libraries and registered readers.

The permanent staff number 60. There are, in addition, 11 guest lecturers and 21 contractual lecturers. The annual report also lists

84 lecturers on the staff of the Medical Faculty and 68 lecturers outside the Faculty.

All students are supported by the institutions that employ them and are paid their salary during their studies. A few receive grants from Public Councils. Most of them have had three to five years of experience in the field. With the exception of nurses, all must hold a university degree. All postgraduate candidates must take a foreign language: English, French, German, or Russian, according to the trainee's choice.

Undergraduate Training

The School is responsible for the training of undergraduate medical students in all subjects in public health, i.e., introduction to medicine, health statistics, care of patients, bacteriology, parasitology and virology, hygiene and social medicine, and field work. The total is 204 hours of lectures and 324 hours of practical work.

In view of the fact that the Yugoslav health services are developing on the principle of integrated or comprehensive medicine, the curriculum of the Medical Faculty, throughout undergraduate medical training from the first to the fifth year, aims at a continuous development of the student's sense of preventive and social concepts. The training takes place in groups and work in seminars is the basic teaching method. Whenever feasible, teaching is taken out of classrooms and laboratories into conditions of actual life. There are organized visits to villages, factories, mines, health institutions, and social centers. After the third year—that is, before attending lectures in hygiene and social medicine—the students complete their field practice; they leave for villages in groups of four or five and, under the leadership of teachers, become acquainted with health problems and living conditions of the people among whom they will live and work as future physicians.

To bring teaching as near to real life as possible, the School introduced another form of field work: seven days of practical experience for fifth-year students in the health centers in the territory of the city of Zagreb. In groups of two, under the supervision of experienced physicians, the students are given the opportunity of learning all the forms of health protection, in the consulting room, at home, and in the field, in accordance with the principles of integrated medicine and under conditions in which the general practitioner lives and works.

*Postgraduate Training **

1. *Master of Public Health for Physicians (two semesters)*—The purpose of the course is to train health officers who will be in charge of various health institutions. A series of lectures and seminars, as well as laboratory work and field work, enable the student to acquaint himself with the main features of hygiene and social medicine, particularly with maternal and child health and the health of school-children and workmen. Special attention is paid to nutrition, environmental sanitation, health education, and public health administration. In view of the fact that the latter deals usually with problems of larger communities, training in medical statistics, epidemiology, and epidemiological methods is considered particularly important. The course covers problems both of the past (infectious diseases) and the foreseeable future (chronic and degenerative diseases, accidents, mental health, etc.). Several excursions are organized lasting one to six days to acquaint the candidates with the work and problems of various public health institutions in Croatia and Slovenia.

2. *Master of Occupational Health for Physicians (two semesters)*—The purpose of the course is to train industrial health officers. The students are given general instruction in hygiene and social medicine—an abridged version of the subject taught in the Master of Public Health course—and then concentrate on problems of industrial hygiene. Particular attention is paid to training in statistical and epidemiological methods. A considerable part of the training takes place in the field, where students become acquainted with the most important industrial processes, establish personal contacts with workers and management, and discuss occupational health problems. Excursions are made to a number of factories, mines, and health centers in Croatia and Slovenia.

3. *Master of Maternal and Child Health for Physicians (two semesters)*—The purpose of the course is to train physicians in health protection of mothers and children. Emphasis is laid on hygiene and social medicine, public health administration, and epidemiology, as well as on the social aspects of maternal and child health. To enable the students to deal with these problems in practice, they are specially trained in methods of health education. Considerable attention is paid to clinical pediatrics and to other branches of clinical medicine important for the protection of mothers and children. Child psychology occupies an important place in the curriculum. The candidates are

* All the courses described here are not necessarily offered during the same year.

taken to various child health institutions in Zagreb and its environs. During their final excursion they visit the renowned child clinics in Rome and Florence.

4. *Medical Microbiology for Physicians and Biologists (two semesters)*—The purpose of the course is to prepare physicians and biologists for research in the field of medical bacteriology, virology, and parasitology. After the introductory part devoted to methods of research work, statistical analysis of laboratory data, principles of public health, hygiene, and general epidemiology, the candidates are familiarized with the problems of immunology, bacteriology, virology, and parasitology insofar as they are of importance to medicine. They also learn the principles of biochemistry and the use of biochemistry in microbiology, as well as the principles of chemotherapy. Practical work is carried out in the laboratories of the School, in the Institute of Health Protection of Croatia, and in the Institute of Immunology.

5. *Master of Experimental Biology and Medicine (four semesters)*—The course is organized with the purpose of training young research workers in laboratory work in the field of experimental medicine and biology. The plan is to divide the training into three groups of subjects with the emphasis on (a) physiology, (b) immunology, and (c) cytology. The subjects given particular attention are biology, pathology, physiology, biochemistry, mathematics, and statistics.

6. *Biochemistry (four semesters)*—The course was introduced with the purpose of familiarizing the candidates, mostly chemists, with current biochemical problems and modern methods and techniques in this field. Besides dynamic biochemistry as the basic subject, emphasis is laid on selected topics of physiology, biochemistry and the metabolism of the cell, immunochemistry, immunology, metabolic radiation effects in mammals, introduction to higher mathematics, and statistics.

General Practice

In agreement with the Council of Public Health of Croatia and the City of Zagreb, the School gives a three-year course for the training of general practitioners. For economic and personal reasons, it is not possible to keep the general practitioner away from his practice for so long, and the training is therefore organized on the basis of in-service training. It takes place concurrently with the physician's regular work, except for the introductory part lasting two months and the final part lasting three months, when the trainee becomes a full-time student at the School.

The purpose of the training is to provide the health service with highly qualified general practitioners, able to deal with all the aspects of health protection, integrating preventive and curative activities at the basic functional level. To this end they are trained in the principles and techniques of preventive and social medicine, they acquire a comprehensive knowledge of basic modern health problems, and they are prepared to be good organizers and leaders of teamwork. Trainees are entitled to present a thesis for the academic degree of Master of General Practice.

Occupational Health

The School offers special training programs to those who have successfully completed the course for a Diploma in Occupational Health at the School and who have obtained permission from the People's Health Council of Croatia to specialize in occupational health. The training covers the organization of health services and more particularly the health protection of workers, hygiene and social medicine in connection with health protection in industry, laboratory and field work in connection with the control of occupational hazards, and industrial legislation dealing with the role of the physician in industry.

Diploma in Public Health Nursing (three semesters)

The purpose of the course is to acquaint nurses with the basic problems of public health. In addition to specific subjects designed to raise the professional standard of nurses (bedside nursing, children's care, dietetics, public health nursing, home economics, etc.), the nurses' training includes also a series of public health subjects (hygiene and social medicine, organization of health services, selected subjects of clinical medicine, etc.). Because of the great number of recently opened middle schools of nursing, the course aims at training also a large number of nurse-instructors and therefore the curriculum includes such subjects as psychology, pedagogy, organization and administration of nursing schools, etc. Practical field work includes public health nursing, hospital care, participation in courses on home economics and hygiene, and students' practical field work. The candidates visit various health institutions in Croatia and Slovenia.

Municipal Engineering and Environmental Sanitation (two semesters)

The course is open to persons holding a university degree in architectural, civil, mining, chemical, or mechanical engineering, or

a degree in chemistry or physics. The first part of the course of instruction extends over one academic semester of not less than 14 weeks of full-time study. Students attend courses in public health administration, principles of sanitary engineering, health statistics, sanitary biology, epidemiology, sanitary chemistry, food sanitation, meteorology and climatology, occupational health, selected topics in physiology, and a foreign language.

The second part of the course extends over one academic semester, during which the students specialize in one of the following three fields: housing and town planning and rural sanitation (mainly for architects); water supply and waste disposal (for civil engineers); or industrial health engineering (for chemical or mechanical engineers, chemists, and physicists).

The School also gives a three-semester course in Nutrition and Dietetics for Nurses, during which the nurses are prepared to serve as nutrition specialists in both hospitals and public health service.

Research

Believing that the teaching activities of universities can successfully develop only if they are closely connected with research, and that a solid link between teaching and research activities is the best road to truth in science, the School endeavors to develop research work in public health and to deal in the first place with problems important for the health and health protection of the Yugoslav people. The School has collaborated with a number of foreign institutions, on joint research programs. In the course of academic year 1961-1962, 36 different problems were investigated. Some of the subjects were arthropod-borne encephalitis, arboviruses, the phage-typing of staphylococci, mental disorders, influenza, the effect of textile dust on workers' health, the determination of normal values of certain metals in biological material, study of the role of hereditary and exogenous factors in the occurrence of cardiovascular disorders, and others.

Service

In addition to teaching and research, the School endeavors to work with various health and social institutions. In addition to working with many hospitals and health institutions, it maintains constant cooperation with the Health Center at Samobor, where the School runs its Demonstration and Training Center, with the Institute of Health Pro-

tection of Croatia, and with the Institute of Health Protection of the City of Zagreb. This work is connected with the solution of many practical problems in the field, such as epidemics of infectious diseases, rising incidence of degenerative diseases, and health protection of various population groups.

The Department of Bacteriology and Parasitology is in charge of routine diagnosis of bacteria, mycoses, and the preparation of auto-vaccines. All the routine work is carried out in the closest collaboration with the Microbiology Department of the Republican Institute of Health Protection.

The Department of Virology cooperates closely with the analogous Department of the Republican Institute for Health Protection on the practical solution of problems connected with virus diseases.

The Department of Environmental Sanitation has developed field sanitary work in close collaboration with the Health Center at Samobor.

The Seminar group made a visit to the *Samobor Health Center* and subsequently to the *Rude Field Demonstration and Training Area*. This visit had been planned as a demonstration of the integration of field training with academic teaching in the School, and of the possibilities of the area for research applied to public health. According to the principle that health services should be as near the people as possible, the Samobor Health Center works through health subcenters set up for individual urban districts, groups of villages or industrial establishments covering 3,000-5,000 inhabitants. Rude is but one of these subcenters.

The Rude Field Training Area was set up on the principle of cooperation, the School using it as a training and research unit in public health practice. The Samobor Health Center continues to finance the routine health services carried out in Rude and uses the experience gained in that Center for the improvement and development of health services in other communes in its territory. This mutual arrangement is the most positive feature of the Center. No special premises were built for the Rude Center. A simple village building was adapted, which houses a modestly equipped rural clinic and the midwife. This midwife, who is well trained, is the only full-time worker in the Center. In a very short time she has succeeded in integrating herself into the life of the village.

The physician—a general practitioner—visits the Center three times a week, and works there from 1:00 p.m. till 8:00 p.m. He has over-

all responsibility for the running of the Center. No extra funds have been allotted for running it; the only income is what the inhabitants of the area contribute to their health service through the social and national insurance schemes for the rural population. All health activities, especially rural sanitation, require the physical and financial support of the population.

The Center's activities can be divided into routine public health services, training, and research. Routine public health services include health education, control of communicable diseases, maternal and child health, school health, environmental sanitation, medical care, home care, public health nursing, and health statistics.

The basic idea was to extend training to the village home, the rural and urban health center, the factory and mine, and the school—in other words, to every place where people live and work. The intention was to supplement the training which the student receives in lecture-rooms and hospital wards by field work in environments which are part of real life. It is in this way and along these lines that the School uses the Rude Demonstration and Training Center. Postgraduate and undergraduate students, individually and in groups, are sent there and in practical work gain experience and skill in handling the problems of everyday public health practice.

Since its establishment, the School of Public Health has carried out extensive research programs in all the fields of public health. Various epidemiological, laboratory, clinical, and other research methods have been used in this work. On the basis of the experience gained, a firm conviction has been formed that best results in public health research can be obtained by field experiments. Well-planned experiments organized in the field, in real life, make it possible to obtain results of extreme value to public health practice. In the light of this experience, the School has developed within the Rude Training Area intensive research work on training methods, on various techniques of health protection, and on public health organization and administration, especially under the influence of industrialization.

The establishment of the Rude Center was the first stage in the development of a large Demonstration and Training Center which embraces the whole area of the Samobor Health Center, consisting of one town, 89 villages, 24 hamlets, and one industrial settlement, with a total of about 36,000 inhabitants. It should be pointed out that the Medical Officer in charge of the Samobor Center is linked with the School as a part-time lecturer in public health practice, and the School

uses the Samobor Center as its training field. The Demonstration and Training Center serves as a field laboratory in which, by means of experimental methods, all questions of health organization and administration are studied, as well as questions of public health practice that are of research and educational interest to the School on the one hand, and of practical interest to the Health Center on the other. The Center is at the same time a field school for all categories of health workers.

The Samobor Health Center is a compound of one-floor buildings that make up a combination of several clinics, plus a small maternity unit. The whole district is looked after by 16 full-time physicians, including some specialists. They are scheduled to work six hours a day. Apart from the director, the Samobor Center is staffed by 10 part-time specialists who conduct its clinics, 8 nurses, 3 midwives, and 4 dentists. Three ambulances are provided for the transportation of the sick to base hospitals in Zagreb. The Center is used for the training of medical and public health students, undergraduates and postgraduates.

Master in General Medicine (from a text by Dr. A. Vuletic)

To prevent the mass flight of general practitioners into the various specialist branches, and to enable them to raise their status, legal provisions for specialization in general medicine were introduced by the Yugoslav Legislature in 1960. According to the new law, the general practitioner in charge of a health center deals with all the aspects of health protection, integrating functionally the preventive, curative, and social activities at the basic level. Thus, a new type of general practitioner is evolving, differing considerably from the old type whose work until recently was limited mainly to curative medicine. The general practitioner spends a good deal of his working time in the field, his functions including home treatment of acute and chronic diseases, screening of population, systematic health education, vaccination and immunization, communal hygiene, regular meetings with health committees, and so on. In order to meet the requirements of the law with regard to the wider role of the general practitioner, there have been developed in Yugoslavia various forms of postgraduate training courses, seminars, and lectures.

On the basis of these considerations, the School of Public Health has organized training with a view to specialization in general medicine, correlated with studies for the academic degree of a Master of General Medicine, in addition to the State Diploma of Specialist in General

Medicine. The program of training was worked out after extensive consultation with general practitioners, health officers, and teachers of the Zagreb Medical Faculty. It is still in the experimental stage and is adjusted as new experiences warrant.

Occupational Health (from a text by Dr. F. Valic)

In Yugoslavia, the rate of industrialization is kept rather high in order to transform a country with a backward agricultural economy, as it was in the past, into a modern industrialized state as early as circumstances permit. Rapid industrialization has given rise to a series of new health problems, and many more can be expected to arise in the future. Under such conditions a danger exists that the increasing rate of industrial and agricultural development may outstrip the facilities available for the protection of health of the working population. It is because this danger is appreciated that efforts are being made to develop efficient occupational health services.

In all medical schools in the country, occupational health is taught as a part of hygiene. The teaching usually covers the following main points: main occupational diseases, environmental hygiene, toxicology, labor legislation, occupational health legislation, and industrial health organization and services.

The main characteristic of the postgraduate curriculum is the emphasis on the unity and interrelation with general public health practice of the three main aspects of occupational health proper, namely, occupational medicine, industrial health engineering, and industrial health chemistry. The specialization of physicians in industrial medicine is approved by the respective Health Councils of each Republic. Specialization training lasts, as a rule, three years.

Health Education (from a text by Dr. B. Markovic)

Croatia, one of the six Republics of Yugoslavia, is a mountainous area of 42,000 square kilometers (16,200 square miles), with a population of roughly four million. Health education in this area is basically the responsibility of the Department of Health Education, Institute of Public Health of Croatia, located in the capital city of Zagreb. The chief function of the Department is to provide pre-service and in-service preparation in health education for health workers and teachers, since they are the only professional persons responsible for this activity. Because health workers and teachers, in view of

their responsibility for the health care of the people and for the education of schoolchildren, cannot satisfactorily conduct a health education program in the community, we have endeavored to persuade a certain number of health workers to become health education specialists and devote their full time to this vocation. Only a few aspects of the Croatian health education program can be mentioned. These will include brief sketches of activities in three broad areas: the preparation of health workers and teachers; service to the health centers of Croatia; and research in health education.

The program of study for health workers wishing to specialize in health education begins with a six-month course in public health at the Andrija Stampar School of Public Health. Following this, the students receive two and one half years of preparation in the Department of Health Education of the Institute of Public Health, and at the end of this period they are awarded the M.P.H. degree. As part of this cooperative arrangement, health education staff members from the Institute serve on the faculty of the School and teach both postgraduate and undergraduate students. Other responsibilities in the pre-service preparation of health workers include a new program for nurses. It has been accepted that two years of health education (four terms) should be introduced as a separate subject in all 17 nursing schools and in four schools for sanitary technicians. It has been possible to secure qualified teachers for only five of these schools, while in the others health education is taught by a team composed of a psychologist, an educator, and a general practitioner. Similar problems are faced in the teacher colleges and in the schools. A new law provides that health education must be integrated into the curriculum of all elementary and secondary schools, which means that teachers must be prepared for this responsibility. A shortage of qualified specialists requires that this important work be performed gradually.

A concern of the Department is the need to integrate health education into all health center activities and in this connection assistance is provided to the Departments of Epidemiology, School Hygiene, Nutrition, Chronic Diseases, Mother and Child Welfare, Occupational Health, and others. All of these departments are already aware of the importance of health education and the objective here is to help them include this dimension in their programs.

A project of the Department concerns research into communications and attitudes about carcinoma. It has been stated many times that

health education is the responsibility of every health worker, and among these a very important member is the physician. Since communications between physicians and patients in regard to carcinoma are a health education problem, and one of the most delicate in medicine, stress has been laid on the significance of the type of approach used by the physician.

Schools of Public Health

Elective Visits

Rennes (Ille et Vilaine), France

ECOLE NATIONALE DE LA SANTE PUBLIQUE

Rapporteur: DR. JULES GILBERT

Introduction

Le Gouvernement français a créé, par une loi spéciale en date du 28 juillet 1960, l'Ecole Nationale de la Santé Publique afin de former du personnel d'un niveau élevé pour l'action sanitaire et sociale.

Cette école se substitue à l'ancienne qui, depuis 1946, fonctionnait au sein de l'Institut National d'Hygiène. Elle est un établissement public national, doté de la personnalité morale et de l'autonomie financière, placé sous la tutelle du Ministère de la Santé Publique. Dans la politique de décentralisation des services publics, le Gouvernement a décidé de l'implanter à Rennes, à 360 kilomètres à l'ouest de Paris. Son enseignement complète le plus souvent une formation universitaire et correspond à un triple besoin:

a. Former sur le plan national les cadres du personnel de la protection sanitaire et de l'action sociale;

b. Dispenser un enseignement de santé publique en langue française pour les étrangers francophones, notamment pour les pays en voie de développement, enseignement qui n'existe pas actuellement en Europe;

c. Former aux disciplines de santé publique du personnel français qui pourra être employé à l'étranger au titre d'une aide technique bilatérale ou dans le cadre d'organisations internationales.

Direction

Le budget de l'Ecole est présenté au Gouvernement par le Ministère de la Santé Nationale. Le contrôle des dépenses à l'Ecole est la responsabilité du secrétaire général. Aucun frais de scolarité n'est exigé pour le moment.

L'Ecole relève: (1) d'un *Comité d'administration*, formé d'une trentaine de membres, tous de l'extérieur, c'est à dire, en dehors de Rennes, qui se réunit deux fois l'an et partage la responsabilité de la

gestion avec le Directeur; (2) d'un *Comité des Etudes*, constitué de 16 membres dispersés dans toute la France, lequel a un rôle consultatif et tient une réunion environ tous les six mois à Paris même, mais en principe chaque fois que nécessaire.

Les rapports les plus directs de l'Ecole sont évidemment avec le Ministère de la Santé publique et de la Population, mais elle en entretient également avec le Ministère de l'Education Nationale et surtout avec l'Université de Rennes, institution d'Etat elle aussi, avec laquelle elle se doit de coopérer puisqu'elle y est étroitement liée sur la plan académique.

L'exécution des décisions et les opérations courantes de l'Ecole relèvent d'un Conseil formé des chefs de départements en plus de la direction même où l'on trouve comme principaux responsables:

Directeur général de l'Ecole:	Professeur SENECAI
Directeur des Etudes:	Mlle MEME
Directeur des Stages:	Docteur ZIMMET
Secrétaire général administratif:	Monsieur LEFEBVRE

L'Ecole comporte actuellement 11 *départements* d'enseignements spécialisés:

Administration hospitalière	Hygiène et médecine préventive
Administration de la santé publique	Laboratoires de microbiologie
Architecture et génie sanitaire	Laboratoires de physique-chimie
Education sanitaire	Sciences et techniques sociales
Epidémiologie	Statistiques
	Soins infirmiers

Installation

Les *locaux* de l'Ecole de Rennes sont, les uns permanents, telle la résidence des étudiants, les autres temporaires, soit qu'ils doivent être démolis, soit qu'ils aient été empruntés de l'Université jusqu'à l'obtention de quartiers en propre, qu'on espère compléter en deux ans. Les plans sont approuvés et les soumissions seront demandées au cours des prochaines semaines.

Les locaux comprendront en nombre suffisant les salles de cours, amphithéâtres, laboratoires, bureaux de professeurs, bibliothèque, le tout dûment aménagé, avec l'appareillage et l'instrumentation nécessaires, projecteurs, microscopes, etc. Sur ce point spécialement, notre

visite était prématurée; ce n'est pas évidemment le bâtiment qui fait la valeur d'une école, surtout s'il faut en juger seulement par des plans. Les réalisations seront à voir en temps opportun; pour le moment, il s'agit d'une appréciation toute provisoire.

Corps enseignant

A la tête de chaque enseignement spécialisé se trouvera un professeur responsable. Il sera assisté par d'autres professeurs, maîtres de conférences agrégés et assistants dont le nombre variera selon le programme d'enseignement. Chacun de ces départements participera pour une part plus ou moins grande au programme d'études propres de chacune des sections de stagiaires (médecins, pharmaciens, ingénieurs, personnel de l'action sociale, personnel para-médical, directeurs, directeurs-économistes des hôpitaux, etc.).

Le corps professoral compte présentement 31 membres à temps complet; le total prévu est de 70. Tant que l'Ecole n'aura par publié son Annuaire, et dans la phase d'organisation où elle se trouve, il n'est pas possible de distinguer les diverses catégories de professeurs, avec leurs qualifications et leurs responsabilités.

Etudiants

D'une manière générale, l'enseignement comporte:

a. Des enseignements de formation professionnelle ou de début de carrière pour:

Le personnel médical: médecins et pharmaciens, inspecteurs de la santé et spécialistes que leurs fonctions mettent en contact avec les problèmes de santé publique: dentistes, ophtalmologistes, vétérinaires, etc.

Les techniciens qui concourent à la sauvegarde de la santé publique: architectes, ingénieurs, etc.

Les statisticiens de santé publique.

Le personnel supérieur de l'action sociale, et entre autres: inspecteurs de la population et de l'action sociale, contrôleurs des lois d'aide sociale, cadres supérieurs des services sociaux, etc.

Le personnel de direction des hôpitaux.

Le personnel para-médical: sages-femmes, infirmières et assistantes sociales.

Les éducateurs sanitaires.

Les fonctionnaires admis au concours.

b. Des enseignements en cours de carrière (perfectionnement) :

Mises au point des doctrines et des techniques médicales et sociales, constamment en évolution. Certains cours spécialisés portent sur des questions particulières d'ordre scientifique et technique, telles les journées de biologie appliquée, le cours d'hygiène rurale, celui sur la protection contre les radiations ionisantes.

Programme

Le programme comporte des cours de longue durée (un an) ou de formation professionnelle ou de début de carrière; des cours de brève durée ou de perfectionnement ou en cours de carrière; et finalement des "cycles d'études."

L'enseignement de l'hygiène et de la médecine préventive aux étudiants en médecine préoccupe déjà le directeur de l'Ecole de santé publique. Le fait qu'il y est professeur de pédiatrie et membre du Conseil de la Faculté ne peut que faciliter les relations entre les deux institutions et préparer les voies à leur collaboration.

a. *Les cours de formation professionnelle* qui se donnent à l'Ecole même sont destinés aux candidats suivants:

1. *Médecins*: c'est le cours équivalent à notre D.H.P. (ou M.P.H.). On entrevoit la possibilité d'organiser un cours de quatre ans d'études et conduisant à un diplôme supérieur.
2. *Ingénieurs*: pour préparer à l'exécution de travaux ruraux ou pour la formation de techniciens plus avancés.
3. *Directeurs et directeurs-économistes des hôpitaux*.
4. *Para-médicaux*: ce sont les infirmières, les sages-femmes et les assistantes sociales.

b. Des enseignements de longue durée sont organisés en collaboration avec d'autres institutions d'Etat:

1. *L'éducation sanitaire*, avec le Centre national d'Education sanitaire, établi au Vésinet, en dehors de Paris. Les relations entre les deux institutions sont définies comme suit: l'Ecole nationale de Rennes est chargée de la formation professionnelle et le Centre du Vésinet doit y collaborer.

2. *L'action sociale*, conjointement avec le Centre de Service Social de Mont-Rouge, en banlieue de Paris.

3. *La diététique*, cours de deux ans donné à Marseille et contrôlé par le Ministère de l'Education Nationale.

4. Cours pour *professeurs de jeunes sourds*, à Paris, avec le Ministère de l'Education Nationale.

5. Cours pour *professeurs de jeunes aveugles*.

c. *Cours de perfectionnement* (à titre d'exemples) :

1. Cours sur les *radiations ionisantes*; cours d'un mois donné à l'Institut d'Etudes Nucléaires, à Saclay, Paris.

2. Cours pour *pharmaciens inspecteurs* de la santé; une semaine.

3. *Journées de biologie clinique* pour chefs de laboratoires (de médecine, de santé publique, etc.) tenues à l'Institut Pasteur et consistant en conférences; trois jours.

d. *Cycles d'études*:

Ce sont là des sessions courtes et intensives, ressemblant en somme à nos séminaires et portant sur un centre d'intérêt.

La *méthode* d'enseignement utilise les leçons théoriques, les travaux pratiques, les discussions de groupes, les visites d'observation, n'importe où en France, et les stages. On a fait quelques essais d'enseignement par sujet, selon la formule de symposium, v.g., deux jours sur la bilharziose, ou sur le paludisme, etc.

Un *stage* de trois semaines avec un inspecteur de la santé est obligatoire. Quant aux étudiants africains, grâce aux relations du directeur avec le Sénégal, où s'est déroulée une partie de sa carrière de pédiatre, ils sont envoyés avec leurs professeurs pour un ou deux mois soit à Dakar même, soit surtout au Centre rural de protection familiale de Khombole, à 100 kilomètres de la capitale. En 1962, ce stage particulier fut organisé à l'intention des directeurs d'hôpitaux; en 1963, il le sera pour les ingénieurs sanitaires.

Le directeur de l'Ecole de Rennes a spontanément émis l'idée que ce champ africain d'apprentissage pourrait accueillir des stagiaires de l'Ecole de Montréal.

Commentaires

Cette visite à l'Ecole de Rennes fut évidemment prématurée; ce n'est pas en période d'organisation et au moment où elle va prendre son élan

de départ qu'il convient de juger une institution. Toutefois il n'était pas concevable, au cours de notre tournée européenne, d'ignorer l'École nationale de santé publique de France, si riche de promesses. Le fait que le programme n'y est pas complètement arrêté donnait un certain à-propos à nos échanges de vues et voici quelques points auxquels nous avons touché au cours de nos discussions.

Le fait que l'École a été implantée à Rennes a suscité certaines hésitations en divers milieux. Il est évidemment assez difficile de réunir à 360 kilomètres de Paris l'équipe d'experts, toujours nombreuse à ce palier, qui puisse donner un enseignement aussi spécialisé.

A cause de son statut d'École d'Etat, l'École de Rennes est obligée de collaborer avec d'autres ministères à Paris et avec d'autres écoles nationales dispersées dans toute la France, alors qu'une École universitaire trouve sur le campus même ses principaux collaborateurs. A cela le directeur répond que du point de vue de la santé publique, Paris est quelque chose de gigantesque, d'anormal; qu'il est plus facile de créer à Rennes un système qui s'adaptera mieux aux besoins modernes des agglomérations ordinaires; et que, bien entendu, les étudiants y seront à l'abri des distractions de la capitale.

Quant aux installations et services sanitaires qu'on ne trouve pas à Rennes, les étudiants se rendent les voir là où ils existent, dans leurs visites et leurs stages.

Il paraît assez étrange à première vue, que dans cette École, la direction des études ait été confiée à une personne qui n'est ni médecin ni hygiéniste; elle a fait les études de droit, l'École Nationale d'Administration, et était membre du Conseil d'Etat. Ce serait la coutume dans les grandes écoles françaises de confier la direction des études à quelqu'un du Conseil d'Etat, la direction comprenant en plus un directeur général et un directeur des stages.

C'est la directrice des études qui prépare la schéma général des enseignements, qui est chargée de leur organisation, de leur coordination et de leur contrôle, et qui voit spécialement aux cours à être suivis en commun. Comme la titulaire actuelle n'était à l'École que depuis une huitaine de jours, on peut présumer qu'à la lumière de l'expérience on fera un certain ajustement de ses fonctions.

Nous avons parlé également de la durée des études, selon qu'il s'agit d'un cours de base en vue d'un service généralisé d'hygiène publique, ou de cours avancés aux fins du perfectionnement ou de la spécialisation des candidats.

La question de l'orientation générale des écoles européennes comparativement aux écoles américaines fut discutée, pour ce qui est du caractère exclusif des premières qui ne reçoivent généralement que des médecins, les autres hygiénistes recevant leur formation dans leur école professionnelle de base. Il faut dire que l'École de Rennes a déjà adopté la politique de nos écoles dont la raison même d'exister est de recevoir des candidats de diverses disciplines et de les entraîner à travailler ensemble pour former l'équipe sanitaire.

Cette façon de faire amène deux difficultés ayant trait aux cours conjoints et aux parchemins à décerner. Nous avons passé en revue les précautions à prendre dans le choix des cours à être suivis en commun par plusieurs groupes d'étudiants. Quant aux parchemins, on reste devant la possibilité d'accorder un diplôme unique (du genre M.P.H. américaine) mais avec un programme comportant une variété de matières optionnelles comme moyen d'adaptation; ou devant l'alternative de classer les étudiants en plusieurs groupes homogènes, chacun suivant un programme uniforme et recevant un diplôme distinct. C'est là, en définitive, affaire d'opportunisme.

En conclusion de cette intéressante visite faite à l'École de Rennes par un représentant de l'École de Montréal, on voit qu'en dépit de certaines différences qui les caractérisent dans l'ordre politique, géographique, ou administratif, ces deux institutions vont dorénavant opérer en communauté de pensée, d'expression, d'objectifs, et de préoccupations académiques, et qu'elles ont tout intérêt à se consulter et à conjuguer leurs efforts.

Aussi, leur direction respective est-elle d'ores et déjà convaincue qu'elle doit considérer avec objectivité et bienveillance tout projet qui chercherait à les unir, que ce soit par la coordination de leurs programmes, par un échange de professeurs, par l'accueil réciproque de leurs stagiaires, ou même par une formule appropriée de jumelage des deux institutions.

Hamburg, Federal Republic of Germany

**INSTITUTE OF TROPICAL HYGIENE
and
SCHOOL OF PUBLIC HEALTH**

Rapporteur: DR. PHILIP R. BECKJORD

Institute of Tropical Hygiene

The Institute of Tropical Hygiene is combined with an 80-bed hospital for infectious diseases, and is administered by the city of Hamburg. Professor Vogel is Director of the Institute and head of the helminthology department.

The Institute was founded by Dr. Bernhard Nocht, a naval medical officer who had seen cholera in Asia. When cholera broke out in Hamburg in 1892, money was put up by local businessmen and the War Office gave its approval for the establishment of the Institute. Dr. Nocht was Director until 1930.

Basic and clinical research and postgraduate training are emphasized. Atabrine and fuadin were discovered here. There are no subsidies from industry. The Institute does not make biologicals. Entomology and protozoology departments are studying typhus and toxoplasmosis, and the pathology department is studying histochemistry of liver. The virology department is studying morphology of viruses. There are no departments of biostatistics or epidemiology.

The Institute does teaching in tropical medicine for the University of Hamburg in both undergraduate and postgraduate courses. Biologists, veterinarians, and M.D.'s are accepted for the diploma, which is not a university degree. Fifty students out of 200-300 applicants are accepted each year for the annual course. About 80 per cent are foreign students, supported by the World Health Organization, their own governments, or other parties. For the medical students, tropical medicine is an elective and is chosen by about half the class. The hospital is used for clinical instruction.

The staff of 180 persons includes 10 M.D.'s and 20 biologists. All heads of departments hold appointments in the University of Hamburg. Many guest professors are invited for periods of six months to two years. Peruvian and Thai nationals are at present on the staff.

The Institute has no connection with the School of Public Health and does not teach public health, though it is a WHO influenza center. It

is planning to set up a 50-bed hospital and 3 laboratory units in Khartoum, Sudan. Students will not go to Khartoum en masse, but the Institute will send individuals there for research and training. There is no connection with the army institute in Sudan, but the project will cooperate with the Sudan National Health Department. Sudan will provide ground, German money will build the buildings, and operating costs will be borne by Hamburg, though they cannot finance sending tropical medicine students regularly to the Sudan. Target date is about 1966.

The Institute has made some teaching films, but they are not available for outside loan. The University of Göttingen also produces teaching films. The museum of the Institute was destroyed in World War II and has not been replaced. The Institute itself was reconstructed in 1959 and the hospital is still being reconstituted. The latter receives about 20 per cent private patients. About half the persons admitted are foreigners.

School of Public Health

The *Akademie für Staatsmedizin* (Dr. Hans Harmsen, Director) was also established after the 1892 cholera outbreak. Fire in Hamburg in 1842 required a new water supply, and Elbe River water was used. Its contamination later caused the epidemic. In 1919, when the University of Hamburg was founded, the *Akademie* partially combined with the Medical School. After World War II, health officers were scarce, and the School of Public Health (*Akademie*) was re-established to service several of the north German states.

The 1934 law for unification of health services is still the basis for federal and state health regulations in West Germany. The Düsseldorf School of Public Health is for North Rhein-Westfalen, the Munich School for Bavaria, and the one in Hamburg for Berlin, Bremen, Hamburg, Niedersachsen, and Schleswig-Holstein.

The School has five subdivisions: (a) teaching departments in connection with the University of Hamburg Medical School (environmental hygiene and sanitation, microbiology, preventive medicine and public health); (b) Postgraduate School of Public Health—training for medical officers of health is required by law (the *Physikat*); (c) State Laboratory for infectious diseases; (d) State Laboratory for toxicology and food; and (e) State Laboratory for water and sewage. It is expected that an institute for industrial medicine will be established.

The Hamburg School requires 13 months of study and experience in public health, including three months in psychiatry in an institution (because medical officers of health make decisions to commit people to asylums). Foreign students are excused from this portion. The requirement of five months of practical work in health service can be accomplished before the student comes to the *Akademie* and not necessarily under its supervision. There are about 20 to 25 students per year, of which approximately one fourth are foreigners. The average age of M.D.'s coming for public health training is 40-41 years. Most are specialists—pediatrics, internal medicine, tuberculosis, etc.

One course is given each year, from October to February. The student must prepare two papers on subjects assigned by the Director, and then must pass written and oral examinations, which last about two weeks. The degree awarded is the Diploma in Social Hygiene, which qualifies its holder for the state health services.

There are about 660 hours of instruction, of which 130 hours are spent in seminars and another 130 in field work. The remainder of the time (400 hours) is devoted to didactic teaching, lectures, etc.

The School has an extensive research program in health and medical-care organization. The German health insurance system covers a large proportion of the population, and there is great interest in what transpires in other countries, especially those of the Soviet bloc. Considerable research is done also on refugee problems. Some research is financed by the Federal Government and some by private funds.

There are no sanitary engineers (as we know them) in West Germany, because water and sewage facilities are under utility companies, not health departments. The "public health nurse" mostly functions as a social worker with some additional training in nursing, though there are some who are basically nurses with social work training. In either case, there is only one person visiting the home, under the auspices of the health department, thus eliminating a duplication which formerly prevailed.

Gothenburg, Sweden

SCANDINAVIAN SCHOOL OF PUBLIC HEALTH

Rapporteurs: DR PHILIP R. BECKJORD and
DR. JOHN J. WRIGHT

Dr. Haraldson, Director of the School of Public Health, welcomed the visiting group at the School, which is housed in the Medical School. He gave the history of the development of the School, originating in 1948 with conferences with the W. K. Kellogg Foundation, the World Health Organization, the Rockefeller Foundation, and the city of Gothenburg. The Kellogg Foundation shortly thereafter dropped from the discussion, and the subsequent development of the School was carried on by the World Health Organization. Dr. Haraldson discussed the training needs in Scandinavia: Denmark (4.6 million), Finland (4.5 million), Norway (3.6 million), Sweden (7.5 million). The total population of more than 20 million is generally believed to justify a school of public health.

The original course was given to county medical health officers in 1953, and was run entirely by the World Health Organization, which provided fellowships for the students, salary and travel for the lecturers, and other expenses involved. A two-month course in biostatistics and epidemiology has been given every autumn since 1953. In 1956, a course of one-month duration for sanitary engineers was developed, and has been given every year since. A course in applied physiology for engineers and for medical officers of health working on the county level was developed, and a third course in social medicine was described. Each of these three courses has a duration of two months at the present time. It takes two years, however, for one person to get all three. Each consists of approximately 270 hours of lectures, the lectures being given six hours each day. The course in biostatistics and epidemiology corresponds to the "core" courses in the United States schools of public health, and is taken by physicians, nurses, and veterinarians. The engineers take only the course in applied physiological hygiene.

In 1962, the four Scandinavian countries drew up a contract to establish a Scandinavian School of Public Health, each of them providing one fourth of the required funds. A new building is in the process of construction and will be completed within five years, and a full-time staff will be added. It will have, each year, the course in biostatistics and epidemiology, the course in social medical problems for physicians and nurses, the course in applied physiological hygiene for engineers,

a short course for sanitary inspectors, and a one-week refresher and review course to be given each fall for those physicians who have already had the three required courses. The new building will provide facilities for the staff to conduct research on the common problems of the Scandinavian countries.

Dr. Haraldson stated that the principal future needs for course work in the School include formal training in public health administration and in hospital administration. Some 200 physicians, 15 nurses, 5 veterinarians, and 200 engineers have taken courses at the School of Public Health up to now. Of the physicians, only 50 have taken the three courses, 75 have taken two of the courses, and 75 have taken one course only.

There are twice as many applicants as there are places in the course. When the physician is accepted, he comes to the School on full salary, if he is employed by the city or the state, and receives a \$200 per month traineeship from the World Health Organization for living and travel expenses. All the students admitted to the School are employees in health services in the country. They average about 40 years of age and have had long experience as medical officers of health. Training for health officers is not at present required by law, but will be as soon as the new building and staff are available. The qualifications for medical officer on the county level are as follows:

Three years training in a hospital (in internal medicine, pediatrics, psychiatry, and infectious diseases) following graduation from medical school;

One and one-half years as district medical officer;

One and one-half years in an institution of hygiene, social medicine, or bacteriology;

Three two-month courses, previously described, and one short course of two weeks in legal medicine.

Dr. Haraldson described the medical service system in Sweden. There are 25 counties in Sweden, and the county medical officer of health resides in the principal town in the county. He is a government employee who deals full time with administrative and public health work in the community. He is not involved with curative medicine. Each county is divided into districts, and has a district medical officer, who is concerned principally with curative medicine. Each district medical officer has approximately 6,000 inhabitants in his area. The areas are selected by common educational, cultural, and neighborhood

backgrounds. The district medical officer is paid about \$5,000 per year by the central Government. He is also paid by the patients: \$2.00 for each office visit and \$3.00 for each home visit. The money for the fees comes from the National Health Service. The district medical health officer, because of his salary plus fees for service, has a higher income than the county medical officer of health.

The County Council is responsible for the hospital in the community, and the director of the Council is usually a lawyer, but is always non-medical. The Government pays \$3,500 per year to the County Councils for inspection service. Beginning 1 July 1963, the city medical officer will be paid by the County Council so that the central Government will have little to do with county government in the health field.

All medical officers in Sweden in counties of 30,000 or more must take the course in the School of Public Health. The county engineers work in the same department with the medical officers of health and the latter supervise their work. The medical officer of health carries on the health education program for the people in the county. The public health nurse is directly responsible to the County Council and not to the medical officer of health.

At the present time there are 65 district nurses for 250,000 people. There are 11 midwives for the same group. There is a need for 50 midwives. Therefore, some of the district nurses are receiving five months' intensive training as midwives and will then become nurse-midwives. Midwives work at the hospitals and over 99 per cent of all the deliveries in the country are done in hospitals by midwives under the supervision of physicians.

The public health engineers receive a one-month course in water hygiene, and a one-month course in applied physiology, which consists mostly of occupational medicine, half of this course being given by physicians and half on more technical subjects by engineers. The public health nurse is required to have three and one-half years of basic training and eight months of specialized training to attain the district nurse level. Veterinarians are required to take only the course in biostatistics and epidemiology.

One highlight of the visit was an informal discussion with the students. They were particularly interested in the rising venereal disease rate, especially among young people, and in the training of health personnel for the developing countries. The students asked many questions about medical care and hospital programs in the United States, and seemed to be well informed on this subject.

OTHER VISITS

Eastbourne, England

ANNUAL MEETING OF THE ROYAL SOCIETY OF HEALTH

Rapporteur: DR. MYRON E. WEGMAN

The participants were very warmly welcomed by Prof. Andrew Semple, Chairman of Council, and Mr. P. Arthur Wells, Secretary of the Royal Society of Health. The participants attended the opening sessions of the Society's meetings and enjoyed the opening address by Prof. Ritchie Calder. Many also heard the very interesting paper presented by Lord Taylor, of Harlow, on mental health. There was also opportunity to visit the technical and commercial exhibits and to meet some of the other persons in attendance at the meeting. This meeting is rather different from that of the American Public Health Association since it involves, in addition to professional public health workers, a large number of laymen who are members of the Health Councils in the various communities.

Opportunity was taken during the visit to Eastbourne to have a two-hour private session of the Seminar participants, reviewing the two visits which had already taken place in order to arrive at some consensus of their impact and importance. There was a general satisfaction with the program to date and a decision to carry on with similar arrangements.

Geneva, Switzerland

WORLD HEALTH ORGANIZATION

Rapporteur: DR. GAYLORD W. ANDERSON

The Seminar group reached Geneva by plane from Amsterdam on 4 May and stayed until 8 May, when it left for Zagreb. The purpose of the Geneva stop was twofold:

1. *To hold conferences and discussions with headquarters staff of the World Health Organization*—On Monday, 6 May, the group met in conference with Dr. Edward Grzegorzewski, Director of the Education and Training Division, and his associate, Dr. D. Messinezy. The WHO education and training program was explained to the group and discussed in considerable detail by the Seminar participants with the WHO staff. Some attention was given to problems experienced by foreign students attending schools of public health in North America. Impressions of the three schools already visited (Edinburgh, London, and Leiden) were discussed, including evaluation of programs of study. Special attention was given to the extent to which social sciences were being introduced into the curriculum and the methods of their incorporation. Later the group enjoyed a brief courtesy visit with Dr. M. G. Candau, Director-General of WHO, and also with Dr. Abraham Horwitz, Director of the Pan American Sanitary Bureau, who was in Geneva attending the World Health Assembly.

In addition to these formal meetings, the Geneva visit provided members of the group an opportunity for personal conferences with WHO staff members in various special fields. To the extent that this enabled each member of the Seminar to discuss relevant training problems with the appropriate specialist, this provided a most valuable portion of the four weeks' program.

2. *To attend the opening sessions of the World Health Assembly*—Although several of the Seminar participants had attended earlier meetings of the Assembly, there were some who had not previously enjoyed this privilege. To all it afforded an opportunity to meet and confer with representatives from the many ministries of health gathered for the Assembly. Not only did this provide for an exchange of views and experiences related to various training problems, but in many instances it enabled the country representatives to inquire about individual students currently registered in the respective North American schools.

The scheduling of the Travelling Seminar at a time which would permit the inclusion of a visit to the World Health Assembly on its opening day is an example of careful and effective planning.

London, England

EDUCATIONAL AND RESEARCH ESTABLISHMENTS *

DR. A. J. RHODES

Conference of Directors of Tropical Medicine Departments in Europe

The week-long Conference of Directors of Tropical Medicine Departments in Europe included participants from Belgium, France, Germany, Italy, the Netherlands, Switzerland, and the United Kingdom. Staff members from the World Health Organization were also present.

This was the second conference of professors of tropical medicine to be held in Europe. The first was held under WHO auspices in Copenhagen a year earlier. It was interesting to note that the European schools of tropical medicine seemed to feel the need to group together in the same way as the North American schools of public health did nearly 20 years ago. At the moment the meetings are informal and do not directly include schools or departments of public health.

The WHO representative spoke of the Organization's interest in training and research in tropical medicine, and of the fact that WHO sponsors hundreds of fellows for training in this field. From the general discussion at the opening session, it appeared that the European schools and institutes interested in tropical medicine would be called upon to teach overseas students for an indefinite period. It seemed that they could help best by concentrating on the basic subjects of tropical medicine, especially microbiology, parasitology, entomology, and tropical hygiene.

Teaching of Mycology to Postgraduate Public Health Students; London School of Hygiene and Tropical Medicine

In an interview with Dr. I. G. Murray, who is responsible for medical mycology teaching and research, it was learned that his department is an integral part of the Public Health Laboratory Service of England and Wales, but is physically located in the London School of Hygiene and Tropical Medicine. The Laboratory is the reference center for medical mycology for the United Kingdom and receives large numbers of specimens for study.

* A more detailed account of the visits in which he participated personally has been prepared by Dr. A. J. Rhodes, Director of the Toronto University School of Hygiene. Copies may be obtained by addressing Dr. Rhodes directly.

Dr. Murray is appointed as a teacher on the staff of the Department of Bacteriology of the London School. He provides some instruction in medical mycology in many of the subjects taught at the School. His commitments are largely in the field of graduate teaching, but in addition he provides a "continuing education" course in medical mycology for laboratory specialists each summer. This is an all-day course lasting for two weeks.

Diploma in Bacteriology; London School of Hygiene and Tropical Medicine

Professor F. Fulton is responsible for the graduate Diploma in Bacteriology course, one of the highest-level courses in the School. Each year there are about 60 applications for 12 to 15 places. In 1963 all the students were physicians, but in other years veterinarians, chemists, pharmacy graduates, and scientists have been admitted. The Public Health Laboratory Service of England and Wales sends most of its young bacteriologists to take the course, on full salary. It is interesting to note that less classical bacteriology is being taught, and gradually more virology and immunology are being introduced. In addition, there is a Ph.D. program which is primarily a research degree.

Research in Health Services Administration; London School of Hygiene and Tropical Medicine

In conversations with Dr. E. T. C. Spooner, Dean of the London School, and others it became apparent that there is wide recognition that there has not been enough operational research into the National Health Service, and that there is an acute need for administrators with advanced training. Dean Spooner agrees that there is an urgent need for a course in health services administration. He would like first to establish a teaching and research unit in the School, to be financed by the Ministry of Health. Suitable candidates would be able to study in the School and then perhaps do field work by being attached to senior administrative officers of the National Health Service.

Wellcome Museum of Medical Science

This Museum of Medical Science, in Euston Road, London, is probably one of the best in the world for presenting the features of the major infectious diseases, especially those prevalent in the tropics. The exhibits are arranged in a number of bays. In each bay there are photographs, models, and specimens of insects and other agents, with

explanatory legends. The major exhibits include malaria, filariasis, schistosomiasis, onchocerciasis, plague, typhus, relapsing fever, tuberculosis, venereal disease, cholera, primary carcinoma of the liver, infectious lymphomatosis, poisonous snakes, and poisonous insects.

The Museum is undoubtedly a costly undertaking, and requires the services of a full-time curator and technical staff. A museum such as this, but on a smaller scale, would be of great value in a school of public health. Perhaps in some instances the school's department of health education could undertake responsibility for the museum, in collaboration with the science department concerned. In an undertaking of this nature it is essential to keep the exhibits up to date, and revision or addition to the legends will be required frequently, for otherwise the exhibits would not serve to complement academic instruction. However, both the original exhibits and the expense of revision would cost more than could reasonably be provided from a school's regular "hard" budget.

Wright-Fleming Institute of Microbiology, St. Mary's Hospital, London

This Institute is of considerable interest as it has a history somewhat comparable to that of the Institute in Toronto, with its close relationship between the Connaught Laboratories and the School of Hygiene. The Institute was founded by Sir Almroth Wright, a pioneer in immunology and serology. Later, it was enlarged and renamed to honor the discovery of penicillin by Sir Alexander Fleming.

There has recently been a substantial change in administrative policy. Formerly, the Institute made a number of vaccines, sera, and antigens for allergy testing. Almost all of this work has now been handed over to a commercial firm. The Wright-Fleming Institute now serves as the Department of Bacteriology and Immunology of St. Mary's Hospital Medical School, University of London. Institute funds are sufficient to increase considerably the staff and facilities of the Medical School Department. The Institute also supports some research in virology and immunology, which is not an integral part of the program of the Department of Bacteriology.

Professor Robert Williams, well-known for his research work and writings in the field of hospital infections, was formerly a member of the staff of the Public Health Laboratory Service, in charge of the Staphylococcus-Streptococcus Reference Laboratory at Colindale, Lon-

don. Professor Williams and his staff are actively engaged in teaching and research in medical bacteriology, virology, and immunology. Teaching duties are mainly directed to the undergraduate medical students. Professor Williams also takes part in teaching pathogenic bacteriology in the B.Sc. (Honors Microbiology) course of the University of London.

Professor Williams made a number of references to the need for operational research in hospitals. He felt that relatively little had been done, especially in the field of design of hospitals, operation of services for patients, and duties of nurses, orderlies, and physicians. His remarks related especially to the need for study of various facilities and procedures to minimize the risk of infection. He felt that little attempt was made to evaluate systematically a whole range of traditional hospital practices. Furthermore, he stated that there was a great need for research of an operational character into the National Health Service. This was a very valuable independent and unsolicited expression of opinion confirming what had been mentioned by many other people.

Laboratories of National Institute for Medical Research, London

The National Institute for Medical Research is the central laboratory of the Medical Research Council. It has many sections in two buildings in London, at Mill Hill and at Hampstead. Dr. Alick Isaacs, who is in charge of the Virus Section of the National Institute for Medical Research at Mill Hill, has several senior workers in his section studying many different problems in medical virology, both basic and applied. He also has many visiting scientists. These are mostly experienced people who have completed a Ph.D., or similar course, and are doing postdoctoral work.

Common Cold Research Unit of the Medical Research Council, Salisbury

This unit is housed in a hospital building constructed in the early days of World War II by Harvard University to study epidemic diseases. It was later taken over by the Medical Research Council and became the center for research into the etiology of the common cold and the various viruses isolated from common colds in human volunteers. The staff of the unit consists of four virologists, two physicians, technicians, nursing staff, and domestic staff.

It is quite an elaborate organization to operate, and derives its support from the Ministry of Health and the Medical Research Council. Maintenance is a responsibility of the Ministry of Works. There are a number of self-contained apartments where the volunteers live. Their food is sent in from a central kitchen. The unit is situated on the edge of the old town of Salisbury and the volunteers are allowed out for walks in the neighboring countryside, provided they do not converse or come close to other volunteers.

Ph.D. students are accepted here. This pattern is of great interest to North American universities where, in general, the graduate schools keep a very close watch on Ph.D. students and prefer them to work "on campus." In the pattern of the University of London, reliance is placed on the abilities of the student and his supervisor. There is no formal course work for the London Ph.D. The students can work with approved supervisors in a great variety of institutions. This plan has a great deal of merit. The keen student is not curbed by formal course work, much of which is somewhat routine in scope. Also, the great resources of research institutes can be utilized more fully than is the case in North America. Members of a busy university teaching department often find it difficult to pursue a subject in the depth that is required in modern research, and to provide Ph.D. students with the type of stimulus and encouragement they require, whereas an institute devoted to research in depth in some particular field can more readily do so.

London, England

VISIT TO THE MINISTRY OF HEALTH

Rapporteur: DR. EDWARD M. COHART

Sir George Godber, Chief Medical Officer, and his staff devoted the meeting with the Seminar group primarily to a discussion of three topics: the "Porritt Report"; reflections on the National Health Service; and public health training.

The Porritt Report *

The Ministry of Health agrees with the Report's conclusion that a National Health Service that costs some 900 million pounds annually cannot and should not be divorced from political control, even though some people have suggested that an independent corporation be created to run the Service.

The Ministry is not as happy about the Report's recommendation concerning the present tripartite management of health services. Hospital and specialist services are now administered through regional hospital boards; family doctor, dental, and pharmaceutical services through executive councils; and personal and environmental health services under the aegis of local health authorities. The recommendation that this arrangement be replaced by area health services boards that would coordinate all three programs is opposed for the following reasons:

a. The administrative changes would be of major proportions, more complex than those which occurred with the establishment of the National Health Service in 1948, and extremely difficult to put into effect. It would probably be impossible to achieve without a radical change of local government boundaries. The establishment of area health services boards might possibly come to pass over a very long period of time, but it is unlikely that this recommendation would be received favorably at present. The Report studiously avoids discussing this in any practical detail.

b. Placing domiciliary community services in the same administrative organization as the hospitals would probably be detrimental to the former because of the overriding effect of the very much larger hospital budgets. In addition, the different sources of financing for each service would undoubtedly create difficulties.

c. It would not be possible to elect such area health services boards in Britain. The public is not interested. In a recent poll 79 per cent of the consumers said they were satisfied with the National Health Service as it is.

d. Although the Report emphasizes cooperation, it separates environmental from personal health services in the local authority, and also separates the local authority's health and welfare services. It might create a difficult position for the medical officer of health in that it

* See p. 77.

would make him directly responsible for the environmental health services, but would divorce him from responsibility for personal health services because these functions would come under the aegis of the area health service board. Another criticism of the Porritt Report was that it failed to think out specific recommendations about occupational health services.

e. Perhaps the most pointed comments were to the effect that the cooperation that really matters was, within certain limits, not dependent upon the administrative structure, but was accomplished on a personal basis on the working level. In addition, under the present system, cooperative efforts were furthered through administrative offices on the local level. In the third place, cooperation is furthered by the cross representation of all concerned on the regional hospital boards and their various committees.

One of the visitors asked whether there was evidence of waste and inefficiency without adequate planning, and suggested that there would seem to be a need for a cooperative arrangement among the general practitioner, the specialist, the hospital, and the health visitors and preventive services under the local authority. In response, Sir George and his staff stated that there were outstanding examples of cooperative effort, with emphasis being placed upon the working together of health visitor and family doctor. It does not make sense to determine where the nurse works on a geographical basis; it makes more sense for the nurse to work with the doctor and it does not cost more. Fifty per cent of the general practitioners in Oxford, for example, now have health visitors attached; Hampshire has even more. This arrangement has become acceptable, and will probably become the rule in the future. The assignment would probably be in the ratio of one health visitor to three general practitioners—there are currently about 8,000 health visitors and 22,000 general practitioners.

*Reflections on the National Health Service **

a. *Relationships of the Ministry of Health with the professions*—Generally, the Ministry has tried to steer clear of any interference with clinical practice. The closest the Ministry has come to departing from this policy was the suggestion it made that hospitals permit much freer visiting to sick children. The technique is not to issue a directive,

* Two important references cited were: *Hospital Plan for England and Wales*, Command Paper 1604. (Jan.) 1962; and *Health and Welfare: The Development of Community Care*, Command Paper 1973 (April) 1963.

but to have the appropriate professional advisory committee make a recommendation to the Ministry that something be done. The Ministry then publicizes the recommendation; many recommendations are concerned with "humanizing" clinical practice.

b. *Hospitals*—The Ministry is currently operating its hospital program within the context of the recommendations set forth in the Hospital Plan for England and Wales. The Ministry has more than 3,000 hospitals, many of them very old. In the early years of the National Health Service, economic necessity forced the Ministry to "patch" these at a cost of about 10 million pounds a year. Then the Ministry began to develop an over-all hospital plan for the country on the basis of recommendations that it had requested from the Regional Boards. On the face of it, the plan calls for a replacement of buildings over a period of 15 to 20 years at an annual cost of about 50 million pounds. A district hospital (serving a population of about 250,000) will be the key institution. However, the real meaning of the plan is to be found in the concentration of all necessary specialist services in one place—the district hospital.

The Plan hopes to place a sufficient number of psychiatric beds in general hospitals so that the old, outmoded mental hospitals may eventually be abandoned. It envisages the need for 1.8 mental hospital beds per 1,000 population in 1975, compared with the present 3.4 beds per 1,000. This is predicated on the hope that there will be fewer long-stay psychiatric patients, which in turn depends on more active treatment on an outpatient basis and the readiness of the public to accept patients in the community.

The Ministry has no standard plan for all the hospitals, but does set limits as to space and costs, and also requires the use of some standardized equipment. The Plan also envisages the closing of many inefficient small hospitals, though there has been opposition to this proposal.

There are some 9,000 specialists working in the hospitals and about 10,000 junior staff under them. All hospital staff members are salaried. One of the problems is how to recruit more British physicians to fill junior staff positions. Currently about 40 per cent of these positions are held by foreigners. Another problem relates to the quality of graduate training in hospitals, especially in connection with career goals.

c. *The general practitioner*—The country started with too few general practitioners and it still has too few. The average general

practitioner's list is 2,250, but 27 per cent of the population have doctors with lists of 3,000 or more. Although the number of general practitioners has increased by about 17 per cent since the introduction of the National Health Service, the average size of the list has fallen by only about 10 per cent. Between 5 and 10 per cent of the doctors are lost by emigration, but this proportion is no greater than that lost in previous years to the colonial services. A much more serious loss is that of women graduates in medicine who are not in practice. New medical schools will be needed, as existing schools probably cannot take many more students.

In the beginning there was a sharp division between the general practitioner and the specialist that was detrimental to the former. To counteract this, the Ministry is trying to encourage group practice by offering positive financial advantages to partnerships, such as interest-free loans for equipment, building, etc., and is also establishing more open-access diagnostic centers. However, it is still true that the general practitioner who attempts to improve the quality of his practice by an investment in equipment or building, or by employing personnel is all too often penalized financially in that he does not recover what he puts in.

The real problem in general practice, however, is the continuing education of the general practitioner. Sir George thinks the Ministry's most important task in the next 10 years is to develop programs of continuing education in every district hospital. This program should also serve to minimize the sharp division between the general practitioner and the specialist. At present, about one in five general practitioners is provided with free postgraduate courses, including the provision of locum tenens and the payment of expenses.

Public Health Training

There is poor recruitment of bright young men to public health. There is also a lack of research in public health practice and no university centers currently exist to develop research of this kind.

Some medical officers of health, especially in the rural areas, are primarily concerned with environmental health, but those in the urban areas are increasingly concerned with medical care. There are 1,300 to 1,400 M.O.H.'s, mostly in the rural areas, but there are 146 local health authorities that are concerned with the implementation of the health and welfare plan. In addition, there are hospital people who need much

more preparation in medical care administration. The country needs 30 to 40 bright young men to undertake top-level public health training each year.

The D.P.H. is deeply entrenched as a public health degree. The Ministry is not satisfied with D.P.H. training as preparation for top-level people to work in local authorities, hospitals, and government service. The British student needs more emphasis on medical care, and General Medical Council regulations permit a good deal of latitude in this respect.

London, England

MEETING WITH SIR ARTHUR PORRITT

Rapporteur: DR. EDWARD M. COHART

Sir Arthur Porritt made a few introductory remarks regarding the Porritt Committee, appointed in November 1958 to give an opinion on the organization of the nation's health services. It was entirely medical, sponsored by nine bodies that nominated persons for membership. The members of the Committee were not official representatives of the sponsoring bodies. Therefore, its Report will be submitted to these nine organizations for their official action. Then the positions of the sponsoring bodies will be correlated, and a final report transmitted to the Ministry of Health.

The Committee decided early in its deliberations that the benefits of the National Health Service far outweighed its shortcomings and that the task of the Committee was therefore to look for ways to improve it. A second decision was that the general practitioner should be the nucleus of the health service, with the hospital, specialists, and public health services as adjuncts. The third early decision was that it is necessary to coordinate the services of the family doctor, the hospital, and public health, which now exist as three distinct and separate parts.

The National Health Service is not comprehensive, since it is limited by available funds, but it is first class as far as it goes. The Committee

makes two major administrative recommendations regarding the combination of the three parts of the Health Service and the continuation of private practice, but makes no attempt to offer a detailed blueprint as to how these should be carried out. The Report recommends area health boards, each based on a geographic unit, sufficiently small so that all three parts of the Health Service can be combined to work together. The Government, in its Hospital Plan, has recommended the district hospital as the basis of planning. These district hospitals could readily be worked into the area health board's concept.

The second item emphasized by the Committee is private practice. The Committee believes that a vigorous private practice alongside the National Health Service is essential to maintain the quality of medical care. Private practice has been growing in recent years, financed by the rapid growth of private health insurance.

There is a shortage of doctors in the United Kingdom. More doctors are required for an increasing population, the Armed Services, industrial medical service, group practice, and for export abroad. Undergraduate training is mainly a concern of the universities; postgraduate education is the concern of the teaching hospitals. There is a need for much more postgraduate training. Many of the larger non-teaching hospitals should become teaching hospitals.

At this point, discussion of the Porritt Report was opened by Professor Walton, who felt that the Report still put too much weight on the hospital and that the area plan would make it difficult to maintain contact with the community. He was concerned about what would happen to the local authority under the area plan.

In response to a question about how one could reconcile the results of a public opinion poll in which 85 per cent of the people said they were quite happy with the National Health Service, with the fact that many people were switching to private practice paid for by voluntary insurance, Sir Arthur said that two million people now have voluntary insurance. Middle-income people are shifting over to voluntary insurance, which is mostly for hospital inpatient and outpatient services. Not very much is known about this phenomenon because the National Health Service is doing virtually no operational research.

Another question directed to Sir Arthur was whether any pilot studies had been planned for the area health proposal, especially with reference to local authorities. Sir Arthur said that no study had been planned. Local authorities would have to give up their personal health

services and keep the environmental services. Sir Arthur thought that the medical officer of health was the best person for epidemiological investigation, for coordination of personal and social services for health, and as consultant to the area health board. He noted that the most favorable responses to the Porritt Report had come from the M.O.H.'s.

When asked whether some of the local welfare activities that directly relate to health should be incorporated in the area health program, Sir Arthur said he thought this could best be done by making the family doctor the hub for coordinating health and related welfare services. He thought this might be facilitated if the general social worker under the welfare authority also in some way came under the area health consultant. Prof. Walton pointed out that in about one third of the local authorities, the M.O.H. was also the welfare officer, that this practice was becoming more common, and that he favored it.

Two comments from the Seminar participants were that it was bad to divorce environmental health services from personal health services, and that the most important contribution of the Porritt Report was its emphasis on the need for bringing the three health services together for comprehensive care, an objective that could not be achieved under the present system.

Some of the visitors were concerned over the fact that there would seem to be "no individual with both medical and administrative training to run the area medical board." Sir Arthur pointed out that there was a long tradition of combined lay and medical boards, with medical consultants and a lay executive administering the regional boards with success. He said that this sort of thing was much more common in the United Kingdom than in the United States, and that medically-trained administrators were in short supply for a number of reasons, among which were the low status, the poor pay, and the belief that medical administration was a dead end.

The small hospital within ready geographic reach is vitally important to the general practitioner, even though it might not be as economical as the larger regional hospital. Of course, if there were a large regional hospital near his practice, the general practitioner should have beds there, but otherwise the general practitioner hospital of 12 to 40 beds is the backbone of the general practitioner service. In a way, this is similar to the concept in the United States of the small peripheral hospitals feeding into the base hospital.

A number of the Seminar participants were concerned about maintenance of quality of care under the system of small general practitioner

hospitals. In response to a question about surgery, Sir Arthur said no surgery would be performed in these hospitals, because they would have no facilities for it. In response to a statement that quality of medical care could best be maintained through specialist supervision of and consultation with the general practitioner, Sir Arthur stated that operational research was needed to determine at what level certain types of medical practice could be improved. He stated that, under the British system, the specialist must be hospital-based, since he would have no facilities otherwise. Diagnostic centers and home consultation would also tend to improve the quality of service. Furthermore, the Report recommends that the general practitioner call the consultant at home, that frequent pediatric and obstetric consultant visits be made to general practitioner beds in the hospital, and that provision be made for easy transfer of patients to consultant services.

In response to a question, Sir Arthur expressed his opinion that occupational health services should be set up under the Ministry of Health for smaller industries, but that the larger industries should continue to run their occupational health services privately.

The Report recommends that the maximum load for a general practitioner be limited to a population of 2,500, instead of 3,500 as at present, and that this be accomplished without any loss of income to the practitioner.

Rome, Italy

VISIT TO THE MINISTRY OF HEALTH

DR. MYRON E. WEGMAN

This visit consisted largely of discussions with Dr. F. Graziano, Deputy to Professor Saladino Cramarossa, responsible for training programs in the Ministry. There is no institution in Italy which could properly be called a school of public health. For a long time after World War II public health was carried out only as a part of other

ministerial functions, but now a full-fledged Ministry of Health has been in existence for less than five years. Its training programs are, therefore, relatively recently developed and consist chiefly of courses developed on an *ad hoc* basis when new groups of public health officers are brought in as the result of civil service examinations. The Ministry has made use of these examinations to assess those aspects of preparation which were insufficient, and has tried to develop its courses to meet these needs.

An example is a course for provincial physicians of the second class, which was in progress at the time of the visit to the Ministry. This five-week course is divided into two main portions, one on general and special technical aspects, and one on administrative aspects. After an introductory lecture by Professor Cramarossa, the rest of the course is broken up into series of individual lectures, sometimes in charge of the same person for two or three sessions, but with a large number of speakers participating. Some of the subjects covered are: orientation in demography and public health statistics; techniques of public health education; problems of enterobacteria; school health supervision; anti-malaria programs; current hospital practices; nuclear medicine; and zoonoses. In the administrative part, which is much shorter than the others, the lectures deal with official regulations and procedures in the Ministry and in the rural areas. About one week is devoted to practical observations and to visits to a pharmaceutical establishment, the Higher Institute of Health, a poliomyelitis readjustment center, one of the hygienic installations in the city, and a blood bank.

Similar programs are designed for *guardie di sanità* and are held at more frequent intervals. In general, they are only two to three weeks long, although some may be as long as two or three months. Engineers, sanitarians, nurses, as well as some of the other public health personnel in Italy are admitted to these courses.

With regard to training physicians, Dr. Graziano pointed out that Professor Vittorio del Vecchio, of the University of Rome, has developed in the last two or three years a graduate course in preventive medicine, which is becoming increasingly popular. Apparently no specific degree is granted, nor does it appear that completion of this training necessarily gives a physician greater advancement in his career. Dr. Graziano did say, though, that a person who had completed a two- or three-year program with Professor del Vecchio would be entitled to call himself a public health specialist and that this in itself might be enough of an inducement to a person to undertake the training.

This is like the pattern which has been developed in the clinical specialties in Italy, and Dr. Graziano thought it unlikely that a specific degree program would be forthcoming in the immediate future.

In summary, the Ministry's training program may be classified more in the nature of relatively brief pre-service and in-service orientation than anything that could properly be called a school of public health. On the other hand, there seemed to be some real interest in the development of full-scale training. Perhaps with a little outside stimulation, a good deal more could be developed along these lines.

Appendix

ITINERARY OF THE SEMINAR

I. Entire Group

April 22-23	Edinburgh, Scotland Usher Institute
April 24	London, England Ministry of Health
April 25-26	London, England London School of Hygiene and Tropical Medicine
April 28-30	Eastbourne, England Annual Meeting of the Royal Society of Health
May 2-3	Leiden, Netherlands Netherlands Institute for Preventive Medicine
May 4-8	Geneva, Switzerland World Health Organization
May 9-10	Zagreb, Yugoslavia Andrija Stampar School of Public Health

II. Elective Visits

May 13-14	Hamburg, Federal Republic of Germany—Institute of Tropical Hygiene, and School of Public Health Drs. Philip R. Beckjord, James A. Crabtree, L. S. Goerke, Ernest L. Stebbins, John J. Wright
May 13-15	Rome, Italy—Ministry of Health Dr. Myron E. Wegman
May 13-17	London, England—Educational and Research Establishments Dr. A. J. Rhodes
May 13-17	Rennes, France—Ecole Nationale de la Santé Publique Drs. Jules Gilbert and William H. Forbes
May 15-16	Gothenburg, Sweden—Scandinavian School of Public Health Drs. Philip R. Beckjord, James A. Crabtree, L. S. Goerke, Ernest L. Stebbins, John J. Wright