

LECTURE

Public Health - The Vision and the Challenge
An Attempt to Analyse the Issues and Possible Solutions

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Part 1

Session Chairman Dr. Yanagawa: It is my great pleasure to chair this most important lecture to be presented by Professor Holland titled "Public Health - The Vision and the Challenge" at this Third British Epidemiology and Public Health Course. I would like to briefly introduce him. As you all know he qualified from St. Thomas's Hospital Medical School in 1954 and since then his entire career has been in research in the fields of epidemiology and public health. He gained experience in these fields at the London School of Hygiene, John Hopkins University School of Hygiene, and many other places in the world. He was a chairman of the Department of Public Health at the United Medical and Dental Schools on St. Thomas's Campus until 1994. I was strongly impressed by his achievements when I attended his retirement party at St. Thomas's, where I realized that many epidemiologist and public health workers are his students. As you all know he played a leadership role in the International Epidemiological Association as its president. He also is the editor of the Oxford Textbook of Public Health. I must say that all of you are very fortunate to have this opportunity to directly listen to his talk. Dr. Holland, please.

Dr. Holland: Thank you very much Professor Yanagawa for your kind introduction. It is a very great pleasure and a very great honour for me to be present again at your course and to present this lecture.

I will not read out from the book we wrote, but will try to discuss some of the issues that are described in it. I would like to divide the morning into two parts. The first part will deal with the historical and factual aspects, and then the second part will attempt to bring these together and try to see where perhaps we ought to be going if we are to be effective in improving the health of the public.

The reason for my interest in trying to describe the development of public health in the United Kingdom was because I have a hypothesis, that public health in the United Kingdom had lost its way in the mid-1930s. There was a change in the organisation of health services in 1930, when the institutions that were under the administration of the Poor Law were taken over, in large part, by local authorities. These institutions were mostly hospitals, and the medical officer of health, employed by the local authority, became responsible for the administration of hospital care and clinical care. This took up most of his time and he thereby forgot what his major role was, which was to improve the health of the population.

In trying to determine whether my hypothesis was correct or not, one had to look at the historical development of public health in the United Kingdom. I must emphasise that I will describe only conditions common in Great Britain. But, in correspondence with Professor Aoki in Japan about my book, he pointed out that some of the issues I raised had also occurred in Japan, as the result of the Meiji regime, which in his words, destroyed much of the public health structure that had existed in Japan until that time.

Before the First World War, there had been five major issues that were of concern. The first was the rapid industrialisation that occurred during the 19th Century, that is, the development of factories, coal mines, etc. This meant that the population moved from a rural economy to an industrial economy. They moved from the countryside to the town. This happened very rapidly, and one of the things evident to all was the degradation of the environment as a result. Secondly, the conditions under which people lived are not really imaginable nowadays. Streets were foul and full of waste and bad water. There was no such thing as sewage. People dug holes in their back yard and put all their rubbish there. If you look at pictures, there...
were rows of mounds of debris which stank, particularly in hot weather.

Thirdly, housing was appallingly bad, in most cases. There was no such thing as in-door toilets or running water. Running water was only introduced in the latter half of the 19th Century. Houses were grossly overcrowded and usually back to back so that people who lived in them, particularly in the towns, were likely to be infected if anyone had an infection. One of the things often forgotten, is that housing in rural areas was just as bad as in the urban areas. There was just as much overcrowding and the houses were just as bad as in the towns. This bad housing was exacerbated by the people who put them up. They wished to make as much money as possible and therefore used very shoddy methods of construction.

Fourthly, people often could not afford to eat properly and the food they bought was often adulterated, that is, for example, mixed with the dropping of rats, mice, and even arsenic to make it look a little better (whiter). So food was not only inadequate but also contaminated. The evidence of the poor nutrition of the population was brought to notice in the Boer War, at the end of the 19th Century and the beginning of the 20th Century. This was the time when England fought against the Boers in South Africa. Between a third and two-thirds of the men who volunteered to serve in the army were rejected because they were so poorly nourished that the army did not want them. This raised for the first time major concern about the poor nutrition in Great Britain.

And fifthly, medicine itself had little to offer. There was very little effective medical care that could be provided for individuals who became ill. The only effective preventive measure available was smallpox (or cowpox) vaccination.

These very bad conditions led to a great deal of concern and unrest within certain groups of the population. They felt that they had to do something to improve matters. If any of you read Dickens you will see descriptions of what life was like and what people tried to do to improve things.

The solutions to the problems at the time were considered three-fold. The most important matter was political. That is, the politicians had to be persuaded that they needed to improve the conditions in which people lived. This was not an easy task and in the history we described some of the battles that various people such as Chadwick, Snow and others had in persuading the politicians that matters had to change, that people had to have clean water, that sewage removal had to be provided, etc. It is important to recognise that this was a highly politicised process. If you think politics are difficult now, I think that it was just as difficult in the 19th Century in trying to improve matters for the population. Opposition to improving the conditions came from the establishment, from industrialists, from wealthy people in general, because they did not see why they should provide better housing, better food or clean water to people who had not had them for the last 100 years or more.

Secondly, society had to be mobilised in order to influence the political process. There were a variety of groups that tried to influence the politicians to improve matters.

Finally, the medical profession had to be mobilised since they looked after the sick. However, it is important to recognise that the medical profession was usually poorly trained. It was only in the middle of the 19th Century that any form of formal registration of the qualification and thus the standards expected of doctors came. Thus only since that time has there been any cadre of really high grade people around to care for the sick.

The improvements that were advocated and introduced by such people as Chadwick, Snow and others were very easy to see. It was very easy to demonstrate that having clean water, having a sewage system, and having good food improved the health of the population. Demonstrating an effect for the activities of public health in the last century was relatively easy. It is very much more difficult now to show what we do is effective in improving health.

The major changes that occurred as a result of improvement of health were firstly changes in demography. I have shown in one of the early tables in the book the growth of the population in the United Kingdom. It increased somewhere from around eight or nine million to about 30 million over a period of 100 years, which is quite a large increase. That was largely due to a reduction in infant mortality and maternal mortality as well as diminution of mortality in middle age. This was accompanied by ageing of the population. Whereas in the last century most people did not live beyond age 40 or 50, they began to grow older and expectation of life, which is not quite as good in the UK as in Japan, was almost the same in the late 1970s and 1980s for men and women.

With the growth in industrialisation there, was growth in prosperity. People were better off and as a result of this they became disgusted with the filth that they had to live in. They wanted to live in better houses, with greener fields around them, with more gardens, and with a clean water supply. This was accompanied by what I call the behaviours of affluence. One of these is cigarette smoking, as described by Professor Hedley earlier. It is important to recognise that, at the beginning of this century smoking was a habit of the upper classes and in the 1930s there was a very clear social class gradient in mortality of, for example, coronary heart disease, they were more common in the upper social class groups and least common in the lower social class groups. Now it is the other way around. The upper social class groups have stopped smoking while the lower social classes have continued to do so.

In addition, there have been changes in diet. We now eat very much more than we used to eat, so this is the second major change in the diseases from which we suffer. We no longer have the problems of under-nutrition, but now have problems of over-nutrition. In the past, most work was physical and there was not very much public transportation so peo-
people had to walk to work, and therefore much exercise was taken both as a recreation as well as during work. Now that is relatively uncommon. We all go to work in a car. We usually, as a recreation, sit in front of the television set and we rarely go and play physically demanding games. So that the problems now are of less movement and less exercise.

There has also been a major change in attitudes towards each other. We now believe in democracy. We no longer respect authority. We all believe that we have an equal voice. That can lead to quite major changes in the way people behave and in the way they adhere or comply with treatment.

Another change has been in the Poor Law. In the past if you were unemployed and had no money, you were incarcerated in an institution and had to do compulsory work. If you could not afford to go to a doctor or were ill, you had to go to the Poor Law institutions, which were pretty bad barrack blocks. If you were lucky you had someone to look after you, and if unlucky you had no one to look after you. If you were mentally ill, you were locked up in large barrack blocks, first to protect yourself from yourself as well as for protection of others whom you might harm.

Nutrition has gradually improved. The importance of nutrition is perhaps best demonstrated by an experiment conducted by M'Gonigle. He was quite a remarkable medical officer of health at Stockton-on-Tees, a small town in north-east England. M'Gonigle was concerned about conditions in which people lived and he was particularly concerned about housing. He persuaded his town council to do an experiment in which they would move half the people from a deprived part of the town to a rebuilt part where they would have better housing with proper sanitation and other facilities, while the other half would be left in their old slum dwellings.

To his surprise, after three or four years, he found that the individuals who were moved to the better, new housing had higher mortality rates than the individuals who had remained behind in the filthy old dwellings. Being of an inquiring mind, he decided to investigate this in greater detail. It was not a true randomised controlled trial and the number of degrees of freedom was only one because the people were moved en bloc, one group staying behind and the other moved, so that you can not apply any proper statistical test to determine whether the differences were statistically significant or not, but the mortality rate in those re-housed was worse than that of those who stayed behind.

Eighty percent of both groups, that is, both those re-housed and those who had remained behind, were unemployed. Their sole income was their unemployment benefit. They were thus comparable. However, the rent of the new housing was twice as great as that of the old housing - about four shillings a week for the old housing and about nine shillings a week for the new housing. Even in the 1930's four shillings was not very much. However, when he examined more carefully what the people spent their money on, M'Gonigle found that the individuals, who were re-housed and therefore had to spend more money on housing, spent less money on food and in particular on food containing protein, so that the nutrition of those who were re-housed was worse than that of those who stayed in the old housing, thus perhaps suggesting that there was an association between nutrition and mortality even in the 1930's.

The major problem throughout the period up to the beginning of the Second World War was poverty. That was really the major problem which influenced health. The response of society and public health in general were the following:

The first was to improve education. Education became compulsory first for children up to the age of twelve, and then to age of 15 and then 16 years.

The second response was to improve housing. To illustrate the importance of considering housing policies, in 1925 the government changed and a man called Chamberlain - (Chamberlain was Prime Minister at the outbreak of the Second World War in 1938-1939 and was a very influential politician throughout the beginning of the century) - was offered the second most senior post in government, Chancellor of the Exchequer. He declined and instead asked to be made Minister of Health.

The Ministry of Health, created immediately after the First World War, was also responsible for housing. There is no clear proof, but I strongly suspect that Chamberlain felt that he could do more by becoming responsible for housing policy than by becoming responsible for the Exchequer. It could be that he was a realist and reckoned that England was going bankrupt and that he would not be able to do very much to revive the economy while he might be able to do something about housing. Another possible reason was that he and his family had been very prominent in local authority in Birmingham and through his knowledge of local authorities he wished to improve the powers of local authority rather than that of the central government.

The third response related nutrition. I have described the importance of nutrition in maintaining health. This was evident through a variety of factors such as, for example, growth of children, presence of rickets in children, and under-nutrition generally. There were a series of different responses, but no coherent policy to improve nutrition in the United Kingdom until the beginning of the Second World War. One of the greatest problems in the First World War had been problems of food supply due to the activities of U-boats since a great part of the food consumed in the United Kingdom had to be imported. There was no real equitable method of distribution of food supply in the First World War until almost at the end.

That lesson was learned, and when the Second World War started, rationing was almost immediately introduced. Rationing meant that food was supplied equitably. That is, you were entitled to a certain amount of meat, butter, sugar, and so forth. There was a points system for such foods as tinned ham. To my mind and many others, that was probably the most
important factor which improved the health of the population of Great Britain, for the first time everybody got what they needed to be properly fed, since food was cheap - being controlled in price - and so even the poorest sections of the population could afford it and they got the same amount as the rich. The rich could not get more, except on the black market, which was not all that important, except at the beginning of the war.

The fourth factor brought in, as a result of becoming prepared for entry into the Second World War, was a system of surveillance of disease. There had been rudimentary systems of surveillance of infectious diseases in the United Kingdom in the 19th Century and early part of the 20th Century, but a coherent method of surveillance was introduced in 1938-1939 in preparation for what was seen clearly to be on the horizon, and the need to be able to cope with wartime conditions.

The fifth factor was what I would call the bad effects of the introduction of microbiology or bacteriology. People forget that epidemiology suffers - even now - from a "war" between microbiology and epidemiology. In microbiology you believe that, if you identify the organism, you can actually do something about the disease. You forget that this is actually only one aspect of becoming ill. For example, the majority of cases of tuberculosis occur in those who are poor as well as having been infected by the tuberculin bacillus, and you forget that disease is not caused only by infection by a bacterium. So one of the major problems was the war between the ascendance of the technical ability to identify organisms compared to the need to control the environment and disease - the latter began to be considered more seriously.

The sixth problem that faced public health was the confusion of roles. By becoming responsible for hospitals one became a commander of resources and men. Hospitals employ large numbers of people, if one is in charge of a hospital one is responsible for a large amount of money. People believe that responsibility for large amounts of money confers power - and one has more power if in charge of an institution than doing other things in public health. Therefore, my thesis is that public health began to lose its way because, as public health became responsible for the provision of clinical services, it forgot what it really needed to be able to do, namely to control disease.

In addition, public health doctors came into conflict with other members of the medical profession. We had a television series, which was called Dr. Cruickshank’s Case Book. The latter was a general practitioner, and was always in confrontation with his medical officer of health, called Dr. Snoddy, who was depicted as very bureaucratic and rather unsympathetic. If you read the history books, you see continuously throughout this century, that there has been conflict between public health practitioners and general practitioners and hospital consultants.

The conflicts were of finance between general practitioners and public health practitioners. The local authorities, because of their role in looking after the poor, began to provide clinical services, e.g. immunisation services for mothers and children. Poor people had to pay (very little), but they were provided by public health. In some places even clinical services for children and the elderly were delivered. This, of course, took away "trade" from the general practitioner.

In the same way, there was conflict between public health and consultants or hospital specialists in that hospital specialists did not feel that the public health administrator knew anything about, for example, laboratory services or x-ray services or which patients should be treated and what treatment they should have. So they disliked being ordered about by the medical officer of health about what services should be provided.

As I pointed out my original hypothesis was that the take over of the hospital by local authorities from the Poor Law had been the death of public health at that time, and that they neglected important health issues. All of what I have said thus far reinforces my belief that my hypothesis was correct.

I went to speak with Sir George Godber, who had been Chief Medical Officer in the Ministry of Health from the late 1960’s to the late 1970’s. He was in the Administration throughout the introduction of the National Health Service, he had qualified in public health before the Second World War. To my mind, he is the most important as well as best Chief Medical Officer that we have had in Great Britain in this century and there is nobody who has approached him in ability or in stature since or before that time. He is still alive and is 84. I have known him for a very long time, and we still correspond regularly. His hand-writing is far clearer than my own.

When I went to discuss my hypothesis with him, he was, at first, quite appalled. During the latter part of his tenure as Chief Medical Officer, he had been particularly anxious to improve medical administration and medical management and he had to some extent been responsible for the involvement of public health doctors in medical management, particularly in the 1970s. So I realised that when I was putting my hypothesis to him, I would be challenging some of the things he believed in. However, he is a very remarkable man, after a three minutes pause he said that he thought I was right and that this had caused 20,000 deaths! That is, the take over of Poor Law hospitals by medical officers of health and the medical health officer becoming involved in medical administration had been responsible. I looked at him quite amazed by this, and asked what he meant. He said diphtheria immunisation was not introduced as an universal measure in England until 1941. It had been known in 1930 that diphtheria immunisation was an effective preventive measure. Between 1930 and 1941, there were 20,000 deaths from diphtheria in England. I went to check on these figures he had given and he was exactly right.

He said that the ability to introduce free immunisation for diphtheria had been present since 1875. There was a clause in the 1875 Public Health Law that enabled local authorities to introduce free immunisation to the total population. Because the medical officer of health had, as he put it, "taken the eye off
the ball", this was not introduced until 1941, during the war, when a clerk in the Ministry of Health discovered this clause and persuaded the government to introduce it. He said that this had been a major failure of public health.

We now come to the Second World War.

There was a vivid contrast in the behaviour of government in the First and Second World Wars. In the First World War, there was little planning as to what would happen at the end of the war. Although one of the major problems was housing which was very poor, but there was very little planning of what could be done. Everybody just wanted the war to end. In contrast, in the Second World War, even at the height of the problems we had in 1940-1941, planning was taking place to improve the social conditions of people after the war.

If you wish to be cruel you can say that this was done in order to provide the men who were fighting for England the hope that they would have a better life when they came back from the war. If you are less cynical you can say that this was because of the recognition that things could not return to what they were before the war. Which ever way, there was planning for introducing health services, introducing a welfare system, improving education, improving housing, etc. The Beveridge report was written and published at the height of the Second World War. In spite of the fact that many thousands of copies were printed, it was sold out within a couple of days. There was a coalition government and even though Churchill did not like some of the provisions that were put forward, such as on education and health, he accepted them and Parliament passed the necessary measures so that things would be better after the war.

The major change in terms of health, was the introduction of the National Health Service, the Act for which was passed in 1946 and the National Health Service was introduced in 1948. I do not intend to describe what the National Health Service is or what it did, but there was one very major problem that occurred as a result of the introduction of the National Health Service. It had always been envisioned by medical officers of health and local authorities that health services would continue to be under the control of local authorities. This did not come about. There were many reasons why it did not happen. Instead the medical officers of health were separated off from the remainder of the medical profession, and the National Health Service was concerned with essentially two parts only: general practitioners, hospital services, and not public health services.

The separation of the medical officer of health from the remainder of medicine had a number of profound effects. Before the Second World War, the recruitment to become a medical officer of health was good. There were a number of reasons for this, one of which was money. The medical officers of health were paid a salary, whereas general practitioners and hospital practitioners had to earn fees, and often general practitioners and hospital consultants were actually very, very poor because people could not afford to pay them. But at least as a medical officer of health, you got a stable salary. So, if you were not very wealthy, there were real reasons why you might choose to become a medical officer of health rather than to be a general practitioner or a hospital practitioner.

Secondly, being a medical officer of health offered great challenges. After all, you could do a lot more through public health measures before the Second World War, which was before antibiotics, steroids etc., and before any effective methods of treatment were available. Much could be done through cleaning up the environment, through controlling water supplies, etc. It was a much more challenging job than being a general practitioner, who could do nothing but to put people on the head and give them some coloured water made to smell nice.

After the Second World War, however, the difference between curative medicine and public health was exacerbated as curative medicine now offered real challenges and offered methods of treatment whereby you could be doing good. Therefore, many of the good graduates became clinical practitioners rather than public health practitioners. There was a major effect both in numbers of individuals entering public health as well as the quality of those who entered at that time.

At the end of the 1960s, there was recognition that the separation of the three parts of the health services was really contra- productive, and in 1974 all health services were united under one administration, including public health. The former medical officer of health became known as a district community physician which caused major problems for these individuals.

The term community medicine, which was introduced in 1969, was a compromise. People wanted to get away from the term public health because public health was associated with sewers and drains, which were not considered very glamorous. Epidemiologists had separated themselves off from public health service practitioners, who they felt were doing mundane tasks and were only concerned with bureaucracy. So you had to bring them in. There were those who were concerned with medical administration and who were separate from the public health medical officers by that time. There was a great deal of confusion and eventually the Royal Commission on Medical Education decided to suggest the term community medicine as a reasonable title.

The powers of the medical officers of health had already been grossly diminished in the late 1960s. They had been responsible, for example, for the social services in local authorities and for environmental health services. These were taken away from them because social workers wished to have their own profession, as did the environmental health officers, and did not wish to be under the control of a doctor. The whole profession of public health at the beginning of the 1970s was confused and demoralised. They eventually came together under the Faculty of Community Medicine. The district community physician served on the management team of a district, area, or region in order to look after public health as well as medical administration.
However, the term was confusing. Other doctors thought they were there to provide services within the community, while the general practitioners thought they should not be concerned with providing clinical services, and did not wish them to be involved in providing clinical community services. It was only rectified with the return of the title of public health in 1988-1989 on the publication of the Acheson Report.

Session Chairman Dr. Yanagawa: Thank you very much Dr. Holland. Dr. Holland clearly outlined the development of public health in the United Kingdom so that I am sure you all understood very well. If anyone has any question or comment, please do not hesitate.

Dr. Asao: Thank you Dr. Holland. My question concerns the definition of social workers and the conflict between community medicine officers and the social medicine professionals.

Dr. Holland: Until 1971, there were what was known as social workers. Social workers were divided into two groups. The first group were what was known as hospital almoners who were responsible for two things. They were a remnant of the old hospital service where they went around the patients in a voluntary hospital to find out how much they could afford to pay for hospital treatment, but they were also responsible for helping the patient to obtain social services. The second group of social workers were employed by local authorities. They were a large number of different groups. There were, for example, social workers concerned with mental health, social workers concerned with housing, social workers concerned with children, social workers concerned with the resettlement of criminals, etc.

The social work profession, that is, those individuals responsible for social work considered that they all had the same generic need for training. Therefore, they wished to institute a form of generic training for social work, and then only after the generic training did you obtain training in the specialist branches such as looking after psychiatric patients or looking after patients in hospitals. As a corollary of that, they wished to have a properly controlled profession in the same way that medicine was controlled so they wished to create a council - I think it is now known as the Council for Social Workers. They wished to be in charge of themselves, whereas before, the doctor was responsible for the social workers, and the social worker was accountable to the doctor. There was an inquiry called the Seebohm inquiry - and it agreed with the suggestions of the social workers. The medical officers of health put forward extremely bad evidence to the Seebohm inquiry, but their advice was not accepted and social workers were separated off entirely from the medical profession.

Whether it was a good or bad thing is still open to argument although I feel quite clearly that it was a bad thing. Dr. O'Brien do you wish to comment?

Dr. O'Brien: Yes, I agree with you. I think it was a bad thing. I will talk more about it tomorrow because the cycle is returning under the present government in the United Kingdom.

What I would like to do is to pick up two points from your talk so far. You have mentioned war, three different wars, regularly repeatedly so far. War and violence are among the traditional trio of enemies of the public health services. But in fact history dictates that war is often a stimulus to public health measures. You referred to the fact that recruits to the British forces in the 1900's were unfit for the sea passage to South Africa let alone unfit for the fighting and that one wonders for nutrition in the United Kingdom as a result of legislation which followed. The First World War gave rise to town planning, if nothing else, which also helped with the housing problem of returning solders.

The Second World War, of course, gave rise to two issues which had impact on public health. The first was the introduction of immunisation in 1941 that you referred to. I personally examined the first cohort of children in the United Kingdom to receive diphtheria immunisation and I can still remember it vividly to this day. The National Health Service, which followed, was another consequence of that stimulus to public health. Both of them fraught with selfish government reasons. The first one, immunisation, was to make sure that there would not be an unnecessary burden of ill health while the main efforts of the country were directed at the war. The second one was, if the war lasted long enough, to insure that recruits were fit to go to fight, bleed and die. This is not unique to the United Kingdom. If you look at the history of public health developments, most countries across the world can cite the same or similar examples.

The second point I want to make is about your reference to the excess deaths from diphtheria because of the delay in introduction of immunisation. I think, as you described it, you were very critical of the public health practitioners at the time, but I think that criticism can be directed in two ways. It is absolutely correct that the public health practitioners did not necessarily take up the permissive powers which were in the legislation, but by the same token the chief medical officer of the day did not go into the government at the time to use any mandatory powers to insist that such legislation be introduced before 1941. So, these are two, I think, valid criticisms.

Dr. Mizushima: I am curious to know about the function of the Faculties of Public Health Medicine in the United Kingdom. Is it that this has a real relation to the qualification of the public health physician? How do you provide a system of training and also certification in public health medicine? I think we need such a system in Japan. Can I have your comment?

Dr. Holland: I will first reply to the point made by Dr. O'Brien about the role of the Chief Medical Officer of Health.
and the Ministry of Health versus the medical officer of health in the country. In the 1930s the two were synonymous in that the majority of medical officers in the Ministry of Health were actually public health medical officers who had graduated from local authorities. There were many examples of Chief Medical Officers having been local authority medical officers. I was making a general criticism of the public health profession and not a specific criticism of local authority. I agree completely that the general profession of public health was to blame for neglect.

The point about war and violence. Obviously, war has been a stimulus to the development of public health and the realisation that public health efforts were important in controlling disease and improving health. Although we are against violence, it is important to recognise that war had a important effect.

Next, on the question about public health education. The Faculty was created in 1972 and became active in 1974. It was created deliberately to meet the problem of having individuals trained in public health. Until 1974, medical officers of health had to have a Diploma in Public Health which was given by a variety of institutions, both universities and non-universities. They were all equivalent, and to be a medical officer of health you had to have, by law, a Diploma in Public Health. The problem with the Diploma in Public Health was that it was designed for the control of infectious disease. There were governmental regulations as to what had to be taught which had not kept pace with the need for modern training in public health.

There was in 1968 Royal Commission on Medical Education called the Todd Commission. One of the most important recommendations was that public health should become equivalent to the rest of medicine. In the United Kingdom, since the 16th century, we have a system of Royal Colleges - Royal College of Physicians, Royal College of Surgeons, Royal College of Obstetricians, etc. The diplomas of these Colleges are intended to provide the necessary qualifications to ensure adequate training to become a specialist in these subjects. From 1961 we also had a College of General Practitioners so that they too started to have proper post-graduate training and qualification. In contrast to the United States and other countries, post-graduate qualifications in the practice of medicine are provided by non-university bodies, i.e. Colleges, which are not universities - they are professional bodies.

The Faculty of Public Health Medicine was created by the coming together of four groups - the ex-medical officers of health, those who were labelled as medical administrators, particularly in Scotland, the academic epidemiologists, and some of the community health specialists. They all came together to create a Faculty in the Colleges of Physicians of the United Kingdom. This now provides a mechanism to ensure adequate training and professional standards. The Faculty is responsible for the maintenance of professional standards and making sure that appropriate training has been given.

**Dr. Babazono:** I understand your public health policy has contributed to improvement of the health for the poor. In Japan public health policy has been responsible for disease prevention and health promotion for all people, not only for poor people. We are now faced with an economical crisis in Japan and some people say that public health should serve only the poor. How do you feel about this?

**Dr. Holland:** I think you first said that public health has been responsible for improving the lot of the poor. It would have been an accurate statement in the last century. I am less convinced that public health has done much for the poor, certainly, in the last 40 or more years.

On your second part of the question whether public health should be concerned only with the poor, I think that is a disastrous policy. First of all unless you have a universal service without distinction, you will always get first and second rate services and I am against that as a matter of principle. Second, I think that it is a fallacy to think that the poor are always the same. There is a great deal of movement between economic levels. You may be poor one year and rich the next, and vice versa. Therefore, to have a system which is only defined by income I think is disastrous. That is what we had, of course, before the war, that is before 1930. We had the Poor Law which was really only providing services to the poor, which was horrendously bad.

I think that it is important to distinguish between the term equality and the term equity. I believe in equitable services not equal services. By equitable services, I mean in relationship to need. That means that you may provide more services to the poor than you do to the rich because they need more. It is very important that you do not provide equal services.

**Dr. Tanihara:** I want to ask one question. You mentioned the conflict between microbiologists and epidemiologists, and I wish to know how can there be good relationship between the two?

**Dr. Holland:** I would like to deal with this in the second lecture, but one of the most important things to recognise is that we need to work in multi-disciplinary or interdisciplinary groupings. That applies for microbiology as well. That is, you have to work together rather than separately. I think it is important, for example, to have a surveillance system that includes laboratories, but it is not only the identification of organisms by laboratories. A surveillance system that is based only on, for example, isolation of E. coli by laboratories in the country is not a very good surveillance system. In the same way, the epidemiologists desperately need the co-operation of microbiologists in the identification and typing of, for example, organisms, so that appropriate measures can be taken as to where infection is taking place. Essentially, the only way you
can do this is by working together rather than separately.

**Session Chairman Dr. Yanagawa:** Thank you.

**Part 2**

**Session Chairman Dr. Yanagawa:** We will now begin the second session for this morning. Dr. Holland, please.

**Dr. Holland:** I have tried so far to deal with some aspects of the historical development of the problems that public health has faced in the past. Obviously, there will be many interpretations of what I have talked about. I am certain that I have emphasized some things and left out others with which some people would disagree and I apologize, but in the time available it is impossible to deal with it in any other way.

I will discuss where we should be going as a professional grouping concerned with improvement of health. I must emphasize that this is entirely a personal analysis.

One of the striking things if one looks at the history of the last 200 years is how the same issues have been present all the time. They occur in cycles. The problems we face now are very similar to the problems our forefathers faced a 100 or more years ago, although they may be different in degree and there are different solutions, but nonetheless the generic problems are very similar.

The first problem is housing. I have already described how after the First and Second World Wars this was one of the major issues which public health tried to tackle. But even now we still have major problems of housing in the United Kingdom. We have homeless people - people sleeping in the streets. We have houses which let in water and without proper heating, so that the difficulties present some 50 or a 100 years ago are still with us. Houses are often very poorly designed so that there is inadequate space for individuals to live and for children to play. So housing is one problem that we need to tackle.

The second problem is nutrition. The problem now is not under-nutrition but over-nutrition and balance of nutrition. It is certainly less common in Japan than in the United Kingdom to have grossly overweight individuals. In the past, we used to say in England that we led the world in certain things. The sorts of things that we led the world in was having the highest mortality rate from chronic bronchitis. Now we are "proud" of the fact that in the European Community we have more overweight individuals, corrected for height, than any other European country!! So we are the leader in obesity, although we are not quite as bad as the United States. In the 1960's when I made studies of comparable groups in the United Kingdom and the United States, the average difference for individuals of the same age doing the same work, corrected for height, was of the order of ten pounds between Americans and British people, and that difference has become even greater now than it was then. Clearly this is not a problem in the developing world where there are the problems of under-nutrition.

We have a problem of what sort of food should be provided and what people can afford to eat. For example, in the poor housing estates, food is more expensive than it is in the wealthier parts of the town. Supermarkets in England are all situated in the well off parts of town, and not in the poor housing estates. In the poor housing estates, there are just small shops and they charge more, so food is more expensive for the poor than it is for the rich. The diets among the poor are probably wrong because fresh vegetables and fruit are very much more expensive in the inner-city areas than in the suburbs, so people tend to eat hamburgers and chips, which are not necessarily very good food to eat because of the amount of fat they contain.

The third problem is the change in morbidity and mortality. There is no question about the fall of morbidity and mortality from certain diseases, particularly acute infectious diseases. However, infectious diseases are still with us and, for example, food poisoning is very much more common than it has been for a long time. I am not sure whether it is more common than 50 years ago, but certainly it appears to be very much more common in the last ten years than 20 or 30 years ago. Coronary heart disease is now one of the commonest causes of death, and stroke which is a major cause of disability and still a very important cause of death. We have cancer. We have much less respiratory disease, and we have the problem of asthma. Chronic bronchitis has diminished. Gastrointestinal diseases have diminished very remarkably, and we have relatively less peptic ulceration and cancer of the stomach than in the past. Acute respiratory infections are as common as in the past although they are less severe. The problem of disability is very important and we have to deal with this - but have failed, so far.

However, the one group of conditions where there has been almost no change in frequency and to which less attention has been given is mental illness. It is very striking how little attention public health has paid to the problems of mental illness and its prevention over the past 100 years or more. That may be because we do not know what to do or we are frightened of it, but it is very striking that public health has played a relatively small role in mental illness, and epidemiology has played as little a part in the investigation of mental health as public health. There are in the United Kingdom very few epidemiologists concerned with trying to determine mental illness causes and methods of prevention. It could be because of the lack of definition, but that is no excuse any longer.

Violence is as common now as it was in the past. By that I do not mean war but domestic and other forms of violence.

This brings us to the changes in Society. There are five major issues in the changes in society in which I consider public health has a role. First is that of smoking. The second is
exercise.

The third is accidents. Although road accidents, for example, have become less common, accidents in the home and accidents at work are still very important causes of both morbidity and mortality at all ages. Public health has an important role in this area. Setting up an appropriate surveillance system for accidents may enable the identification of places that are particularly hazardous and then perhaps something can be done about it. For example, some years ago when I was involved with a health authority, to deal with the problem of accidents in children, we persuaded the health authority to fund traffic curbing measures and change the layout of the streets in a particular housing estate where there had been many accidents to children because of speeding cars. We did not improve the treatment of accidents in the emergency services, but we tried to prevent accidents.

The fourth is alcohol. Moderate drinking may not be bad but certainly excessive drinking is not good. It is a problem in society as a whole. Finally, violence. The problems of violence, particularly in the home, are just as common now as they were 50 or a 100 years ago, but we pretend not to recognise it or to bury it.

A major issue which we have to face is the relationship between ourselves as epidemiologists and public health physicians with other groups. There are perhaps five or six things that give rise to conflict between ourselves and other groups. The first of these is our belief in evaluation. Perhaps one of the most important aspects of epidemiology and public health is that we evaluate what we do and expect others to do the same. That is not a particularly comfortable activity either, it is a difficult activity for the majority of doctors or other professional groups.

The second is the age-old problem of prevention versus cure. Everybody says that an ounce of prevention is better than a pound of cure or some thing like that. Everyone believes that prevention is better, but actually that is not what we spend our money on. We tend to spend our money on providing curative services and acute services rather than on services concerned with the prevention of disease and the promotion of health. It is more difficult to show that preventive activity has a beneficial result. It will take many years to show that some have any effect, whereas treatment with a pace-maker or penicillin has a dramatic effect immediately and so is very much more popular.

The third problem is the difference between what I would call acute care versus rehabilitation care or organized care. Let me give an example using stroke. I recently took part in a major consensus conference on stroke at which various individuals presented evidence on different methods of treatment. Obviously, the provision of aspirin is effective in treatment of the acute episode. The use of thrombolytic substances may also be effective in individuals who have an ischemic stroke rather than a thrombogenic stroke. I know that a number of other agents are being discussed such as neuro-protective agents and so forth, but when you look at the results of these agents, the most that they can do is to reduce mortality and morbidity by the order of about five to seven percent even in the best trials. The interesting thing is that the use of properly organised rehabilitation services in patients with stroke reduces both mortality and disability by the order of 20-30 percent. All the emphasis of drug companies and clinicians is on the acute treatment of stroke which has small effect and only a few practitioners are really concerned with the proper organisation of services including the rehabilitation services which have far greater effect on mortality and disability and quality of life.

The fourth is the area of conflict with the public. The message that we as public health practitioners have to deliver is often extremely unpalatable and unpopular. In Japan, many believe in multi-phasic screening services, which is equivalent to a test of whether your car is running properly every year. Public health has found, however, that only a few screening services have a beneficial outcome. They may enable you to live ill longer, but they do not necessary make you live longer as a well person. That is an example of an unpopular message that public health practitioners have to deliver. In the same way, some screening services miss cases. There always are false negatives and false positives, and we have to transmit that message to the public that expects doctors to be right every time.

Finally, we have problems of relationships with politicians. In the United Kingdom, a politician is only concerned with an issue which he can influence in the next two to five years, that is, by the time he has to face another election. Ministers of Health are usually only in office for an average of two years and as you can see I have listed all of the Ministers of Health for the last few years in our book. They are interested in only what happens in the next two years. Many of the problems we deal with are long term and we cannot show a result in that space of time. So we are not popular nor do politicians necessarily want to support our activities which may cost money because they cannot see a result during their term in office.

Classical examples of differences in concerns between politicians and public health are fluoridation and air pollution. We can do an enormous amount of good by introducing fluoridation of the water supply in terms of prevention of ill health, particularly among the poorest section of the community. It is a relatively cheap method but politically it is not a very favoured method and there are many examples of how it has been opposed by a local politician with crazy ideas. The best example I know of the effectiveness of the medical officer of health in introducing fluoridation is the story of the medical officer of health in North Wales who said fluoridation would be introduced on a particular date and who then (after that date) received hundreds of letters saying how terrible the water now tasted. He wrote back that the water had actually already
been fluoridated for many weeks.

The opposite example is air pollution. The problems of air pollution in the United Kingdom were dealt with by the Clean Air Act, which had a profound effect upon mortality and morbidity. The levels of air pollution we now have are trivial compared to those of 50 years ago. There is no question present episodes and levels have some health effects, but it is relatively very small compared to the past. Yet the public and political concern is far greater for problems of air pollution than it is for the problems of, fluoridation, which is far more important, particularly for the poor.

The next problem I think we face is that of multi-disciplinarity. In the past it was feasible for us to command people to do things as doctors. Certainly in England this now is no longer the case. For epidemiology as well as for public health, it is crucial that we learn to work in groups and learn to work with other disciplines. As epidemiologists we have to work with social scientists, health economists or psychologists who have specific skills that we do not have. We have to be able to work with statisticians, with chemists and with toxicologists, depending upon the problem we are trying to tackle. The same is true of public health. We have to learn how to work with microbiologists, whether they are medically qualified or not, with nurses, the general practitioners, and the hospital consultants. We can no longer expect to work only as individuals. We have to learn how to work in teams. This is not as easy as you may think because you must remember that you as a doctor may not be the "commander of the team".

The next problem is that of specialisation. The majority of us were trained as generic epidemiologists or generic public health physicians. That is, we covered all fields. Life is becoming far more complex and we have to face the fact that, in the same way as medicine has become specialised, epidemiology and public health has to specialise. In medicine now we not only have specialists we also have sub-specialists, the day of the general physician has passed. Only the general practitioner aims to cover the whole field and he does not really deal with more than being the first port of call. So it is important in public health to recognise that we may need public health specialists who deal only with mental health or with infectious disease. They may need additional specialist training in mental health or in infectious disease or in communicable disease.

The next problem is technology. Technology has moved enormously fast in the last 100 years and we have to come to terms with that. We must recognise that there are particular aspects of technology that may help us and others that may in fact hinder us. The ability to use a computer is probably crucial to being a good public health practitioner. I, for example, can not so that I no longer qualify, but I think the majority, if not all of you, already have mastered this ability. One may also need to cope with other aspects of technology such as global communication systems, which may alter the ability to do different things in a better way in the future than at the present.

The final problem we have to face is that of conflict between our philosophy and those of individuals who are concerned with the treatment and care of individuals. Throughout the last 150 years or more there has been conflict between public health doctors and those concerned with clinical care. This comes into play in terms of our responsibility in being concerned with the health of the population. For example, problems of coronary heart disease are probably more important to us than the problems of liver disease. Rare forms of heart disease, which are amenable to heart transplantation, will be favoured much more by certain groups of cardiologists than by the public health physician who knows the resources consumed, by heart transplantation could, if used in another field, prevent several thousand deaths from coronary heart disease by providing health education. So there is bound to be conflict.

The philosophy of public health has to be concerned with providing the most effective care for most people while the clinician has to be responsible for providing the best for the individual who comes to seek help.

If you accept my analysis of the major problems we face in public health, it is important to consider what is essential in the performance of public health function. There are four areas that are crucial.

The first is the control of disease, chronic as well as acute disease. In the past public health was concerned only with the control of infectious diseases. In addition to the control of infectious diseases, we now have a role in the control of chronic diseases, for example, cancer, stroke, heart disease and so on. This implies the development of a system of surveillance, you have to know when a case occurs, in whom it occurs, and what the fate of that case is. Systems of surveillance of diseases have usually been developed only for acute infectious diseases. There are examples of systems of surveillance, such as for accidents. However, there are very few examples of systems of surveillance for coronary heart disease. There are examples of setting up registries for particular conditions, whether it be for stroke or heart disease, but relatively rarely are these registries actually used for what I regard as being essential, namely surveillance. Surveillance means more than registration. It implies also taking action to control. Surveillance is not only observation but is action.

The second area is that of environmental and social factors. It is crucial that public health becomes involved in the formulation of both environmental and social policies and be concerned with the impact of individual policies. As I tried to emphasise in my first lecture, the one area that has been dominant over the past 150 years is poverty. That has had the major impact and been the most important cause of morbidity and mortality in the United Kingdom. We have become concerned with, for example, cigarette smoking but we are not concerned that the people who smoke are the poor. That implies that we have to become concerned with the impact of specific environ-
mental and social policies.

An example is that in the past medical officers of health were concerned with unemployment. The Chief Medical Officers of Health in the United Kingdom in the 1930s, under a conservative government, commissioned a series of studies of the effects of unemployment on health in different parts of England. In the past 50 years I do not know of any conservative or labour government that has commissioned such a study or tried to do something about it. Similarly we have to be concerned with the impact of environmental policies, whether they be the building of a road or an industrial plant or the location of an airport. All of these have health effects. It is extremely difficult to measure the impact and certainly one of the major tasks of epidemiology and public health is to develop the methodology for measuring the impact of environmental and social policies on health in order to be better able to influence those responsible for introduction of the policies.

In the European Union we spend many billions of pounds on subsidies for tobacco growers. At the same time we have a public health policy which says that we should reduce the incidence of cancer. The two policies conflict. Public health has a very small voice, economics and industry are more important in the determination of policies. But improvements in health can only come through changes in environmental and social policies and not through the activities of medical practitioners.

The third area in which it is essential to be involved is in behavioural concerns and education. By this I mean such simple things as educating people of the hazards of too much smoking or too much drinking. But actually it goes much farther than that. Matters such as abortion and family planning are important behavioural concerns in which we ought to be involved. For example, in one district in London, for every live birth there is one abortion. I do not wish to make judgements as to whether this is appropriate or not, but this implies that abortion is the birth control method being used and not "the pill".

Cigarette smoking is a classical example of where we have been remiss. In the United Kingdom we showed that attitudes change before individuals adopt smoking as a normal habit. That is, if you can influence attitude perhaps you can influence behaviour. However, smoking starts in primary schools, before children go to secondary school. Yet, most health educational efforts only take place in secondary schools.

Finally, health service issues. The evaluation of which services are effective and which are not, which should be given, and when they should be provided. That does not mean that we have to be responsible for the provision and management of these services, but we have to be involved in the planning and evaluation.

If you accept these four issues as being crucial in the execution of public health function, then one has to be concerned with what is involved and what skills are needed.

The first issue is the ability to have freedom of speech. Until
The fourth area which is important is that of information. Certainly in the United Kingdom the responsibility for health information is rarely in the hands of public health. It is usually in the hands of a statistician or an information specialist. That implies that we tend to collect what can be collected rather than what is required to be known of what is happening to health and health services. For example, in spite of the fact that a record-linkage system had been first introduced in the Oxford region and in Northern Scotland in 1964, we still do not have a method by which we can link episodes on the same individual through the use of routine statistical analysis. In some countries this is feasible and used to some extent, but we are still deficient in using the possibilities of getting appropriate information that will help us to provide services in a better fashion.

Fifth, we need resources. We need to have our own earmarked resources for public health prevention rather than to be continuously in conflict with clinical and acute services, because we will always lose in the battle with these two services. It is always the immediate drama that catches the imagination. Unless we have clearly earmarked resources, we are never ever going to develop a really good public health service.

That finally means that we need access to what I call the levers of power. That is, it is crucial that the individual responsible for public health takes part in the decision making process of environmental, social and health policies. Only by actual access to the lever of power can one hope to influence the policies that need to be executed. Again in the United Kingdom the example I will give you is that of the Chief Medical Officer of Health. The Chief Medical Officer of Health has one unique piece of power. Although he is not the most senior individual in the Ministry of Health, he has direct access to the Minister and he can, if he disagrees with the policies of others, actually go to the Minister and say well this is no good or you should not be doing that. Whether it has an effect is a different question, but at least he has access, by law. The same should be true at every level within our Administration.

If you accept these six conditions, one then must be concerned with the possible structure in which public health can function. Public health is a multi-disciplinary activity which includes doctors, social scientists, statisticians, and so on. It is a multi-disciplinary activity and not only a medical activity. It includes doctors, social scientists, statisticians, and so on. It is a multi-disciplinary activity and not only a medical activity.

The first possibility is that there should be a completely free standing body of public health practitioners responsible to a public health authority as part of the government, and be completely separate from every thing else. The model for that actually existed in New Zealand for about three years. They had a Public Health Commission which employed public health practitioners and was responsible for public health activities at all levels. The obvious advantage of this is that public health thereby has its own resources and can decide how to deploy them. It does not have to be accountable or responsible to anyone else. However, there is one major drawback. The government may object. Since the Commission has to be funded by and set up by the government, it can easily be abolished. I have tried to emphasise that public health is not necessarily the most popular subject to the general population or to the medical profession. So when the public health practitioner says, for example, cigarette advertising must be abolished and says this as the Public Health Commissioner, it is often easy for the government to say it was not their idea and discharge that public health practitioner the next day. That is exactly what happened in New Zealand. A Commission was established as a separate entity, but when it came to delivering uncomfortable messages such as on the use of particular drugs, the provision of particular services, and most importantly about the use of tobacco advertising, the government abolished it. So I do not believe that a free standing public health commission is the answer.

The second possibility is what we had before 1974, where public health was part of local government, and its doctors were employed by the local governments and who then had to provide certain public health services. This meant that they had defined populations and had access to the authorities concerned with both the environmental and social factors. That theoretically it is a good way of working. However, it has three major problems.

The first of these it is unlikely that many medical graduates will wish to separate themselves off from the rest of the profession and be under a completely different authority with completely different terms or conditions of service. We may again revert to the problems we had immediately after the Second World War of decline in the standards of medical practitioners in public health. Since I consider the medical function to be a crucial component of public health, I do not think that is a good alternative.

The second problem is that, as part of the local authority, they become part of local politics. In the United Kingdom, politics can be very "dirty". It is usually dirtier in the towns than in the county areas, and the doctor's voice may not be heard so that the political solutions may take dominance over the public health solutions. So it would be difficult to influence the activities that are essential to public health.

The third problem is that of information. If you are employed by local authorities it may be very difficult to have access to the health information that you require from the health service, which is a different authority, and this information is crucial to the execution of public health.

So I consider that the optimal solution is a modification of the present structure, which is that public health is a part of the health authority. It has thereby easy access to all health matters. But there are two caveats. Firstly, it is incumbent and essential that public health becomes involved with both social and environmental policies in local authorities as well as in the central government. As a right, doctors become members of the appropriate local authority bodies that are involved with
matters such as planning, housing, education, and so on. That implies a great expansion in the numbers of public health practitioners than exist at this time since you would have many more individuals who will actually perform these tasks in the future.

The second caveat that I have is that you need what I call an institute or some structures at the regional and central levels which will provide specialist support and training and help to the local areas. Those institutes must be staffed by specialists or super-specialists to provide support for the local level, for microbiology, toxicology, environmental matters, etc. It is crucial that those institutes are linked or part of educational and research universities and that they are not separate free standing bodies but are part of the total university or other systems that already exist.

Now this brings me to the end of my own vision of public health which is an highly idealised one and I have great doubts whether any one would implement them, but I think that it is crucial that there be better education and more research, whether it be in epidemiology or public health generally, than exists at this time. In almost all countries I know support of public health and epidemiology research and education is deficient and I think it is important there be further development of expertise in both these areas and improvement both in quantity and most importantly in the quality of research and education in our field. Only when that happens will any of the things that I have talked about and which I wish for come about.

**Session Chairman Dr. Yanagawa:** Thank you very much. Dr. Holland illustrated to us the many problems that now face to public health and immunology. I think we have the same problem in Japan. Any question or comment?

**Dr. Kakehashi:** You mentioned the matter of surveillance systems. I am interested in surveillance systems and agree to their importance, but we would have difficulty in management without knowing who are the subjects. What kind of a surveillance system do you have in mind? Are they of large or small scale?

**Dr. Holland:** I do not necessarily mean that you should have a large universal surveillance system, but actually a surveillance system designed for a specific problem, and you may build it up into a coherent one that can cover more than one condition. For example, accidents. It is perfectly feasible to have individuals recording cases brought to the emergency department because of accidents during driving or at home. At the same time, however, that is inadequate. You also need to record more, for example, the police record where accidents have occurred, and from the fire service where the fires have occurred. Then you have a system which brings together all events which thus enables you to identify places where more accidents occur whether domestic, or due to motor vehicles.

**Dr. Kakehashi:** I can see that there will be some difficulty. For example, if the accident is related to life, if someone dies, then it should be reported, but if the accident is minor, especially that occurring at home, it will not be reported unless it is obligatory. So all accidents will not be recorded. I would like to know if any trial is being carried out in the United Kingdom.

**Dr. Holland:** I think you are absolutely correct. It is difficult to get minor things reported, but if you instituted a routine, gradually you will find perhaps having the minor accidents reported which will then enable you to identify where the problems occur. For example, the general practitioner has to be called in to the home because of an accident to a child. He probably will not report it unless he is given some incentive to do so. So you have to gradually build it up. You can not set it up completely de novo. What I am trying to say is that you have to build it up block by block. For example, for injury, the only system that I know of is in Wales.

**Dr. O’Brien:** I would like to conclude that comment about injuries. If you look at the industrial scene in the United Kingdom, accidents are defined quite clearly as those occurrences which cause absence from work for three days or more. They are notifiable to the health and safety executive at work. As Professor Holland said if you define the circumstances, define the terms carefully, and then apply the appropriate pressures you can build up the information you need.

**Dr. Burney:** To follow-up this matter further, this is a big issue in the United Kingdom at the moment because absence has been identified as one of the areas that the government is particularly interested in as an area of morbidity which is very important. As you said there is actually a bit of a problem in setting up surveillance and setting up records of what is going on. One of the problems is that many of the sorts of things you can look at are actually not simply related to the accident. They are related to the response to the accident. So some people depending upon the local health services will report and some people will not. One of the things that is being suggested at the moment is that what the government is suggesting which is to report all accidents that occur in the accident emergency room but you concentrate on the most serious ones, and the most serious ones might for instance be defined as fracture to a long bone. Now a fracture of a long bone will always appear at the hospital at some point so you get some regularity in what is being reported, and you also can get economically probably the most important facts from the point of view of morbidity and mortality as well. So you start with a relatively small area and then you start to build up. Defining exactly what is an important accident is extremely difficult and will always be contentious.

**Dr. Jong-Myon Bae:** In your lecture you mentioned vio-
Dr. Holland: I am not sure you are correct. I simply pointed out that violence is a problem at the present time. I am not sure that it is more common now than it was in the past. I do not know of any study that will enable me to say that. I think that in the past it was accepted as being normal behaviour if a husband beat up his wife. That is not accepted as normal behaviour now. In the past we perhaps let out our violence by playing in organised sports, boxing and things like that, but we do not now. However, I do not know and I cannot answer the question of whether violence is more common or not.

Dr. Hedley: Dr. Holland complained of his colleagues producing useless and irrelevant reports on the one hand but also called for the expansion of the discipline in terms of numbers and influence. It seems that there is a potential conflict here. Joking apart could you give some examples of the kinds of issues you think are relevant in terms of public health output. My other question is how can we expand the discipline? Must it be in terms of numbers or could it be in terms of access to different sectors and influences? It seems to me that the argument for much increased resources to expand numbers, regardless of whether it is justifiable or acceptable or not, is probably unlikely to happen. On the other hand it just seems goaf for increasing the influence of public health in various sectors.

Dr. Holland: I obviously did not express myself very well. I did not necessarily say that the documents were irrelevant or poor. What I did say that many of the documents that I have read had been badly written or difficult to understand. Let me give you an example. There is a very poor district in North England, where the person concerned dealt with only one issue, that is the health of women. She dealt with it in some depth including such matters as cancer of the breast, fertility, and cancer of the cervix. Only that. It was a very powerful document, and obviously was written with some passion. In contrast, a report in a neighbouring district, which had a major problem with a declining industry and a problem of unemployment, dealt cursorily with the social problems in that district with mention of women in passing. It dealt entirely with the description of the hospital services that had been built rather than health problems. That is what I meant by a good and a bad report.

I do not agree with you on your second point. I think that unless there is an expansion in the numbers employed for the delivery of public health function, I do not think that we can possibly deliver what is expected of us. I think that you can not expect the present numbers of individuals that exist to deliver services and also to be involved in discussions with local authorities as well as with health authorities. As my son, who is training to become a public health physician says, the problem is that the only interesting thing is to be a junior or a trainee in his authority because he has time to explore a subject. As soon as you get to be a consultant, you spend your time going from one committee to another and not doing any thing of value. Now obviously that is not necessarily general, but I still think that it is crucial to recognise that we cannot deliver with the manpower that we have. The whole point actually rests with improvement in education and research. I think the present education for our subject is inadequate.

Dr. Miura: Thank you very much for your very comprehensive review. I would like to ask about specialisation. Very simply saying I am an epidemiologist but my major is cardiovascular epidemiology. However, these days I am doing studies of epidemiology of many diseases, for example amyloidosis, cardiomyopathy or congenital anomaly, covering a very broad area. I would like to ask you about how you feel about specialisation?

Dr. Holland: I think it is crucial to have proper generic training in, for example, epidemiology. But then you may wish, for a number of years, to specialise in, for example, communicable disease. You may specialise in cancer services or epidemiology of cancer or in cardiovascular disease or in mental health. I think it is quite difficult to simultaneously be expert in, for example, mental health and cardiovascular disease, but I think it is crucial to recognise that we do need specialist knowledge as well as generic knowledge. I cannot forecast which specialities we will have. The only one that I would be certain of as being required is communicable disease control.

Dr. Hoshuyama: In Japan the health of workers is mainly under the charge of the Ministry of Labour other than the Ministry of Health. I would like to ask about the validity of the abnormality rate of the workers. That is, the Japanese workers must receive health check-ups by law, and the Ministry of Labour publishes the abnormality rates based on these check-ups. The numbers have increased in this decade from 20% to more than 40%, that is a 20% increase in ten years. I think it is an overestimation. When needed the data can be obtained for say cholesterol levels, which is increasing. However, I feel that there are other factors which are influencing the increase of abnormalities. Additions are being made to the measurements to be made in these check-ups and, for example, blood glucose and HDL cholesterol will be added next year in January. Another point is that the normal range is changed at times. For example, the upper normal limit of cholesterol has
been lowered from 250 to 220 so persons formerly normal have now become abnormal. I think the figures include the effect of compounding factors. Could you comment on this?

**Dr. Holland:** Well, all that I can say is that the separation of responsibility for health between different authorities is always bad, and this is the general conclusion that I have made. For example, the separation of responsibility for health of workers is I think a general problem. Since people can work from ages 15 to 65, I think that was a wrong policy. Certainly in England we have a form of responsibility for health of workers through the Health and Safety Executive. There are some industrial specialists employed by firms which are separate from the National Health Service, but I think that was one of the bad decisions made in the 1960s. I will not go into the reason why it was made, but it was actually because of the interest of one particular individual who did not wish to be under another individual, and the two departments became separate. I think that was a wrong concept.

**Dr. Hoshuyama:** Within several years the Ministry of Labour and the Ministry of Health in Japan will be combined.

**Dr. Sohel Reza Choudhury:** I have been thinking about the decision making process for public health policy in Japan. Now the Ministry of Health and Welfare is planning to modify the health care system. Most part of health policies, aside of whether good or not, have been made without any evaluation being made first. Now they are trying to make modifications and adjustments. Many researchers in Japan consider it a de facto decision and feel that no change can be made in the decision. The process is very different here, but nevertheless the system will be changed. I would like to ask about the role of academic people in making decisions in public health.

**Dr. Holland:** I do not think that what you have described is very different from the United Kingdom. Do not have any illusions that what I described are more than an ideal. I think the majority of public health policies have been decided in spite of, rather than because of, the role of public health physicians. I think that the question of the role of the academician is quite a difficult one, and I have not discussed it.

In England, during the 1960s and 1970s, academicians played a reasonably prominent role in the formulation of policies. In the 1980s they played less and less of a role, and took the back seat. I will give two examples. The first was the policy on redistribution of resources between regions and areas. We, as the academic unit, put forward a proposal for an experiment. The politicians refused to do the experiment, but they involved us as academics, in the formulation of a policy. In contrast, in the reforms of the health services we, again, as an academic unit, put forward proposals for doing experiments on changes in the delivery of health services, which perhaps would change society. The government absolutely refused to listen and stated quite clearly that they wanted no academic involvement.

I do not know what is happening now. I think that there is again a greater role of some academics, but what I am personally very concerned about is that it tends to be dominated by media columnists and some social scientists, and there are few public health academics or epidemiologists involved. So I do not think it is very different.

**Session Chairman Dr. Yanagawa:** I think the time has come to close this session, but I have one comment of my own. The discussion of the clinical aspects of public health in the first session reminded me of the disastrous sacrifices due to tuberculosis among young women in Japan in the latter half of the 18th Century and the 19th Century after the Meiji era. The textile industry rapidly developed in Japan and young girls less than age 15 were taken from the rural regions to work in the textile factories. They worked very hard from four o'clock in the morning to nine o'clock at night and shared the same bed with the night workers. The labour conditions were very poor, and 10% died of tuberculosis and 30% were sent home with tuberculosis. That caused a nation-wide outbreak of tuberculosis not only in urban areas but also in rural areas. After that, up to the end of the Second World War, no effective public health measure was taken in Japan. It is very serious that politicians have no interest in such problems. As you mentioned access to leaders in power is very important to fulfill our responsibility.

I think we have many public health problems that must be addressed hereafter, for example, measures to control chronic diseases such as stroke, and cancer. There is the need for surveillance systems for disease and registries, such as you mentioned, which is being addressed in some areas but not much is being done yet. We have cancer examinations, and also many health examinations, over 10 million examinations throughout Japan, but we have no system for evaluation. Thus, we have learned much from you. Thank you Dr. Holland.

**Addendum**

This paper is the tape recording transcript of lecture presented at the Third British Epidemiology and Public Health Course which was held from November 29 to December 5, 1988 in Hiroshima, Japan.

The British Epidemiology and Public Health Course has been held with the cooperation of the British Council and the Japanese scientists of epidemiology and public health medicine, and the purpose of which is to introduce to the junior scientists of the epidemiology and public health medicine the British epidemiology which stresses the importance of practice. The first course was held in 1994 at Jichi Medical school with the leadership of Professor Yanagawa. Subsequently the second course was held in Osaka with the leadership of
Professor Hashimoto in 1996. As was mentioned above, the third course was held in 1998 and the organizing committee of the course was as follows;

**Organizing Committee**

**Honorary Chairman**
Itstuo Shigematsu, M.D., Consultant Emeritus, Radiation Effects Research Foundation

**Co-Chairman**
Walter W Holland, M.D., Professor, The London School of Economics and Political Science
Kazunori Kodama, M.D., Chief, Department of Clinical Studies, Radiation Effects Research Foundation

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Peter GJ Burney, M.D., Professor, Public Health Medicine, United Medical and Dental Schools, St. Thomas's Campus
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Michael O'Brien, M.D., Chairman, Northumberland Health Authority
Hirotugu Ueshima, M.D., Professor, Department of Health Science, Shiga University of Medical Science
Hiroshi Yanagawa, MD, Professor, Department of Public Health, Jichi Medical School

**Consultant**
Kunio Aoki, M.D., President Emeritus, Aichi Cancer Centre

**Instructor**
Yosikazu Nakamura, M.D., Associate Professor, Department of Public Health, Jichi Medical School
Kiyomi Sakata, M.D., Associate Professor, Department of Public Health, Wakayama Medical College
Akira Okayama, M.D., Associate Professor, Department of Health Science, Shiga University of Medical Science

**Guest Speaker**
Tomisaku Kawasaki, M.D., Head, Japan Kawasaki Disease Research Centre
Yutaka Hosoda, M.D., Research Consultant, Radiological Epidemiology Investigation Centre