(Editors note: This is the first in a series of commissioned papers which record the oral history of eminent Fellows of the Faculty of Public Health. Professor Holland is a former President of the Faculty.)

**Early years**

Professor Walter Holland grew up in Czechoslovakia in the 1930s in Teplice in the Sudetenland, the son and grandson of successful Jewish businessmen. And in the late 1930s Adolf Hitler’s ever shriller demands that the Sudetenland should be returned to Germany fomented unrest and violence in the region.

‘Almost every weekend we would leave because of the riots that used to take place and go to the mountains, or somewhere like that, which was not very pleasant really.’

When in 1938 Britain and France gave Hitler what he wanted at Munich the young Holland could not but notice how political events were affecting his family. ‘It became very apparent that they were under very great stress. And then with the news in the papers we all left [Teplice in the spring of 1939], but there was never any discussion about it. [Then] there was discussion about leaving Prague … before the Germans marched in. I know that my father was determined to go partly because he wanted to but also because he could see no future there. Whereas my mother and her parents, particularly her parents, did not wish to leave Czechoslovakia.’

When the Germans eventually occupied Prague and the dismembered Czechoslovak state Walter Holland’s father realized that it was time to leave.

‘[My father] was Jewish and … he had helped a large number of Germans in their escape from Germany before 1938. And, in fact, when Prague was taken over [he] left almost immediately, within 24 h. And within 6–12 h of his departure the Gestapo came for him. But, of course, he wasn’t there. And the reason that he got through was that he got a train from Prague to Germany and changed trains so that he was not on a train originating in Prague but he was on a train originating from somewhere within Germany.’

Towards the end of March 1939 young Walter, together with his mother, followed Holland senior to Britain, where they were sponsored by a good family friend who had a stamp dealership in Vigo Street in London. Like so many refugees from the Nazis they arrived in England with next to nothing.

‘Some luggage was sent on afterwards but not very much. But my father had been able to transfer some money to the United Kingdom before he left in the period between 1936 and 1938 and between September 1938 and March 1939. My father worked as a partner with my grandfather. They owned a very large wholesale business that sold cotton and woollen goods and it was the largest wholesaler in Czechoslovakia. And to the disgust of the Germans they got every thing away from Teplice to Prague. The period between September and March was spent in selling off everything so that, in fact, there was quite a large capital sum available and some of that was able to be transferred at that time.’

And the rest of the family who remained in Prague? ‘We continued to receive the odd letter from them. My grandfather died in 1940, a natural death from cardiac failure I believe. My grandmother shortly after that was deported to Theresienstadt (Terezín), a concentration camp quite near to Teplice. And she died in Theresienstadt.’

Holland, knowing ‘only a few words of English’ went to a succession of English boarding schools including Rugby School. The war with Germany had broken out and his father was working for the electrical company British Thomson Houston in the midlands town. At school Walter Holland combined an interest in history with the sciences. ‘I think probably … my parents suggested that I would be more likely to earn a living if I did a scientific subject than a non-scientific subject. [But] it’s really … [I who] decided that medicine was of interest to me.’

‘I can’t say that it was altruism or my wish to do good. I think my interest was largely because I could see an application for the physics and chemistry, biology and maths that I was learning. … Various other books about what doctors could do and did also fascinated me. And that’s what really I wanted to do. [And] I was always brought up with the feeling that I also had a duty to repay society for what it had done to help me. And I think that also there was always a feeling of gratitude about how we had been received by this country so I felt I had some debt to repay.’
First interest in medical research

Having sat the Higher School Certificate successfully Walter Holland was still too young to enter the medical school at St Thomas’ Hospital in London. So he sat the examination again. And that gave him an exemption from having to take the first MB. So while his contemporaries at St Thomas’ began their formal medical education Holland was working as a Research Assistant to Dr Tom Day, Reader in Pathology for a pound a week. ‘[He] taught me about research, taught me about the need for exactitude and for being careful and so on. So that I could understand what research was about.’ There was the excitement of research. If you set up a particular experiment and it works and you see the things that you hoped that you would and you discover new structures. It was really the excitement of it and the need for patience, but at the end it paid off.’

Was this excitement the excitement of a hypothesis demonstrated or the excitement of findings that required a reconsideration of the original hypothesis? ‘It was a combination of both. I think that the question of hypothesis driven science was not common in the late 1940s. It was, ‘Let’s find out how something works.’ Not, ‘I think, that this is what is going to happen, let’s see if that’s right or wrong.’ ‘We … never had prior hypotheses as to how it happened. Whether that is true in other scientific disciplines I’m not sure. Probably not to the same extent. Medicine is very backward in terms of science and it still is.’

‘I then joined my year to do the second MB and again during that time I was interested in research and I was fortunate in that I did reasonably well in second MB and so was offered the chance to do a BSc. At that time, intercalated BSc’s were not common. There were three of us out of 60 who were offered a chance to do physiology and two of us were offered anatomy. I chose physiology because I thought that that was much more interesting. I did that for a year and a half and again it was extremely instructive because it was just at the time that they were beginning to do open heart operations and we were the individuals who were asked by the cardiologists to do various estimations of blood gases because we’d used a Van Slyke machine. It was a very interesting 18 months.

‘The Professor of Physiology who had just come to Thomas’ at that time was a man called Henry Barcroft who really was far more interested in research than in teaching. And certainly Tom Day, to whom I still used to go and talk, suggested that I would learn something about research by going to work in that department. There were others there who very experimental like Maureen Young, Jeremy Swann, Downman, Tanner and others. There were some very outstanding individuals at Thomas’ at that time who fostered an enquiring mind and by working for the BSc we were enabled to really do that in a much better way than we could have done by just following the normal MB course.’

Early research into respiratory disease

The young Dr Holland had acquired the taste for research that would determine his future career. But first there was National Service with the Royal Air Force in the early 1950s. And it was as an RAF doctor that Walter Holland discovered the particular area of research to which he would devote a substantial portion of his professional life, respiratory disease. He joined the Central Public Health Laboratory in Colindale in North London to work on testing a new vaccine developed by Glaxo for use against an adenovirus. ‘However, the vaccine failed its safety tests because Glaxo forgot to switch the incubator off over Christmas and so the specimens were “fried”.

‘So, in the middle of January when it was supposed to be administered there was no vaccine available. And then the question was, “What would I do?” Shortly before that a man called Professor Tommy Francis who was a Professor of Epidemiology at the University of Michigan and a very eminent influenza researcher, had noticed on a trip to Hong Kong that there was a major outbreak of flu in China and Hong Kong. … That was the 1957 flu. We expected it to come to this country. And so Colindale offered me the chance to investigate that. And because Suez was over I was offered the choice of either staying at Colindale and work on flu or going to the Institute of Aviation Medicine. I decided that flu was a once in a lifetime opportunity whereas the physiology I could do anytime. And so I stayed at Colindale. The question posed for me was why did flu only appear when the weather got cold, in the winter months? So we set up a system of surveillance to identify when the first cases of influenza reached this country.’

‘The project] was partly designed by my boss at Colindale, a man called Professor Corbett McDonald … and by [an] MRC Committee of which Professor Charles Stuart-Harris, the major influenza researcher, had noticed on a trip to Hong Kong that there was a major outbreak of flu in China and Hong Kong. … That was the 1957 flu. We expected it to come to this country. And so Colindale offered me the chance to investigate that. And because Suez was over I was offered the choice of either staying at Colindale and work on flu or going to the Institute of Aviation Medicine. I decided that flu was a once in a lifetime opportunity whereas the physiology I could do anytime. And so I stayed at Colindale. The question posed for me was why did flu only appear when the weather got cold, in the winter months? So we set up a system of surveillance to identify when the first cases of influenza reached this country.’

‘I hadn’t got the faintest idea of what epidemiology was, that was really where I learnt what it was about. … I found it fascinating and very interesting. I investigated a couple of outbreaks. I investigated two outbreaks of Q fever, one in the Isle of Man in Jurby in the officers’ training camp where I was able with reasonable certainty to show that it came from the officers having a smoke in a shepherds hut where the lambs had had their young. I also investigated a Q fever outbreak at St Mawgan in Cornwall where I was able with reasonable certainty to show that the infection can be spread from man to man, which had not been described before. But then it was very interesting to look at respiratory disease. I went to see an outbreak of respiratory disease in one particular station where it could have been smallpox because the airmen had come from Saudi Arabia
where there was a smallpox outbreak. I tried to disentangle clinically respiratory infections due to influenza, adenoviruses, from other viruses by taking blood specimens and isolations in relationship to standardized examinations – and failed miserably."

‘After my National Service I went back to St Thomas’ and Edward Sharpey Schaeffer, the Professor of Medicine gave me a linked job in which I had three responsibilities. I was a Clinical Lecturer in Medicine. I spent some time continuing with paediatric research, which I had done previously, and, thirdly, I did an epidemiological study of respiratory infections of patients in hospital. I was more interested in epidemiology than in the other two. I could see there were greater possibilities.’

Walter Holland pursued those possibilities first at the London School of Hygiene from 1959 to 1961 working with Sir Austin Bradford Hill, Richard Doll and Donald Reed. ‘They had a completely shared ethos on epidemiology and epidemiological research. They were all three very hard nosed, very, very good methodologists.’ And then in the United States. ‘I went with a defined position to the States, I did not go on a Fellowship. I went to fill a substantive post at Johns Hopkins [University] largely engineered by Donald Reid so that I would be earning ‘proper’ money rather than only Fellowship money. We had started a study to look at the effect of air pollution on respiratory disease and we had devised an investigation which examined post office and telephone van drivers in four different locations in the United Kingdom with different levels of air pollution and we wanted to see whether this could be used in the United States, whether it could demonstrate that the finding that respiratory disease was commoner in the United Kingdom than in the United States was true.’

Holland returned to England in 1962 after that year in the United States having investigated how respiratory disease started in populations and ‘I came back with the idea of developing epidemiological research at St Thomas’. … St Thomas’ had actually appointed me shortly after I arrived in the States so as to make sure that I would come back and I came back to an interesting place. We had a Dean who was married to the daughter of a Bishop. A surgeon who had a great social conscience. Mr Robert Nevin and Professor Sharpey Schaeffer who was only really interested in research. I was appointed to Sharpey Schaeffer’s Department as a Senior Lecturer with the deliberate intent that he would do all the administration and I could spend all my time establishing my reputation as a researcher. Thomas’ provided both space as well as staff. They gave me a secretary, they gave me a statistician and they gave me another medical person to work with me.’

**Department of Clinical Epidemiology and Social Medicine at St Thomas’**

In 1964 St Thomas’ created a new and bigger department to enable Holland and his team to undertake larger research projects. ‘The first question was my title … The Dean wanted me to be called “social medicine”, Sharpey Schaeffer said, “Nonsense, he’s a clinician so he must be called epidemiology.” And Donald Reid said, “Well if he’s that then he won’t ever get a clinical salary. And you can’t have social medicine because he’ll never be able to go back to America.” And so, in fact, they came to a compromise and it was to be called a Department of Clinical Epidemiology and Social Medicine. The term clinical was deliberately introduced by Schaeffer and Nevin so that everybody working with me in epidemiology would be considered clinical and would be paid on a clinical salary scale. I believe we were the first unit to achieve this.’

The new unit was located in the Department of Medicine. ‘That was absolutely deliberate because Schaeffer would provide me with a cover for my respectability as well as doing all the administration.’ And Holland continued to be involved in clinical work as well as his research.

‘On my appointment as a Senior Lecturer I was given Honorary Consultant status and I continued to hold a clinic once a week for patients with chronic respiratory disease. That was the research field that I was studying and I felt it was important to maintain my clinical links. So although I did not have beds I did out-patients, and I saw patients and I did clinical ward rounds. My teaching was entirely on ward rounds in the Department of Medicine. I thought that was absolutely crucial … to continue to have clinical responsibilities, to be in touch with patients in order to learn.’

The unit was called the Department of Epidemiology and Social Medicine at a time when the concept of social medicine was a much-debated one that in time would harness academic disciplines other than the purely medical. Holland saw the scope of his new discipline

‘I had read most of the work by Ryle who was the first holder of a Chair of Social Medicine in this country in Oxford from about 1942–1949. So that I knew all the texts. One of the first people that I recruited was a social scientist, Jessie Garrad, to help both in the teaching as well as in research. I recruited not only medical people and statisticians but also social scientists.’

‘Then following on from that I had very close relationships with the London School of Economics and with Professor Richard Titmuss. I got Richard Titmuss to come and talk to medical students in exchange for my coming to talk to his social science students. And so that I then also developed a relationship with Professor Peter Townsend and particularly Professor Brian Abel-Smith. But, so that I had realized what social medicine was before… I felt you had to work with and incorporate the methodology and ideas of other subjects. But my major interest was in hard-nosed epidemiology.’

And in respiratory disease in particular. ‘I think that the 1950s and 1960s people were very much concerned about the problem of respiratory disease. Respiratory disease was one of the major causes of death and disability at that time. The problems of air pollution were very manifest. I lived through the London smog episode so I knew what it was about. We were concerned about trying to identify factors that caused the dis-
ease to develop. Part of my work in the Air Force had suggested to me that factors in early life could be important in making individuals more susceptible to develop chronic disease in later life. Nobody was really doing any work on that so that I thought that that was an interesting area for exploration.

'...one major strand of work [in the Department of Epidemiology and Social Medicine at St Thomas'] was studies on populations of children. ... I would not be treading on anybody's toes in terms of adult studies ... so I decided that that was a niche that I could develop on my own and it would add knowledge.'

The Kent/Harrow Research Project

'I was concerned with trying to identify the factors responsible for the development of respiratory decease and levels of ventilatory function [and] I had two large populations that I was studying – one in Harrow and the other one in Kent.'

'...we chose six electoral wards, two of which were polluted, two of which were unpolluted but the unpolluted became polluted. So we got some interesting results on that. In Harrow it was more complicated – yes, we had to employ two field workers and my colleague John Colley and I went out. We spent quite a lot of time on fieldwork. I was then not married and neither was he, and so we each spent one evening a week visiting families in Harrow. ... That was considered normal. In my day, medical researchers would start at nine o'clock in the morning and usually work till nine, ten in the evening.'

'The data collection was over 7 years in Harrow. It started in 1963 and we finished data collection in 1968–1970. We collected data on new borns in 1963 and 1964 and they were each followed for 5 years, until they became aged 5. In Kent we started at the end of 1962 and we collected data essentially up until the early 1970s. About 8 or 9 years.'

'I had designed the project to allow us to follow populations for 5 years. My original design was that you'd follow cohorts from 0 to 5, from 5 to 9, from 10 to 14, from 14 to 19 and so on. And thus get a picture of the development, the natural history of respiratory disease. And that is what I have done in a number of studies since then.'

'I always had a long-term view of the projects I undertook. I was able to satisfy what I'd been taught, namely that whatever happens one must publish four papers a year! So, in fact, one lived off ones' previous work. But there was never, certainly in the 1960s and early 1970s, there was no pressure to provide quick results. The pressure was to provide results that were valid and good, not quick and dirty. And, in fact, studies that were quick and dirty were looked down upon by my generation, and still are.'

The results of the Kent/Harrow Project were tabulated with the use of early computers and ‘it was all done concurrently [with the project] and ... I think the last papers were published at the end of the 1970s. I think probably we didn’t exploit all the data that we had gathered very well because there were always other questions that we had to answer so we couldn’t spend time on doing this. And one of the problems is although one had recruited people to work with one and you gave them these data sets they don’t necessarily become enthusiastic about them. So that quite a lot of data really was wasted. But I suppose the major papers on the Harrow studies were not published until the mid 1970s. The major papers on Kent continued to be published until the end of the 1970s and beginning of the 1980s.’

And what were their principal findings? ‘There were really three or four. The first one was the influence of air pollution on
the development of respiratory symptoms and respiratory function from birth. Secondly, that none of the factors during pregnancy influenced respiratory disease in the first year of life or subsequently. Thirdly, that illness in the first year of life was important in terms of predetermining the liability for respiratory infections in later life. The importance of cigarette smoking by parents on respiratory illnesses in 1-year-olds, and the importance of social and geographic factors other than air pollution on the development of respiratory disease in children up to the age of 14. The importance of social factors and deprivation on height and weight and on nutrition in school aged children. The growth of obesity, particularly in the deprived groups in Kent. I suppose that’s about it.

**Health Service Research Unit at St Thomas’**

In 1967–1968 Walter Holland created a Department of Health funded unit for Health Service Research at St Thomas’. The unit was born out of St Thomas’ own plans for modernization and expansion and from the DoH’s realization that it lacked adequate research for, amongst other undertakings, the new hospital building programme initiated by Enoch Powell when he had been Secretary of State.

‘I think that the realization that health services research was important began to permeate … the Department, or Ministry of Health as it was at that time. It’s important to appreciate that there was one Principal in the Department who was responsible for the money within the medical branch who’d been in operational research during the war in the navy. A Mr Cornish who never got beyond the rank of Principal. He had a budget of £3000 per annum in the early 1960s and he recognized that there was a need for research within the health service. Up to that time research was done in-house by, I can’t remember the precise name, but a kind of Social and Health Services Research Unit and it began to be realized within the Department that it was not really trusted. This coincided with a man called Dick Cohen … going to the Department of Health. [He] had been third Secretary at the MRC but who had come to blows with Harold Himsworth, the Secretary of the MRC because he felt that the research was not really being applied. Cohen [went to the Department and] became George Godber’s deputy and friend. He understood the need for research so that there was a climate growing in the Department of Health that was willing to consider research.’

‘At St Thomas’ we had a real desire, particularly in the administration, to undertake work which would determine how the new hospital that was about to be built should be designed in relationship to the needs of the population. St Thomas’ had to be rebuilt, so what was the design going to be? And we were challenged to provide some ideas for doing this and we eventually said we’d do what we knew how to do, namely a population survey in Lambeth, find out what illnesses people had, what services they received and from that try to design the hospital to meet their needs. The question was money. Now, obviously, it could have been paid for from the endowment funds because they had the money but both Bryan McSwiney, the Clerk of Governors, and I decided that this would be a very bad tactic because we would be attacked from all directions, and so on. So we went and talked to the Department of Health and got a very ready reception. I had had contact with one Senior Medical Officer in the Department of Health called Max Wilson who was in charge of research under Dick Cohen. He and I had done some work earlier. So we discussed things. At the same time both Sir Austin Bradford Hill and Professor Jerry Morris said that my ideas were reasonable and we should go to the MRC. The MRC said ‘No’, they wouldn’t want another unit in London, but if it went to Cambridge that would be fine. So we went to the Department because that’s what Jerry and Bradford Hill suggested and they were the two advisors to the Ministry. They encouraged us to put forward a proper research proposal, which we did, for the creation of a major research programme on determining the health needs of the population. And that very rapidly became the idea for a Health Services Research Unit. … We never signed a contract until about 1968, or 1969 although support had started in 1966. The culture for research was not very apparent within the Department.’

‘[After] we’d done the study in Lambeth … we were then invited to put forward proposals for the ‘best buy’ hospitals. The idea for ‘best buy’ hospitals was to change the provision of hospital care from in-patients to out-patients. Two hospitals were to be built, one at Bury St Edmunds and one at Frimley. Professor Bob Logan at the School of Hygiene was asked to put forward proposals for Bury St Edmunds and we were asked to put forward proposals for Frimley.’

‘Frimley Hospital was to be built on the basis of more out-patient facilities than in-patient facilities and from my training I decided that we would look at specific problems. The first one was stroke, and what we did was to describe all cases of stroke in the catchment area of Frimley and then see what happened to them and what care they required over a 3 year time period. The second area was the use of general practitioner’s beds within the hospital trying to describe what GPs could do or could not do. The third one was mental illness in that there were about 1500 individuals in the [asylum at Park Prewett mental hospital near to] Frimley and we wanted to see how many of those could actually be discharged into the community and what services they required. So we took specific examples of one or two problems, areas, to try to see whether the new design could satisfy the needs of the population. The fourth thing we did was a randomized control trial of early discharge for hernia. We measured the total cost, not only the hospital cost but also the community costs. And we used the standard epidemiological methodology that we’d been using in other studies. We obviously had to use some of the (medical) records, particularly of general practitioners as well as hospital practitioners but we always had to check on that, and for example, we had one individual going round the general practices to make sure that what we got was complete.’
The research for this project produced unexpected findings. ‘I suppose the first one was in early discharge. We showed that actually the costs were almost exactly the same if you included the social costs, which everybody always excludes. We showed that the major cost of minor operations was not in the hospital but it was the time off work, which was the same whether you were in for 2 days or whether you were in for 7 days. So that was the first surprise. In the general practitioner studies we showed that it was perfectly feasible for general practitioners to care adequately for certain cases.’

‘The second surprise was that, in fact, the policy of emptying [a mental hospital [like] Park Prewett was somewhat unrealistic in terms of expectations because somewhere around two-thirds of the individuals inside had been there since about the age of 10 or 20 and they came from places like Cornwall, or Southampton, or Birmingham or somewhere. So they had no family nearby and no community to go back to. So if you wanted to empty [the asylum] you would have to create special other ‘bins’ to provide the necessary asylum for individuals who were grossly dependent.’

‘[And when discharging the mentally handicapped back into the community returned to the political agenda in the 1980s as “Care in the Community”] I said, “We were right, nobody took any notice of what we said.”’ This would seem to beg a crucial question about medical research of this kind, namely whether politicians and indeed civil servants are aware of research findings when they are making policy.’

‘There is one very major thing that you forget, that is that politicians themselves haven’t got the faintest clue about most of this. They are true amateurs. They are entirely advised by the civil servants. And the majority of the civil servants only remain in their post for 3 years so they develop good knowledge and good relationships with a group of researchers and then they move on. And the Department of Health has, I don’t know, 5000 to 10 000 bureaucrats who don’t necessarily communicate with each other. So that it is somewhat of a chance that people, if you like, continue a relationship. We were very fortunate in that I developed a friendship with one particular individual who started off as a Principal and ended up as an Under Secretary. He rose in the Department of Health and he was very open to scientific advice and would always actually pick up the phone and ask for it. However, he came to blows with his superiors in the 1980s, and in the late 1980s there was a culling of the good innovative civil servants within the Department of Health.’

**Funding**

In retrospect it seems remarkable that in the 1960s and early 1970s such generous funds were available from central government to units like Professor Holland’s at St Thomas’ for this kind of research. ‘There was money available and there were very few people around who had the necessary training to be able to use it reasonably well. I think there was a far greater degree of trust in individuals and dependence upon individuals than there is now. There was far less bureaucracy than there is now. I have a colleague, a friend who was a Professor of Medicine at the same time at another medical school. And we were both sucking our teeth on the station platform one day and we both agreed that the 1960s were the best years of our lives in that it was relatively very easy to get money. We knew it was always better next year than the year before even though we obviously sometimes had to cut back. But, yes, it was much easier.’

‘I mean all institutions were much smaller, whether they were at the hospital level or the Departmental level, so that you had very much closer individual relationships and could communicate much more directly. I mean, St Thomas’ had, I don’t know, between 50 and 100 medical students, and one knew them all. One knew all the house staff, one knew all the porters, and so on. In the same way in the Department of Health one knew the actors that needed to be approached and they would know who to approach as well outside. In research we had various groups that met regularly so we knew what other research had been done and who was doing what. Yes, without any question.’

**Two other projects: ‘Smoking in Schoolchildren’**

‘The study on smoking in schoolchildren was a desire [by] the MRC... “Would I be interested in putting forward a proposal?”’

‘We had shown in some of our earlier studies in Kent that children already at the age of 11 were beginning to take up cigarette smoking. This was a great surprise. We also showed the ineffectiveness of the then propaganda that was promoted by the Health Education Council. It was pretty useless. We showed, however, on observational analysis that individual children who’d had a respiratory infection were less likely to continue to smoke after their infection than those who’d had no respiratory infection. Because of our knowledge of children, because of our work with children, the MRC approached us to see whether we would do a major study of the take-up of cigarette smoking amongst children, what induced children to take it up and could we do trials to stop them from taking it up once we had some clues.’

‘Alan Snaith, a Medical Officer of Health from Derbyshire who was very interested in research and I cooperated. We devised a scheme whereby we took secondary school children in Derbyshire. We did prevalence surveys in half of all secondary schools and followed them up for 5 years. Then we were persuaded to continue to follow them up until they became age 21. We demonstrated that the take-up of smoking followed a change in attitude rather than the other way around. That is, children changed their attitudes towards smoking before taking it up rather than taking up smoking and then changing their attitudes. We also showed that even with taking all the effective methods of persuading them, things like their peers smoking, their parents smoking, doing more sport, and so on, if we had 100 per cent effectiveness of all these measures we would be
which, perhaps, we’re still living with. And that is that the
resulted in one of the major disasters of the health service,
cancer screening. It was introduced in the mid 1960s and it
there was enormous political pressure to introduce cervical
said that this was a way that their lives would be saved and so
country. It became very much a feminist issue in that the women
used in the United States and people began to hear of it in this
'Screening'
‘Obviously it is frustrating [that these findings were not acted
upon] but I think that I have always considered my major inter-
est was research and research findings. I always considered that
there was a differentiation between those responsible for the
implementation of policy and those advising them. I have
always felt that the two should not be muddled and that there
were great dangers in people like me becoming dictators.’

‘Screening’
‘In the early 1960s cervical cancer screening had begun to be
used in the United States and people began to hear of it in this
country. It became very much a feminist issue in that the women
said that this was a way that their lives would be saved and so
there was enormous political pressure to introduce cervical
cancer screening. It was introduced in the mid 1960s and it
resulted in one of the major disasters of the health service,
which, perhaps, we’re still living with. And that is that the
pathology services were overwhelmed by cervical cancer screens
and so the number of post-mortems began to decline radically.
So whereas before about 60–80 per cent of all deaths used to
have a post-mortem examination, after cervical screening began
to be introduced 10 per cent of post-mortems were undertaken.
This was a disaster for medicine and it still is. But there was
enormous political pressure to introduce screening.’

‘In addition it was seized upon by BUPA and some of the
other private providers that this would be a ‘well person check’.
So there was great political pressure to introduce screening
services. The Department of Health had been reasonably wise.
George Godber had been wise. In 1963 he sent a Senior Medical
Officer called Max Wilson to the United States for 6 months to
find out all about screening. He came back with good knowl-
dge of the scene and then in the late 1960s, together with a man
called Jungner he produced a paper for WHO that laid down the
principles which should be obeyed before any screening was
introduced. The Nuffield Trust also created a Working Party
under Professor Tom McKewon’s (Professor of Social Medicine
at Birmingham) Chairmanship, which also considered the
criteria of screening. A variety of screening services were then
considered appropriate and others inappropriate. As a result of
these two moves the Department of Health created a formal
committee, which would vet all proposals for screening services
within the NHS and would agree to what could be done and
what would be paid for. We were asked to do a large random-
ized control trial of multi-phasic screening, which was a sort of
‘MOT’ of everybody. After some difficulties, we set up a
dominated control trial in two large group practices and we
started off from the point of view that it was going to work it
could only work with GPs being responsible.’

“We showed that 10–20 per cent of all individuals or 20 per
cent had an abnormality. But we showed that very few of these
abnormalities really mattered. We demonstrated that if you intro-
duced multi-phasic screening into the NHS as part of the GP
contract it would increase the cost of the NHS by about 10 per
cent.’

“We also showed that BUPA, which at that time was charg-
ing £75 were actually charging six times the cost of all the tests
that were done. We showed the cost of a screening was £12 per
individual. So we were not popular with BUPA. Our findings
were then accepted by the Department of Health and multi-
phasic screening was not introduced into the NHS. We recom-
manded instead that there should be focussed, opportunistic
case finding methods. We’d shown that essentially what was
wrong was picked up because most people went to see their GP
at least three to five times a year. So we could use that oppor-
tunity of contact for doing directed examinations for things that
were possibly important. That lesson persisted within the NHS

Again Government did not appear to respond to the findings
of Professor Holland’s team, neither the Department of Educa-
tion nor the schools themselves. ‘Partly [it was because the
integrated approach in which public health, education, social
services and medical services all hung together had been lost]
but also there was complete resistance by the local politicians
and central politicians as well to admit that children below the
age of 11 could take up smoking! They didn’t want to believe
this! This was so foreign to their ideas that they couldn’t under-
stand that, perhaps, between 3 and 7 per cent of children below
that age were already smoking when they entered secondary
school.’

‘Secondly, it was because the drives for a national curricu-
lum, which should have offered the opportunity to introduce
changes, were so rigid and so dominated by educationalists who
wanted to change the attitudes towards reading and writing that
the concept of teaching responsibility for your own decisions,
decision making and things like that, was the reverse of what
they were trying to do.’

We showed that children began to take up smoking before
they went to secondary school, so that if you wanted to have an
effect you had to do it in primary school. We suggested various
ways for doing this. We were completely blocked by the educa-
tional establishment who were uninterested in doing anything
among primary school children and who were unwilling to change
their curriculum to take into account what we said, which
was to teach that children had to take responsibility for their
actions rather than how to learn to read and write only. We
showed that the major change in smoking habits, a very rapid
rise in smoking, occurred after age 16, when they left school and
that this occurred particularly in those who were out of work.
We showed that children who were between 16 and 18 who did
not have work to go to or did not continue in education were the
ones who really smoked.’

We also showed that BUPA, which at that time was charg-
ing £75 were actually charging six times the cost of all the tests
that were done. We showed the cost of a screening was £12 per
individual. So we were not popular with BUPA. Our findings
were then accepted by the Department of Health and multi-
phasic screening was not introduced into the NHS. We recom-
manded instead that there should be focussed, opportunistic
case finding methods. We’d shown that essentially what was
wrong was picked up because most people went to see their GP
at least three to five times a year. So we could use that oppor-
tunity of contact for doing directed examinations for things that
were possibly important. That lesson persisted within the NHS

ORAL HISTORY – WALTER HOLLAND 127

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for about 10 years. Our final report was published in 1977, 1978.'

‘In the late 1980s the Department of Health, with Mr Clarke as Secretary of State, again put forward proposals for multi-phasic screening in general practice. I wrote to the Chief Medical Officer of the time reminding him even though he should have known, and he didn’t take much notice of what I said. However, my colleague David Morrell who was a Professor of General Practice wrote a scathing lead article about what was happening and what this would do to general practice and how much the costs would go up and so on. And he was listened to much more than I was, in spite of my letters to the BMJ and letters to Ministers. And so it was never introduced.’

The DoH Resource Allocation Working Party

While maintaining close links with Government through the DoH Walter Holland carefully guarded his independence and that of the unit at St Thomas’ even when he was invited to sit on the newly formed DoH Resource Allocation Working Party.

‘In the 1960s it had become apparent that there were gross disparities in the distribution of resources to different parts of the country. Essentially, what money was available for health services was dependent on a historical formula. That is, everybody got the same proportion of the increase over the years. Obviously those who started off rich became richer than those who started off poor who became poorer. So that the divide, particularly between the north and the south, widened very considerably. [Richard] Crossman tried to correct that and he introduced a formula, which was dependent upon utilization of services. He was persuaded that you should be funded by what you did. The fallacy in that, of course, is if you haven’t got anything you can’t provide it, so that it did nothing to correct the disparities. The person who really recognized this was Brian Abel-Smith, who was advisor to Barbara Castle and to David Owen. When they came into power their first act was to try and see this could be corrected. Brian was a member of the Advisory Board to my unit, he was the Chairman. And he and I discussed this and I actually put forward with my colleagues a proposal to David Owen (or to the Government) and to the Chief Scientist of the day, Douglas Black, of trying to see how we could best direct growth money to do the most important things. We proposed different ways of doing it in different areas such as, for example, areas with high infant mortality, to give them services for maternity and children. To do a proper trial with different areas getting different amounts and other areas just getting normal amounts. Just to show whether directed things could do something. I was called to see Douglas Black and David Owen who was the minister of the day and he said, “That’s absolutely impossible. I couldn’t do that, we have to use something more general.” And he then said that he was going to create a Resource Allocation Working Party, which would consider ways to redistribute resources so that it would be more in relationship to need.’

‘A Working Party was created on which I was the only academic; all the others were Finance Officers, Regional Medical Officers and so on. And that had three sub-committees and we were faced with an impossible timetable because we were created in April and we had to report by, I think it was the end of August, in order that our proposals could be incorporated in the spending round for the following year! So we decided that we would put forward interim proposals and then a substantive proposal. The interim proposal was to take the utilization bit out of the formula and base it entirely on population size and age structure. We said that areas with a lot of people needed more than areas with few people. And those with lots of old people needed more than those with many young adults. That was the first stage and then we showed that that didn’t do very much and so we then tried to incorporate another measure. We incorporated the measure of mortality because we had to incorporate a robust statistical measure that would not vary greatly from year to year but would reflect needs. We said that areas with high mortality for, let us say respiratory disease, were likely to need more resources for respiratory disease than areas with low respiratory disease mortality. And so that formula was devised. We showed, for example, the Household Survey couldn’t be used, that morbidity data didn’t exist, and so on. So we put forward a formula for the redistribution of growth money. We never said that the base money should be redistributed, we merely said if the general growth was, let us say, 2 per cent then areas with a lot of money would get little if any growth but areas with little money would get more than 2 per cent. That proposal was accepted by the Government and was then implemented until the Tories came in. Essentially it was differential growth. The difference between regions was rapidly eliminated in the early years of the Thatcher era not because of magic, it was because there was a reduction in total resource so that by reducing you could eliminate differences much more rapidly than by having differential growth. Remember that this is only at regional level so the disparities between districts remained and there were major disparities. They were gradually corrected based on the national formula but they still remain.’

‘The major opposition to these changes came from the Finance Division of the Department of Health, because there had been three individuals responsible for the division of resources to the health service since 1948. Their power became transparent with the introduction of the formula and so the Finance Officers fought tooth and nail not to have this formula introduced.’

‘One of the Members of the Working Party was Liz Shore, the wife of Peter Shore, Secretary of State at the Department of the Environment. One of the factors that was considered for use in the formula was the weighting that was used for the distribution of local authority monies, the rate support grant. The Under Secretary, [the] Chairman, said, “Whatever happens, we shouldn’t do that because it’s manipulated”. In socialist years the towns gain, in Tory years the counties gain. And, Liz said, “Yes, absolutely right.” And so we tried to introduce a very
transparent method, namely mortality rates, age, age and population size and the gender of the population. Nothing else. In the late 1980s the formula was changed. The operational researchers and the politicians hated the formula and then various adjustments were made largely on the advice of economists and others so that then it became, again, easy to manipulate the distribution of resources. And Alan Maynard made his name because he showed that the district that got most gain was the constituency of the Secretary of State!'

**Conclusion**

Retired in name, but certainly not in deed, Walter Holland continues to advise and teach a research led approach to public health. ‘I think that the things that I have done over the years have been concerned with the health of populations and with the factors that cause disease and improve health. Certainly some of the work, and certainly a greater proportion of the work that I did in my final years was to enable others to do that and provide them with the opportunities to do it rather than doing it myself. Yes, certainly I’ve moved into, if you like, the role of an administrator and a facilitator rather than of a doer but I think that the majority of it has been concerned with populations, with those interested in population health rather than with individual health. So, I wouldn’t consider that I’ve moved away from epidemiology or public health really, except that I didn’t do any of the data collection work myself.’