LESSONS FROM THE PAST

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Introduction

A common complaint heard from us ‘oldies’ is that it was better in “our time.” It is worth considering what aspects of past practice and experience could help to ameliorate some of our current problems.

Health of the population has improved enormously (1). Material well-being has improved greatly. We no longer commonly encounter the diseases of poverty such as malnutrition, although shamefully there are still some cases of rickets particularly in immigrant groups. Malnutrition, particularly in the deprived, is manifested by obesity, associated with diabetes, heart disease, arthritis and some forms of cancer.

Effective methods of prevention, diagnosis, treatment and rehabilitation are now far greater. We now know that the commonest form of cancer in the UK, cancer of the lung, can be largely prevented by not smoking - and its surgical treatment has improved so that whereas few, if any, patients survived for more than one year in the past, about 20% now survive for five years (2).

Even with these advances there are some conditions, and experiences, which are worse. It is worth exploring both practice and experiences in the past to see what could be done better now. It is important to recognise that the author trained and worked in a London Teaching Hospital a privileged location.

This paper will comment on some of the practice in the past in Medical Education, Care in Hospital, Organisation of Health Services, Medical Research and the role of the Media and Politics and how changes have impacted our current behaviour and attitudes Some remedies are suggested to current practice.

Though most of the detailed practice and changes relate to the United Kingdom it is important to appreciate that these are also occurring and applicable in other developed countries. The need to learn from the past – both its good and bad points is universal. The societal changes, such as improvements in communication, the lack of solidarity, the increasing role of management, the distrust of professionals are also universal. Thus the lessons, and solutions, are not limited to the UK.

EDUCATION

Choice of Medical Students.

Medicine has always been a very attractive option for school leavers. In almost all countries, even with the creation of new medical schools, over-subscription to medical training has continued. In some countries, e.g. Italy, Spain, Ireland this has led to the export of medical graduates to the UK and USA. To practise medicine a reasonable level of intelligence is required. Student applicants differ in their attitudes. Some choose medicine because of its scientific components and are mainly interested in those aspects, while others are far more interested in the human side of the discipline and relish the possibilities of interaction with people. In choosing among applicants it is important not to exclude either of these attitudes. It is far easier to assess educational and technical abilities than human values, in the past some attempt to achieve a balance in entrants' attitudes, interviews played a major role - even though these are very easily manipulated and subject to error. Nowadays, because of the pressure of work and number of applicants, some universities rely only on past school examination results and school reports - this may preclude many seriously motivated applicants to miss out against those who excel in exams, although, in the past 2 years, there has been pressure to ensure that "value based" recruitment occurs. Whereas in the past there was great emphasis on interest in sports, music success etc., this now counts for less and

other markers of good team working and dexterity (required in medicine) have been introduced. But these are more commonly seen in private school applicants!!

Undergraduate Education

As clinical medical students we were expected to "clerk" the patients assigned to us- usually three to four. This entailed taking a detailed medical and social history, a full examination and then visiting each patient at least once daily. Based on the history and examination we were expected to make a diagnosis and understand the reasons for the diagnostic tests ordered by the qualified staff. There were ward rounds, both with junior and senior staff, at least two to three times a week, when we were expected to present the relevant history and findings of our patient and the treatment administered. Obviously this entailed appropriate literature searches so that we could understand the needs of the patient, the reason for particular findings and the possible diagnoses or treatments for the patient.

This is obviously a curtailed account of the learning/teaching process in clinical subjects' current, fifty to sixty years ago. Much of this is now not possible, or irrelevant. Patients with an acute illness are normally only in hospital for a very short time period, the use of digital devices for searching the literature have replaced visits to the library and life is more hectic than in the past.

But it is worth considering what has been lost, and what can be done. The major loss has been the knowledge gained by students of the effects of illness on a patient over time and the experiences of life and reaction of individuals from a very wide spectrum of age, sex, ethnicity, income etc. Thus we learnt a great deal about the individuals for whom we were responsible. Some medical schools e.g.Case-Western Reserve in Cleveland, took this much further - medical students on entry to the clinical period were assigned a family, which they were expected to follow for three to four years to develop an understanding of the family and

social effects of illness (3). One or two UK medical schools (e.g Plymouth) have introduced a modified form of the Case-Western Reserve model. In the UK generally we developed teaching in general practice, which enabled the student to understand both the way illnesses first presented as well as the effect on the family.

With the demise of home visiting in much of general practice, this aspect of the medical experience of a student has been lost. A common complaint now heard is the loss of empathy of doctors for their patients; perhaps this is associated with the lack of experience during their training. Obviously we cannot return to the old ways of relatively leisurely treatment in hospital or reintroduce home visits by GP's with students, but we could ensure that students do experience the effects of illness on patients' lives and how environmental and social factors interact and impinge. This could be done by even greater use of general practice in medical education than is now done. The resources for such teaching will also need to be increased greatly, at the expense of institutional medical education.

But perhaps the greatest change (and block to patient experience by students) has been the amalgamation of some medical schools e.g. St Thomas', Guy's and Kings in London and the expansion of medical school numbers in others such as Birmingham, Newcastle and Sheffield. Thus we now have intakes of three to four hundred students instead of the fifty to one hundred of the past. Thus methods of education, and experience, of students has changed considerably. Whereas in schools with fifty to one hundred students, both teachers and students knew each other reasonably well and student - patient experience could be on a one-to- one basis, this is now impossible. There has been a shift in the culture and methods of clinical education making it much more impersonal and this may be responsible for changes in the attitudes of doctors to their patients. The increase in size of medical schools and student numbers has enabled schools to expand the size and scope of some academic departments, eg. Genetics, since many consider that this is where the future medicine is.

Postgraduate Education and Training.

In this area of education there have been very important, effective changes since I qualified. The introduction of training for general practitioners is particularly noteworthy. Many of the gaps identified in the experience of the doctor in the social and environmental factors in illness, as well as the longitudinal aspects of illness are rectified by the training and education of general practitioners. However for those pursuing a hospital specialist career, postgraduate training and accreditation is largely based on enhancement of knowledge and technical skills in the management of illness - and there is insufficient emphasis, or exposure, to the influence of social, environmental or human factors, partly, of course, because the patient turnover is so great.

Summary

The considerable expansion in the number of medical students in all countries has been accompanied by an improvement in both quantity and quality of education and research in many of the technical aspects of medical practice and knowledge e.g. genetics, considered as important for the future development of medicine. A major accomplishment has also been the recognition of the need for post-undergraduate education and training particularly in general practice. But this has been accompanied by the deterioration of the practical learning experience at the undergraduate stage, particularly in exposure and experience of the social and environmental aspects of illness.

The much greater emphasis on the technical, scientific aspects of medicine has been at the expense of the human, social and environmental causes and consequences of disease. It is unfortunate that this emphasis does not reflect the burden of disease in the community either now or in the future. It may be part of the cause of the common complaint by patients of the medical profession's lack of empathy.

CARE ON HOSPITAL WARD

Ward Sister and Nursing.

When I first qualified and was a houseman, the most important person was the ward sister. She (mainly) helped me to understand which patient required my help, what sort of help was needed, the routine of the ward, and whom I had to deal with to get things done. (eg. X-ray, blood tests). She also provided support at times of difficulty - and provided information on patients, their family as well as staff. It was she who instructed ward staff in their duties and ensured the patients' welfare. I was fortunate in that all the ward sisters with whom I had close and continuing contacts were helpful and remained my friend for many years. As a patient, at that time, I knew to whom to turn for help, to rectify any problem and to ensure that the care that I needed would be provided. A number of changes occurred in nurse education, nurse management and relationships between nurses and doctors since the 1950's e.g. all state registered nurses now have a degree, and the Salmon Review changed nurse's hierarchies (4).

As a patient, since that time, there have been great changes. In my experiences a ward sister (or equivalent) is rarely seen on a ward. Relationships between nursing and medical staff have changed - no longer do the latter seem to rely on the advice of the former and nurses have taken on some of the functions of the junior (or even senior) medical staff, e.g. putting up transfusions, taking blood. It is difficult to distinguish between nurses of different grades; e.g. who is in charge, who is trained, since they often do not wear uniforms distinguishing the different grades. So called 'named nurses', supposed to be responsible for an individual patient, exist, but are rarely seen and do not fulfil the role of a ward sister. Many of the nursing tasks, such as the provision of bedpans, washing facilities, feeding are undertaken by nursing assistants, who are not registered, and have variable amounts of training. In the past

we had State Registered Nurses (SRN), trainee nurses, with varying levels of experience, and State Enrolled Nurses (SEN), also registered and who needed to pass certain exams of a lower grade than SRN's, and not allowed to administer drugs or to undertake some other nursing procedures.

Continuity of Care and Quality

In the fifties and sixties medical care in hospitals was delivered by teams or "firms". In a teaching hospital, such as St. Thomas', there were medical, surgical, gynaecological, ENT etc. "firms". These usually consisted of two consultants, a senior registrar, one or more registrars and one or two housemen. For general medical and surgical patients each "firm" looked after about thirty to forty individuals, usually cared for in two to three wards, a male and a female ward. Patients were admitted for in-patient care from either casualty or out-patients. Each 'firm' received new patients from casualty on certain days or weeks. They were then responsible for their care for the duration of their stay.

When a new patient was admitted, whether from casualty, out patients or waiting list he/she was first examined by the houseman (and medical student). The houseman would order any necessary blood test, X-ray and so on. Any necessary treatment was usually started. A registrar (or senior registrar) would then visit the patient, usually with the houseman, would perform any further examinations considered necessary, and modify the treatment if appropriate. The consultant would review all patients admitted, usually on the day of admission, but certainly one day later. All patients on a "firm" were visited at least once, but usually twice, daily. Registrars and consultants would always review patients every two to three days, unless the houseman considered more frequent visits were necessary. Thus there was continuity of care from the same team throughout the patients' stay. Any member of the team, but most often the consultant, would ask other medical staff or specialists to see a

patient if they considered a second, or specialist opinion, was needed. This was particularly important for patients admitted from casualty to a general "firm" which, for example, specialised in gastro-enterology but needed help with a cardiac patient.

Diagnosis

Obviously to reach a diagnosis in any patient the history and examination are crucial. Experience was important - and we did not hesitate to ask for help from others. Some clinicians are better than others in putting together findings-those with these abilities were in great demand. To confirm, or explore, findings appropriate biochemical, haematological, special examinations such as x-rays, ECG etc., were done. It was not until the early seventies, when such instruments as multiple-channel auto-analysers were available, that a routine battery of tests was undertaken on patients. In my experience this was not considered acceptable and only tests to explore specific, possible, diagnoses should be done. Whitehead and Holland showed the problems of doing say twenty tests on a patient- by chance at least one test was likely to be abnormal- not necessarily because of the illness suspected (5).

As students we were taught to confess that we did not know if we were uncertain of a diagnosis or the meaning of findings in a patient. If one did not know we were taught to go to the library and/or to consult with others to find out and make sense of the findings. In the early nineties (6) the concept of evidence based medicine (EBM) was propagated by Sackett, Feinstein, and others. By some this was considered a new radical concept. To many of my generation it was not new - we had always sought the meaning or mechanism of any finding or diagnosis in a patient, and since the work of Bradford Hill and others, accepted the need for randomised controlled trials to assess the efficacy of a treatment. We attempted to treat on the basis of scientific findings. This was not unique, although it has become more

common. Medical education was(and continues to be) very variable. Unfortunately the power of "authority", rather than science, is still a potent factor in medicine

SUMMARY

There have been great changes in the conduct of in – patient hospital care. The treatment that patients receive is now of much shorter duration, e.g. whereas a patient with a myocardial infarct was kept in bed for 1-2 weeks after the event, he/she is mobilised within 1-2 days and usually discharged home after 2-3 days. The possibilities of investigation and treatment are far great than in the past. The methods of diagnosis and treatment now are far more likely to be based on evidence of trials and scientific investigations. "Firms" have largely disappeared because of the increase in volume of patients admitted daily which overwhelm the system. The specialisation of roles has meant that there are now far fewer generalists and specialists are unprepared to treat the spectrum of diagnoses. As a result general units have been created to manage the acute phase of illness (Acute Medical Units) and the need for generalists' has returned. The "Shape of Training" review (7) has forced a reconsideration of the need for generalist training. Bu this has been associated with other changes. Nursing, considered as a vocation with training largely in hospital nursing schools, is now a university discipline, with far more theoretical knowledge required as well as practical training in a ward. Entrants to nurse training now come from a wider spectrum of men and women than in the past, when it was one of the few "respectable" jobs for genteel young women. The number of trained, qualified nurses is less than in the past, and individuals who perform nursing duties (nursing care assistants) but who have not participated in nurse education, are now far less qualified and not subject to regulations as their equivalents (State Enrolled Nurses) in the past. With the general abandonment of hierarchical authority, in many professions, visible markers of training, experience or level of authority have disappeared from nurses who could be identified by the type of uniform they wore. Part of this has also been due to concerns with

cross-infection and thus the disappearance of ties, long sleeves etc. (although the evidence for the effectiveness of these changes is sparse).

With shortening of lengths of stay and increase in patient turnover, regulation of hours of work of staff and change in the attitudes to the work-life balance, continuity of care for a patient has become much more difficult. With the increase in the requirement of senior individuals, e.g. ward sister, matron, to record vast amounts of detail to document all activities performed in hospital care, the time available, or devoted, to physical visit to a ward or patient has diminished.

A consequence of changes in financing of hospital care, as well as the increased self-confidence of staff in their own abilities, and the shortened length of stay has led to far less referral or request for a "second opinion". Thus the marked changes in hospital care in the past 50 years are partly due to changes in attitudes in society generally.

ORGANISATION

Between 1948 and 1974 in the UK there were three components which provided health services; general practice under local medical committees, hospitals under hospital management committees and Boards of Governors, and public health, under Local Government. There were many disadvantages to this form of organisation and as a result reorganisation occurred, with the unification of all three parts resulting in Regional Hospital Authorities, Area Health Authorities (which had a separate general practitioner committee) and Districts. Public Health was included in this (8). Following some years' experience, the Area Health Authority tier was abolished and replaced by District Health Authorities. There are many papers describing the advantages, disadvantages and problems of these structures, which I will not repeat (9). But I will concentrate on two aspects, internal hospital

administration (management) and co-ordination/ collaboration with community services, including general practice.

Hospital Administration/Management

At my teaching hospital, St Thomas'; the chief executive was known as the Clerk of the Governors, later District Administrator. He was assisted by a number of other administrators, of varying degrees of experience and seniority. Almost all of the senior individuals had been trained in a national scheme, established shortly after the end of World War Two when, with the advent of the NHS, it was recognised that formal training in hospital administration was needed. Much of the drive to establish sound training came from the King's Fund and Manchester University. The "drivers" of this were Prof 'Teddy' Chester (10) and the Acton Society (11). Each of the trainee administrators retained links to a mentor. When the reorganisation of the NHS occurred, conversion courses in health services, rather than hospital service only, were organised.

Although there was always some tension between the doctors and administrators, in general, relations were amicable. The intellectual quality of administrators was high, most were university graduates. St Thomas' was considered an excellent institution for training. Of the administrators with whom I had close contact several became Regional Administrators including the Chief Executives of the English and the Welsh NHS. To epitomise their attitude it is worth quoting one Clerk:

"It is your job to tell me what patients you need to see in out-patients, it is my job to organise the out patients department so that you can see these patients most effectively"

Nursing administration was separate, but closely related to, the general administration, under a Matron. This will not be discussed further, largely because of my ignorance, and because it functioned in concert with the rest of the hospital.

All aspects of administration were accountable to the Board of Governors or the Hospital Management Committee). These were appointed by the Minister of Health. The majority of Governors or Members were laymen e.g. Chairman of National Westminster Bank, Deputy Chairman of Bovis (a large construction company) and the Finance Director of Morgan Crucible. They included representatives of the medical and nursing staff as well as the Dean of the Medical School.

Each of the Governors" took an interest" in one or more of the Hospital Departments, e.g. catering, nursing, and finance. They had no executive responsibility, but became knowledgeable about their function, problems etc. and thus could provide expert input in the deliberation of the Board of Governors(12,13).

In 1974 there was a major change in the organisation of the NHS, Boards of Governors (and Teaching Hospital autonomy) disappeared. Public health, which had been in Local Authorities, changed to being within the NHS. Hospital Management Committees, the equivalent of Board of Governors, in non-teaching hospitals, also disappeared. These structures were changed to Regional Health Authorities (instead of Regional Hospital Boards). Area Health Authorities and District Management Teams (14). In 1979-1981 there was further change with the disappearance of the Area Health Authority and District Management Teams which became District Health Authorities.

There are many detailed descriptions of these changes and structures which I will not discuss except to comment on one aspect. The Authorities, whether at District, Area or Region became much more political. At each level usually four or five individuals on the Authority

were nominated (and appointed) by the relevant Local Authority and Trade Union, many were local politicians and these were rather less 'worthies'. The aim was to democratise the NHS and attempt to make it more representative of society (9,15).

As a participant in these changes I feel that there were some good and some bad consequences. I was on a District Health Authority, as a representative of the Medical School, and Vice-Chairman for some years. I also served as a non-executive director in the late eighties to nineties at another non-teaching Authority. In addition as an academic researcher I had quite a lot of contact with both officers as well as members in many Authorities throughout the UK.

(1) As a result of the politicisation of Authority membership it is my impression that the Authority members become more distant from those delivering clinical services, nurses, doctors etc. They were less trusted.

(2) Decisions on policy reflected more on the political allegiance of members. This is well illustrated by events in Lambeth. Lambeth was a very left wing borough and was opposed to many of the policies of the Thatcher (conservative) administration. There were thus several occasions when conflict arose, which on one occasion led to the suspension of the Area Health Authority and its replacement with members appointed by the Secretary of the State.

(3) In some instances Members of the Authority ensured that those appointed as officers, or even in some instances as clinicians, were politically acceptable, e.g. in Labour Authorities that the officer was a good 'Labour' man, in Conservative Authorities that he/she was not!

(4) There were also advantages- e.g. local health policy decisions were more likely to reflect the needs and views of the local population rather than the views (and prejudices) of worthy individuals from commerce.

(5) In my experience the change in the membership of an Authority was associated with greater reliance on those responsible for operation of the institution, i.e. the executive directors and less willingness (ability) to challenge statements of the latter by non-executive directors. Associated with this was a greater tendency to accept, without question, the directives of DH and of higher Authorities- since the executives could be removed/sacked by them (not only theoretically but in practice). Since the Chairman of every Authority was appointed by the Secretary of State he/she was far more likely to follow the "diktat" of the DH, than in the past when individuals not necessarily affiliated to any political party had been appointed.

(6) In the early eighties administration of the NHS was deemed to be deficient. An enquiry led by Sir Roy Griffiths, Chief Executive Sainsbury's and adviser to the Prime Minister Mrs Thatcher, considered that the NHS administration, particularly in the DHSS, had lost its way. He introduced the concept of "general management" and the separation, within DHSS, of operational management of the NHS and health policy formation (16). This change from administration to management of the NHS and its institutions had a profound effect on the way the hospitals and the health service worked. Whether it was more effective, rather than just efficient, has never been assessed objectively, though many opinions have been expressed. But with the 1989-91 changes of the structure, and the separation of commissioning and provision, it has been associated with a dramatic increase in the management costs of the NHS from about 5-6% to 12-15%(17,18).

Leadership

A major change in behaviour in hospitals has been the lack of contact between those responsible for health service delivery and management. In my experience in the period up to

about 1978, the hospital Chief Executive (or equivalent) and the Chief Nursing Officer(Matron)" walked the wards" frequently, usually at least once a week. This meant that not only did they know individual staff, but they could see if there was any physical problem, and could be approached easily by the staff. In more recent times, in my experience, the CEO and CNO rarely visit the wards, are unknown to patients and staff, and rely on a 'chain of command' for communication. Certainly they are unknown to patients. Identification of problems, or changes in practice or policy, occur as a result of regular meetings of staff or their representatives.

SUMMARY

The increase in levels of education associated with "levelling" of society has led to changes in attitudes as well as the function of the NHS. Whereas in the past knowledge was considered as part of the "property" of the professions, this is not the present view. In the past professionals were the most valued individuals of any knowledge-based organisations such as medicine. Now many organisations consider the individual with specialised training and education, such as a doctor, as a technician essential for the performance of the organisations' task but subservient to the manager who is responsible for the organisation and prioritisation of the tasks.

This change in attitude to professions has been accompanied by diminution in trust of professions. It is now common to consider that professionals are more concerned with their own welfare and advancement, rather than the provisions of "public good". This is well epitomised in Le Grand's book (19).

This loss of trust in professionals has been accompanied in Society generally with increasing bureaucracy and greater influence of political ideology on all aspects of life from which the health service has not been excluded.

The health services, as other social services, in all countries, has become far more dominated by a management ethos which is more concerned with efficiency than effectiveness. Thus economic factors are now of paramount importance in the provisions of services generally, and this includes health services.

Increase in the number of managers involved with the provison of health services, as well as the closer involvement of politicians in the governance of health services at all levels, has been accompanied by a greater appreciation of patients' (or users) views. But this has been accompanied by a lessening of trust in managerial/authority decisions by the professionals. Unfortunately the expansion of the management cadre has not been accompanied by an improvement in management capability at all levels, which has led to frustration, waste and strife between professionals and managers.

Whereas in the UK NHS the first period (1948-1974) was marked by stability in organisational structure, since 1974 there have been many changes in structure. This has been a universal habit, not restricted to the UK. Governments faced by the inexorable demand for increased provision (and thus funding) of health services have usually responded by changes in organisation/administration structures.

The initial changes in the amalgamation of general practice, hospital and public health in 1974 was influenced by professional advice relevant to changes in the pattern of disease. The many subsequent changes that have occurred in the NHS have been initiated by politicians and managers, often in opposition to professional views. This is not an isolated phenomenon but also seen in many other countries, e.g. the Netherlands, Germany, Sweden.

Although the word "leadership" has become far more common than in the past – and the need for it emphasised in most activities ranging from the Armed Services to politics, industry and commerce the simple activity of talking and seeing individuals at work, whether it be patients, customers or officials, has become rarer. Several academic programmes in leadership and management have been developed in many universities and many future managers have attended these from all fields, but the basic practice of example, "leading from the front" and concern for the welfare of those for whom you are responsible, common in past "paternalistic" practice, are now absent, to be replaced by the development of bureaucratic rules. The health services and universities have not been exempt from this change.

RESEARCH

There has been a major change in the management of academic medical research. In the period up to about 1990, the head of a department was usually responsible for the research in his/her department, both to acquire the necessary funds, accountability for research done, as well as recruitment. It was usual for the Head of a Department to visit or talk to each member of a department at regular intervals, even to walk round each room daily.

With the great increase in the number of academics being given personal professorial titles in the UK, the diminution of university funding and the increase in the burden of university administration, a marked change in most academic institutions has occurred. Now individuals recruited to many academic departments are each responsible for acquiring the necessary funds to do a piece of research (and concomitant overheads). Each researcher decides on the area or subject he/she wishes to explore and is responsible for developing his/her ideas and obtaining the necessary resources. Thus, although individuals select the institution/department in which they wish to work, usually depending on the mix of interests

present, in many institutions the development of a coherent research strategy for that institution is often difficult or impossible. Since individual researchers are frequently responsible for their own salary there is often little loyalty to an institution, and universities 'head hunt' capable individuals to raise their prestige (and overheads). Academics have always recognised that their reputation is largely dependent on their research output, so there is little incentive for developing or participating in teaching. Obviously there are many exceptions, often individual able, successful researchers build teams of colleagues working in one specific area. Research units supported by a Research Council, Department of Health or a Charity are obvious exceptions. But, whereas in the past, in most well-founded institutions young academics were supported and encouraged by the department in which they worked to develop research ideas of their own; although the present administrative, funding system enables such individual enterprise to occur, if the young researchers fails in the quest for funds, he/she is lost.

It is also not recognised that the current system of academic funding is only rarely able to support long-term endeavours which may show few, if any, short-term results. Furthermore it is not recognised that the current system has encouraged the creation of large research bureaucracies to ensure both financial probity, ethical conduct, fairness in the award of funds, complex reporting procedures and so on, but whereas twenty years ago the author was involved in chairing the research committee of a medium-sized charity dispensing grants of about two million pounds per annum,with the help of one part-time administrative assistant, there are now at least six administrators/managerial individuals who fulfil the same tasks, reducing the money available for research. Most universities now have a senior (well paid) individual, with an appropriate number of staff, involved in encouraging, helping and administering research as well as searching for research opportunities - but usually not involved in research who will often, not have done any serious research themselves. Thus,

whereas in the past, research was a pleasurable, individual activity, undertaken by those interested, it has become an important, income-generating bureaucratic task.

I, and many of my colleagues, entered medical research, after becoming interested in solving a problem or exploring an idea. We were encouraged by the Head of Department to undertake the research as part of our service and teaching duties and the necessary facilities and resources were provided. At the end of one or two years it was usually obvious whether we were capable of both initiating and undertaking research (and if it was of interest). Many fell by the wayside, but a few continued, obtaining necessary training and experience and climbing the academic ladder. This ability to do 'unfunded' research to determine whether one wanted such a career, or to follow a 'crazy' idea, has now largely disappeared.

Epidemiological research

This form of research has, and continues to change. In the 19th century most research was concentrated on infectious diseases such as cholera, typhoid and tuberculosis -and the importance of environmental factors such as contaminated water supplies and poor housing in the causation of disease. With the improvement in environmental conditions and antibiotics the importance of infectious disease as a cause of illness and death diminished. Cancer, cardiovascular and respiratory diseases, the so called chronic non-communicable diseases (NCD), became far more common. With infectious disease close co-operation and knowledge of microbiology were of the utmost importance in identifying the causes and methods of prevention. With NCD's one became far more concerned with individual behaviours, such as cigarette smoking and diet, although environmental factors, e.g. air pollution, remained important. However the methods epidemiologists used in their research have also changed. In the first and second area field epidemiology was predominant. Methods included the development of questionnaires and appropriate biochemical and other physical

measurements, with emphasis on findings linked to defined populations and careful design to limit observational and other forms of bias.

Randomised controlled trails were developed to test the effectiveness of interventions without the introduction of selection bias. Current epidemiological research, even if some of the 'old' methods are employed, and the emergence of some infectious diseases, e.g. HIV infection, necessitates continued involvement with microbiology, differs in many respects. The development of computers and genetics, enables epidemiologists to undertake far larger studies, to identify small effects and is beginning to disentangle the contribution of environmental and biological factors. But perhaps the most profound change has been the development and involvement of computing and statistical techniques, crucial in the investigation of large samples. Whereas, in the past, every epidemiologist had to have only a small amount of statistical expertise, that is no longer sufficient. Furthermore much epidemiological research is now based on large databases, often collected for administrative purposes, with little concern for accuracy, validity or variability. Field surveys of defined populations in developed countries have become increasingly difficult, whereas Cochrane (20), Reid (21), Morris (22) and I (23) were content with responses from eighty percent plus (and often ninety-nine percent) of a population surveyed. This is becoming increasingly difficult and researchers have become satisfied (or have needed to accept) responses from sixty percent, and even as few as thirty percent of a population surveyed. More epidemiological research now avoids large field surveys, and relies on responses to mailed or web site surveys. Far less attention is devoted to the development of bias-free readings/responses – complex statistical techniques are used instead to make the "necessary" adjustments.

Modern technology does have two major advantages for epidemiological research. It is far easier to handle, and analyse, large datasets which enable the use of far larger studies across

many more locations. Thus it is much easier to undertake studies in the European Community and use the diversity of the different populations to explore suitable hypotheses. Large longitudinal cohort studies are also far more feasible because of the ability to handle large datasets and thus life-course studies can be done much better. But it is unfortunate that cost limitations in such studies limit the ability to ensure that the data is both, accurate, valid and bias-free. In addition, because of the problem of costs, frequent use is made of databases not designed to investigate a specific problem and secondary use is made of available information, rather than specific data to answer a specific question.

SUMMARY

Research has not been immune from the changes in societal behaviour that has affected, as described above, medical practice, hospitals and medical education. Although there is now far greater emphasis on ethical behaviours of researchers. Research endeavours are now subject to many more bureaucratic procedures than in the past – partly to satisfy the craving for accountability. The funds for research have increased worldwide, both from state as well as charitable sources. The development of genetic methods and knowledge has greatly expanded in the possibilities for disentangling the relationships between environmental and biological factors in the development of disease, its treatment and prevention. But it must be emphasised that, so far, there have not been any new fundamental findings to affect the common diseases such as cardiorespiratory disease or cancer.

Perhaps the greatest changes in methodology has been the development of computing power which has enabled researchers to develop far more powerful statistical techniques at very low cost and this has been accompanied by the ability to investigate far larger samples of the population and follow them easily. This increase in the ability of examining far larger populations, the availability of large databanks and the development of statistical and

modelling techniques has expanded research horizons. But it has been accompanied by the neglect of concern about the validity of the data used for research and the need to test precise, limited, focused hypotheses.

Research has become more public and used, and abused, by the media and politicians in all countries. The media, politicians and managers worldwide often have little concept of research methodology. For example there is little understanding of the difference between relative risk and population attributable risk. This often leads to the publication of "scare horror" stories of findings of little significance – and the non warranted use by those "in charge" of using findings to bolster their beliefs and behaviours. Little can be done about this without major changes in societal attitudes to research and without the active participation of researchers.

Media and Politics

One of the most striking changes over the last fifty years has been media interest and stories on medical events and medical research, particularly genetic research. Fifty years ago, when I first spent some time in the USA, I was struck by the appearance, daily, of a story of medical interest in the Baltimore Sun. This ranged from a medical misdemeanour, to miracle cure, to a case history of an interesting patient. I was used to the British press, where such stories appeared rarely. But now we have copied the transatlantic habits, in all newspapers there is usually at least one such story. Of course, the stories have to be melodramatic, so good news is not often reported, bad news is common, but not always accurate.

In the nineteen-eighties I was a member of Lambeth Health Authority. Lambeth Local Authority had a very left-wing orientation and so was in frequent conflict with the Thatcher Government. This often led to problems on the Health Authority; some members were nominees of the local authority. The monthly meetings of the Authority were often prolonged

and were open to the public. Because of the frequency of dissent with central government policies we were ‘newsworthy’. But what was really worrying was how little relation there was of the reports of the meeting and what was actually discussed, or agreed.

The lack of reliability of media reports of health matters is worrying. But of even greater concern is the selectivity of coverage. Nowadays the tabloids are full of horror stories of events in the NHS, often fuelled by partisan politics. One suspects that the right wing media are encouraged to cover such stories, since they reduce trust in the NHS and promote the concept of private care. It is remarkable how good is the PR of private providers/companies, only rarely does one now see accounts of malfeasance by them e.g. the breast implant disaster and the inability of private providers to cope, with the consequences of the repeated horror stories of care in private elderly care nursing homes.. And yet in the 1950’s and 1960’s failures in health care in private facilities, or by private companies, were common and reported. In addition media coverage of the controversy around the current reforms was singularly absent, only a very few news organisations gave space to discussions of the changes in health care provisions, or why the great majority of health care professionals disapproved of them.

The provision of healthcare and the organisation of health services has always been the subject of political debate in the UK and elsewhere. The introduction of National Insurance in 1909 by Lloyd George was the subject of intense political debate. The Beveridge Report in 1942, which introduced the concept of a National Health Service, was debated, even at the height of World War Two. Its introduction by the Labour party in 1946-48 was opposed by the Conservative party, who wished to have a different structure, as well as by the BMA and many doctors. It was only in the 1960’s that debate about the concept of the NHS abated and it became, as has been said, a ‘national religion’. This, however, did not mean that political discussions abated. The NHS has always been a “political football”. The matters of

controversy have also been similar throughout. The most frequent debate has been about funding, starting with the Guillebaud Enquiry (24) in the 1950's about the cost of the NHS,to the distribution of resources geographically in the 1960's to 1970's (e.g. RAWP)(25), to adequacy of funding in the Thatcher years leading to the 1989 reforms(26), and more recently to comparisons with expenditure on health by other countries (e.g.Tony Blair). All Administrations since the early 70's have responded to these discussions of the NHS by reorganisation, in 1974 by unification, in the 1990's separating purchasing from providing and most recently removing the power and responsibility for providing services from the duties of the Secretary of State to merely" ensuring" the provision of services. Between 1974 and now there have been at least 30 reorganisations, with increasing frequency since 1990 and increasing demoralisation. Too often a new Secretary of State has wanted to leave his/her own imprint on the NHS, only a very few have attempted to mould 'their' reorganisation in such a way that services for patients improved. The 1974 reorganisation, which brought general practice, hospitals and public health into one authority, was preceded by at least ten years animated discussion of professionals in the NHS, and was broadly welcomed by both the main political parties. The 1989-91 reorganisation, which divided authority between provision and commissioning of services, and all subsequent changes, particularly the most recent 2010-12 change, have not been subject to such intense professional discussion, but have been led, and influenced, largely by management consultants and politicians most of whom had little health service experience but are ad**e**pt in the sale of nostrums, perhaps applicable in commercial enterprises, rather than the provision of a social service. In addition they have been dominated by the belief that" private -for-profit" markets are the answer to improvement in efficiency and quality. No notice has been taken of examples from the failure of private enterprises, or the difference between making 'widgets' and providing complex

varied services or the example of USA with its gross inequities of provision and costs. But above all, in recent years the ethos that ‘profit is king’ has dominated the scene.

SUMMARY

Modern communications means that society is inundated by information. Governments connive with the media to produce and disseminate shock-horror stories which can catch the voters’ attention. This is used to propagate favourable messages. In the past reasoned debate on issues such as politics, the health services or universities was the norm.. In all countries we now see a great increase in the speed and spread of information transmission. In almost all countries there has been an increase in polarisation of attitudes. With the growth of both health and economic inequality in almost every country, and certainly between countries, every administration has attempted to find solutions to these problems. But in most countries these inequalities have been accompanied by diminution in “solidarity”. In in an era of instant communication governments have also succumbed to the search for instant solutions. But, in every country, these must not harm the rich or powerful. With the growth in the deficit of population “solidarity” everywhere individual profit has become “king”.Greed and selfishness has replaced concepts of concern for the poor and vulnerable. Thus societal services such as health services, education and research have been modified to enable individuals to profit – e.g. through private health insurance, fees for undergraduates and patenting research findings.

Conclusion

This is a brief personal account of medical experiences in the past sixty years. Obviously it is highly biased, but I would draw the following recommendations about what should be done

now, and in the future, to apply the lessons of the past and improve, and rectify,current health care.

(1.) Greater care must be taken in the selection of medical students. The two essentials of a good doctor are empathy and ability to solve problems. Development is required in the ability to identify these traits.

(2.) Because of changes in society and available methods of treatments there is less need for institutional facilities, thus teaching in the community needs to be developed which will also help in the education of future doctors of the influences of environment and social factors on both the causation and progress of illness.

(3.) Choice of medical career is always difficult and young graduates need to experience a wide variety of disciplines.

(4.) It is essential that specialisation in post-graduate education does not occur too early – and that changing disciplines is not discouraged.

(5.) The identification of ward staff should be made simple and easy, so that patients and visitors can easily distinguish between state registered nurses and health care assistants, different grades of nurses e.g. fully qualified nurses, first year students.

(6.) Health care assistants should be registered with a statutory body which should specify the skills required. Thus there should be uniform training and examination procedures. In case of demonstration of lack of professional competence there should be a procedure for barring re-employment or enforcing remediation of health care assistants.

(7.) Since most health care requires continuity of care and since modern methods of working involve a far greater frequency of limited time rotas, it is essential that 'handovers' from one shift or team to another are both efficient , and that defined areas of responsibility in care are developed.

(8.) In the past patients in hospital were visited by junior medical staff at least twice a day, and by senior medical staff at least once a day, senior nursing staff also reviewed each patient daily. This should be re-introduced.

(9.) All patients desire to have a diagnosis of their condition. It is not always possible to give this immediately, but instead of giving imprecise, inaccurate information patients should be told that ‘we don’t know at this time, but are trying to find out.

(10.) In the past expenditure on management of hospitals was low (approx. 5%) and the number of managers few. This level of management was, probably too low. Now expenditure on management in hospitals accounts for about 12-15% of health care costs, and there are many managers. Whereas Sir Roy Griffiths, in his enquiry, commented on the scarcity of managers he would now, probably, comment that there are too many. The increase, both in numbers and the expansion of responsibility, is unnecessary and counterproductive.

(11.) Concomitant with the increase in management there appears to be diminution in their quality. Managing a ward, hospital, or general practice is different to managing a department store or other industry. Specific training is required, and it is not sufficient to have been a nurse, doctor or pharmacist.

(12.) A prime requirement of modern health care is the need to co-ordinate activities; collaborate with other disciplines or units and to share expertise. Far more emphasis to these aspects is needed. Training in multidisciplinary working is crucial.

(13.) Willingness to accept responsibility for any action taken in the care of a patient as well as clear lines of accountability are required. If anything goes wrong admission of fault should be mandatory. Blame should not be shifted from one body to another, but it should be accepted that failure can occur in any organisation, at any time.

(14.) There is an obvious need for leadership skills within the NHS, although there has been some attempt to introduce these, England has been remarkably resistant to developing a 'staff college', as was originally advocated in the early 1970's (27). Only Wales has developed an appropriate structure. Although many leaders are 'born' with the necessary skills, they can be developed.

(15.) Good research and committed researchers are crucial in the development of any organisation. Researchers and academic departments should have a coherent strategy. It is important to foster research and to encourage the development of original work. To assume that research should only tackle problems defined by managers or politicians is to confuse research with management consulting.

(16.) Most research in medicine is a team effort. Appropriate teams must be developed and researchers trained to work in multitasking teams.

(17.) In academic medicine it is essential that those who research also take their share of teaching, and vice versa, that those skilled and mainly interested in teaching also do some research. Only in this way can one ensure that modern advances are included in education and practice. Of course both researchers and teachers should also provide a service by doing, clinical, public health, pathological work, to ensure that the service benefits from research and that researchers understand service needs.

(18.) Although there is a need for basic research most medical research is of a more applied nature. When deciding on a research topic it is important to appreciate that the findings should have an application.

(19.) Not every practitioner is suited to become a researcher, but opportunities and resources should be available for a young practitioner to do some simple research and explore an idea. Of course all proposals must be vetted for ethical acceptability. This

should not need to go through a lengthy assessment procedure as the main aim is to stimulate an individual to take up research

(20.) Many of the major, dramatic findings of chronic disease epidemiology were made between 1950 and 1980, e.g. smoking and cancer of the lung, exercise and coronary heart disease. Thus the field has become more complex. Nonetheless it is unfortunate that, other than for infectious disease, much of epidemiology relies on routinely collected data. Collecting information and examination of individuals has become expensive, but reliance, on routine data sources, or mathematical models, leads to less reliable findings and often false conclusions. It is a pity that the carefully planned collection of data whether by questionnaire, examination or investigation is now rare. It is a pity that service practitioners frequently expect payment for taking part in planned studies which involve training and the collection of information not entirely relevant to the care of a patient. This is one of the major causes of the rise in the cost of collecting data for a study but is a consequence of the societal norm to be paid for any service. This habit should be reversed.

(21.) Much modern epidemiology relies on statistical methods to correct for bias in the data collected. Unfortunately these techniques cannot correct, adequately for errors in recording answers to a questionnaire or, for example, the measurement of blood pressure. The methods developed in the past e.g. recording interviews (28) or 'blind' measurement of blood pressure (29), are neglected and may lead to similar fallacies such as the 'bimodal distribution' of blood pressure being accepted. More care is required in the collection of data.

(22.) Although it has for long been recognised that epidemiologic findings must be related to a defined population, the difficulty in obtaining response rates of 80%+ in population studies, common in the past, has meant that findings from a population

with response rates of 30-50% are both published and accepted. The need, and cost, of obtaining better response rates seems to be neglected, sensitivity analyses may be of some help in estimation of the reliability of a finding, but are not really sufficient. A modern problem has been the acceptance of findings from surveys not based on true random samples or total populations of those at risk. They are cheaper and easier to obtain but the findings are unreliable. Random samples of non-respondents in a study and definitions of their characteristics to determine how their participation in a study might have influenced the results, or greater persuasion to participate, by use of appropriate incentives, should be used.

(23.) The role of the media in stimulating concern about health care and the NHS should not be underestimated. Many of the current reports serve a useful purpose, but some are erroneous, some scare current and future patients, and some raise false hopes. The media need to be challenged when errors occur.

(24.) Since its inception in 1948 the NHS has been the subject of debate. Discussion of health services organisation, health service failures and successes occurs in all countries. The emphasis in all countries on dramatic events in the media influences politicians in their attitudes and policies. Unfortunately this leads politicians to demand and impose "instant solutions". These are rarely based on a thorough knowledge of the reasons for failure or success. Recent examples are detailed by Paton (30) and Fotaki (31). Unfortunately it is unlikely that political interference and ideological concepts, whether well informed or not, can be avoided in the direction and management of health services in any country. But some changes are possible. Academic research and ideas should be promulgated by appropriate, peer reviewed publication, rather than by press release or twitter message. Health administrations should not rely on the help of management consultancies, usually not adequately

trained, but the expenditure on management consultancies should be used to strengthen academic health research which would then have the capacity to provide the necessary help. Their advice would be far more likely to be based on appropriate, specific knowledge as well as being more independent and less likely to be based on the wish to "please the customer".

(25.) With the increase in academic health research, to substitute for the panacea of expensive management consultancy, research commissioning should become of a longer term nature. Health researchers should also be encouraged to develop links to health service managers and politicians (and vice versa) in order that the quality of advice is more soundly based (32).

Epilogue

I recognise that this essay describes policies, behaviour and organisation current while I was being educated, trained and practiced. Much has happened since that time, but I consider that is in important to reflect on past customs and practice, I also accept that the opinions that are expressed will not be viewed favourably by many, nonetheless I think that it is worthwhile to consider what has been lost and whether some, even if not all, are reintroduced.

Although most examples are from the NHS in the UK they are applicable generally in almost all health services in all countries.

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