PAPERS AND ORIGINALS

Getting the NHS back on course

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In great contrast to its performance in the 'sixties, when it was progressing fast towards achieving a first-class service for Britain, the NHS has slowed down and gone off course. In the 'sixties salaries had lagged behind; the old Victorian buildings were just beginning to be restored or rebuilt; and everyone worked long hours, but morale was exceptionally high. Much of the credit for this goes to the leadership of successive ministers. Potentially the NHS seemed to be one of the finest advances in social humanity in this century, second only to the introduction of the old-age pension early in the century. Then came the erection of a top-heavy administrative structure that wrecked the communication between doctors and administrators and slowed down progress. This was followed by an infusion of political dogma—completely foreign to a service that was built up with almost unanimous support and co-operation from all three political parties—and the medical profession realised that the new policies meant the potential loss of professional freedom and that the patients could then no longer come first.

The Royal Commission has been given massive documentation about the present problems and will provide new plans for the future, but it will be at least four years before any major changes can be implemented. In the meantime, much can be done to get the Health Service moving in the right direction. The first essential is a sense of purpose and direction, and this must come from the men at the top. Leadership, confidence, new attitudes, understanding—not money—are needed to restore the team spirit so essential for the first phase of recovery. The second phase will need a number of important changes, such as the consultants' new contract, and some simplification of the administrative structure, with the public once again represented in the district hospitals. Our older hospitals will have to be refitted before new ones are built and disastrous mistakes made in the past should be avoided. The various time-bombs that are quietly ticking away will have to be defused. These include salary scales and the great problem associated with maintaining

academic appointments in alliance with the National Health Service. Surely the NHS and not the universities should be paying for the service component of academic work. Out-of-date parts of the service, particularly operating theatres, have got to be modernised and inbuilt obsolescence reduced by proper maintenance. Medical records must have better support so that tidy, methodical details can be kept about every patient by both general practitioners and hospitals.

Progress on all these matters would undoubtedly be quicker if each main region of the country were given greater autonomy—as indeed they were in the past, when the arrangement worked well. Today's supply of fine top-level administrators should ensure a uniform national standard, and previous inadequacies in certain regions need not be repeated. Essentially Britain still retains the individualities of the old kingdoms long since federated into our nation. Every manufacturer, every advertiser, every traveller realises how much difference still remains among different regions: everyone, in fact, who is not blinded by Government overcentralisation.

This paper brings together the essentials for getting morale restored in the NHS.

Appreciating the key role of the patient

"Patients come to the NHS to be treated and not to be administered." Yet this simple fact, so clearly set out by Paine,¹ is increasingly being forgotten. Every administrative change should be tested against its effect on the service to the patient, and reorganisation has weighted the scales against them. Patients need a flexible National Health Service that enables them to be sent to the best and most convenient centres to find the diagnosis and treatment they need and this has become more difficult.

One of the real advances under the NHS has been the recognition of the individuality of patients. Several studies have helped patients to understand their illness and to play a more active and co-operative part themselves. This process can be helped by community health councils when they serve as the patient's friend. Too often, critical comment has been inhibited by the patient's sense of gratitude, and organisational defects that should be corrected go unmentioned. Too many wards and outpatients have continued to function under poor conditions with out-of-date routines. These are becoming increasingly

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noticed by the more observant members of the public. A medical sociologist² (as a patient) has written a kindly but critical study pinpointing a whole series of unnecessary inconveniences to a patient and inadequate communications during her admission.

The young can be particularly observant, critical, and uninhibited. The report of the Court Committee³ on child health services contains an appendix on attitudes of 5th- and 6th-formers to doctors and their knowledge of the health services, and makes salutary reading. "There is a general feeling that neither family doctors nor school doctors communicate effectively with them and that neither have time to discuss health and personal problems in the depth they would like." "Family doctors do not talk to you, they talk to your parents in front of you as though you do not exist." Doctors and nurses must review critically their present arrangements, particularly the need to encourage the individuality of every patient. Pressure of work is no excuse—life is a matter of priorities. Nothing could help the NHS to achieve its objective better than full practical recognition of both the key role and the individuality of the patient. The NHS is there for the patients and should not be a battleground for sectional interests.

Understanding NHS finances

Too few people understand what is happening, but this understanding is essential if morale is to be maintained and improved. Everyone knows that costs have risen astronomically, but in the real terms of purchasing power the cost has risen very modestly—having doubled between 1954 and 1976. During the 1950s the increase in purchasing power was about 2% a year. In the 1960s it reached 6%, but for the period 1973-4 to 1977-8 it is down to 2.2%. In the recent White Paper the spending on health is planned to rise only 6.8% over four years. Generally, at least 1.5% a year is needed merely to keep pace with the extra demands generated by an aging population, and so the margin for development of services in the next few years is negligible. The only chance of improving services to the public will come from using buildings, equipment, and people more efficiently, but these dividends have already been paid out. In the last decade there has been an impressive increase in medical, nursing, and administrative staffing, but little of this increase has been translated into better patient care. In giving his breakdown of the reasons for the increase in administrators to the all-party Commons Public Accounts Committee Sir Patrick Nairne⁴ estimated that 45% of the increase was due to the more expensive management structure, 20% to increased planning functions, 15% to improved conditions of service, 10% to work taken over from local authorities and to service the new community health councils, and 10% to improve financial control.

None of this so far has improved service to patients. The increase of 21.4% in the numbers of nurses, from 272 000 to 330 000 between 1971 and 1976, will have helped somewhat. Nevertheless, the hours of work and entitlements to leave have also changed during this time and the real increase represents only 11.8% in terms of hours effectively worked. This is an acceptable contribution but, even so, not all this has reached the bedside. The hope of an improved service under the financial restraints already ordained in the White Paper must come from raising staff morale and further concentration of services to make fuller use of our present facilities. In order to lower morbidity and mortality rates, improvements in social environment and life style are needed rather than in medical services. It is becoming more and more evident that cradle-to-the-grave mollycoddling may be counterproductive.

The NHS's income has been relatively fair in proportion to the national economy, but one may reflect that countries with less antiquated hospitals tend to have two or more sources of income. Health is a capital asset and many would be willing to make some contribution at the expense of their life style (which all too often has aggravated if not caused their illness).

In monetary terms the contribution of private practice is

relatively small—about £30m—but in real terms it has been immensely important. The standard of pay-beds in earlier days became the general standard for the NHS and led the way in terms of amenities and treating the patient as an individual. Potentially, private practice offers the one guarantee against Britain developing the two-tier standard of medical care. If private practice is completely separated from the NHS inevitably it will become the leader, and the NHS will suffer: it cannot afford an internal "brain drain" as well as an overseas one. If a double standard of care is not to become a reality, there must be freedom of access for private patients to specialist and academic centres, and preferably to all hidden specialties as well. The independence which some of our academic centres have achieved by being able to finance research has been of great importance at a time of national economic stringency.

Understanding the consultant's role

The medical work of a hospital is made up of thousands of individual clinical decisions that are accepted by the patient on the advice of the consultant or one of his senior assistants. Diagnosis and treatment are achieved with the help of a team, backed up by the general hospital resources. The nature of treatment and the facilities needed remain the consultant's responsibility, and he or she determines the speed at which the unit works. In a sense, every consultant is a managing director and should be in a position to discuss departmental needs with those who are concerned in making final decisions. Before reorganisation, consultants had access to the level where final decisions were taken. An intelligent lay chairman would have been well briefed by administrators who had the benefit of discussions with the consultant concerned, but reorganisation virtually closed these lines of communication. The best an individual specialist can do is to brief a consultant colleague on the district management team. He can also discuss it with the hospital secretary, but, with few exceptions, these posts are now held by relatively inexperienced administrators, above whom is the sector administrator, the district administrator, the area administrator, and the regional administrator.

No wonder that today decisions can be achieved only after appalling delay and mounting frustration. Like the caged canary, most consultants have struggled to overcome the system, but few have succeeded and most remain frustrated. The ultimate reaction in these circumstances is to stop trying to expand their clinical activity, as they usually did before reorganisation, and, instead, to build up their personal interests. Fortunately, management still attracts some interest, but reorganisation led to a definite cooling off in relations between hospital doctors and administrators, to everyone's disadvantage. Senior medical staff should remain *primus inter pares*, because they do the intricate operations and deal with all major medical crises. This is what hospitals are all about. The decline of consultant status is not only a function of reorganisation—the profession must accept some responsibility. Since they allowed themselves to be politically outmanoeuvred consultants will have a long haul to regain their prestige and full public respect.

Stimulating hospital staff morale

Medicine today increasingly has become a matter of teamwork and this must be recognised. Just as the consultants should have access to those who make final decisions about their department, so should members of the hospital staff be allowed to suggest ideas for improving working arrangements. Doctors and nurses have no monopoly in feeling pride and responsibility for their hospital, but there are relatively few occasions when all grades have an opportunity of showing that they too have a great interest. Those who have been concerned with arranging an annual fete cannot but be impressed by the enthusiasm and interest all sections of the staff show in the hospital. The same

deep interest certainly has been apparent from cross-sectional working groups set up within hospitals threatened by serious financial stringency or other crises. The interest and desire to help are there, but they need to be nurtured. Unfortunately, there is a minority of staff who seem intent on causing irritation and disruption and who no longer accept any form of discipline.

Staff consultative committees need not be dull and unproductive. Participative management may be a step in the right direction. New angles may be seen on small but irritating problems directly affecting patient care by small groups of staff working on specific topics. Participative management might help to solve more problems within a hospital—problems relating to work schedules, and controversial items such as car-parking control may be successfully worked out by a multi-staff group. Consultants have a responsibility for encouraging teamwork, for co-ordinating their team with other members of the hospital, and for setting an example in courtesy and consideration. It helps morale and costs nothing, for example, to ensure that theatre lists include not only the name of the surgeon and the patients, but also the names of the theatre sister and other staff who will be helping, including the porters. Achieving good staff relations needs thought, not money, gives better work satisfaction, and improves the service to the patients.

Concentrating administrative skills

Any large-scale revision of administration will have to await changes recommended by the Royal Commission. The basic principles of reorganisation introduced by Sir Keith Joseph were, and still are, reasonable. To federate the health services inside and outside the hospitals makes sense, and so does close co-ordination with local authority social services and health education services. It is unnecessary, however, to build such a complicated administrative organisation at the area. The area team of officers have had to erect a topheavy structure and multiplication of communication systems that has made the NHS unwieldy. If there were statutory single districts the area officers would be free to get on with what should be their primary function—working closely with the community, developing information services, stimulating ways of improving the environment, and encouraging preventive medicine. The decaying inner zones in all the big cities pose immense problems and need area health authorities to undertake just what their name implies.

Staff now being held in “non-jobs” in the area should be transferred either to practice or to planning. In the districts, communication should be direct with the region.

Nevertheless, area health authorities (committees composed of members of the public) play an important part that should be continued because of their essential link with the public. In the name of the public, AHA members accept final responsibility for difficult decisions, and their contribution is to provide wisdom and common sense. I hope that, with rare exceptions, they will in future be related to single districts.

Concentrating acute hospital services

Ever since its birth, the NHS has continued to improve and make better use of what is available, and today there are well over two and a half million more hospital admissions annually in Britain than there were in 1948. This has been achieved with 60 000 fewer beds, and this fall in the number of beds has continued over the past ten years. The efficient use of beds has allowed double the number of patients to be treated, but the “conveyor belt” stage is now imminent and little more can now be achieved with fewer beds.

It is no longer possible to provide an acute general and surgical service in units of about 100 beds. It does not mean that smaller general hospitals should close, but their use may have to change, and they could help to provide more support for the community health services other than acute medicine and

surgery. These smaller general units have fostered much local affection and regard, and closing them causes ill-feeling locally. Concentrating acute resources is an essential step in rehabilitating the NHS.

Improving hospital buildings

The quadrupling of oil prices has effectively finished the ambitious programme of building new hospitals that was started in the 1960s, and we must now systematically refit older buildings. Strange as it may seem, there has been no systematic comparative national review of hospitals since 1943. The first step should be to measure existing facilities, buildings, and equipment. (In the educational world the date of construction and adequacy of the schools has been worked out.) Each region has undertaken a building plan and much information is available, but this has not been put together comparatively. A simple national domesday-type survey would enable the physical state and facilities of general hospitals to be recorded region by region. About 20 key questions would probably suffice, including points such as year of construction, ratio of lavatories and bathrooms to beds, number of interchangeable single rooms, provision available for medical staff to see patients and relatives, and size of the medical photographic department (so essential for teaching). With computer help the whole exercise could be completed within months and then for the first time the regions could be compared objectively. The information might come as a surprise to politicians, as it would show how many deprived hospitals still exist in our main cities.

Hitherto, capital money has been concentrated on new hospitals or major developments and remarkably little has been spent on refitting the older hospitals, which are the backbone of the district medical service in Britain. For the time being, we should stop planning new hospitals and, so far as possible, refit our existing stock. Hospitals, especially those constructed before 1914, were solidly built with three floors, thick structural brickwork, and the staircases and landings were often in stone. Windows were made with seasoned wood and double-hung sashes, and doors and mouldings were substantial. In general, they remain remarkably versatile for upgrading, but this is not true of many of those built after the first world war. Building an external spine for extra services, gutting the interior, and re-planning will provide an acceptable ward for patients and staff. Furthermore, such wards tend to retain an atmosphere of friendliness and familiarity less easily achieved in new buildings, and they are less expensive to heat. The ample grounds surrounding most Victorian hospitals provide the necessary space for extensions of outpatient and diagnostic departments. From a national survey it would be possible to make realistic allocations between regions, and to plan a forward programme.

Fair shares

One of the prime objectives of the National Health Service was to provide equal opportunities for treating patients, regardless of where they lived. Fair shares is a first essential for the NHS. The question at issue is whether this should be determined by a computer fed with incomplete and often inaccurate figures, as proposed by the Resource Allocation Working Party (RAWP), or whether human judgment should continue to be used as before. RAWP was set up to study the basis for financial allocation among different parts of the country. An explicit allocation is attractive and could remove any sense of unfairness. The objectives are unexceptional, but the proposals made are fraught with danger for the NHS. They propose to take “need” as a basis for allocation, ignoring present “use.” This sounds simple and logical, but it is neither. The proposed assessment of need is based on age, sex, fecundity rate, cross-boundary flows, and mortality rates for selected conditions in an arbitrary age

range. There is no acceptable definition of need, and the calculations used are unsound. They fail to allow for unmet medical need in the community—which can be ascertained only by local surveys. To make spurious calculations is merely to close the eyes and mind to reality, and acts as a brake on progress. For any such exercise like should be compared with like, and this is not being done.

Apart from London weighting, it is assumed that equal money in different regions buys equal care. No allowance is made for the distortion of expense that occurs, for example, in large conurbations, where not only does the cost of living rise but there tend to be zones of social deprivation resulting in greater pressure on the health services. This cannot be dismissed as being the responsibility of the social services instead of the hospital service. Account must be taken of the variation in standards of primary care, because this affects the amount of hospital support a community needs. One must take into account the enormous (but necessary) cost of teaching hospitals. An even quality of management cannot be assumed and, indeed, this may have been the biggest single variable in accounting for some of the present disparities.

With populations of 250 000-350 000 errors will be magnified, particularly population figures and Standardised Mortality Ratios (SMRs). RAWP depends on accurate estimates of population, but these do not exist. The last five-year census was cancelled on economic grounds, and within 10 years considerable unrecorded changes can occur, and striking disparities have been found at the time of a major census. Populations remain "guesstimates" and an unfair basis to use for allocating millions of pounds. Implementing subregional RAWP needs first-class records departments, but these departments are already working under difficulties, often having lost staff in economy drives, and existing returns cannot be relied on for accuracy. Recording the cross-flow of patients needs additional staff, all of whom are doing unproductive work. It is in the districts that obvious variations in social deprivation could be associated with only small changes in mortality rates but major demands for care. It is in the districts that there are obvious variations among local authority social services in their care of the handicapped, the elderly, and the ill, and there will be variations in the quality and quantity of primary care. These differentials are likely to exceed the RAWP time scale for equalisation.

There could be serious repercussions on the Registrar General's mortality data. SMRs are derived from information on death certificates, which are susceptible to changes in diagnostic practices unrelated to true changes in cause of death. Under the RAWP recommendations money is being taken away from the better-off regions and redistributed to those less well-off. In East Anglia there are the best morbidity and mortality figures in Britain, a high standard of general practice, excellent but not yet perfect district general hospitals, and regional costs that are below the national average. There is far better all-round medical care in East Anglia than there is in the East End of London. There one finds inner city decay, struggling antiquated district hospitals, patchy and often dismal primary care, but, in addition, two world-famous teaching hospitals and two specialist hospitals all with regional and national responsibilities. Under RAWP recommendations, the East Enders lose out, and the East Anglians gain some millions. Surely such practice of "fair shares" cannot raise morale where it is needed. There are parts of the country, particularly the Northern region, where more new money is desperately needed and where a differential allocation must go. There are also parts of Britain—such as Scotland, which already has 25% more money per caput than England—that were left out of RAWP's terms of reference. RAWP's benefits are outweighed by loss of morale elsewhere and unwise expenditure. The pursuit of economy and efficiency is an accepted responsibility of district administrators, but they must know all about local conditions, and not work from a computer exercise relating to RAWP calculations based on insecure statistics. The starting point must be "use" and not "need," and human judgment at top levels must be allowed to

continue. As a nation we accept the umpire's decision, and we are prepared to wait in queues.

Encouraging specialist centres

Fair shares for basic essentials had been achieved nationally by the mid-'sixties. For highly specialised facilities there must continue to be an uneven distribution between districts and areas, and some centres must be regional or even national. The centres of specialisation today set the standards for tomorrow. They are the pathfinders—the academic seed-corn of the nation—and must be nurtured and protected if they are to make their full contribution to the NHS and to our international reputation. Around the country as well as in London several specialist hospitals have made excellent contributions to the NHS. Unfortunately, some are linked with district budgets and find themselves increasingly threatened. These include Harefield Chest Hospital, Stoke Mandeville Hospital, Birmingham Accident Hospital, and St Mark's Hospital for Diseases of the Colon and Rectum, London.

The specialist hospitals have built up a tradition which has four complementary effects. Firstly, they attract patients who provide unique opportunities for studying management problems, and indeed their evaluation of new treatments may save the NHS much money. They also help patients to help support one another, a benefit of the specialist unit that is seldom recognised. This has been particularly true for patients with paraplegia and abdominal stomas. Such patients find themselves among others with similar problems and with staff who understand their particular physical and psychological needs.

Secondly, they attract staff. A specialist hospital may draw its consultant staff from several hospitals, and this is particularly true in London, where most of the staff will spend half their time working elsewhere in a large teaching or district general hospital. The pooling of ideas which results when staff from different hospitals work together closely is one of the reasons for the success of the specialist hospitals.

Thirdly, they promote high standards. The fact that the staff deal only with a small range of disease leads to their developing special skills. This is true among the whole nursing, radiological, laboratory, and medical staff. All of them have highly developed systems of medical records that facilitate and encourage clinical research.

Fourthly, they attract postgraduate students. Doctors from all parts of the country and overseas seek training at such hospitals, either by working in a junior post, by observing the work of the hospital, or by attending courses. For many years between 3000 and 4000 overseas postgraduate doctors have come to Britain to learn skills, most return to their own countries and, later, may be responsible for ordering British hospital equipment and pharmaceutical preparations which stimulate our export trade.

A point also insufficiently appreciated is the valuable contribution that the NHS makes to "hidden specialties" in the highly specialised work done in general units all over Britain. They may distort budgets, but they help many patients and contribute to medical progress.

The political contribution

For better or worse politicians make a vital contribution. The difference between high and low morale in terms of work output in the National Health Service is at least 10%. With good team spirit and with a real sense of purpose everyone works with a will, as happened in the 1960s. There was a sense of real partnership among politicians, the DHSS, the regional boards, and the hospitals. The objective was to build up a first-class health service and with the building programme at last under way the vision was becoming a reality. The NHS had the

advantage of being backed by all political parties, and was comparatively free from political intervention. The regional boards had started excellent work, although some were less advanced in their plans than others.

In the last few years there has been a sharp fall in morale. The national economic climate had a chilling effect, but the service worked well earlier on under greater economic strains. The problem arose from the break-up of the partnership between those working in hospitals and those controlling the service. The spirit of mutual trust was lost. We continue to pay a heavy price for the failure to stamp out the divisive malign influences which had started from the infiltration of extreme militant workers into what has hitherto been a happy, efficient Health Service. It was worse than that, because the Secretary of State of the day gave tacit support to them. If our politicians could collaborate effectively with the health profession it would help the NHS. Doctors have been faced with three major documents—*RAWP*, *Priorities*, and *The Way Forward*—written mainly by economists, senior civil servants, and administrators who have had no recent clinical contact. Virtually every senior medical organisation has expressed misgivings about these documents and their deleterious effect on the Service. These major criticisms have been made by professional men and women who do the work, who have hitherto been loyal supporters of the NHS, and who still support the concept of a national health service, but their views have been virtually ignored.

The public's contribution

Although many may find the NHS below their expectations, few fail to appreciate the advantage of not having to pay the heavy costs of medical care. Despite the publicity given to weaknesses such as too-long waiting lists, the public remains tolerant and remarkably few complaints reach the area health authorities. In general, the public appreciates the high standards of nursing and medical skills which they receive free, and refrain from being too critical. Increasingly, constructive positive

interest is being built up. It began with a few specialist groups such as the Ileostomy Association, and today at least 54 patient associations cover a variety of common and uncommon conditions—for example, diabetes, migraine, eczema, multiple sclerosis, coeliac syndrome, haemophilia, and Huntington's chorea. In turn, such organisations have stimulated instrument makers and food and drug manufacturers to study the needs of their sufferers, with excellent results. Public participation in health care and preventing disease is steadily increasing, and many volunteers are helping the National Health Service. An understanding, co-operative public is indeed a great stabilising influence.

One further way that the public could help is by reducing their demands on the service. Many illnesses are inevitable, but an appreciable number of physical and mental breakdowns are determined by present-day life styles. The NHS is doing more and more work in hospitals at the foot of the cliff, but what is really needed is a fence at the top, which the public themselves have got to build. Much has been done in simple preventive measures, particularly so far as accidents in the home and elsewhere are concerned, but the next stage is to promote good health by simple measures—brisk daily exercise, maintaining one's weight, developing a preference for unrefined rather than refined cereals, enjoying alcohol only in moderation, smoking less or not at all. Independence, self-reliance, and family stability offer the best protection against the ill effects of major crises on the body. This seems to be the message coming through, particularly from the Scandinavian countries and, indeed, from East Anglia. The NHS will start afresh as soon as it is appreciated that patients must always come first.

References

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- ³ Report of the Committee on Child Health Services. *Fit for the Future*, Vols I and II. London, HMSO, 1976.
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ONE HUNDRED YEARS AGO Cystine calculi are of such rare occurrence, when compared with other varieties of urinary concretions, that the following case which occurred in the practice of my father (the late Mr George Southam) is, I think, worthy of record.

Margaret P, married, aged 33, residing at Ashton, was admitted into the Manchester Royal Infirmary on September 14th, 1868, suffering from well-marked symptoms of stone. On October 16th, the operation of lithotomy was performed, the urethra being rapidly dilated and the calculus removed entire. The operation was, as is usually the case, followed by incontinence of urine; but this soon disappeared, and she was discharged from the hospital on November 9th with perfect command over her bladder.

The calculus was pure cystine; weight 180 grains; shape oval; size an inch and a half by an inch. The surface was slightly tuberculated, glistening, and of a dirty brownish-yellow colour. Some difficulty was experienced in making a section of the calculus, owing to its soft consistency and tendency to crumble down; but it shows a whitish waxy surface. The central portion has a chalky appearance, forming an indistinct nucleus, and is of a whiter colour than the more external portion, which shows a somewhat radiated arrangement.

Having ascertained that the patient was still living at Ashton, I visited her in June 1877, with the view of making some inquiries into her family history and present condition. She is one of a family of nine, who are all alive and healthy. No member of her family, either on her father's or mother's side, has, as far as she is aware, ever suffered from stone or any symptoms referable to the bladder. She was always strong and enjoyed good health until the age of thirty-two, when she began to be troubled with symptoms of stone, which were very severe for some months preceding the operation. She has had four children, all now alive; of these, three were born before the operation; the youngest, a girl, was born four years subsequently to the operation, and is now consequently five years of age. She is an anaemic strumous-looking child, with enlarged cervical glands, and has always had very

delicate health. The patient herself is a slightly built woman, of delicate appearance and sallow complexion. She has never been very strong since the operation, though able to get about and attend to a small shop of which she has the charge. She has never noticed any gravel in her urine, or suffered from attacks of renal colic, since the operation. So long as she keeps tolerably quiet, she is able to retain her urine perfectly; but, if she undertakes any hard work or takes much exercise, she is troubled with incontinence.

Being anxious to ascertain whether the condition of cystinuria, which must have been present eight years ago, still existed, I obtained some of her urine for examination, and found that it presented the following characteristics. It was of specific gravity 1017, turbid when voided; had a peculiar aromatic odour and a pale amber colour; was faintly acid. On standing, it very quickly deposited a copious whitish sediment, the supernatant fluid remaining very turbid. Examination of the deposit under the microscope showed very numerous transparent hexagonal crystals of cystine, the field being crowded with them. Mingled with these was a slight quantity of amorphous urates. On the addition of hydrochloric acid or ammonia, the crystals at once disappeared. On boiling a little of the urine with potash and lead-acetate, a dark-coloured precipitate of lead-sulphide appeared. After standing twenty-four hours, the urine became alkaline, with a strong and disagreeable odour. After forty-eight hours, the crystals of cystine had entirely disappeared, numerous crystals of triple phosphate being present.

An examination of the urine of the daughter, aged 5 years, gave the following results: Specific gravity 1010; neutral; very pale straw-colour; quite free from any odour; quite clear; no deposit on standing. Microscopic examination did not show the presence of any crystals, nor was the addition of acetic acid or solution of carbonate of ammonia followed by the precipitation of any crystals of cystine. (*British Medical Journal*, 1878.)