them or because they remain on their doctor's list in their "home" borough. In response to this problem the family practitioner committee has set up a special primary care service for homeless families.

For our health district the presence of a substantial homeless population has clear resource implications. Overall, 9% of the beds at St Mary's Hospital were being used by homeless people for whom the health authority received no additional financial allocation. Given the current stringent budget constraints under which all health authorities operate, this is a great extra burden in a very deprived district. Antenatal and childcare services are most affected by the influx of homeless families. Further research is needed to measure the true size of the homeless population, how long they remain homeless, and the levels of morbidity

they experience to understand and develop services to meet their needs. If the white paper on the reform of the health service is fully implemented the implications for health care for homeless people are profound.

We thank Dr S Richman, lecturer in paediatrics, and Mr R Touquet, consultant in accident and emergency medicine, for providing data.

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Regional NHS Profile

To flourish or fade: the NHS in Dumfries and Galloway

Richard Smith

Nine years ago I wrote an article describing how the NHS worked unusually well in Dumfries and Galloway.¹ The article is still remembered in that beautiful part of Scotland and is even sent out to some of those applying for jobs in the region. It is because the article is remembered and used that Dr John Macdonald, a general practitioner from Wigtown in the west of the region, wrote to me suggesting that I make another visit to look at what he sees as a deterioration.

The morale of many of my colleagues, and certainly my own, was poor before the publication of the recent white paper and has obviously not been helped by recent events. The struggle to provide a comprehensive 24 hour service in isolated rural areas... In reward for less than the average remuneration... takes its toll, particularly on family life... I recognise the symptoms of burn out even in the young. The depressing thing is that we see no way out. We are desperate for reforms in the NHS but not reforms that are going to make things infinitely worse—to the point of threatening the very viability of our current practices.

Inspired by Dr Macdonald's words I set off in August to see if things were so bad, thinking that the

future for the whole NHS must be grim indeed if it can no longer work in Dumfries and Galloway. Also ringing in my ears were the Prime Minister's recent words that she wanted to make the NHS so good that nobody would seek private care. Ironically this was effectively true in Dumfries and Galloway in 1980. I wondered if it was still true.

Assets

Many of the assets of the region identified nine years ago remain in place. One is that expenditure on the NHS at £415 for each person is higher than almost anywhere else in Britain. The area is outstandingly beautiful and offers a high quality of life. The population is united, stable, and generous to its hospitals. Recruitment of nursing and most other staff is easy, and there is even a waiting list for qualified nurses who want jobs. The region's main hospital, the Dumfries and Galloway Royal Infirmary, was built in 1975 and remains in good condition. Hospital staff have access to a swimming pool and a nine hole golf course.

Most of the consultants and general practitioners know each other personally, and the chairman of the health board knows every consultant. All the consultants with whom I spoke agreed that the standard of general practice was uniformly good. I asked consultants whether they could think of any general practitioners who weren't up to scratch, and most said no; one senior consultant did, however, admit eventually that he could think of two—"And they of course think that they're the best." The doctors also know the managers—they were administrators nine years ago—but it is in these relationships that the cracks are beginning to appear.

Improvements

There have been measurable improvements in the past nine years. A six bed hospice has been opened inside the infirmary and has improved terminal care across the region. A surgical intensive care unit has also been opened. The region has appointed consultants in dermatology, ophthalmology, and ear, nose, and throat surgery and begun its own services in these specialties. ("This region must be one of the last strongholds of otosclerosis," observed one of the ear, nose, and throat

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Dumfries and Galloway

surgeons. "I do a case every couple of weeks, whereas surgeons in other parts of the country hardly ever do one.") And in the week in which I visited the region the chairman of the health board opened a new 12 bed unit for the mentally handicapped in Stranraer.

The geriatric services in the region seem to be working better (although one general practitioner thought that they had deteriorated)—mainly because of a growth in private nursing homes (from one in 1980 to seven now) and the opening of a new geriatric hospital in Annan. These services are especially important in a region where 7.1% of the population of 147 000 is over 75 compared with 6% for the whole of Scotland. The new outlets for elderly patients mean that blocked beds have disappeared in the past couple of years—partially explaining why bed occupancy in the infirmary has dropped from a daily average of 321 in 1987-8 to 307 in 1988-9.

Another important improvement has been in "productivity"—the workload has increased much faster than the budget. Thus the number of operations has increased from 9202 in 1985 to 10 338 without any increase in surgeons. Similarly, new referrals to the obstetricians and gynaecologists have increased from 1931 in 1980 to 3609 in 1988—again without any increase in consultants. Viewed from the perspective of managers and politicians this is progress, but some of the doctors and nurses see it differently.

Strain in the acute services

This increase in productivity has been achieved within a shrinking budget. The acute services have had to make "efficiency savings" for several years and have always managed to stay within their budget. But in the week that I visited they were £375 000 (1.4%) over their budget. Mike Gault, the unit general manager, thought that these savings would be achieved without cutting services to patients, but some of the doctors and nurses were less confident.

Doctors described how the increased throughput meant that there was less time to talk to patients—"less time to care." They discussed, too, whether more work meant more mistakes ("certainly more minor ones"), and junior doctors described the exhaustion of having to cope with perhaps 20 medical admissions in one 24 hour spell on duty. Particular anxiety focused on equipment—perhaps because there had just been a meeting of the committee that made decisions on

which equipment would be bought. There had been bids on the table for £650 000 worth of equipment but only just over £100 000 to spend. Doctors were worried not only about being unable to offer the best equipment to the local people but also about replacing existing equipment. The hospital is now 14 years old, and much of the equipment installed at the beginning needs replacing.

Murray Ritchie, the senior nurse in the hospital, described with enthusiasm the new specialist services that the nurses were providing—for example, in terminal care, stoma care, infertility, leukaemia, and renal dialysis—but was unhappy that these were often having to be provided without new staff. Inevitably it means that routine services may suffer.

Doctors are also worried about providing new services. Currently under debate is a renal service. Until recently all patients with renal failure had to go to Glasgow, an exhausting experience for those with chronic renal failure. The hospital has now appointed Chris Isles, a physician with a special interest in renal medicine, and he has put together a closely argued paper that shows that setting up a renal service would benefit not only those with renal failure but would also eventually save money. One of the difficulties is that at the moment renal services cost the Dumfries and Galloway Health Board little or nothing because the Common Services Agency pays for the ambulances to transport patients to Glasgow and money is allocated directly to the Greater Glasgow Health Board to provide a renal service for Dumfries and Galloway.

Crichton Royal Hospital

One of the unique features of the health service in Dumfries and Galloway is the Crichton Royal Hospital. It was once a world famous psychiatric hospital, and it is still a huge and beautiful hospital with dozens of ornate buildings, a golf course, a swimming pool, a sports centre, and a church the size of a small cathedral. It once had 1300 patients but now has 430, a third of whom are over 80, in 540 beds. A problem of the mental illness services in Dumfries and Galloway is that the presence of the Crichton has inhibited the development of services in the community. The hospital may also have absorbed a disproportionate amount of the health board's budget, and now it is to be cut by from £9m to £8m over three years. This is causing heartache among the psychiatrists and is likely to demand rearrangements and probable cuts in the nursing services. Morale among the nurses is consequently low.

Morale

Whether services are yet suffering in Dumfries and Galloway is debatable, but undoubtedly the morale of doctors, nurses, and other hospital workers has fallen dramatically since I was there nine years ago. Many doctors talked about retiring early, and the morale of nurses has been seriously damaged by the regrading exercise. Miss Ritchie thought that it could not have been more badly done: the government gave them only two weeks to do the regrading, and consequently most of the discussions with staff took place after rather than before the regrading—when nurses appealed. "Exactly the wrong way round," said Miss Ritchie, who spent almost six months picking up the pieces.

The poor morale of the doctors seems to have several sources. Firstly, the increased workload means that things are not always done as well as they would like; time for research and clinical meetings is also restricted. Secondly, the doctors think that they have worked harder and harder to improve services only to be faced with further cuts. Thirdly, they are distressed by the

The most dramatic thing to happen in Dumfries and Galloway in the past decade was the Lockerbie air disaster. Virtually all the staff of the Dumfries and Galloway Royal Infirmary were in the hospital within minutes of news of the disaster. In the event only a handful of patients were admitted as most victims were killed instantly. The after effects of the disaster are still evident to local general practitioners in the psychological problems of their patients

Loch Trool, Glentrool

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growing gap between what may be done medically and scientifically and what can be afforded. This is professionally discouraging and raises questions in many doctors' minds about why money couldn't be diverted from elsewhere—for instance, armaments. Fourthly, the doctors resent the insensitive way in which most politicians and some managers dispense their growing power: the doctors think that they are not adequately consulted and that power resides with people more concerned with finance and pleasing their superiors than with providing the best services possible for patients.

Relations between consultants and managers in the hospital do, however, remain reasonable. Hostility is reserved for the more distant managers and politicians. The Scottish health minister, Michael Forsyth, is deeply unpopular among the doctors. Within the hospital one of the surgeons, John McCormick, serves as a link between the managers and the medical staff and finds the job difficult if stimulating. "I can stand it only because I can get away and operate and feel that I'm doing something directly useful." The hospital has not yet begun resource management by doctors, but preparations are being made. A special committee is also looking at introducing more audit into the hospital, but Mr McCormick thinks that doctors and managers have quite different ideas on the ways and uses of audit: "Managers want information for marketing, whereas doctors want to try and improve results."

Coming changes in the NHS

A final reason for the low morale of doctors in the Dumfries and Galloway Royal Infirmary is the NHS review. Virtually all the hospital doctors and general practitioners in the region are unhappy with it, and public meetings on the review have produced meetings of unprecedented size with most speakers against the review. The two local members of parliament (both Conservatives, which is, of course, unusual in Scotland) have been rattled by the strength of opposition to the review, and one—Ian Lang—may lose his seat over the issue.

Much of the doctors' opposition is based on the way that the review has been introduced and on the fact that the NHS has worked well in Dumfries and Galloway and yet is being put at risk because of ill thought out solutions to problems that exist elsewhere. The basic idea of separating the purchasers from the suppliers of services is unlikely to mean much in Dumfries and Galloway, where there is virtually no private sector and the distance to other NHS hospitals is so large; and only one practice in the region has more than 11 000

patients (so qualifying for its own budget), although some of the larger practices have been led to believe that they might be eligible if they work together.

Many of the rural general practitioners in the region are deeply disturbed by the new contract. Most of them have small lists because their patients are so scattered, and they worry that the new contract may mean that they have to reduce their number of partners or be unable to take on part time help. Dr Macdonald and his partner, Dr Forrester Brewster, have 2750 patients between them, and a quarter of the patients are over 65. They cover over 200 square miles and have 10 000 consultations and make 6000 visits a year. They make so many visits because many of their patients have great difficulty getting to the surgery: public transport is inaccessible to many. Dr Macdonald and Dr Brewster think that the new contract fails to recognise the special features of their difficult work and will make conditions worse. The Stranraer general practitioners, all of whom do hospital work in addition to general practice, are also worried that their service will be damaged by the new contract. At the moment there are 10 full time partners (all men) and five part timers (all women) looking after 15 500 patients. The general practitioners are worried that they may lose all the part time partners.

But the general practitioners recognise that many of these worries are theoretical and that it isn't yet clear how general practice will change. Again, though, much of the resentment arises from a feeling that politicians far away are making decisions without understanding how they will affect places like Stranraer. The chairman of the health board, Jim McIntyre, a local farmer, recognises the fears of the local general practitioners but thinks that their special circumstances have been recognised: "The boys from the Scottish Office have been down collecting figures."

"Income generation"

Mr McIntyre likes some of the proposals made in the NHS review. He likes the fact that "the main thrust of the review is accountability, which must benefit patients in five years' time." He is also excited by the possibilities of the NHS being able to make money to improve its services. And he and the health board have already begun these sorts of projects. Buildings at the Crichton are rented to organisations such as the Dumfries and Galloway Tourist Board and a local radio station, and Mr McIntyre has visions of renting more buildings, using the laundry and catering facilities to provide services outside the health board, and possibly persuading somebody to build a luxury hotel on the site. Already in train is a plan to bottle water from the artesian well at the Crichton. "There's a huge demand for bottled water," says Mr McIntyre.

Many of the doctors see these activities as marginal and somewhat tacky, and they wonder whether the board is losing sight of its primary commitment to improve the health services of the people of Dumfries and Galloway. But what may prove even more controversial is the plan to develop a 100 bedded unit for rehabilitating patients with head injuries. The unit would provide services for people from all over Britain and possibly from abroad and would generate income that could be fed back into the local health services. The initiative for such a unit has come partly from a local radio presenter, Lindsay MacTaggart, whose husband was injured in a road accident, but the initiative was well received by Mr McIntyre and the board, who are keen to make some money and use the facilities of the Crichton (which is where the unit will be sited). What is especially appealing to the present government is that the capital to develop the unit will come from a German financier who owns a large estate

in Scotland; some may also come from Scottish banks. The health board will supply buildings from the Crichton and then run the unit, which will obviously need a great many skilled staff. Mr McIntyre is excited by the project and gives it an 85% chance of happening. He responds to worries about the unit draining staff from the area by saying that as the unit develops the nursing college will develop courses for nurses to work in the unit.

Stranraer option

If Mr McIntyre's pipedream is the new head injury unit then his nightmare is what to do about surgical services in Stranraer. When I visited in 1980 these services were provided by a surgeon who was also a general practitioner. Now they are provided by a single surgeon, but he will be retiring in a few years—and the problem is how to reorganise the services. The surgical establishment is unhappy about surgeons working alone, and yet there is not enough work for two surgeons in Stranraer. The community in Stranraer insists on there being a surgical service in the town because Dumfries is too far away and "too foreign." But the doctors in Dumfries are worried that if the service in Stranraer grew in size it would drain resources from the already stretched service in Dumfries.

This impasse will have to be solved, and the health

board has conducted an option appraisal. It keeps, however, putting off its final decision, hoping that some compromise will be found. It will have to be. Mr McIntyre will never be able to hold his head up again if the town loses its surgeon: "We must," he says, "have a surgeon here."

Conclusion

These then are the tussles over the NHS in one large but thinly populated region of Scotland. The service works as well as it did when I visited nine years ago, and in some ways it works better. The morale of the nurses and doctors is, however, low, and there are great anxieties over the future. What is to become of the service? What will the NHS review and the new general practitioner contract mean for the region? Will the health board be able to generate income and relieve the pressure on the acute services or will it lose its way in a tangle of entrepreneurial sidelines? Will the Crichton become again an international centre of excellence or will it prove to be a millstone round the health board's neck? And will Stranraer keep its surgical service and its unique blend of general practice and hospital service? I look forward to going back in another decade to find out.

1 Anonymous. Dumfries and Galloway: where the NHS works well. *Br Med J* 1980;281:438-40.

MATERIA PARAMEDICA

A charmed life: or merely good luck

Bert Hardy, a wartime photographer on the staff of *Picture Post*, was interviewed on Channel 4 by Jill Cochrane. He described his many hair's breadth escapes from death. Asked how he accounted for his good fortune at a time when so many men in similar circumstances were killed, he replied, "There's someone up there looking after me." The notion of divine protection from danger and for recovery from illness is fairly widespread. Those who have survived a series of hazardous episodes might well believe that they led charmed lives, but they ignore the fact that those who came to grief did not survive to dispute this hypothesis.

I acquired my slight kyphosis in adolescence. It has been a minor nuisance, mainly by displacing my centre of gravity forward, which makes prolonged standing tiring. On the positive side, however, the stoop has tended to fix my gaze, when out walking, on the ground some yards ahead instead of on the horizon. Thus, although this has not prevented my tripping on uneven flagstones from which I have sustained many fractures, I have spotted a number of coins of the realm and been enriched thereby, in the aggregate, to a sum of little short of one pound over several decades.

I recently picked up a tenpenny piece, and congratulating myself on the good fortune, slipped it into my pocket. I had not gone far when a faint, rather high pitched, bird-like voice seemed to emanate from my pocket. I took out the coin, and, sure enough, it was speaking to me. I carried out the usual tests to confirm that I was not hallucinating, and report on the conversation that ensued.

BJF: Did you say something?

COIN: I said how fortunate you were to have picked me up, as I am a most unusual tenpenny piece. I have led a charmed life.

BJF: Please explain.

COIN: Well, I was recently in a bank with a lot of my fellow tenpenny pieces (not "tenpees," please; it sounds so vulgar). One of the young cashiers said to his colleague, "If you take a thousand coins—1024, to be precise—toss them in the air, and eliminate those that fall tails, roughly half of them would survive as heads. If you then tossed the roughly 500 that fell heads, you would get about 250 falling heads. So after 10 such tosses, you would be left with just one coin falling with the monarch's head facing up." His colleague retorted that though halving 1024 10 times would end in unity, the halving would not be exact with each tossing. He conceded, however, that he would end up with a single coin heads up; but warned that over 2000 individual tossings would wear out his thumbnail. Far better, said the cashier's colleague, to put the thousand coins in a large pan, and toss them in the air; half would come down tails and could be quickly

eliminated. It would be necessary to repeat the process approximately 10 times—much more time saving than tossing individual coins.

BJF: Yes, I know that method. When I roast almonds, and they are beginning to turn brown, I toss them and half come down pale side up. This saves me burning my fingers turning all of them individually.

COIN: Would you please mind not interrupting? As I was about to say, these cashiers carried out the experiment in which I had the honour to be included. I am happy to say that I was the sole survivor of one thousand tenpenny coins. I am therefore convinced that I led a charmed life.

I refrained from pointing out that the final toss might have landed tails, as he seemed rather sensitive about his superior status. (I use the masculine gender as a grammatical convenience.)

BJF: And who do you think bestowed this state of grace upon you? Was it someone up above? The governor of the Bank of England, perhaps?

COIN: Oh, no! It was the Master of the Mint, my Maker.

BERNARD J FREEDMAN

Half a head: migraine and its treatment

Some disorders have probably been with us since *homo* became *sapiens*. A claim in this connection could be made for migraine. There is an Egyptian text of great antiquity on migraine in the British Museum. I am indebted to Miriam Stead, curator of the department of Egyptian antiquities, who informs me that the text, though dated c1220 BC, is derived from knowledge dating back to c2600 BC. Papyrus 10685 v 4 mentions the condition as "gs-tp," in the hieroglyph "half-head," and which is identical in meaning with "migraine," in its turn derived from the Greek *Hēmikrania*.

The papyrus goes on to advise on treatment. First obtain, or if necessary make, a crocodile of clay with grain in its mouth and eye(s) of faience set in its head. Inscribe a drawing of the gods upon a strip of fine linen to be placed on its head. When all is ready, there follows a complex recitation, calling upon 13 gods. Those who wish to try the treatment, if all else has failed, should take their half heads to the British Museum, where the full text of the invocation may be obtained.

There follows (Papyrus No V—Magical Texts, p 51) mention of a migraine variant, "half-temple," which entails a different invocation containing elaborate threats, not only to the evil causing the malady, but also to various gods. The Egyptians were in the habit of threatening their gods. Many of us have had patients like that.

BERNARD J FREEDMAN