to assess than successful ones often because of deficiencies requiring informal or formal contacts with the company to try to resolve them. There is a mechanism for "fast tracking" some assessments to make available new products of major importance in public health. This mechanism was used twice during the review period, with an average assessment time of 10 weeks.

To our knowledge the number of people taking part in premarketing studies has never previously been reported by a drug regulatory authority. Table III clearly shows that the numbers of healthy volunteers used to support product licence applications are sometimes considerable. Such investigations, with safeguards, make substantial contributions to the development of new drugs. Clearly also the numbers of patients exposed to new active substances before marketing vary widely. For agents shown to be effective in an otherwise lethal condition relatively small numbers of subjects may be required to show safety and efficacy. In contrast, much larger numbers of patients will need to be studied to reassure the manufacturer and the committee of the safety of products intended for common conditions, those with a more benign natural history, and those for which alternative treatments are available. Obviously, the number of subjects (volunteers and patients) exposed to most new active substances before marketing can only provide provisional reassurance about safety in a larger and more heterogeneous population. Our data underline the importance of vigilant safety surveillance after marketing.

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2 Griffin JP, Diggle GE. A survey of products licensed in the United Kingdom from 1971-1981. *Br J Clin Pharmacol* 1981;**12**:453-63.

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The NHS Observed

Junior doctors' years: training, not education

John Roberts

Graduate medical education is a brutal enterprise in Britain. Junior doctors seem more like apprentices to a craft than students of a profession: their hours are long, the duration of their training is uncertain, and their futures depend on the whims of consultants. Defenders of the system argue that juniors' training years are a time of "hands on" work that builds dedicated doctors who are skilled and compassionate and practise with a healthy scientific scepticism. But scepticism seems to have spilled over into cynicism: "When I finally get to the top [of the medical pyramid] I can rest, and maybe all this pain will be worth it," said a senior house officer.

In this time of upheaval and change in British medicine all professionals are worried. But none seem as truly miserable as junior doctors. British house staff seemed demoralised, with many anxieties: over the long hours, uncertain futures, dependency on senior staff, changing roles in hospitals that themselves are in the midst of changing roles, and fluctuating government policies.

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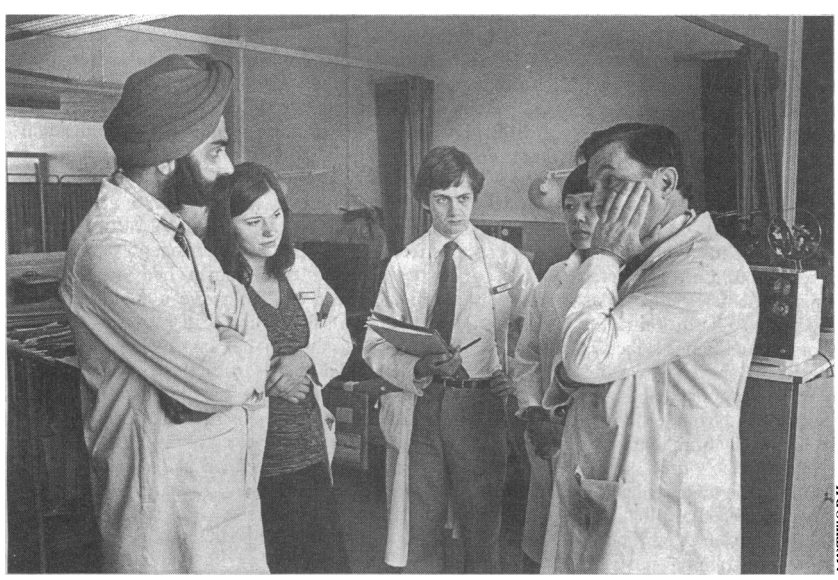


NETWORK

Will their consultant give them a reference?

The very title junior doctor implies something different from the American counterpart, the resident. The resident is one step beyond student status: education is the stated goal. "While you're here your priority is to learn," our chairman told us on our first day as residents in America. "Patient care comes second as you have the help of attending [senior] physicians at all times." Junior doctor implies apprentice, and service duties seem to preclude all but informal and haphazard education. House officers I interviewed said that formal conferences were scheduled but were mostly attended by consultants: junior staff were too busy with patients.

Fatigue from long nights and long years

The saga of the long hours of junior doctors has been well described. Over 115 hours of duty a week is not unheard of, and hospital leaders defend this.[1] The average is 93 hours a week, according to the Department of Health, though this is a crude estimate. Fatigue, juniors argue, leads to disasters such as forgetting to set a ventilator alarm before a heart transplant operation, resulting in the patient dying of anoxia.[2] A patient with leukaemia died because a house officer, who had been awake for 30 hours, injected vincristine rather than methotrexate into her central nervous system.[3] Oddly, to an American, patients seem to be sympathetic about such mistakes. One, whose epidural anaesthesia had worn off during her 27 hour labour, defended the house officer: "When I began my labour he'd already been up 36 hours. I got poor care, but he was exhausted."

In America patients and families are not sympathetic, they're angry. The name Libby Zion is well known to most American house officers because it was her death that angered the public, which demanded that doctors reform themselves. The young woman died in 1984 because exhausted house officers misdiagnosed her systemic infection. The lawsuit brought by her father resulted in nationwide reforms in the conditions and hours of work of doctors in training.

British junior doctors' long hours are gruelling, but this is exaggerated by the uncertainty over how long

this part of their career will last: juniors have no idea when they will become consultants. Uncertainty lurks everywhere, especially at the senior house officer and senior registrar levels, where doctors can languish for years. In the United States years of training are precisely laid out. For example, in America a would be rheumatologist reaches consultant status (attending physician) about five years after graduating from medical school. In Britain it is about twice that.[4] Dermatology entails four years of postgraduate endeavour in America. A British senior registrar reported an average of 10·8 years in 1990. "Dead man's shoes is what we call it," he said. "We move into consultancy when someone dies, and in dermatology there are few consultants, so death is all too rare."

Both the government's and consultants' interests are served by keeping the number of consultants small. Juniors' salaries are smaller, which benefits the Treasury. And consultants are able to maintain both their high status and a demand for private practice. In Britain the ratio of senior doctors to juniors is 2:3; in America it is 6:1.

The British graduate trainee's future is in the hands of a few senior doctors. Qualification examinations end early in training, whereas in the United States the qualification examination is the last crucial step on the path to specialist physician. "My next job depends solely on the recommendation of my current senior," said a senior house officer in Nottingham. "I like him a lot, and I'm sure he'll support me, but I might have poor luck at the next draw." That next draw comes along every six months. In a tradition that dates back before William Harvey junior doctors travel from job to job, work under one consultant at a time, then depend on him or her for a recommendation to the next job. Indeed, a survey in 1986 found that nearly two thirds of doctors found such patronage to be important to career advancement.[5] The long hours, uncertain years, constant job switching, and dependency on individual consultants create a profession of sycophants, a registrar said. It sustains a conservative hierarchy of consultants "who promote the people they like, who fit in to their image." A London surgeon said simply, "In London, it's a close knit mafia among senior doctors."

The pattern of dependency starts early. Students begin medical school in their late teenage years, just after secondary school (figure). American medical students have at least a bachelor's degree, and more Americans start medical training in their late 20s and 30s. "We start medical school too young, so we don't tend to question the system that constantly says 'Keep your options open,'" said a 22 year old senior medical student. "It leaves us very narrow, conservative, afraid to take risks. I envy other Europeans who take off during training to study or travel."

REFORMS FOR UNDERGRADUATES

Professor Lesley Rees, dean of the medical college of St Bartholomew's Hospital, says that educators have begun reforms, at least at undergraduate level. Barts is experimenting with a "problem based" curriculum patterned on those of Harvard and McMaster universities in North America. It is also moving away from teaching only in hospitals, "which are becoming centres of intensive care and surgery rather than centres of diagnosis." Professor Rees encourages students to take a year off before starting medical school. "I say, 'Go away for a year. Travel, read, work behind a cash register. Just get some living in before you start down this road.'"

Yet Professor Rees admits that students cannot take more than a year or two off because of the long years of training. "It wouldn't be economically sensible to accept a student over 30," she said. As dean she has little power to alter the training of juniors, since they are not within a dean's authority. Actually, no one seems prepared to take responsibility for the confused state of graduate medical education. Former health minister Kenneth Clarke blames the consultants, who retort that the government is too tight fisted to pay for more senior positions. The royal colleges and the General Medical Council, too, have been accused of not policing their ranks in medical education. Even the juniors' representatives seem reticent, some say, because they are wary of losing financial benefits.

Women in medicine: a feeling of futility

FORMAT

Nearly half of all medical students but only one in seven consultants are women

British medical education is a pyramid. At the bottom, medical school, women make up nearly half of all students; at the top, consultancy, they account for one in seven. Along their climb to the pyramid's peak, say house officers and educators, women suffer disproportionate pressures to jump off.

While the unhappiest professional group I encountered were junior doctors, the saddest among the juniors were women. "It is futile for me to stay in a hospital specialty if I want to have children," said a senior house officer. "Sooner or later I'll have to quit and go into general practice. Women just don't fit in." The fear of being different haunts all house officers, and women say that their gender and child rearing imperatives define them as very different from their colleagues.

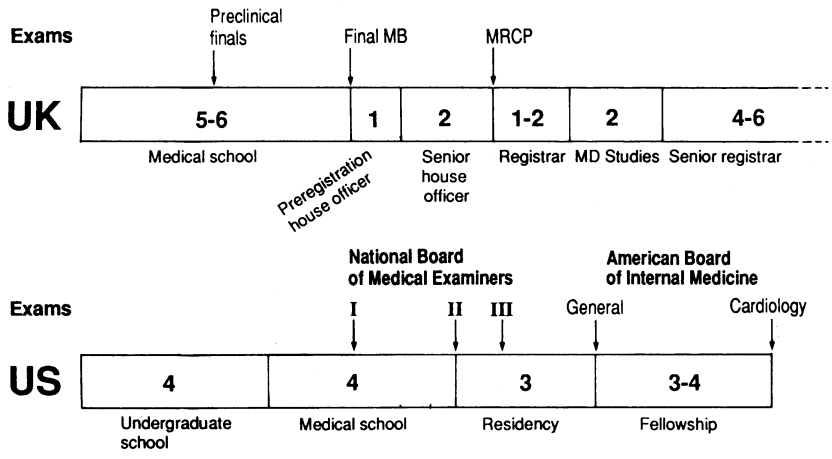
Nearly half of female junior house officers meet the criteria for clinical depression, a recent survey found.[1] Professor Peter Richards, dean of St Mary's Hospital Medical School, has speculated on why women find medicine so hard to fit into: "Most women marry within two years of qualifying as doctors and most have a family. Their problems arise partly from living in a country which provides far less support than many other Western nations for married women with young children who want to continue to work full-time; partly from living in a society which by and large expects a woman's professional career to come second to her husband's; partly from having chosen a profession which has many specialties that are unsuited to part-time training; and partly from the difficulty in providing geographically convenient training posts in those specialties which are suitable for part-time training."[2]

Research supports this observation. One study found that women were twice as likely as men to feel constrained in their medical careers by marriage and nearly three times as likely to feel constrained by children. Ironically, men were 25% more likely to be married and 15% more likely to have children. And despite myths to the contrary, the same author found that though women do take a year or two off for child rearing, they return to medicine on a par with men.[3]

In Britain, perhaps even more than in America, medicine has been a male enterprise. In 1901 only 212 of 36 354 doctors were women. Elizabeth Blackwell (1821-1910) and Elizabeth Garrett (1836-1917) found it so difficult to get medical training that they went off to America. The old attitudes have not perished. Recently a survey showed that 45% of medical school graduates recalled that women had been treated differently in medical school.[3] An American medical student on rotations in Europe said of her British experience: "In Sweden I was treated as an equal among male colleagues, a little less so in the United States. In England I was clearly at the bottom. I don't know if it was because I was a student or a woman, but I do know that the British generic doctor is a 'he.' A 'she' is not acknowledged."

"Sadly, the greatest title placed on a British woman in medicine is 'honorary man,'" said Richard Wakeford, a Cambridge educator who reviews medical schools' curriculums. During my interviews no one, including women, used the pronoun "she" in discussing "the British doctor."

Typical education pathway in cardiology



As doctors, politicians, and educators debate, the problems mount for junior doctors: more responsibility and less sleep because patients in hospital are sicker, fewer nurses and ancillary workers because of NHS budget cuts, introduction of bleeps, more technology to master, more drugs to administer, and simple lack of food due to other NHS budget cuts. "Patients finally become the enemy, and rather than fight them we give up and opt out for general practice," said a senior house officer.

Opting out for general practice, however, is becoming a road less taken because of higher standards of general practitioner training. Nearly half of new general practitioners reach practice by way of the vocational training scheme, which means that fewer are coming from hospital based training programmes. General practice is one of the few specialties (radiology and psychiatry among them) that has made education a priority for graduate trainees. The vocational training scheme, begun in the early 1970s, has become a centrepiece of modern general practice. It focuses on teaching trainees the skills needed by a doctor whose mission is to treat outpatients with primary care skills. During their three year training the trainees spend one year in a general practice, learning consultation and management skills. The other two years are spent in hospital specialties appropriate to general practice: paediatrics, obstetrics, general surgery, medicine, and psychiatry.

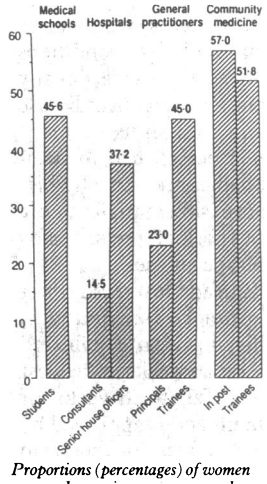
Richard Wakeford, who studies medical curriculums for the General Medical Council, says "General practitioners are attracting better people from medical school classes. It is not the bastion of those who couldn't make it in the hospital any more. They are the best students, and many staying in the hospitals are not the calibre they once were."

At least the pay is better

All is not bleak in hospital: junior doctors are fairly well paid. A British senior house officer earns about £13 000 basic and may pick up another £9000 in overtime pay, which is paid at one third the basic rate. Housing is sometimes provided as well. The average American resident earns about £12 000-13 000. In addition, young British doctors have lower debts. Student loan debt runs at around £2000-3000, much of it at low interest rates. American colleagues leave medical school with average debts now exceeding £21 000, much of it at market interest rates.

In general, too, juniors in Great Britain carry great respect from consultants. "My junior doctors are my colleagues," said a Nottingham professor. Numerous consultants praised juniors, and they recognised that workloads are unbearable. But with consultants fighting their own battles with the NHS and its institutions many expressed an attitude of powerlessness to help out.

Some help may come from the government white paper *Achieving a Balance*,[6] which proposed to increase the number of juniors appointed consultants by encouraging early retirements and by funding more posts, including 100 posts created since 1987. The result, the planners hope, will be to replace a pyramid system with a cylindrical one. Some policy analysts, however, worry that the more recent, and major, white paper *Working for Patients*[7] will negate educational



Proportions (percentages) of women among doctors in career posts and trainees, 1988 (source: "Health Trends," Department of Health)

Women house doctors I interviewed said that they didn't fit into the professional image, and they assumed it was their deficit. Only a few considered that the problems might lie within the profession rather than in themselves.

Medicine is a feminine enterprise run by masculine rules, Dr Paul Hodgkin has written. "Medicine has grown out of a science governed and dominated by men and masculine patterns of thought," he observes. "Control of emotions and the pursuit of power are prized."[4] He suggests that medicine's metaphors for itself derive from the masculine world of the military: body's *defences*, heart *attack*, *killer* T cells, treat *aggressively*, therapeutic *armamentarium*, and even house *officer*.[4] As medicine's goal is "to relieve suffering" he and others have urged that masculine values of competition and conquering be supplanted by feminine virtues of cooperation and caring.[5] Whether such feminisation of medical values will occur is unknown. Clearly, some specialties will change more slowly, such as general surgery, which counts eight women among its 965 consultants.

But the number of women joining the profession continues to grow. The proportion of women enrolling at medical schools in Britain has increased linearly for decades and now exceeds 45% (by contrast, in the United States the proportion has been level at 34% for three years) (figure).

The government has tried to ease pressure on female junior doctors by creating part time training positions, though word of them is not universal among trainees, and even the few trainees I interviewed said that they would hesitate to try them. "You just cannot risk being too different on a career track," said one. (I heard no one suggest that men might take more part time positions to rear children.)

Although their numbers are creeping up, women trainees remain pessimistic about change—at least soon. A profession that welcomes them, they say, seems far away. But perhaps a more woman centred profession will come sooner, not because specialties will open their gates to women but because women may continue to choose career paths that will usurp the traditional specialties' political power in the NHS. Women disproportionately enter general practice (45% of new trainees are women) and community medicine (52% of trainees), where they can serve as district medical officers.[6] General practitioners and district medical officers, as purchasers of health care services under the NHS reforms, will be the centre of British medicine in years to come.

1 Firth-Cozens J. Sources of stress in women junior house officers. *BMJ* 1990;**301**:89-91.
2 Richards P. *Learning medicine, 1991*. London: BMA, 1990.
3 Allen I. *Doctors and their careers*. London: Policy Studies Institute, 1988.
4 Hodgkin P. Medicine is war: and other medical metaphors. *BMJ* 1985;**291**:1820-1.
5 Gilligan C. *In a different voice: psychological theory and women's development*. Cambridge, Mass: Harvard University Press, 1982.
6 Medical Manpower and Education Division, Department of Health. Medical and dental staffing prospects in the NHS in England and Wales in 1988. *Health Trends* 1989;**21**:99-106.

reform. They believe that the "internal marketplace" of hospital trusts will create more incentive to use junior doctors as cheap labour.[8]

Meanwhile, juniors whom I interviewed are waiting to see what happens. Even those who aspired to general practice said that they were deferring any commitments. "I like general practice," a senior house officer said. "But I'll stay in the hospital until all the politics settle out." Her junior colleague added, "We have to remain here. One cannot come back to the hospital from general practice—at least, not easily." Indeed, the future for young British doctors is difficult to discern amid the storms of political manoeuvre and waves of reform. Junior doctors are disillusioned about the changing face of medicine and seem paralysed to deal with all the external influences.

Essayist Richard Asher wrote that the well trained doctor is "a jack of all trades and master of one." The apprenticeship of British doctors has heretofore been to the trade of medicine. If junior doctors are to become active students of their profession they may also need to become jacks of other trades: politics, economics, management, labour relations, and more.

1 Mihill C. Doctors risk sack on hours. *The Guardian* 1990 September 18:18.
2 Anonymous. Hours cut due. *Hospital Doctor* 1990 September 6:8.
3 Mihill C. Patient died after wrong injection was given by overtired doctor. *The Guardian* 1990 September 21:13.
4 Medical Manpower and Education Division, Department of Health. Medical and dental staffing prospects in the NHS in England and Wales in 1988. *Health Trends* 1989;21:99-106.
5 Allen I. *Doctors and their careers*. London: Policy Studies Institute, 1988.
6 Department of Health and Social Security. *Hospital medical staffing: achieving a balance*. London: DHSS, 1987.
7 Secretaries of State for Health, Wales, Northern Ireland, and Scotland. *Working for patients*. London: HMSO, 1989.
8 Harrison S, Hunter DJ, Pollitt C. *The dynamics of British health policy*. London: Unwin Hyman, 1990.

Understanding Benefits

Attendance allowance

Simon Ennals

Contributory benefits
Retirement pension
Widow's benefit
Unemployment benefit
Sickness benefit
Invalidity benefit
Maternity allowance

Non-contributory benefits
Child benefit
One parent benefit
Attendance allowance
Invalid care allowance
Mobility allowance
Severe disablement allowance
Industrial injury benefit
Statutory sick pay and maternity pay

Means tested benefits
Income support
Housing benefit
Community charge benefit
Family credit
Social fund

From the point of view of medical practice and patient care, attendance allowance is perhaps the most important social security benefit. It is one where the detailed knowledge of a patient's needs and condition possessed by the primary health care team is important in helping a patient to qualify. Doctors are ideally placed to spot potential claimants and to help with making a claim. The allowance itself can make an enormous difference to a patient's ability to lead an independent life and it also acts as a passport to the additional premiums to income support and housing benefit described in the third article. With the increasing emphasis on care in the community the attendance allowance, already paid to 713 000 people, will become even more important over the next few years.

The attendance allowance is one of the most misunderstood of social security benefits. It is paid to a person who needs certain kinds of attention because of disability, regardless of whether he or she actually receives that attention. It is often confused with the invalid care allowance, which is paid to the carer of someone receiving attendance allowance. When the attendance allowance was introduced in 1970 it was not designed to meet any particular costs. Clearly the amount paid is inadequate to pay for the kind of attention often required in order to qualify. Most claimants use attendance allowance as a general disablement costs allowance, to help with the additional costs of disability and general housekeeping. It is paid at two rates—£37.55 a week for claimants who satisfy the attendance conditions by day and night, and £25.05 a week for those who satisfy the conditions only by day or night. The government plans to replace attendance allowance for patients under pension age with a new disability living allowance in 1992. The "care" element of this new proposed benefit will work in much the same way as attendance allowance, but with an additional lower rate for less dependent people.

Who can get attendance allowance?

The claimant must satisfy the attendance conditions for night or day attendance, or both (see box).

The claimant must have satisfied one or both of the attendance conditions continuously for six months before making the claim. This has traditionally meant that many severely ill or disabled claimants have died before qualifying for the allowance. As a result of considerable pressure from organisations working with the terminally ill, the law has now been changed (from October 1990) for terminally ill patients, who will be deemed to have satisfied both day and night conditions for six months. A person will be regarded as terminally ill if he or she is suffering from a progressive disease and can be expected to die within six months.

Until April 1990 the disabled person had to be at least 2 years old, but disabled babies are now eligible. A child under 16 must require substantially more attention or supervision than that normally required by a non-disabled child of the same age and sex.

Attendance allowance is not means tested, and nor does it depend on National Insurance contributions, but the claimant must usually live in Great Britain and have been present there for at least 26 weeks in the past 12 months. A temporary absence of up to 26 weeks, or longer if it is for medical treatment and is approved by the secretary of state, will not affect the right to benefit.

The claimant must not have been living in certain kinds of accommodation provided for out of public funds, such as local authority homes and hospitals, for

Qualifying conditions

Day attendance

The person must be so severely disabled that he or she requires from another person *either*:

(*a*) frequent attention throughout the day in connection with his or her bodily functions; or

(*b*) continual supervision throughout the day in order to avoid substantial danger to himself or herself or others.

Night attendance

The person must be so severely disabled that he or she requires either:

(*a*) prolonged or repeated attention in connection with his or her bodily functions from another person; or

(*b*) another person to be awake for a prolonged period or at frequent intervals for the purpose of watching over him or her to avoid substantial danger to himself or herself or others.

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Written in association with the Child Poverty Action Group
This is the sixth of 10 articles

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