have to assume that each person will be in post for about four years, so that the number of doctors who are ready to proceed to consultancy will be roughly $387/4=96$. There would therefore be many more people available than there will be posts vacant (roughly 39), and the competition would be severe.

For mental handicap there are 20 senior registrars in post. Five might therefore be available for the estimated posts falling vacant at consultant level of roughly nine a year.

In general medicine there are 215 senior registrars. Fifty-three might therefore be ready each year for the roughly 29 posts available in 1982-6 or the roughly 19 available in 1987-91. In general surgery the position may be similar since there are 196

TABLE I—Expected numbers of annual retirements of permanent paid medical and dental consultants by specialty on the basis of current retirement rates: 1982-1986

Estimated No of retirements per annum	Specialty
30-39	Anaesthetics, mental illness
20-29	General medicine, general surgery, radiology
10-19	Child and adolescent psychiatry; ear, nose, and throat; histopathology; obstetrics and gynaecology; paediatrics; traumatic and orthopaedic surgery
5-9	Dermatology, geriatric medicine, haematology, mental handicap, ophthalmology, radiotherapy, rheumatology and rehabilitation and oral surgery
<5	Accident and emergency, blood transfusion, cardiology, cardiothoracic surgery, chemical pathology, clinical neurological physiology, clinical physiology, forensic psychiatry, genitourinary medicine, infectious diseases, medical microbiology, nephrology, neurology, neuropathology, neurosurgery, paediatric surgery, plastic surgery, psychotherapy, urology, orthodontics

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TABLE II—Expected number of annual retirements of permanent paid medical and dental consultants by specialty on the basis of current retirement rates: 1987-1991

Estimated No of retirements per annum	Specialty
40-49	Anaesthetics
30-39	Mental illness
20-29	General surgery, obstetrics and gynaecology, radiology
10-19	Child and adolescent psychiatry; ear, nose, and throat; general medicine; histopathology; ophthalmology; traumatic and orthopaedic surgery
5-9	Accident and emergency, chemical pathology, geriatric medicine, haematology, medical microbiology, mental handicap, paediatrics, radiotherapy, rheumatology and rehabilitation, and oral surgery
<5	Blood transfusion, cardiology, cardiothoracic surgery, clinical neurological physiology, clinical physiology, dermatology, forensic psychiatry, genitourinary medicine, infectious diseases, nephrology, neurology, neuropathology, neurosurgery, paediatric surgery, plastic surgery, psychotherapy, urology, orthodontics

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senior registrars in post, so that 50 might be available each year for roughly 29 posts.

These examples must suffice. There is no substitute for working out these prospects for yourself, for only you can decide whether you will accept a particular degree of competition. But it is worth bearing in mind that somebody will win through, and it might very well be you if you are sufficiently well motivated, work hard, and have an eye to the proper progress of your training and education.

In the next article I shall discuss moving along the difficult path from registrar to senior registrar.

Family Medicine

Thamesmead: dream to reality

P M HIGGINS

Thamesmead, as imagined in 1963, was to be a "new town" within the boundaries of London. This new community of 60 000 people from inner London would come under the authority of London County Council (now Greater London Council) and the two local boroughs, Greenwich and Bexley. On this large area of land traffic would be segregated from housing. The architecture would be based on an industrial system with lakes, waterways, and walkways to give a distinctive character and set higher standards of amenity for public housing. Private development would be encouraged in order to ensure a balanced community; new jobs and new houses would be provided together; churches and facilities for shopping, recreation, and education (including a polytechnic) would be concentrated in the centre, of which the focal point would be a yacht marina. This would be the first stage in a cycle of urban renewal around London.

General practice was in a sad state at the time, and these

imaginative proposals caught the attention of two men in the department of medicine at Guy's Hospital Medical School: John Butterfield, professor of experimental medicine, and Robert Smith, a general practitioner who was seconded to the department by the Wellcome Foundation. Here was a chance to develop a comprehensive health service with a special emphasis on primary care for a large population in a capital city and also provide a teaching unit in the community for Guy's medical and dental students.¹ With a grant from the Nuffield Foundation a general practice research unit was set up to make proposals.

Smith and his colleagues set out their ideas²: better co-ordination between the three branches of the National Health Service, closer links between hospital and community medical services, and the integration of general practice with the personal health services provided by the local authority. Curative medicine and preventive medicine would thus be brought together. A main health centre would provide a large number of services—consultant clinics, diagnostic radiology, facilities for teaching and research, local authority clinics, and dental and ophthalmic services. Four teams of doctors, health visitors, and nurses based at the main centre would each look after an area of the community. At four or five centres scattered throughout Thamesmead they would run child health and antenatal clinics

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and follow up people who had been seen first at the main health centre. Every medical student from Guy's Hospital would spend at least two weeks (later perhaps three months) in one of the health centres. Preregistration appointments to the health centre were a possibility, as were opportunities to train postregistration doctors and members of related professions. Residential accommodation would be required for students.

Planning

In 1964 the general practice research unit set up a medical planning liaison group which became the Joint Health Services Advisory Committee (JHSAC) in 1967. Guy's Hospital provided an office and the organisations represented on the committee contributed to the cost of administration and planning. Because the Thamesmead development straddled the boundaries of two London boroughs and of inner and outer London, representation often had to be duplicated. On the main committee sat representatives from the two local health authorities, Greenwich and Bexley; from the Kent and Inner London Executive Councils and Local Medical Committees; from the local hospital management committee; from the regional hospital board; from Guy's Hospital Medical School. Subcommittees to plan dental, pharmaceutical, and ophthalmic services were set up. Representatives of the Greater London Council and the Department of Health and Social Security attended as observers.

JHSAC's duties were to produce plans and to advise the responsible authorities, but the most urgent task was to design and build premises for the medical teams. The first families were expected to move in during 1968 to the Bexley area of Thamesmead. An architect was appointed to design the first local health centre there and to study proposals for a main health centre. A temporary centre of four linked factory-built units on skids, designed to be moved to serve successive phases of the development,³ were placed on site in the spring of 1969 and served well for three years. In 1972 the Lakeside Health Centre was opened. It is a striking building, jutting out over a pool. Its only serious design fault is a treatment room that resembles a small casualty department. The health centre building has recently been extended because the population is nearly double the original estimate for health services.

In 1971 the idea of providing lightly staffed local health centres other than Lakeside was discarded,⁴ but a large main centre is still planned despite financial stringency and a reduction in the target population from 60 000 to 45 000, a large number of whom would always look to Lakeside for services. The plan is for the centre to house two or three group practices to serve between 20 000 and 30 000 people. Construction began in November, and in two years we shall have the long-awaited accommodation for teaching and research. In 1974, when the NHS was reorganised, the new Greenwich/Bexley Area Health Authority became responsible for all health services. The regional health authority disengaged, JHSAC was disbanded, and the responsibility for Thamesmead was divided between two health districts—now two autonomous health authorities—each inheriting different traditions of services and different staffing levels. Paradoxically, when the new integrated health authority took office this project as an exercise in health care planning came to an end.

The community

The first family moved into Thamesmead in June 1968, a few more moved in by the end of that year, and by 1971—about a year later than planned—1000 families were in residence. About 20 000 people now live there instead of the 40 000 forecast at this stage. Compared to the general population, less than half of the people are over 65, and there are nearly twice

as many children under 15; 6% compared to 22% in the general population are of professional or managerial status.⁵ Few private developers have so far been attracted. The town centre has not yet been built, and a shortage of jobs locally compels many residents to travel to work in inner London. Building continues, though slowly because of economic reasons, and proposals for a river crossing at the eastern end of Thamesmead may hasten development of the centre. The Greater London Council's policies on the rate of development, on rents, on services, and on the balance between public and private housing varied with the four-yearly changes in political control of the GLC.⁶ Community spirit is good, however, fostered by a lively local newspaper *Insight* and by Radio Thamesmead.

Primary care and community services

In May 1968 I was appointed general practitioner to Thamesmead and was given an academic appointment at Guy's and appointed clinical medical officer for Bexley's health department. A new arrangement, the "D" allowance, designed to attract experienced doctors to new communities, was used for the first time. Because there was no house for me and my family at Thamesmead I was given a house on a nearby council estate. In September I set up the practice in the only building available—the GLC's information centre—and waited for patients. According to the plan the practice would look after 6000 to 7000 people, probably increasing to 10 000 when building was completed. After six months I was allowed to employ an assistant, who was replaced by my first partner in 1970. We agreed that we would analyse problems fully from the start, help people to understand why they fell ill, encourage self-reliance, and restrict prescribing to what was indicated for good medical reasons, thus hoping to reduce dependence on the health services. Each week we ran a family planning clinic and two child health clinics that, because they were Bexley health department clinics, were open to all families whether on our list or not. I was also immersed in planning and committee work.

The "D" allowance had serious limitations, and the slow growth of the population increased our financial difficulties. We had therefore to seek extra work, and, for example, were responsible for the nurses' health service at Guy's for more than five years. When the third partner joined us in 1973 he worked in the school health service. Thus we achieved at the time the objective of an integrated service for families; we also started health education and health promotion. Then we had to beat a retreat because our list of patients grew longer than we had expected, due in part to changes in the building programme and in part to families remaining with us after they had moved to nearby areas. We now look after more than 11 000 people, and when the neighbourhood is completed we may have 14 000 patients. There are now six partners; we care for most of the needs of our diabetic patients: one partner is on the staff of the diabetic clinic at the local hospital; we have more equipment for treating asthma now, especially for children; and working closely with the local paediatric department and the local psychiatrist has helped us to deal with chronic illness and complicated problems. We have also resumed work at one child health clinic.

People began to move into the Greenwich area of Thamesmead in 1973. An experienced doctor was sought to start up the second group practice, but the terms of the "D" allowance prevented this and not until 1975, after they had improved, was an experienced general practitioner in post. In 1978 the practice team moved to a temporary centre called Gallions Reach. The four doctors now have about 6000 patients on their list; they staff the local health and child health services and will be the first group to move into the main health centre when it opens in two years.

We agreed with our local medical colleagues to restrict our practice to Thamesmead, leaving neighbouring doctors free to accept any residents who wished to register with them. We are

very glad to have the help of the staff at the local hospitals, who provide a first-class laboratory service and a full range of radio-diagnostic procedures; consultant clinics have also been set up (table).

A community such as Thamesmead could indeed be expected to have many social difficulties and use the health services a lot. We depended on the local social and nursing services for help. Because Bexley's social services department was being reorganised a local office did not open until 1973. Our relationship with social services is good but their staff are hard-pressed, and on the whole they have been unable to provide a service in the health centre. The borough's health department had had no experience of health centres or of attaching staff to general practitioners. They did their best for us, however. An experienced health visitor was seconded and built up a good service.

Consultant clinics at Lakeside Health Centre

Psychiatry	Neurology
Surgery	Rheumatology
Paediatrics	Child Psychiatry
Dermatology	Metabolic Medicine
Gynaecology	

Bexley was short of health visitors compared with Greenwich, and it was a long time before the special needs of a population with twice the normal proportion of children were recognised. When more staff were allowed it was difficult to recruit. The nursing service in the health centre has been less satisfactory. At first we had an experienced nurse who also worked on the district, but she had to help out elsewhere. This became too much, she left, and nursing staff change continuously. Thus apart from the receptionists and health visitors, neither of whom have a clinical role, only the doctors are always available to deal with problems throughout the week.

We also wanted to work with people who were concerned with the health and well-being of this new community. The Community Worker's Group holds monthly meetings at Lakeside Health Centre. It includes people from the statutory social and health agencies and voluntary agencies and is supportive, educational, and political—that is, serious difficulties that affect the community are identified and pressure is exerted on those who can help. Furthermore, the Thamesmead Christian Community built the only public building in Thamesmead, an oecumenical centre, which Anglicans, Catholics, Methodists, and the United Reformed Churches all use for worship. The clergy together formed a liaison group of the GLC, the area health authority, the doctors, and representatives of the community, which did much useful work. Clergy, doctors, nurses, health visitors, social workers, and probation officers also run a marital self-help group.

Because of the potential risk of septicaemia or infection of arteriovenous shunts or fistulas (some of which are fashioned from a variety of prosthetic materials), is antibiotic prophylaxis advisable for dental treatment and other surgical procedures in patients having regular haemodialysis?

Vascular access sites, both prosthetic shunts and fistulas, are commonly infected by skin commensal organisms, *Staphylococcus epidermidis*, *Staph aureus*, and diphtheroids, and with Gram-negative rods including *Acinetobacter* and *Moraxella* species.¹⁻³ These infections have not been shown to follow bacteraemic episodes, but positive blood cultures and even clinical endocarditis have followed such infective complications. Mouth streptococci rarely cause such infections, and there is nothing positively to connect them with dental surgery. There is therefore no logic in giving dental prophylaxis to patients having dialysis, the antibiotics usually used for this purpose being largely inactive against staphylococci, the commonest organism in shunt infections. These infections are often related to partial throm-

Dental and pharmaceutical services

The dental services were and still are unique at Thamesmead because the dentists are salaried and because the same dentists provide general dental services in the Lakeside Health Centre and also work in the community dental services. In 1970 an experienced dentist was appointed jointly by Kent Executive Council, Bexley Borough, and Guy's Dental School. The service combined health and prevention with general dental care and used dental therapists from the New Cross School (now closing).⁷ The Nuffield Foundation financed teaching dental students from Guy's, who also visited local schools to teach about dental health. By the end of 1970 about a third of the residents had received dental treatment⁸—a high proportion for a population who traditionally used dental services very little. When the grant from the Nuffield Foundation ended there was no more money for the imaginative teaching programme, and the links with Guy's are now tenuous.

In a new community such as Thamesmead the local authority usually puts the chemist's shop out to tender and lets it to the highest bidder. The pharmaceutical profession is dissatisfied with the commercial activities needed to run a viable chemist's shop, so an "ethical pharmacy" near the health centre was let to a pharmacist who was selected by representatives of the local pharmaceutical committees and health centre staff. In return for a reduced rental he was to restrict commercial activities and advise doctors and others at the health centre on pharmaceutical matters.⁹⁻¹⁰ The scheme did not work because his earnings were considerably less than expected. The commercial restriction has now been lifted. Some pharmacists have been "honorary" members of the health centre and taught our students, but the original idea of an ethical pharmacy working closely with the health centre team remains unfulfilled.

This is the first part of a two-part article.

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basis of the site and may be introduced at the time of connecting or disconnecting the dialysis machine. If prophylaxis were to be used it would have to include the antistaphylococcal drugs flucloxacillin, fucidin, or even vancomycin given as a single dose, as all modern prophylaxis tends to be, but administered before the start of each dialysis. As the details of the mechanism of such infective episodes are uncertain, it would seem on balance not reasonable to attempt prophylaxis for these infections, but patients subject to recurrent episodes could be protected in this way.—J H DARRELL, reader in clinical bacteriology, London.

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