Where Shall John Go?

Papua New Guinea

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Some readers have been a bit worried about John lately. He is clearly disillusioned with England, and has been conducting hesitant flirtations with France, West Germany, Nigeria, and other places. This may be a symptom of adolescence. But before he finally settles down, whether to his ultraspecialty or to prescribing tranquillisers in Golders Green, may I suggest that he also considers Papua New Guinea?

Clinical experience

John's most vivid impression on arrival—whether as a junior doctor at Lae, with its teams of Western-style consultants, or whether he is posted immediately to take sole charge of the malaria-infested swamps of Kerema—may well be the astonishing amount of “clinical material” in its most full-blown manifestations. Diseases previously encountered only in textbooks, such as miliary tuberculosis, tertiary syphilis, and cerebral malaria, he will see in reality, and it's sometimes gratifying to see how these monsters of the past quite readily respond to modern treatment. It can give a doctor a sense of power—as if he were fighting colourful nineteenth-century armies with a machine-gun. Most of the diseases, whether in urban or rural districts, will be a reminder that so-called tropical medicine is really the medicine of poverty.

In paediatrics he will soon become familiar with marasmus and kwashiorkor, and their sequelae of pneumonia and gastroenteritis. He will see neonatal tetanus resulting from poor village hygiene and lack of vaccination. He may have to treat patients with talipes, dislocated hips, and “covered anuses.” There will be many cases of osteomyelitis, both acute and chronic, which, again, he will usually treat by himself, whether by intravenous antibiotics or by removal of sequestra and saucerisation. In the Highlands he will treat many patients with “pigbel” (enteritis necroticans). Consultant support will usually be available in the form of a weekly visit from the paediatrician at the nearest base hospital, and it is usually possible to fly patients down for surgical treatment or specialist care. A small handbook with standardised methods of diagnosis and treatment is also available.

In gynaecology and obstetrics he will find himself, after a few weeks, doing caesarean sections and will soon learn to do symphysiotomies when necessary. He will remove ovarian cysts, and deal with ectopic pregnancies—which seem to be quite common and often to take a misleading form, because a patient may be walking about and complaining of a stomach ache when her haemoglobin is below 5 g/100 ml and she has two litres of blood in her pelvis. In anaesthetics he will soon learn to do spinal

and epidural blocks, and also take his turn at giving relaxants and doing intubations.

In other words, many of the procedures he had learnt about and watched as a student he will find himself practising—an unusual thing for any doctor to be doing. So too, in surgery, he will set broken ankles, broken tibias and fibulas, and broken femurs. Orthopaedic work has increased since the building of the Highlands Highway, with its consequent road accidents, and surgical experience is usually supplemented by the amount of tribal fighting in the Highlands areas. Arrows have to be removed from most parts of the body, frequently from the abdomen, which often necessitates bowel resection, and, again, he may very well have to do this on his own. Craniotomy may be urgent, and can be performed after telephone consultation with the surgeon at the base hospital.

No one could say the work was not interesting.

Organisation of health care

First come the aid posts, often nothing more than huts constructed of bush materials, frequently in the remotest depths of the forest. They are manned by aid post orderlies, who have undergone two years' training, and can diagnose and treat pneumonia, gastroenteritis, venereal disease, and similar common illnesses. They can refer patients to the health centre—similar to a hospital, but less expensive in terms of staff and equipment. It is run usually by a health extension officer, who has had a three-year college training, followed by two years of supervised practical training or internships. These can refer patients to provincial hospitals, which may have from one doctor to a dozen, and have operating theatres, x-ray facilities, pathology laboratory, and so on. These again may refer patients to the base hospital, which will have a team of consultants. Current plans are to devote more and more attention to the aid post system of basic health care, and to vaccination and other preventive medicine.

John will be expected to teach nurses and health extension officers (who are roughly equivalent to barefoot doctors). He will be amazed at how much the nurses can do by themselves. When he arrives on the scene he will usually find that the patient has been admitted, a diagnosis made, a drip put up if needed, and treatment already begun. Often a lumbar puncture, when indicated, will have been carried out. All this may turn his habitual way of thinking upside down. He may well see a theatre orderly or technician very skilfully carrying out skin grafting and tubal ligation. The whole medical/surgical hierarchy appears to be threatened.

But, of course, it makes sense in such remote places, and is a credit to the good teaching that must have gone before. Just as he finds the nurses doing things that would be unthinkable in developed society, so he will be expected to do more than he did back in the UK; he will be trusted to do them soon after being taught; and he will find that procedures which were the jealously guarded terrain of ultraspecialists do not in fact hold quite such terrors as he had been led to expect. Naturally, errors

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will be made, but they will be his own errors, and he should be able to learn from them. Such a predicament cannot fail to galvanise the most jaded practitioner.

Teaching will be partly by practical example—once a doctor feels capable of doing it—and partly by formal lectures and rounds, some of which may be given in English, some perhaps in pidgin.

Specialist help and research

If he practises in one of the base hospitals at Lea, Moresby, or Goroka or Rabaul, for example, the new doctor will work as part of a team led by a consultant. If he moves to a provincial hospital, he will be given far more responsibility of the type I have suggested, but specialist help, reassurance, and advice will be available by telephone (if it's working), and patients who are too much of a problem can always be flown or taken by ambulance to the base hospital itself. In Kundiawa, for example, we have a specialist paediatrician who visits weekly, and a physician and a surgeon who at present visit about once a month, and plans to do so more often.

There is an institute of medical research based in Moresby, with a branch in Goroka in the Highlands. Doctors working there have recently discovered the cause of kuru (the Parkinsonian syndrome transmitted by a virus in the course of cannibalism), and also seem well on the way to developing a reliable vaccine for pigbel. The work needed for this—vaccinating whole communities living in the remotest bush, and in co-operation with the army—was a beautiful exercise in double-blind procedure and logical proof carried out along classical lines. For any doctor interested in research the "experimental material" is inexhaustible.

Primary medical care

A doctor working in one of the remoter areas, such as Laiagam, is likely to be single-handed. He may have to construct the hospital itself, build walkways against the rains, and use teams of convicts to build latrines. He will be his own pathologist, typing and cross-matching blood; his own hospital secretary, hiring and firing staff (which can be a huge problem in itself, and needs a good knowledge of local behaviour patterns and expectations). There may be opportunities here for experimental projects, such as that at Vanimo—where the provincial health officer constructed a hospital latrine which produced methane gas, and ran into a reservoir which supported a fish farm. Those interested in nutrition may be able to cultivate gardens to supply the hospital with avocados, citrus fruits, bananas, pineapples, yams, sweet potatoes, and maize, and thus try to change the conservative food habits of the population. He may also take

part in seminars with government representatives to study government investment and the way it will affect health in his area.

If he becomes a provincial health officer John will probably be expected to know something about the work of the health inspectors and supervise their visits to butchers, and initiate networks of water supplies and village latrines. As provincial health officer he may find that within two years of arrival in the country he is responsible for an area about the same size as Wales.

Naturally in such circumstances some doctors become grandiose, and some find it too much—just as they do in Britain.

Salaries and conditions

One doctor claimed that the salary was so large as to be "embarrassing." This will depend on the individual's threshold of embarrassment. Certainly the salaries and conditions are based on Australian standards, and are at present maintained at this level, and, even though Papua New Guinea is now politically independent, the actual funds for these salaries still originate, I believe, in Australia.

Papua New Guinea consists of several nations that happen to be on the same island. There are 700 totally distinct languages. The inaccessibility of one area from the next—because of dense jungle, rain forest, ravines, and mountains—meant that many different genetic groups, with their own languages, culture, and customs, could develop side by side. It is the same with the climate and the landscape: these range from the tropical lagoons and marshes of the coast to what you could call the "tropical alpine" terrain of the Highlands. Geologists call the Highlands "deeply incised," meaning that it is intensively fissured by ravines.

There are at least 700 different peoples, but, once he learns pidgin, an English doctor will be able to communicate with the local Chimbu just as well as a Papuan doctor from Port Moresby. The coastal people have long had contact with other civilisations, but the Chimbis are one society that really justifies the adjective primitive without the inverted commas. Many of the Highlands societies have only seen White men since about 1930. Several doctors who have come out of Papua New Guinea have gone back to Britain, only to return as anthropologists. Several White groups also deserve study.

Further information

Any doctor interested in hearing more about opportunities in Papua New Guinea should write to the recruitment officer: Anthony Dewe Matthews, 22 Garrick Street, London WC2.

What are the suitability and availability of an oestrin depot in treating senile atrophy of the female genital tract as an alternative to oral oestrogen (as from pregnant mares' urine), which induces at times unacceptable nausea, or ineffective local treatment with dienoestrol, or both?

A search has not found any oestrin depot preparation available, although there are oestradiol implants. If the patient is sensitive to oestrogen then implants too may cause nausea. If the symptoms really are attributable to atrophy of the vagina, or vulva, or both—no other parts of the genital tract would cause symptoms through atrophy—then local treatment is probably best, but in cases of difficulty this should not be left to the patient herself. Failures are often caused by unskilled insertion of pessaries or the application of creams. It is important to carry out repeated microbiological investigations; for it is inflammation, not atrophy, that causes the discomforts. Antibiotics may help if specific organisms are found. Attacks on non-specific

organisms may be mounted with hydrargaphen pessaries, and resistance to organisms may be built up with lactic acid jellies or douches as an alternative to oestrogens.

How long does the immunity provided by the rubella vaccines currently used for 11 to 12-year-old girls in schools last?

Studies in the USA show that antibody titres after rubella immunisation have been maintained at protective levels since vaccine was first used on a wide scale eight years ago. It seems theoretically likely that a single dose will confer lifelong protection, although clearly it will be many years before absolute proof is available. The reasonable assumption that protection is long-lasting underlies current policy in the USA to immunise both sexes in the preschool years.