# MEMOIR OF A MEDICAL CAREER

**by Dr W Clyne Shepherd**

## Part 1: The early years (1945-51)

### *Undergraduate training*

My primary schooling was in the 1930s, and hardly a week would pass without an uncle, aunt, friend or neighbour enquiring: 'What would you like to be when you grow up?' My answer was: 'A doctor.' That would come out as if by spinal reflex, though I trust a higher centre had been engaged. It would be much later that it would be a considered response, and I have always thought of it as vocational; I felt drawn to being a doctor without any sense of the journey ahead. My only experience of doctors would have been that this was the person from whom you sought advice when really unwell or covered in a rash.

In about third year of wartime secondary school, a decision had to be made about subject selection based on career ambition. Our careers adviser said I should start biology and botany, dropping some other subjects. That was to result in my having to sit a university examination in chemistry, which I passed, to gain admission to Edinburgh Medical School.

Being the first person in my family to attend university, the experience generated a degree of educational and cultural shock. I could compare it to a problem in essay writing I had in school, perhaps a lack of imagination and uncertainty about what was wanted from an essay. Eventually a day arrived when a teacher described the structuring and composition of this kind of writing, and it all became somewhat easier. A similar comment could be made about university education – that various exercises and examinations call for a certain style or response – though perhaps that was a particular weakness of myself. In addition, there was from the start a new vocabulary, full of unfamiliar terminology, to learn.

Our large medical class of 1945 had two main groups. The larger by far comprised World War 2 secondary schoolchildren, some of whom had been cadets of army, navy or air force. The second group was smaller and impressively varied, containing service men who had been wounded and demobilised, some women who had been in the services, and some scientists. The classmate who would become my wife, Anne McDougall, had been drafted into essential wartime government research work in England, for the Building Research Division of the Department of Scientific and Industrial Research. In particular she studied the effects of bombs on buildings, mostly British bombs on enemy buildings. When V2s started raining on London, she was sent to examine their effects as soon as possible. Her best friend, Priscilla Turnbull, inspected tanks off the production line, a sort of quality control.

Subjects came and went at speed – medical physics, medical botany, zoology, psychology, anatomy, physiology, biochemistry, pharmacology and bacteriology to name but some – one's brain struggling to accommodate everything… and make sense of it. There was a feeling of relief in third year when reference was made more frequently to clinical subjects, and fourth year at last brought the start of laying on of hands. On the whole, patients appeared to be very tolerant of being examined by students. Many seemed to regard it as a duty for the benefit of future generations of patients. Pathology was a third year subject, and it was a pity that morbidity in the living could not have been more directly connected with the pathology of their condition. Admittedly it is difficult to see how this could have been better coordinated.

Medical history-taking, physical examination, forensic medicine, medical ethics, psychiatry, therapeutics, general medicine, general surgery, obstetrics and gynaecology (deliver 12 babies), paediatrics, otolaryngology, ophthalmology, neurology, sexually transmitted diseases, radiology, radiotherapy, urology, anaesthetics: how were we able to cram the foregoing into two-and-a-bit years? In the 1940s one knew virtually the whole pharmacopoeia, and as I write there are several classes of medicines which alone are in excess of that meagre list.

In the last two undergraduate years we were attached to clinical units for bedside and surgical teaching. The precursor of the present-day accident and emergency department was the surgical outpatient department, and there was also a medical outpatient department. Neither lent itself well to student class teaching, but they were better if one was on attachment. I also had an attachment to the Grassmarket Dispensary, which was eye-opening after my upbringing in a comfortable environment. In the Grassmarket were vagrancy, alcohol addiction, and serious poverty. We also visited patients in old tenement buildings accessed from the

Pleasance and close to Holyrood. There one saw overcrowding, cold and damp properties, and children who looked pale and inadequately clad. Nowadays, our ability to study health experience by small area such as postcode has demonstrated again and again that differentials in health are related to socioeconomic status and environmental deficits; and it is still challenging to policy-makers, health authorities and other bodies to find ways of ameliorating this inequality.

Not dissimilar in many respects was my elective experience of delivering babies in Dublin, not in the famous Rotunda Hospital but rather in the poorer district served by the Combe Lying-in Hospital. There was no shortage of babies to be delivered, and most of us exceeded our required number of deliveries by some margin. We could also be called out to miscarriages.

My worst experience in Dublin was being called to a 29-year-old woman in her ninth pregnancy. The baby's head appeared to be stuck not far from the introitus, and the patient was exhausted. I called the duty obstetrician, and he told the tearful woman that she was fortunate to be having a new addition to the family and should stop making a fuss. He applied forceps and delivered a live baby.

Another clinical student attachment was to St Mary's Hospital, Islington. Not far from the main gate was a statue of Dick Whittington, and the hospital now bears his name. It was a London County Council hospital transitioning to the new National Health Service. Medical staff were very welcoming. There was much to see and do, and there was more scope for a student than in Edinburgh. My main attachment was to internal medicine, but they had a system of calling students to anything interesting that was happening. Perhaps I had spoken in the mess about my Dublin experience and that was why I was called to the maternity one night when there was a woman in obstructed labour. I cannot recall all the circumstances, but the problem was the danger to both mother and baby. The duty obstetrician might have a difficult decision about which to save, depending in part on the method of assisted delivery. Time was not on the side of mother or baby, but the woman already had two young children, and the result of group discussion was that she took precedence. The anaesthetist disagreed and said he could not anaesthetise under these circumstances. I later heard that another anaesthetist had been found quickly, and that the mother had survived but sadly not the baby.

Out of the blue at St Mary's, I was given the opportunity to gain experience in circumcision of a child. There were two on the list, and I followed the first one in every detail. I was, of course, monitored closely, and I was relieved at the sight of an intact glans after removing the prepuce. When one of the Edinburgh paediatric surgeons wrote an article on this subject about 30 years later, I appreciated his heading 'There is a divinity which shapes our ends rough hew them how we may'.

Medical final exams were soon upon us, written and viva voce, and I managed to produce a little drama for myself. Knowing that I would have to show competence with the stethoscope, I resolved to ensure that my auditory canals were clear but succeeded only in impacting wax against my right ear drum. I attempted to auscultate myself, and it was obvious that I could not listen to heart and lungs competently. I went to ear, nose and throat outpatients and was saved by the attention of Dr JFO Mitchell (soon to become a consultant in Dundee), who cleared my wax plug without even the assistance of a syringe. The world immediately sounded better, and fortunately I passed the exams.

Anne McDougall and I had planned to marry on the day after finals finished, a plan which made the exam experience somewhat like walking a tightrope. Good fortune brought us safely to the end of the rope, and after the wedding we went on honeymoon to Dublin. Why Dublin? Well, I knew it a bit, Anne's father had enjoyed a period of Gaelic studies there, and best of all there was no food rationing.

***General practice and house jobs***

Two weeks later, Anne and I were back and living in a flat in Portobello. A well-known local general practitioner, Dr Elizabeth Baxendine, asked Anne to do her holiday locum, and her husband, Dr Wright, would be happy if I did his. Their assistant, Dr Ronald Cameron, would be around for guidance if needed. This was very agreeable to us, but I would soon find an aspect of the arrangement which was uncomfortable and disconcerting. Both of my parents were from Portobello, I was born there in my granny's back room, and indeed my birth certificate from 1928 bears the name of William Baxendine, Elizabeth's father, who was the Registrar. I had been such a frequent visitor to Portobello that I knew many people there and had been in lots of houses of my childhood friends. Mine was not the face older people expected to see when they called

the doctor. To be fair, no-one rejected me, but it was very awkward asking personal questions, and sometimes doing physical examinations.

In 1950 there appeared to be three routes into a future career: hospital, general practice and public health. Many young doctors obtained further training in the first two for one or two years before settling into one of these. Doing National Service was the order of the day in 1950, usually a year after graduation. I elected to seek house physician and house surgeon posts.

The senior medical staffing of Edinburgh Royal Infirmary, in order of seniority, were Chief Consultant (of a unit), Sub-chief, one or two other consultants, Clinical Tutor, a fairly senior trainee, and houseman. Demobilising doctors would often have a period of attachment to a unit, a reorientation to civilian medicine. A unit in the Royal Infirmary would usually consist of two large Nightingale wards, one male, one female. The Medical Superintendent with one or two medical assistants would be responsible for the running and coordination of clinical services. Support services of these times were bacteriology, biochemistry, pathology, and haematology/blood transfusion.

The Matron headed the nursing staff of the hospital, and a nursing Sister was head of nurses in her unit. Staff Nurses were fully qualified senior nurses, very often one on day duty and one at night. A Sister Tutor, under the Matron, headed nurse teaching. Nurses in training were expected to rotate round the units in a balanced way to obtain suitable medical, surgical, gynaecological, ENT and dermatology experience, and also to provide a 24-hour service. Their social lives were very, very disciplined. My wife did not even have ready access to the Nurses Home to visit her own sister. She had to make an appointment and visit at permitted times.

It used to be said, without too much exaggeration, that one learns more in six months as a houseman than in all the earlier years in training. This probably has to do with having to take full responsibility for one's actions in employment and also caring for patients from day of admission to discharge. Of equally great value is having direct access to more senior doctors and participating in discussing aspects of patient care. Having taken a full medical, social and occupational history, the houseman had in some respects the more comprehensive view of the patient as a whole person.

I joined Leith General Hospital as a house physician in August 1950, doing what was regarded as the medical outpatients department job, seeing all the acute medical referrals, assisting at a weekly skin clinic, dealing with minor eye emergencies, and having a number of in-patient beds. My fellow house physician was a classmate, Duncan McVie, who had a larger inpatient load and was the houseman for ophthalmology. He was the perfect colleague. We never had a disagreement, and we had no difficulty in the sharing of duties or in covering for one another. Moreover, there was a piano in the mess and Duncan was an excellent pianist! If we had a spare moment I would beg him to play.

Conditions of work were straightforward – 24/7 for six months. Any time off was unofficial and had to be covered by a colleague. Leith had at least three local attractions close at hand: the Newhaven fish and chips restaurant, the Eldorado wrestling and boxing ring, and a cinema. You could be called back to the hospital from any of these; at the last-named your name could pop up on the screen, but few risked it.

Sideroom (laboratory) work in the evening was a real obstacle to skiving: we did the patients' haemoglobins and red blood cell, white blood cell, and differential white cell counts, grouped and cross-matched bloods, and performed a range of urine tests. We each coped with sleep problems in our own way. I found it helped to do a ward round after midnight and see the patients settled, but that was no guarantee of an untroubled night. Others went to bed earlier in order to cope better with night calls. The 24/7 system is now criticised for overtiring doctors and leading to errors of judgement. That may be valid, but on the plus side one did get to know the patients in all conditions very well. Having been a patient in recent years, I have seen quite a lot of tired doctors around, despite changes to working patterns.

Many patients of those days had chronic heart and lungs conditions, hypertension, renal problems, peptic ulcers, diabetes, or some combination of these. I recall two patients who taught me lessons. The first was a man brought into medical outpatients on a trolley. He was reported to have fainted when standing in a queue at the local post office. An ambulance had been called and he was at the hospital pretty quickly. He too thought he had fainted, for the first time in his life. Nothing significant arose from past history. He was a thick-set man of about 60 and I elicited nothing from physical examination of all systems. In particular, pulse and blood pressure were very normal. However, some instinct raised two questions in my mind: did he have

a slightly cyanotic tinge, just a hint bluish discolouration of the lips (it was notoriously difficult to be certain in artificial light), and did a very normal BP seem right for a man of that age and appearance? I thought it would be best to admit him for observation, and phoned Duncan to expect the arrival. About an hour later I was told he had died. At post-mortem he was found to have had a massive heart attack. When Dr Andrew Rae Gilchrist's major report on coronary thrombosis appeared in the British Medical Journal (BMJ) it was prefaced, if I recall correctly, with the biblical quotation 'The heart is deceitful in all things'.

The second lesson was provided by another man, who in recent years had been admitted to the medical ward on several occasions with recurrent jaundice. I do not recall many details, but the crux of the problem was that he would show signs of obstructive jaundice and get better on medical (as distinct from surgical) treatment. When I saw him he looked ill, gaunt and weak. As previously, x-ray failed to show any gallstones. He died and at post-mortem examination (which I did not witness) was found to have translucent stones and biliary cirrhosis. Apparently a surgical opinion at some earlier stage had been to refrain from exploratory surgery.

About half way through my medical residency we obtained the part-time services of a medical senior registrar, a relatively new creature of the NHS, and he was researching the effectiveness of new antihypertensive drugs. This was my first essay into research. It involved pretrial assessment, administering the drug, taking blood pressures standing and recumbent at stated intervals, and a final BP some hours later. I recollect that some patients were very sensitive to the drop in BP, and some years later I was relieved to have a much smoother experience at the Western General Hospital when my own antihypertensive cocktail was administered.

Duncan McVie and I both moved over to the surgical side of Leith Hospital for our second six months. His consultants were JR Cameron and Donald Mackintosh, both of whom I knew from the Royal Infirmary. I had fewer general surgical beds than Duncan, but had in addition a small gynaecology ward and some urology beds. My consultants were James Ross, Arthur Barron, William Liston and Tamas Wilson. This was a great education for me, and I sometimes joined the other team as second assistant.

Different schools of thought seemed to occur more often in surgery than in medicine. In undergraduate teaching we had been advised that, if we had a surgical examiner from London in our finals and were asked about breast cancer, we should answer that the usual procedure would be radical mastectomy. In Edinburgh, simple mastectomy followed by radiotherapy would sometimes be the treatment of choice. In my general surgery ward as a houseman I encountered two regimes for the post-operative care of hernia patients: one surgeon favoured early ambulation, while the other thought sounder healing was achieved by at least a week in bed, sometimes longer. In addition, some surgeons still performed gastroenterostomy for peptic ulcer, when most were doing partial gastrectomy. A doctor friend had had the former followed by a very uncomfortable period with dumping syndrome. What a boon to surgery, the NHS and ulcer sufferers it was when effective medical treatments were found.

Leith was on the rota for surgical emergencies, which included head injuries. They could be very worrying to manage because of fear of intracranial bleeds. Neurosurgeons were as reluctant as psychiatrists to travel to examine patients, but were willing to give telephone advice on the basis of our observations of vital functions. On one occasion I was faced with a head-injured patient with psychotic behaviour. The psychiatrists admitted him on the basis of a telephone conversation, thus retaining their no-travel status.

Unfortunately, diabetic gangrene of the lower limb was not uncommon, and experience in guided and assisted amputation sometimes was offered to young doctors. I do not know if that was widespread or if my surgeons specifically, who had both been in the war, thought it a useful training in case emergency amputation came one's way in future. I was especially pleased to have performed one when a railway worker was admitted after a train had run over his leg. The waiting surgeon, after hearing all the details, told me to go ahead and do the surgery. The anaesthetist and theatre sister appeared unfazed, and fortunately everything went to plan. (I think the anaesthetist would have been Alastair Masson, who was also a medical historian.) At ward round the following morning with the other surgeon, I was aware of his surprise (probably opprobrium) that I had done the surgery.

In 1950 we were still enucleating hyperplastic prostate glands. Forty years later I would be personally grateful that the transurethral method was well-established. A number of urology patients were women requiring ureteric transplant following pelvic irradiation for cancer. I admired Mr Wilson's surgical skills.

The gynaecology unit was also a good training ground, and it was a privilege again to be working directly with the consultant. An important aspect was learning how to speak to women of different ages about their gynaecological complaints. Later in my career I appreciated having obtained some competence in digital and bimanual examination, and learning, for example, a simple procedure for testing the patency of the fallopian tubes, for these skills proved useful in my care of women in Africa.

## Part 2: National Service (1951-52)

House jobs came to an end in August 1951, and naval training started the following month. The Lords of Admiralty instructed me to appear at HMS *Victory*, Portsmouth, on a certain day, to commence training as Surgeon Lieutenant, Royal Naval Volunteer Reserve. Although one might hear lots of complaints about National Service being a waste of time, it did not strike me that way. The armed forces had a distinctive age and rank structure which made them interesting as organisations, and my generation had been very conscious of them for five years before I joined up. In addition, many of our parents had been through World War 1, and although they were not talkative about the battlefield we had imbibed stories about camaraderie and knew the songs of WW1 and WW2.

In 1951 much of Europe was still recovering from WW2, there was much political turbulence extending to the east, and the Korean War had started. The dual processes of recovery from the war with some dismantling of the military machine while remaining ready to remobilise some forces if necessary created a sense of discomfort, but the latter justified the continuation of National Service.

I cannot recall much about basic training at Pompey (Royal Naval Barracks at Portsmouth). Squarebashing (parade ground drill) was certainly a feature and was no problem to those of us who had been in a cadet corps. Of course chief petty officers, like army sergeant majors, enjoyed conveying the impression that we were a bunch of gormless good-for-nothings. Another basic was learning that a lexicon called King's Regulations and Admiralty Instructions governed naval life.

Classroom instruction included some naval history, the navy at war, and medical practice in the service. The rum ration and subsidised tobacco products would also have been mentioned. Officers were not eligible for the former, but I am afraid at that stage I indulged in the latter. There may have been no tot of rum for officers, but the bar did a roaring trade even at lunchtime. Gin and angostura bitters appeared to be a favourite of 1951 if your sleeve displayed three or four gold rings.

At the end of basic training, our postings were dictated and I headed for the Royal Naval Air Station (RNAS) at Arbroath, also known as HMS *Condor*. One of my medical classmates, Alastair Maxwell, was appointed to HMS *Illustrious*. Another, Gilbert Abercrombie, took a short service commission in the New Zealand navy before settling in Auckland. A third, Alan Watson, went to Malta.

RNAS Arbroath had an almost bewildering range of officers: executives, secretariat, engineers, instructors, pilots, and some connected with reserve aircraft. The training of engineers was the main function; there was landing practice for aircraft on a delineated area representing a carrier deck. For a time we had a squadron of the Fleet Air Arm that had returned operational duties in Korea. There was even the occasional friendly sight of a Tiger Moth.

The medical establishment was a PMO or Principal Medical Officer (three rings) and two Surgeon Lieutenants. 'Quack' was the colloquial term for the doctors, and it was the Sick Bay Chief Petty Officer who was known as 'the Doc'. A Queen Alexandra's Royal Naval Nursing Service sister ran the nursing staff, and we had a sick bay for inpatients. As optional extra activities my immediate colleague was attached to our mountain rescue unit and I deputised for him, and I had medical duties in the sports side of naval life. This worked very well under our first PMO. However, he had an extraordinary successor who insisted that one of us (but not him) be on station at all times, which limited our contribution to recreational activities.

Another job came my way, which I think went by the title of wardroom wine caterer, a euphemism for being in charge of the wardroom bar. If this sounds like a jolly digression, it was not. The Navy enjoyed its mess dinners, dinings-out of departing officers, not standing for the loyal toast (low deck-heads), cocktail parties, and so on. In those days we had real beer barrels and carefully chosen wines and spirits, and if the commander wished to have a certain type of punch it was our duty to produce it. Another officer might wish to have crêpes suzette and make a show of lighting the brandy. Probably I make this sound more arduous

than it was, but it meant daily checks on activity, ordering supplies, keeping the books, and troubleshooting as required. After a while I discovered it had another function not unrelated to medicine, which was to keep an eye on anyone who was going too far. Naturally this was done discreetly, and I think it served a useful purpose. *Verbum sapienti satis est* – a word is enough for a wise person.

Condoms were freely available to sailors, who were well-known for enjoyment of trips ashore and appearances at sick bay some days later with 'the clap'. Despite the ease of obtaining these protectives, the same men would return with reinfection time after time. The service required them to be reported through the disciplinary system, and their rum was stopped: no medical confidentiality.

After one mess dinner a fellow attender, who had obviously enjoyed the occasion, intended to drive the short distance along the main road to married quarters, when an interesting apparition appeared ahead. The background lights of Arbroath revealed that a large transporter carrying an aircraft fuselage was heading towards him. Delighted, because he had been expecting this delivery, he thought he should express his pleasure to the driver of the transporter, who would be turning into the main gates in about 100 yards. He stopped his car and went into the middle of the road, arm raised to request halt (he was wearing the uniform of a naval officer). Abnormal loads usually have a police escort and this one was no exception. As duty MO I duly took a call from the police who told me they were holding an officer in trouble. I spoke to the PMO and was relieved when he said he would deal with the matter himself.

The naval dentist ('Toothy') and I were good friends, and the commander asked if we would be willing to adopt a clandestine role in some exercises possibly try to upset the applecart, as it were. Three occasions arose:

1. In an internal exercise, some of the ship's company had to leave the station and a few hours later try to breach the perimeter as 'saboteurs'. They had a planning meeting in the wardroom mess. Since I had a key to the bar, the dentist and I were able to secrete ourselves and listen to the plan. Our perimeter was safe.
2. A detachment of Royal Marines had to 'attack and occupy' the station a few months later.
3. Our company had to attempt to breach an RAF station and nearby radar establishment.

The dentist and I were uncertain about our possible role in relation to the marines' mock attack. We knew they would only have cover to the south of the perimeter. In civilian clothes, at dusk, we started walking along the road to the south and the only thing we encountered was a Humber staff car. On the other side of a high hedge opposite the car was a structure of some kind, possibly a large tent. We heard distant voices and the subdued movements of people not wishing to draw attention to themselves. This appeared to be the marines. Amazingly the car had a key in the ignition, so we drove it along the road some distance and were able to park it in a dark shadow so that it was not conspicuous. We returned to the station, reported to the commander, and got into uniform to await the 'attack'. Before it started we had to return to the commander, who said that a very irate marine CO wished to know where his car was (personally I think he should have been grateful we did not take the key or even the whole car into the RNAS). When the marines mounted their attack all hell was let loose – loud bangs, flashes, and plenty of smoke in the air. I was about to be less-than-competent with an injured sailor. He had been near an exploding smoke bomb and presented with a gash near his right ear. It was a linear wound immediately posterior to the mandible below the temporomandibular joint and above the angle. He thought a piece of canister was inside. I cleaned the wound and did much probing, which he tolerated well; the probe did not detect anything suspicious. I stitched the wound and all seemed well. My colleague saw him when he reported back, again saying he thought a fragment of some sort was inside. He was sent to Arbroath Infirmary for x-ray which revealed a metal fragment, and apparently it was removed with relative ease. This, for me, was another lesson to be learned. I do not think the victim realised how close he was to a much more serious injury.

Wilf (the dental officer) and I had no difficulty getting into the RAF station, and we wondered if they had given any thought to the exercise. The radar station was just the opposite. Nasty looking dogs with their RAF handlers paraded around the perimeter of what was quite a small compound, and we could not gain entry by stealth; it would have taken direct force against man and dog or strong diversionary action to get inside. (Readers, I acknowledge that we were hardly even gifted amateurs.)

One day a young WRNS wireless operator reported to sick bay and said she was being harassed by someone interrupting her phone calls. This voice could break in at any time and was bewildering. She was a serious young woman and we discussed the possibility of someone playing a joke on her. She had

reported it to her head of section, who had been unable to do anything about it. Later I spoke to her senior and he was certain that no-one was breaking into her calls. The penny dropped – this was a psychosis, subsequently confirmed as schizophrenia, the first fresh case I encountered at a primary consultation.

I became a rugby casualty. We were playing St Andrews University and I got a knee in the face with sufficient force to fracture and depress my left zygoma. Apparently I tried to play on, but I had to leave the field, was driven back to Arbroath, and deposited in Arbroath Infirmary. I remember the surgeon showing me x-ray films and saying that he thought he should try to elevate the zygoma if I agreed. The left side of my face was numb and I consented. I was not cerebrating properly and realise that the PMO managed my concussion very carefully thereafter. Some facial numbness persisted for years.

Before the foregoing, which was not especially painful, I had an experience that was indeed painful. My dental friend had filled one of my teeth, and afterwards the first bite of food had an electrical effect on my trigeminal nerve – every branch shrieked with pain and the nerve ends, every single one, felt as if a white-hot needle had been inserted. Only morphine gave some relief from pain. It may sound ridiculous, but I cannot recall if the tooth was refilled or extracted. The latter seems more likely.

Two in-service courses were obligatory for Fleet Air Arm doctors: aviation medicine and atomic warfare. At Condor I had got used to seeing pilots' wings on all sorts of uniforms, including executives, engineers and instructors. At Farnborough it was the turn of the doctor pilot – the director of the aviation medicine course. Lessons on speed, altitude, g-force and the effects of flying on human physiology were all as expected, but ejector seats and parachute management added extra interest. At one stage we got into parachutes and jumped off a platform into a swimming pool, releasing the chute shortly before hitting the water.

The atomic warfare course was different and more frightening. How could one discover the implications of this obscene form of warfare and not be in a lobby to ban it?

Shore-based national service personnel in the navy always hoped to have some sea time, and I had a short period on a recommissioned destroyer from South Shields doing sea trials in the North Sea. It was enjoyable, and the only hairy part was going down the Tyne in a pea soup fog, foghorn blaring and the Captain praying that he would not hit anything.

King George VI died in February 1952, and I was designated to be one of those making up a Coronation parade in Edinburgh to celebrate the accession of the new Queen. . This meant having to practise marching, etc. with a sword. It was an awful nuisance having to wear that contraption all day. Like the rum ration, it should have been abolished for serving no useful purpose.

## Part 3: Preparing for Africa (1952-56)

### *Paediatric surgery*

Demobbed from National Service and back in civvy street, I was keen to find a job that would be further training ground for Africa – where I had decided I would like to work. First, I became a senior house officer in paediatric surgery at Edinburgh's Royal Hospital for Sick Children (RHSC). That was a good move in terms of treating children of all ages and learning how to engage with them medically, adjusting medicine dosage; and a helpful aspect of the job was weekly joint meetings with the physicians. As well as general surgery there was a ward for burns, plastic, and maxillofacial conditions. We also covered accident and emergency work. Although there had been undergraduate lectures on congenital problems, I was struck by the volume and range of them – including, for example, exomphalos, imperforate bowel, spina bifida, cleft lip and palate, tracheoesophageal fistula and congenital dislocation of the hip – and I did not recall having been told as a student about the occasional occurrence of genital ambiguity.

Medical genetics was still in its infancy. Rhesus incompatibility was a problem (before the days of anti-D globulin), and I was impressed by the work of two registrars, James Farquhar and New Zealander Ted Lewis. After doing an exchange transfusion in the Simpson Memorial Maternity Pavilion they would return to RHSC doctors' mess and regale us with their experiences.

Hernias and circumcisions were regulars, and there were occasional encounters with Perthes disease, Wilms tumours, bone tumours, and spinal defects. These give a flavour of what we were seeing in the

surgical words. Very ill children, including those who had bad burns, could be ‘specialed’, but we did not have intensive care in its modern set-up.

***Plastic surgery***

AB Wallace was the chief of plastic surgery, and his senior registrar (soon to become a consultant) was Alastair Batchelor. I was offered an appointment with them in Bangour General Hospital, West Lothian, in mainly adult work. Also in the unit were surgeons A Campbell Buchan and W Donald MacLennan (oral surgery). Anne Sutherland was researching protein loss and replacement in burns. She would go on to become the first female consultant plastic surgeon.

It was a stimulating environment. The optimum method of treating burns of varying severity and parts of the body was not standard. Following an American initiative, AB had become an exponent of exposure treatment. Anne was doing her major study, Campbell was trying to cultivate skin cells to cover burns, and Donald (also known as Bill) was developing maxillofacial facial work to a more advanced level. The medical photographer was kept busy by this department, as I discovered when asked to cover for his holidays – I had to give up.

The surgeons were very busy. They drew patients from a wide region, and emergency admissions, if not quite as frequent as in general surgery, were nevertheless in steady supply. To compound things, they were on-call for both Bangour and RHSC plastic surgery, and were asked occasionally to attend other on-call units in emergency to find skin cover for victims of trauma.

AB was on a planning committee for the further development of the Royal Infirmary, and I recall him updating us, probably in 1954, describing how they would move into Edinburgh. Years later the closure of Bangour Hospital presented an opportunity to relocate to the capital. That was not implemented, and the original service plans for Bangour’s replacement, St John’s Hospital, Livingston, had to be modified to accommodate plastic surgery.

In my time at Bangour we had one large emergency admission of miners after a fire, probably about 10 men. There was said to have been an explosion and ball of fire, possibly from a spark. I cannot recall details of the burns, but the parting shot of the last man to be discharged was memorable: he told me a stupid b….. had tried to light a fag and said person would get his comeuppance soon.

The A8 road was a potent source of casualties. A final year medical student on attachment to Bangour was killed as she alighted from a bus. Three medical staff were casualties during my year in Bangour, and I heard of others after I left.

The maxillofacial part of the unit was kept busy with a variety of conditions. Seeing a middle third fracture of the face – with its unnatural mobility – for the first time was disconcerting. Assisting Dr MacLennan to stabilise the moving part was a memorable experience which included making a plaster of Paris cap or helmet in which was embedded a cantilever structure whose other end was attached to the maxilla. There were postoperative airways complications in both this case and the other I saw, and I wondered if tracheostomy would have been appropriate. It is good to know that internal fixation is performed nowadays.

A variety of conditions could require dental extractions, and I was taught the procedures against possible need to do some in Africa. In the event, that did not arise a lot, but when needed it proved to be a great advantage to have had the instruction.

Ulcers, usually varicose, in the lower leg were often referred for skin cover and were a difficult challenge requiring patience. A wide range of skin conditions – congenital and acquired, benign and malignant – were referred to the unit. A fairly new development was holding combined consultations with radiotherapists and dermatologists. Occasional attendance at these was a major learning experience.

AB had an arrangement to train aspiring plasticians from what was then Yugoslavia, and the first of these was Franz Zdravic, a doctor in Ljubljana. He was already a very capable doctor – and he was a social extrovert. After tasting our coffee he begged to be taken into Edinburgh to look for decent Turkish coffee beans. After grinding, there was a demonstration of how to make good coffee in a simple copper pot. It was indeed good, but I was unable to replicate the simple looking technique, at least with the same success.

Franz (or Franjo) persuaded some of us to visit his homeland, and three of us plus Anne drove to Ljubljana in my father's Austin Countryman. Our welcome was overwhelming. We were shown over the principal hospital and met several members of staff, and, of course, Franjo's wife and family. A health warning would have been helpful: all welcomes to foreigners are inadequate unless validated by the consumption of a glass of slivovic, even before noon.

There was more to Franjo than met the eye. He had been a medical student in Vienna when the Nazis arrived. They could turn up at a restaurant and require everyone to stand and give the salute 'Heil Hitler'. Yugoslav students decided they would not comply with this, and were promptly dismissed from university. He joined the partisans, operating between Slovenia and Italy until the end of the war. In addition to Slovene and Serbo-Croat, he could speak German, Italian, Russian, and English. His Scottish visitors could summon a little German and French among the four of them.

About five years after leaving Bangour I revisited and, thanks to Dr MacLennan, was able to obtain a small x-ray machine from the NHS, effete for dental work but still useful in looking at damaged digits of leprosy patients in Nigeria.

***Anaesthetics***

Hugh Boyd gave most of the anaesthetics in the plastic, burns and maxillofacial unit, and was a good communicator. He may have influenced the two junior doctors in the unit without realising it. Ian Nisbet became a consultant anaesthetist, and I decided to apply for a training post in anaesthetics before going overseas. I was fortunate in starting with Dr James Straton in the Eastern General Hospital, where his most major work was with the cardiothoracic surgeons headed by Andrew Logan. Mr Logan was a stern task-master, understandable in the developing field of heart surgery but sometimes stressful for the team. Bennie le Roux was the senior specialist trainee from South Africa, and after retirement from the NHS Mr Logan worked in South Africa for several years.

Dr Straton had started to use epidurals in gynaecology and, as in heart surgery and with spinal anaesthesia, there was a careful routine of recording vital measurements. Added to the foregoing were maternity, ENT and dental anaesthesia. It was a good training ground.

One day I was asked to go to Leith to anaesthetise a business man for reduction of fracture. I was surprised at the volume of thiopentone needed for induction – about twice the usual – and I remarked on this to doctor and nurse, surmising that perhaps he enjoyed a drink. The job was done, and the patient regained consciousness. I asked how he was feeling, and added to his reply was: 'By the way, I am not an alcoholic.'

My second six months in anaesthetics was with Dr Alastair Mackinlay, Mr Paterson Brown's anaesthetist in the Royal Infirmary, who also had lists in Deaconess, Bruntsfield and Elsie Inglis Hospitals. There was nothing new in the anaesthetic range, but Elsie Inglis Hospital afforded a new insight: they had a small ward for dealing with the aftermath of what I shall call street abortions, and I had to anaesthetise two women in that position. What struck me was their toxic state, the putrefying smell in their ward, and the odour generated in theatre. This experience combined with the mental state of women with unwanted pregnancies was a considerable encouragement to acceptance of the Abortion Act as socially justified.

## Part 4: Nigeria (1956-68)

***Passage to (and from) Africa***

My wife and two daughters and I set sail for Nigeria from Liverpool in the MV *Apapa* on 4 April 1956. The vessel was a mail-and-passenger ship of the Elder Dempster Line, which would take 10 days to reach Lagos, calling at Gambia, Sierra Leone, and Ghana en route. We would make the round trip several times, until air travel became cheaper in the 1960s. I have to confess a disappointment at losing the sea route because it was health-enhancing after a gruelling tour of medical work.

That first trip was unexpectedly helpful. Moving so quickly between jobs meant a lack of preparation for life in Nigeria – orientation courses were not only customary but highly desirable. Fortunately the ship was full of people returning to work, and that had great educational value. On board were government officers, managers of trading companies, entrepreneurs, and church mission workers of several denominations and

professions. Shortly before arrival in Lagos, government staff, usually from the Colonial Office, would receive their postings, and simply overhearing discussion of these gave me clues about what gave satisfaction and how some situations were regarded. We had begun to experience something of interrelationships that could affect us in our new life.

The voyage was smooth, the food was excellent, and all sorts of deck games were available. Several years later, the last of our sea voyages home was quite a contrast. We boarded, in Cameroun, the MV *Changuinola*, a refrigerated banana boat that took a small number of passengers. There was a deck cargo of West African hardwood logs, which were in fact trees minus roots and branches. They appeared to have been carefully balanced, one on each side of the deck, and securely chained to something. After a tranquil start we left the African coast and headed into a storm of increasing severity. We had a very good captain from Hull and he said that all we could do was ride it out, nose pointed towards America. From time to time we find ourselves in an unusual situation, as I was when the captain had a quiet word. In this really turbulent weather there was a potential for injuries and sickness. Would I be willing to be, as it were, the ship's doctor. There was only one answer to that, and he showed me the ship's medical supplies. I cannot now picture them but do recall that they were much more and varied than I had expected. He also said that his prime concern was the deck cargo. If a log broke loose we would be in serious trouble. In the end I only had to deal with a minor hand injury and give some advice on seasickness.

***The Church of Scotland connection***

It was membership of the Church of Scotland that had drawn my attention to the medical and health problems of Africa. However, having expressed interest in working for them in that continent, I felt somewhat discouraged by a seemingly less-than-enthusiastic response on the part of the Africa Secretary of the Foreign Mission Committee of the Church. I deduced from his attitude that he had doubts about my commitment to mission work. I heard nothing after the exploratory meeting, but then a suitable opening was advertised in the BMJ, and my application was successful.

Nigeria was at a significant stage of its evolution as a country, and in our first five years there we would experience colonial rule, transitional self-government, and – in 1960 – the attainment of independence. Our area of work was to the east of the Niger, south of the Benue, west of British Cameroon, and north of the sea (Bight of Biafra). Towards the centre and south-east of centre of this region the Church of Scotland Mission had two general hospitals and two leprosaria; in addition there was a larger teaching hospital, shared with the Church Missionary Society and Methodist Mission. The advert in the BMJ had been for a locum doctor to cover a series of home leaves. Though the appointment had been for one tour, approximate duration 20 months to two years, my period of employment would be over 12 years.

***Uburu and Itu***

My first appointment was to the CSM hospital at Uburu, an Igbo area in the south-east of the Eastern Region of Nigeria. Some indication of its development can be seen from how it was when I started and when I worked there again about 10 years later.

When I initially took up post, the hospital buildings comprised an outpatient department and dispensary, a large male Nightingale ward, a similar female ward with child annex, an operating theatre, and a small ward for rescued twins. Lighting, sterilising, and refrigeration were done by kerosene. Ten years on, the hospital had acquired a maternity and baby unit, electricity, and an x-ray facility. Equipment in general was much improved. In earlier days water had been collected from rain tanks, and now there was a piped supply. The whole outlook had been improved through Canadian and Dutch churches' adding personnel to the Scottish medical and nursing staff. A new Canadian doctor approached me one day to seek reassurance after Sister Smith had told him she was perfectly capable of delivering a baby – was this true? It was not the way they did things in Canada. That was a minor blip in an otherwise harmonious relationship. Amongst other advantages of improved staffing was our ability to visit many of the surrounding villages for mother-and-baby clinics and immunisations. In this connection I especially remember the late Sister Margaret Tran Smith from Glasgow, and Sister Alicia Bandeen from Strichen in Aberdeenshire. They were both skilled nurses who related well with the patients. And I should not forget Aberdeen itself, whose people provided us with a sturdy vehicle for outreach work (in the last photograph of it I saw it was bullet-ridden). But I have digressed from my first posting at Uburu…..

Outpatient clinics were for all-comers, irrespective of age, sex, nature of illness. In charge of proceedings was Edward Kanu, a local man of many skills, trained informally by Dr Harry Hastings and his wife. Edward ran the department, interpreted, and did some basic pharmacy and microscopy. Modest fees were charged to those who could pay, and no-one was turned away. A clerk collected the fees, and I taught him disease coding from the International Code Book.

Patients could have the sort of conditions one might see in a British doctor's surgery, but these would be in small proportion to prevalent local afflictions like malaria, ascariasis, ankylostomiasis (hookworm), dysenteries, filaria, sandfly fever; and from time to time schistosomiasis, guineaworm, and yaws in the early days.

One day, when I was about to start medical outpatients in Uburu, Edward said I had better go to the waiting area right away. This was a covered verandah, squarish in shape, and there in the middle of it was a man on a bamboo stretcher with florid smallpox. While that could have been an utter disaster, fortunately the campaign to eradicate smallpox had reached our area and most of the local population and our waiting outpatients had been vaccinated. None of his contacts became infected.

Two other infections were serious concerns for us – rabies and tetanus, the former fortunately uncommon (perhaps one or two cases in a year) but the latter more frequent. We could not do anything for established rabies infection other than due care with best relief of discomforts. When prevention was feasible there was

a cumbersome routine of staged administration, over three weeks, of vaccine usually by abdominal subcutaneous injection. I had to have this myself at Itu, my second placement. Some years later an improved and simpler Merieux vaccine became available. Where, say, a dog's head was available, we could send it to Ibadan for confirmation of diagnosis, but I became less enthusiastic about doing that when a specimen went missing.

Tetanus could arise in neonates, postpartum mothers, and wound infections (in reverse order of treatment success). The first two of these arose from home deliveries in rooms with earthen floors. My medicinal armamentarium comprised penicillin, antitoxin, muscle relaxant and chlorpromazine.

One patient at the Mary Slessor Hospital in Itu was particularly memorable because he was the nightwatchman of a friend in Arochukwu. He had an ulcer on the lower leg that resembled a tropical ulcer, which would have made me think of mycobacterium; but he assured me that he had had a wound there and had tried some 'native' treatments without success. On arrival at the hospital, he had risus sardonicus, the 'sardonic smile' caused by spasm of the facial muscles, an early sign of tetanus. Despite standard care, he developed opisthotonus (spasm of the large muscles around the spine) and his general condition was steadily deteriorating. He refused amputation at first because, in accordance with his indigenous religion, he could not face the afterlife minus a leg. In the end he consented to below-knee amputation, and his recovery was impressive.

Malaria in all its forms was a constant problem, especially for the young. Snake bites were a challenge at Itu, and it was a pity that though the offending reptile had often been killed it was seldom brought to hospital for identification. At admission the state of the victim was paramount: was there cardiovascular collapse or was the nervous system failing? As with rabies, the patient could go into total failure, unresponsive to treatment. We had only one antitoxin: Russell's viper venom from South Africa. The bites of patients who survived could be very filthy, sloughy, and slow to heal, but with good general recovery of the patient. Temporary blindness from spitting cobras could last for days and recovery of vision was usual.

At this stage of commenting on infections and communicable disease, I shall refer in passing to leprosy. It was a major health problem, its incidence declining very slowly. Our two leprosy hospitals were close to the general hospitals, but run on different lines. Itu had a typical leper colony with thousands of patients, a hospital, and had some small industries run by patients. This was a township with a cycle of civic events, most of the patients counting their stay there in years. Expatriate staff included an administrator, doctor, nursing sister, engineer, clerk of works/builder/carpenter, and office manager. These would have been from the church, Mission to Lepers, and the British Leprosy Relief Association (now LEPRA).

Medical work at Uburu was started by Dr John Hitchcock in 1913. He and his longest serving successor, Harry Hastings, initially dealt with all patients. Local custom had been that people suffering from leprosy had to live in segregated villages, Dr Hastings set aside a separate time for some of them to be treated at the hospital, then was given some land for a camp. This work in 1947 became the Southern Ogoja Leprosy Service, and another doctor, JCP Logan (a Glasgow dermatologist), started to develop a system for the local treatment of patients in their villages. Dr Alistair MacDonald and family went on leave in 1959, and I started my tour there. Alistair had further developed the scope of the service. At base in Uburu there were a small hospital; a workshop to make sandal-style footwear adapted for the protection of deformed feet, and other contraptions to help deformed hands; an operating theatre; and small laboratory. Set apart were our living quarters, and houses for the substantial number of itinerant leprosy inspectors who would take treatment to patients in a guesstimated area about the size of Cumbria. Logistical planning from Uburu to the east side of the Cross River was an important part of the job. Treatment had been fairly traditional over many years, until recently, when Alistair was participating in trials of a new sulphone and saw encouraging signs of more effective treatment.

My workload in Uburu and Itu included surgery, both elective and emergency. Inguinal hernia, direct and indirect, was very prevalent and appeared on most lists, and I had the impression that epigastric and umbilical hernia were more common than in Scotland. Hernia was, as expected, much less common in women, and that was despite the heavy loads they carried – it could take two people to place a load on top of an improvised ring of cloth on the carrier's head. Male circumcision was fairly common, and there were occasional haemorrhoids to deal with. Local women circumcised female children. The wounds could become infected and be presented to hospital, or there might be a later problem of scarring, which could be severe enough to occlude the vaginal opening, leading to cryptomenorrhoea (menstruation without externally-visible bleeding). Emergency work included a variety of trauma from palm tree falls, machete and

gunshot wounds, and, inevitably, strangulated hernia. Ectopic pregnancy arose occasionally. On the investigative side of gynaecology, if a marriage did not result in pregnancy in a few months the woman might seek advice. The usual routine would be: general and pelvic physical examination, look for infection, and send a puff of air through the fallopian tubes. If all seemed well, it was only rarely that the husband would present himself for fertility assessment.

After my anaesthetic job in Edinburgh, it was a huge surprise to find that locally-trained male nurses were proficient in delivering chloroform and ether anaesthesia by Schimmelbusch mask. A further surprise was the absence of intra- or post-operative problems related to that. Naturally, however, I used local anaesthetic by infiltration or regional block wherever possible. I also discovered that I could anaesthetise for lower segment Caesarian section by infiltration and with a thiopentone syringe strapped to the patient's forearm, the latter usually needed when closing up.

***Political unrest***

I was working in Mary SIessor Hospital in 1966 when post-independence political jostling arose in Western and Northern Regions. Somehow I must attempt to condense the non-medical aspects, yet not omit reference to problems which later troubled the consciences of British doctors and nurses.

The general knowledge of Nigeria I gained in my time there generated wonder that colonial Britain had sought to bring together so many peoples of diverse language, religion and culture. One major division was represented by the people north of the Niger and Benue rivers, of whom the majority were Muslim. They numbered in millions, as did the two other large peoples: Yoruba to the west of the Niger and Igbo to the east. These three groups dominated their regions, but there were many other peoples, some of several millions in population, who made a very important contribution to the country. For instance, the Church of Scotland mission started in the south-east coastal port of Calabar, largely but not wholly Efik, with a distinctive language. Another example of population complexity was the creation of a Mid-West State which included a number of Igbo; and there were also Western Muslims. Efforts were made to foster unity amongst the diverse peoples, a tall order when Britain's colonial policy had been one of indirect rule, with traditional culture and customs applying in civic life. Political parties would naturally develop from this sort of base and encounter difficulties in attempting to make inroads among people of another group. Country-wide political parties would struggle to exist. A further side-effect of indirect rule was disparity in educational attainment. Those who took advantage of educational opportunities obtained the best jobs or entered the professions, and many Easterners obtained posts in the North.

In the West there was a difficult conflict between two political parties, and in the North there were several pogroms against Easterners with thousands of deaths. The Federal Government, with a Prime Minister from the Northern Region, appeared unwilling to restore order, and the latter was later assassinated. Several military coups followed.

My work was in the Eastern Region, which remained pretty peaceful amidst the political turbulence. Refugees and wounded were returning from the north in increasing numbers, and after consultations among Eastern leaders a movement towards secession developed momentum.

The foregoing is an attempt to give an expatriate view of some of the background to the civil war, and is not a proper history. After the failure of negotiations to secure an amicable settlement of the country's problems, the Eastern Region declared its secession from the Federation in May 1967. They decided to call the territory Biafra. This was not just the landward aspect of the Bight of Biafra, it was the name that historically appeared on early maps, predating the name 'Nigeria'. The coining of the latter is attributed to journalist and writer Flora Shaw, in an essay in The Times in 1897. She later married the British colonial administrator Lord Lugard (who would become instrumental in the unification of Northern and Southern Nigeria in 1914).

***Civil war and Umuahia***

Although I can pinpoint months and years for certain events that took place, I did not keep a personal diary at the time. What follows is a composition about a period of intense activity and very little sleep. A feeler had been put out about the possibility of my working in Biafra under the auspices of the Red Cross. The neutrality of that appealed to me, and I went through a course in Geneva with a young German doctor and a

Swedish nurse. A date had been set for our departure to Port Harcourt in Biafra, but the ICRC (International Committee of the Red Cross) and Lagos (the Nigerian capital) could not reach agreement on the terms.

The churches had been very active in Nigeria, and the World Council of Churches in Geneva had been anxiously watching the political situation evolve. They were sending a mission to Biafra, and I would be welcome to join it. After ascertaining that the ICRC did not wish to keep our team hanging about, this was arranged. In the event I became their representative and also a working doctor at the Queen Elizabeth Hospital in Umuahia.

The Nigerian Federation forces' invasion of Biafra was two-pronged, one section moving along the south coast and the other advancing along the north of the region, almost a wide pincer movement. Taking into account the geography and topography of Biafra this was an effective way of cutting off supplies. In fact it was so effective that the food supply ran out steadily followed by some seed supplies that were intended for planting. Kwashiorkor hit the child population at an alarming rate, and for the first time in ten years I began to see older children and teenagers with the hair, bellies and ribs of protein calorie malnutrition. Also very upsetting was the sight of skinny mothers without breast milk, holding wizened babies that looked as if they were trying to cry but did not have the strength to emit even a slight sound.

It had been the head of a large Swiss trading company who approached me about the ICRC, and he had become the Red Cross manager in Biafra. He and leading people in other charities wished to have some estimate of deaths from starvation in Biafra during the civil war. There being no accurate knowledge of population numbers and no birth and death registration, how could one offer a crude estimate of deaths? We had to try to build a picture together from various pieces of intelligence. For years, government grants had been dependent on submitting statistics on work done, with diagnostic codes. The current situation of in- and out-patients was known. I held a weekly meeting with supervisors of refugee camps in the locality and received their reports (numbers in camp, deaths, and supply needs). Before the war we knew numbers at child health clinics in villages, we were used to doing village population inspections for leprosy, and there had been a government attempt at census counting. Two further qualifications of our figures were that they applied only to our geographical subdivision of Biafra, and at a particular point in time. Our estimates of the scale of starvation mortality among children made grim reading, but a professor of paediatrics wrote to The Times asserting that such starvation was a regular part of life in Africa.

There was much more to the story of the impact of the war on ordinary people than the blocking of food supplies. War was quite deliberately being waged against the civilian population; some were fleeing ahead of the Nigerian army and could become refugees several times. The Nigerian air force enjoyed the freedom of there being no opposition in the sky or from the ground. Thus towns, villages and markets were regularly attacked. My temporary cover at the Mary Slessor, Murray Philip (Edinburgh graduate of 1945, and Itu leprologist) was doing a ward round in January 1968 when the hospital was bombed – despite having huge red crosses on its roofs. Why did the pilot return to strafe the hospital several times? Three other hospitals were said to have been attacked.

In my earlier work I had only ever dealt with handfuls of casualties, but a major incident would befall Umuahia in February 1968. I was doing a theatre list in Queen Elizabeth Hospital, when I thought we were being bombed: there were aircraft noises like a large swarm of angry bees, and loud explosions. It was no surprise when there was a loud bang on theatre door, it was opened and a voice shouted to come to the outpatient department as soon as possible. After sewing up I rushed to the OPD, and learned that a large and crowded market place not far from the hospital had been attacked from the air with antipersonnel rockets. On my way from theatre I had passed the mortuary, slightly secluded in location, but unable to be concealed were rows of bodies from the raid. At outpatients were the largest number of serious casualties I have ever seen, many with clearly severe trauma and others with deceptively innocent-looking small entrance wounds to chest and abdomen. Every available doctor was there. Triage had to be smart, improvised tourniquets and IV fluids were needed in profusion, and wards and theatres were being prepared for a huge influx of patients.

One thing that benefited our situation was that we now had working a number of senior physicians and surgeons from Ibadan. From memory these included a cardiothoracic surgeon, a urologist, a general physician, a gynaecologist and a paediatrician, all Eastern Nigerians who had felt the need to be with family in the war zone.

We had three pairings of doctors at work on treating casualties. I worked with Dr Okoronkwo Ogan, who had trained in Hammersmith and was a very experienced gynaecology specialist. Once again in my life I found myself working with a very agreeable and capable colleague. We had never worked together, and knew nothing of each other's work. We quickly decided, patient by patient, who should perform the surgery and who would administer anaesthesia or assist. 'OK' Ogan was such a good trauma surgeon that I wondered if I had been mistaken in taking him to be a gynaecologist. I recall working till we were exhausted, and returning to the task after a break for rest and recuperation. In such situations it is amazing how adrenaline kicks in and some new injection of energy appears.

A few days after the air attack I visited the market and saw that shrapnel damage to adjacent buildings was a yard or two above ground and consistent in height, to my mind anti-personnel in character. It seemed clear that most of the air warfare had been directed against the civilian population. I later checked the number of deaths and injuries from the attack – almost all among civilians – and in May 1968 The Times published a letter from Rev Dr TS Garrett and others including myself, drawing attention to the intensification of air strikes on Biafra at a time of world pressure for peace talks, and to the scale of the resulting civilian casualties.

Day-to-day work in Umuahia had become extraordinary, and it is unsurprising that I have difficulty in trying to report coherently on this period. The hospital was increasingly busy, and the valuable assistance of the Ibadan doctors needed to be incorporated. I fitted in to the work according to need – out- and in-patients, ward rounds, operation lists, emergency on-call – but required to withdraw one morning a week to meet leaders of refugee camps, receive their reports and, together with the redoubtable Rev Bill Aitken (founder head of Okigwe secondary school) and others, respond to identified needs. I hope that I helped Bill as much as he helped me and others. He went to the Biafran airport every night, and I too when I was able. We needed to identify and secure supplies that belonged to us, and have them loaded into lorries. Bill was then in charge of the logistics of distribution.

***Visits to Canada and the United States***

Out of the blue, I received a summons to go to Ottawa and speak to the External Affairs Committee of the Canadian House of Commons – or, more accurately, be interrogated by them. Canada had a reputation, which it rightly cherished, of seeking peaceful solutions to international conflicts. It had supplied peace-keeping troops to many. Also, it had supplied a military observer to the civil war. I did not know it at the time, but this journey, in October 1968, would be my last out of Biafra.

If any reader of this memoir is asked to go directly from a conflict zone to an interrogation with political undertones, I recommend caution – at least a couple of days to discover what is being said or reported of your situation around the world. (I greatly admire broadcast reports on TV or radio from close to the frontline of a war.) I was questioned closely by the committee. On the good side of my responses was their spontaneity, coming straight from the conflict and life of the people, starvation and injury. Much more difficult were questions which required value judgements and would feed into the political discourse. I think I found myself just pleading to stop fighting by almost any means, and then sort out the constitutional problems which Britain (innocently, if you wish) had helped to create.

What I had thought would be a relatively short trip to the outside world acquired a momentum of its own, and I was asked to meet groups in Toronto and New York, some of whose representatives I had encountered in Biafra. It goes without saying that most of these were supportive of the effort to relieve starvation and provide medical aid, notably the Canadian Presbyterian Church and the American Council of Churches. Interestingly a small UN group said they were approaching me unofficially for information and would hope to provide aid whenever it was allowed. Heartened by that, I asked for a meeting with the British Ambassador to the UN, Lord Caradon (formerly Sir Hugh Foot). He had been well-known as a leading diplomat who had steered the Nigerian peoples into their independence constitution. Also, I had been told that he had a sympathetic understanding of the problems of emergent new countries. Being aware of these things, and being used to seeing horrified reactions to suffering and privation – and favourable attitudes to international aid efforts – I had high hopes for the meeting. These were well and truly dashed. The prevailing message from our ambassador was of a need to stamp out what the UK Government viewed as a rebellion. He was opposed to giving aid to the Biafrans, implying that those who did so were an impediment to the ending of the war. He made no concession to historical context and Britain's roles in it, or to the humanitarian concerns of a health professional with first-hand knowledge of the war and its civilian casualties.

***Personal reflections***

My experiences during the Biafran war were disturbing not only through the direct impact of suffering, loss of life and destruction but also as a result of ethical issues they raised. And my experiences in Canada and the US sometimes placed me in intensely political arenas without due preparation. Others, better equipped than I, have written about these problems.

Moving towards a summing up of my Nigeria experience, I had not anticipated two additional 'appointments': co-option as a police surgeon just happened, but becoming medical officer of health for the area was enshrined in the notepaper of our new local authority, regrettably without mention of remuneration.

Despite the unhappy ending in civil war, I have no regrets in the career choice that led me to working among the Igbo, Efik and Ibibio peoples of the old Eastern Nigeria. Some lasting friendships remain.

Here are some lasting medical memories from over 12 years in a corner of West Africa:

- the success of measles vaccination, and its contribution to child health
- elimination of smallpox from Nigeria; encountering a vaccinator using a safety razor blade
- elimination of Yaws from the country
- the challenges of acute malaria in children
- ever-lurking tetanus
- sheer frustration treating rabies
- decline in the prevalence of leprosy; hopes of better treatment
- distinguishing between leprosy and tuberculosis
- being asked to tell police that a shotgun wound to an upper abdomen was suicide; I said I would need to see the gun, but it never arrived
- the filthy wounds of a man who had been having a wash on river bank, been bitten across his trunk by a crocodile and somehow escaped
- a prepubertal girl with severe burns scarring to the anterior fold of the axilla, extending to the areola; she refused to go to a major hospital hundreds of miles away; I successfully raised an abdominal tube pedicle as a first stage of repair, but we never saw her again after her discharge
- occasional nights with strangulated hernias
- the striking absence of appendicitis – commonly attributed to diet
- only one patient with breast cancer
- two patients with Kaposi sarcomas, pathology confirmed
- superb colleagues: medical, nursing and other; and both local and expatriate.

During my time in Nigeria I had good reason to appreciate clinical teachers and trainers in Edinburgh. In under-doctored and under-equipped situations considerable reliance is placed on history-taking and confidence in clinical examination, and I felt that Edinburgh had been strong on both. The advantage of taking a holistic approach to care was inescapable as most patients had a strong sense of spirit as well as mind and body.

## Part 5: Back in Scotland (1968-91)

### *Entry to public health/community medicine*

I have no memory of flying from New York to Scotland. It was some days later that I recall Dr James Carsewell speaking to me about amoebiasis, in the infectious diseases unit of the City Hospital in Edinburgh. I was an inpatient and had had the usual treatment, and he was considering a role for chloroquine or Flagyl in my further management. My contribution was to say that he had a carte blanche to try anything. When I was discharged, he and the Church of Scotland doctor advised against a return to Nigeria.

A career decision was needed, but what? My eldest daughter was about to leave school, and next daughter would follow a year or two later. However appealing was a clinical career, I was low in the pecking order, and nearly all of my former bosses had retired. A consultant who was a family friend said: 'Don't worry, Clyne. There are loads of gimmicky jobs appearing these days, and you should find something.'

Scanning the medical vacancy columns in the BMJ, I found that Midlothian and Peebles were looking for a public health medical officer. I was successful in my application and took up post in 1969. Frankly, I knew nothing about the structure and modus operandi of public health in Scotland. At interview I discovered that child health clinics would be a major part of the job, and the Medical Officer of Health was satisfied that I could cope. My only memory of this sort of child health clinic was from the late 1940s, sitting in with Haldane Tait, Principal Medical Officer for the child health service in Edinburgh, and thinking that this was an excellent development for child health.

In addition to a daily child health clinic, I visited various establishments that provided care for children with particular needs, such as Castle Craig near Peebles (which enabled children with severe asthma to escape from polluted urban atmospheres) and a range of care homes. Through these visits I was able to discuss aspects of care and any identified problems, and ascertain whether the Council could do anything to help.

As time progressed I was increasingly impressed by the work of the Midlothian and Peebles Public Health Department. We had a very comprehensive picture of child health from birth to school leaving age. Children in special schools were seen every year, as were children living in other specialised facilities. There was at least one medical contact with a parent every year to discuss progress and provide an opportunity to open up on any subject.

In time I was promoted to senior medical officer in the department. That role involved some management responsibilities, communicable diseases and environmental health, liaison with relevant local authority departments, school health, referring needy children for further investigation or specialist care, responding to enquiries by councillors, and writing an annual report on child health.

The Medical Officer of Health (MOH) advised me to take the Diploma in Public Health in view of the major reorganisation of both local and health authorities which was impending as a result of the NHS (Scotland) Act 1972. That legislation heralded a unified health service in Scotland, with responsibilities transferring from the regional hospital boards (planning and development of hospital services), executive councils (pharmaceutical and general medical, dental and ophthalmic services) and local authority community health services to 15 new health boards.

In tandem with that service reorganisation, a unified specialty – community medicine (a confusing misnomer for a field of practice that served communities but not in the community) – was created from the strands of local government public health, NHS administrative medicine and academic social medicine. The Diploma in Public Health had thus become the Diploma in Community Medicine by the time I started at Edinburgh University's Usher Institute in 1974. All that remained of Professor Crew's undergraduate course of 25 years earlier were health statistics, genetics and reproductive health; and what was to come was a measure of progress over the intervening period. Epidemiology and associated disciplines were the most important subjects, and next in line were the reorganisation plan, management systems, and planning in general.

The task of reorganising and integrating health services was formidable. Each of the three medical branches had been run on its own distinctive system, bearing no similarity to one another. Hospital services consumed most resources by a considerable amount, and that would dictate their top ranking in influence and interest. Even so, they would now be managed by a district executive group comprising administrator, treasurer, medical officer and nursing officer. The five local authority public health departments in the area

would disappear. Primary care had least management disturbance (*nemo me impune lacessit*?), but would have to think twice where practice lists straddled district boundaries. Lines from Omar Khayyam seemed to me to capture the situation nicely: 'Ah, Love, could you and I with Fate conspire to grasp this sorry Scheme of Things entire, Would we not shatter it to bits – and then re-mould it nearer to the Heart's Desire!.'

Following the retiral of the MOH of Midlothian, and with the deputy about to retire, as third in the hierarchy I would become involved in the dismemberment of Midlothian, part of which was going east, part west and part south, i.e. to East Lothian and West Lothian in the Lothian Health Board area and to Borders Health Board.

***Edinburgh Royal Infirmary***

With the health service reconfiguration in place, I was appointed as a community medicine specialist with Lothian Health Board, in 1975. An early assignment was to work with the medical superintendent of Edinburgh Royal Infirmary, who was about to retire, and continue for a time after his departure, until new arrangements were in place.

To have a panoramic view of one's area's major teaching hospital was a great privilege that made me wonder why on earth the medical superintendent role would be considered effete. There was much work to be done, for example in service coordination, problem-solving, troubleshooting, dealing with seasonal bed shortages, and developing codes of practice (for instance in relation to hepatitis B) – one could go on and on. Some might argue that such activities did not require a doctor, but doing the job, which included dealing with medicolegal issues, I thought a doctor most suitable. From time to time infection problems arose, and I asked the bacteriologists for information about organisms and their distribution – I was told not to worry, they had the situation under control.

Once, in the middle of winter, I received a message that the Accident and Emergency Department was very busy and really struggling. I went to the Department, offered my services, and was told that a man with a lacerated hand had been waiting for ages and a degree of intoxication was not helping his patience. The charge nurse seemed happy and I proceeded to stitch the wound. At work next day I received an anonymous note saying I should not do this sort of thing as I did not have a clinical appointment. I never discovered who sent it.

***Community medicine specialist remits***

A suitable preface to an account of my other duties as a community medicine specialist is a question from one of my daughters: 'What do you actually do, Dad?'

In the course of my time with Lothian Health Board, I was assigned to the following service areas:

- maternity, gynaecology and women's health
- child health, including Royal Hospital for Sick Children management
- radiology
- communicable diseases and environmental health
- community medicine training
- health education.

I can think of only one word which describes the community medicine role in all of the above – 'facilitation'. This was a useful role in a newly-structured service, because for years there was uncertainty about the identity and location of people in new appointments, especially since they too could be uncertain of the boundaries of their responsibilities. And community medicine was new to everyone. To whom was I responsible for what activities and with what powers? This would be a voyage of discovery. The first two areas in the above list would command much of my time.

***Maternity, gynaecology and women's health***

Much was happening in every aspect of the division of obstetrics and gynaecology, adjacent to whose Simpson Memorial Maternity Pavilion stood the busy Medical Research Council building with a wide range of interests in all aspects of reproduction. There is an overabundance of matters about which to reminisce.

To start at the beginning: Glasgow had demonstrated the use of ultrasound in antenatal care, and one of our radiologists was confirming its value. At this early stage was it safe (no harm to the mother or fetus), did it provide useful and reliable information, at what stage(s) should it be performed, and should it become part of antenatal screening for all pregnancies? Who should do the scan – radiologists, radiographers, obstetric registrars, midwives? How many scanners would be required at which locations? And so on. Yes, there was community medicine facilitation, both formally and informally.

Two university obstetricians – John Parboosingh and Ken Boddy – were interested in a scheme to improve the quality of antenatal care in the community. Now that it was possible to analyse small area health statistics, considerable variation was demonstrated, correlating with socioeconomic status. Sighthill had the third poorest maternity and perinatal statistics despite being the location of Scotland's first health centre (opened in 1953) and a good performer in primary healthcare delivery. The two obstetricians, local GPs Ian McKee and Robert Dean, and I met and agreed a policy of care based on a problem list and action plan. Also, it was an awkward journey for patients from Sighthill to the Simpson, and so such visits were kept to a minimum. The scheme was looking to be very successful and we invited the BMJ to publish our pilot study. It declined, and further inquiry led to the conclusion that the journal's obstetric adviser was against the idea of outreach care, which would have entailed an occasional visit to a health centre. Dr Ian Smart of Bonnyrigg Health Centre also participated in the scheme and succeeded in obtaining an ultrasound scanner.

Histopathological examination of the cervix had demonstrated the development of dysplastic changes preceding invasive cancer, and cervical smear testing was to become a screening programme for women in the childbearing years. If dysplasia and carcinoma-in-situ were treated promptly, invasive cancer was effectively prevented. A colposcopy service was developed by Dr George Smart at Elsie Inglis Memorial Maternity Hospital, which could provide a treatment room for laser treatment and biopsies. For a time a pathologist was available to examine specimens and patients could be advised of results, shortening the delay in moving to further treatment.

Introducing a cervical screening programme would have considerable implications for the University Pathology Department, faced with the challenge of how to move from the ad-hoc test to screening a substantial population. Resource needs and costs had been submitted, and I had a meeting with Professor Alastair Currie to discuss these – which would take a surprising turn in a personal sense. Having gone into the meeting confident that an underestimate would not have been made, I was prepared for tough talk, but it worked out well and he suggested a cup of tea. I knew he was from the Isle of Islay, and I proceeded to tell him that my father-in-law and his considerable family were fellow Islay folk who had emigrated to Canada. That led to my wife Anne being Canadian, and when I first knew her (in 1947) her passport nearly spoiled a holiday visit to France. French immigration asked for her visa, and since she did not have one she was told entry would not be possible. A Frenchman standing behind her had heard the exchanges and seen her distress and that of her Scottish friend Priscilla Turnbull. He dashed forward and, improvising impressively, told the immigration officer that this was a catastrophe for himself and Anne: they were engaged to be married and this was her first visit to meet his parents. In the end it was decided that a fine would satisfy the authorities. Once the two women were through immigration, the Frenchman invited them to his apartment and said that he would take them to meet the Scottish Church minister in Paris. Professor Currie had listened with the patience of a Hebridean, but at this point he broke in to say that he knew the Frenchman, who was called Ika, and that the minister happened to be his cousin!

Sir Alastair's cousin, Reverend Donald Currie Caskie, was appointed to the Scots Kirk in Paris in 1935. His WW2 story is told in his book *The Tartan Pimpernel*, named after the nickname he acquired as a result of his remarkable exploits. Having preached publicly and strongly against the Nazis, he left Paris when they were about to invade, in 1939. Heading south, he settled in Marseilles and ran The British and American Seaman's Mission, setting up a safe house for a miscellany of uniformed and other escapees from the Nazis. Again obliged to move, he was welcomed in Grenoble and given a university appointment. He set up a local network as before, re-establishing contact with the Maquis (French Resistance). Imprisoned by the Gestapo in 1943, he spent time in gaols in Italy, France and Germany. In his book he referred to two of his Maquis contacts: Pierre, a nephew of General Charles de Gaulle; and one Ika Feigelsen, a medical student who became a surgeon in Paris after the war – and the very student who leapt to the defence of an unknown young woman in Calais.in 1947. Caskie's friendship with Ika continued, and the latter visited Islay several times. Anne, daughter of an Islay man (and minister), enjoyed the many coincidences and the serendipity surrounding her encounter with Ika.

Returning to my involvement in women's health, breast cancer was the most common malignancy in women and a major cause of death. Self-examination and manual palpation by a doctor had been shown to be ineffective in improving the prognosis. There was now hope that modulated x-radiation would reveal changes in the picture of breast tissue at a sufficiently early stage to greatly improve the outlook. Breast screening by this method was introduced, and I was involved in the planning. That led to my being asked to speak at the first training course about criteria for appropriate screening, and in doing so I naturally referred to consideration of false positives and negatives. At this stage of breast screening's evolution there were some uncertainties about effectiveness, and I thought it appropriate to refer to that. The next speaker was a doctor who had spent years researching breast cancer, and so I ended my contribution (I cannot remember the exact words) by saying that she would elucidate further this aspect. She stepped up to the podium giving me a very dirty look. I was never asked again to participate in the course, and I have always assumed that I had unwittingly wrong-footed her.

Family planning was in my remit, and it was so well and ably run by Dr Nancy Loudon that my attachment was unproblematic. There were training courses for the certificate, and a research aspect was fairly constant. My role was largely to interview applicants.

Reproductive medicine was busy, trying to solve problems of infertility, and we would celebrate the first baby resulting from in-vitro fertilisation. The new embryology authority had delivered its first report, and my presence was requested at a meeting of the Health Board in Drumsheugh Gardens. Some Board Members were anxious to receive confirmation that all research was taking place within the new rules. It was virtually a command that I visit the researchers and confirm their compliance. I made the visit and could convey assurance to the Board, but it was comforting to know that the embryology authority itself was sending experts to check research establishments.

Reflecting on the foregoing exercise, I wonder why the Board did not request my presence to discuss a proposed closure of Elsie Inglis Memorial Maternity Hospital, a popular hospital with views over the Queen's Park. The practitioners who had used it for years were up in arms, and a large number of women in neighbouring districts were incensed. Some time after the decision was taken to proceed with closure, I heard the professor of obstetrics refer to the hospital as having the best labour ward in Edinburgh, adding to my sense of loss of a much-loved facility that had originally been funded by public subscription – in honour of the remarkable, inspiring and pioneering doctor after whom it was named.

Elsie Inglis (1864-1917) overcame the obstacles to medical education faced by women in the 19th century, qualifying in both Glasgow and Edinburgh. Living and working in the latter, she founded a facility for the maternity care of poor women of the city, at 219 High Street. Much has been written about her and about the Scottish Women's Hospitals for Foreign Service (SWH), which she founded in 1914 with the aim of providing female-staffed relief hospitals overseas in WW1. Elise was instrumental in developing all aspects of the SWH's work, and led her own unit in Serbia.

My late wife Anne's aunt, Helen McDougall, of Islay and Edinburgh, joined the SWH when she was a final year medical student, passed her finals a year later, and then returned to Elsie Inglis's unit in Serbia. When the Serbians were commemorating the work of the SWH in the 1980s, Anne and I were invited to attend. It was an impressive and unforgettable experience. An amazing number of people of different interests were present: great nieces of Elsie, other SWH relatives, diplomats, parliamentarians, university lecturers and historians, and members of the (now defunct) British-Yugoslav society. We divided into different groups for some activities, and Dr Zarko Vukovic of the Yugoslav-British Society was our guide. He later wrote a book about Elsie in Serbo-Croat, with some English sections.

Zarko took us to the teaching hospital in Belgrade of earlier years, and we were surprised to learn that Elsie had been proactive in saving it, when the depredations of wars and deaths of many doctors threatened closure. Apparently the hospital bore her name for a number of years.

The beautifully kept Belgrade Cemetery had a small, raised enclosure with three adjacent graves marked with the names of Elizabeth Ross, Catherine Ferris, and Mabel Dearmer, who had died in service with the SWH.

In a park area in Mladenovac we attended a ceremony of rededication of a memorial fountain erected by the Serbs of many years ago to record their appreciation of the SWH. The British Ambassador, Andrew Wood,

took part, and Anne conveyed her appreciation on behalf of the Medical Women's Federation, Scottish Eastern Branch.

Another impressive dedication was made at a memorial to Dr Katherine MacPhail, a Glasgow University medical graduate of 1911. Her biography *Ever Yours Sincerely,* written by orthopaedic surgeon Zelimir Dj Mikic, tells the story of a courageous and adventurous doctor, who served with the SWH, subsequently returned to Serbia, and remained there until forced to leave during WW2. In the 1930s she moved from an Anglo-Yugoslav children's hospital in Belgrade to another in Sremska Kamenica, with much of the construction work supervised by herself. A sculpted stone bust sits outside the main building, recalling her work, which initially was the treatment of children with TB.

***Child health***

Reconnecting with children's services as a CMS in Lothian, following in the footsteps of Dr Helen Zealley, was a pleasure. There was a continuing need to enhance coordination of hospital, general practitioner and community services. I had had some experience in all of these, and sometimes problems arose around the boundaries of professional responsibility. Problems arising in schools and child placements in a range of institutions run under various auspices were seldom amenable to a quick response from general practice or hospital paediatricians, and the community doctor, who knew the institutions and their staff, was a useful link. Two joint – hospital/community – paediatric appointments in my time, were a step in the right direction.

Advances in care inevitably lead to demands for service developments, and premature and compromised babies came into this category. The same applied in neighbouring health authorities. We set up a system to try to deal with this problem of special care by agreement to notify vacancies to speed up the transfer of babies requiring urgent attention.

Although a new Sick Children's Hospital was to be built a few years ahead, the existing RHSC needed intensive care beds and this development was instituted.

My recollection is that the UK was slow to start screening children by tuberculin testing and BCG vaccination compared with, for example, Scandinavian countries, but we did get going and the reduction in incidence of tuberculosis was satisfying. An incident I recall around 1980 was the death of an immunocompromised child after surgery, with post-mortem examination revealing miliary tuberculosis. It was an important lesson in a number ways: the lurking bug, and the need for contact tracing (including hospital staff), sterilisation of anaesthetic and surgical equipment, etc. Up to retirement I remained on a committee monitoring the diminished activities of Mycobacterium tuberculosis.

Looking back through my training and work, what are my most striking other memories of child health?

- As a medical student, attending the Grassmarket Dispensary and following up some children in their homes in very poor housing accessed from the Pleasance, the kids looking pale, undernourished, and inadequately clothed (I was tutored by Dr Young of Newington).
- Also as an undergraduate, seeing tuberculous glands of neck, and congenital syphilis.
- As a senior house officer in RHSC, seeing a wide range of congenital defects, some amenable to surgery.
- Anaesthetising for a few guillotine tonsillectomies.
- In Nigeria, appreciating the benefits of measles vaccination; seeing subnutritional states almost disappear entirely – only to be re-established by the Biafran war; and the advantages of antenatal care and safe parturition.
- In Midlothian, being pleasantly surprised by the comprehensiveness of community child health services.
- Lastly, after becoming a member of the Lothian Child Protection Committee, discovering the extent of sexual, physical, and emotional abuse in society. Interdisciplinary cooperation – among social work, police, and several branches of medicine – was essential (though much easier in committee than in practice).

***Radiology***

I was attached to the Division of Radiology, possibly because I was frequently in touch with the Royal Infirmary radiologists, whose services were required by all departments.

Forging a new relationship with another branch of medicine involves the preliminary of taking stock of one's knowledge and experience in the field. By my time as a young doctor there had been steady developments from the start of radiology to where it had become more than a diagnostic tool by assisting in some treatments, and assessing progress, as well as confirming cure of some conditions.

I remembered very little of the physics of x-rays from my earlier training and career. Mass Miniature Radiography was an important feature of life during my days as student and young doctor. Two of our class members were found to have pulmonary tuberculosis and lost a year of their medical course. After MMR examination, if one was asked to attend Spittal Street for a full film one's heart sank until one was cleared. Population screening played a significant role in the control of TB.

As a houseman one was called to the x-ray department to inject contrast media, always hoping there would be no systemic reaction to challenge one's skill and resilience. Occasionally a discussion with the radiologist was requested over an interpretation, or to seek advice on further investigation. Of special interest to me, as one with a tendency to gastric reflux and pyloric spasm, was to witness a barium swallow and follow through, searching for an ulcer. Also, working with the builder of a very small x-ray facility in Nigeria had been instructive regarding building materials, design, apparatus location, and protection measures.

Returning to the subject of the Lothian Radiology Division in the 1970s and 80s, there were problems, as in virtually all medical departments, with storage, retrieval and applications of records. Departments were busy, space was limited, and instant service could not be guaranteed other than for emergencies.

Ultrasound scanning to assess fetal maturity, placental location and detect morbidity was still in its relatively early days but would in time become a general feature of antenatal care. Ultrasound would also widen in scope, across other specialties, as a diagnostic tool. There were significant resource implications for radiology and antenatal care.

Even more game-changing than the development of ultrasound was the emergence first of computerised axial tomography (CAT) and then of magnetic resonance imaging (MRI). Body scans, brain scans and spinal cord MRI would greatly enhance the armamentarium of investigations. As an aside here, I recall the time when the Scottish Home and Health Department was considering the cost of CAT scanning and apparently contemplating provision in two Scottish areas. One of our senior managers attended a professional gathering in Texas and on his return was asked if they had heard anything about CAT scans. He answered: 'Yes. Every hospital has one.'

The above provides merely a glimpse of developments, without reference to enhanced contributions of radiology to cardiology, neurology, respiratory medicine, and orthopaedics, for example, or to the increasing role of interventional radiology alongside the diagnostic. All in all, radiology was expanding and achieving greater effectiveness in its contribution to clinical work.

The emergence of breast screening had implications for radiology, surgery, and oncology. I chaired the planning committee in Lothian, and we opened the first facility in Springwell House in Edinburgh.

Giving general practitioners open access to straight x-rays carried out in selected hospitals was a long-overdue improvement during this period. There were a number of decisions to be taken: which facilities, in which hospitals, with what radiographers, and who would read the films?

All workers exposed to radiation were required to wear badges which measure exposure. In my time only one radiographer was highish, but with a good safety margin.

***Communicable diseases and environmental health***

I shall deviate from the narrative flow at this point in order to reflect on personal and professional experiences of communicable diseases.

According to my mother, I had whooping cough, measles and chickenpox along with my young cohort and beyond my memory. I do remember experiencing mumps and rubella at age nine or 10. The former caused a bit of discomfort in face and neck, especially on eating, but mercifully no orchitis. I have some amusement in recalling my rubella. One day I was feeling pretty awful with headache, malaise and aching limbs, and said to mother that I wanted to stay off school. She looked at me, placed a hand briefly on my forehead and would brook no shirking. It was a bleak day. One or two days later I came out in a punctate rash with a slightly achy neck ('glands') and felt fine on the whole, happy to go at school, but mother decided I should stay at home.

Undergraduate teaching on the more common infectious conditions was relatively light, and I would have appreciated more on measles, in respect of severe acute measles and lasting complications. However, it was important to devote time to learning about diphtheria, poliomyelitis, meningitis, haemolytic streptococcus, smallpox, typhoid, tetanus, and infectious mononucleosis. In addition, tuberculosis was taught as a subject on its own.

There had been a high incidence of TB, high mortality and morbidity, both pulmonary and bovine. Historically a variety of regimes of care had been tried, and none engendered confidence in a satisfactory outcome (my impression, at least). I remember well Professor Derrick Dunlop referring to one physical type of patient: with pale skin but pink cheeks, and a 'spurious glow of health along with a tuberculous pleural effusion'. Also, it was well known that pregnant women could have underlying pulmonary TB, which would be revealed after delivery, when the partially compressed lungs regained full movement. Available treatments for pulmonary TB included induced pneumothorax to collapse lungs, and in suitable patients lobectomy or even pneumonectomy. Infected neck lymph nodes, bones and joints, and abdominal organs gave surgeons much work; and TB meningitis was a very nasty illness.

Having witnessed the ravages of TB, I saw that the arrival of streptomycin was a godsend which transformed the situation. In due course paraminosalycilic acid and isoniazid would be added to the treatment regime, and cure achieved. But there could still be residual health problems.

In my undergraduate training, venereal disease was the recognised term for what would become referred to as sexually transmitted infections. Dr Batchelor was the head of the relevant specialist department (and father of two distinguished doctors) and in his introductory lecture was gently amusing about taking a history and not being censorious, and tactfully striving to discover contact details. Incidence and prevalence graphs demonstrated peaks associated with war and low socioeconomic status.

I never saw a primary chancre, but there were memorable demonstrations of tabes dorsalis and the steppage gait of the tertiary stage of syphilis, and the cerebral deterioration of late neurosyphilis. As an undergraduate I saw a case of congenital syphilis in RHSC, and I was asked about the condition in an oral examination in paediatrics. Before the effectiveness of penicillin was discovered there was a salutary quip referring to a former treatment: 'One night with Venus could lead to a lifetime on Mercury'.

Gonorrhoea was much more common, the clinical features being more obvious in men and sometimes unrevealed in women – indeed sometimes coming to light after delivery of a baby with ophthalmia neonatorum. I referred earlier in this memoir to the proneness of some servicemen to get repeated attacks of gonorrhoea, and their refusal to wear condoms.

Non-gonococcal urethritis was being noted, and acquired the title non-specific urethritis. In the 1980s it was found that a significant proportion of cases could be attributed to chlamydia infection, a cause of infertility.

Under the service reorganisation, food hygiene and the control of food poisoning incidents (notably salmonella and campylobacter) fell within the remit of local authority environmental health departments, working in conjunction with health board community medicine specialists.

Hepatitis B had been identified and procedures and a code of practice were developed for the protection of doctors, nurses, and the many others in danger of infection in some occupations and situations. A vaccine became available for risk groups, and I was somewhat surprised to discover that I already had antibodies.

In the 1980s acquired immune deficiency syndrome – AIDS – emerged, at first of uncertain origin but then found to be caused by the infective agent given the name of human immunodeficiency virus (HIV). In the early stages of what was to be a huge global health challenge, I was called to a meeting in the Scottish Home and Health Department and given their view of what was required. I then had to initiate local discussions on Lothian's approach to the problem. At first little was known about the natural history of the organism and how it would manifest itself. It was found to be transmitted by both heterosexual and homosexual contact – and also by the sharing of hypodermic needles by injecting drug users. Edinburgh was one of the heroin-injecting capitals of Europe. In Sir Kenneth Calman's 2019 memoir I was pleased to see his reference to two doctors who did much to improve the Edinburgh scene: Roy Robertson, a general practitioner in an area (Muirhouse) well known for addiction problems; and George Bath, a community medicine specialist who fought hard to develop a needle-exchange scheme and other services.

***Community medicine training***

Compared to the clinical specialties, there was no well-trodden path to follow in the service training of budding community medicine specialists. Community medicine was new, as was the conceptual role it would play in a reorganised service. Though developed from the longstanding practices of public health and hospital administration, together with academic social medicine, none of these provided a training model for community medicine to follow. For its training grades it had adopted the titles 'registrar' and 'senior registrar', but any comparison between clinical and community medicine would reveal more contrast than similarity in the training period. In the clinical world, junior doctors were in the frontline of services and usually indispensable in the process of patient care, while consultants could be more of a periodic presence in clinical action and teaching. In community medicine, the consultant-level doctors were in the frontline and trainees more in the background, working in a timescale dissimilar to the clinical.

In the early days of the reorganised service (from 1975), roles, relationships, and management structures were new. Matching trainees to trainers was informal and the perceived needs of the former were taken into consideration when allocating the latter, who were often trying to find their own feet in the new scheme. As training coordinator I needed to develop an approach to training that was clearly defined and disciplined. Dr Fred Foster, a medical geographer in the university department of community medicine, was interested in the education and training process, and offered to help.

Based on published work, we devised a training scheme which is best described through the associated discussions and records. Before an attachment to a trainer was confirmed, the trainee's perceived needs would be discussed, bearing in mind also the anticipated direction of their dissertation for Part 2 of the examination for Membership of the Faculty of Community Medicine. Putative trainer and trainee would reach agreement on the programme for the attachment, and that would be recorded in a proforma sheet we had devised. The trainee would also have a comprehensive record covering all attachments and other related activities during the training period. The training coordinator would monitor and document progress.

The Lothian community medicine specialists agreed to implementation of the foregoing, and it was duly instituted. A few brave souls made a tentative start to devising individual programmes, but after a few months it was clear the system was not working. It was even difficult for participants to discuss their problem with it. I had the impression that possibly it was too specific and clear-cut about activities which were not amenable to precise definition. On the more positive aspect, I was told it had sharpened discussion and planning amongst the participants.

Nearly all trainees had an academic tutor/mentor for their dissertation study for Membership of the Faculty of Community Medicine.

It is worth noting that trainees ranged in age and experience from relatively inexperienced young registrars to seasoned former GPs and doctors who had been senior registrars or even consultants.

I thoroughly enjoyed my role as a trainer, and to this day I remain in contact with a number of former trainees – most or all now themselves retired.

***Health education***

When I was a young (and even not-so-young) doctor, the principal connotation and meaning of 'health' was the absence of disease. A caricature of this had been enacted on two occasions of medical examinations for His Majesty's Forces, one when I left school and the other a couple of years later. They were finished in five minutes and went something like this: 'Do you wear glasses?' Two stethoscope positions in the precordium. 'Take a deep breath', for one anterior and one posterior auscultation of the lungs. 'Give a cough...another cough' (checking for hernias). 'Bend down and touch your toes' – a torch illuminated the perineum. 'That's fine, you're fit.'

A major advance in my understanding of the fullness of health came with the World Health Organisation's definition. This was not just about the absence of disease: it was about a positive state of wellbeing – mental and social as well as physical – and being able to achieve one's full potential in life. Whether someone has no physical health problems or suffers from a congenital or acquired disorder, they can seek their optimal state of well-being, and maximal achievement of potential. There are some, myself included, who would add a spiritual dimension to the WHO definition. In my experience, many people have a holistic sense of mind, body and spirit, and the spirit aspect is very important to them.

As the community medicine specialist attached to the Lothian Health Board Health Education Department I would discover that the WHO definition of health and its guiding principles were basic tenets in the planning and delivery of health education. Nevertheless, the prevention of ill-health would remain an important public health objective. Over the years, vaccination and immunisation have made an increasing contribution to the prevention of diseases caused by micro-organisms. Much has been discovered about environmental hazards, many in the ambience of daily life. And there are many health problems that are caused, contributed to or aggravated by 'lifestyle' behaviours that are in turn affected by individuals' physical, psychosocial and economic environments. Health education had to cover all these aspects of prevention and more, while at the same time seeking to enhance wellbeing.

In the later years of my career, the multifaceted view of health, recognition of its positive dimension (wellbeing and fitness) and a broader understanding of health determinants were reflected in a widening out from health education to health promotion. As part of his dissertation for the MFCM Part 2 examination, one of the community medicine senior registrars who had a training attachment to me, Andrew Tannahill (who went on to become the Chief Executive of the Health Education Board for Scotland), developed a model of health promotion which was subsequently to become widely-used. It accommodated the positive dimension of health, and drew together health education, preventive services such as immunisation and screening, and legislative and policy measures to protect and promote health.

***The return of 'public health'***

The term 'public health' was formally revived in the UK a few years before I retired, with community medicine being renamed public health medicine and placing at the fore a sense of responsibility to all people and a recognition that health and medicine interact, the latter in the service of the former. Some time after I retired, the professional specialism of public health was opened up to non-medical professionals, and what had been the Faculty of Community Medicine, and then the Faculty of Public Health Medicine, became the Faculty of Public Health. Specialist public health practice was characterised as having three core domains: health improvement (largely health promotion), health protection (safeguarding against infections and environmental hazards), and healthcare. As can be seen from this memoir, I was actively engaged in each of the three in the course of my time in public health. I greatly enjoyed playing my parts in them all.

**Postscript**

Having spent the second half of my career in public health, I found it strange and discomfiting to complete this memoir while a pandemic – given the name Covid-19 – is raging. Its magnitude is having a profound impact across the world, and it is difficult to think of any aspect of life, work, learning and leisure that has not been markedly affected. In responding to this challenge a new light has been cast on the roles of epidemiology, health protection, health education, and healthcare in maintaining the integrity of our social fabric.

In the application of public health knowledge and skills to the control of infection, the cooperation of the public is crucial. This is dependent on effective communication by the authorities, mutual understanding, and such clarity and persuasion as will bring about disciplined behavioural change. The ever-developing vocabulary of public health has been depended upon to illuminate this discourse. For example, the public has become familiar with the terms incidence, prevalence, infectivity and R number, used to describe the state and scale of infection locally and globally; and with infection control measures such as lockdown, social distancing, and the regulation of social gatherings.

A heavy burden has been placed on health and social care services in the community, hospitals and care homes, and exceptional calls have been made on the skills and devotion of staff, some of whom have themselves succumbed to the infection.

Much remains to be learned about the Covid-19 coronavirus, its natural history, pathogenic processes, and the body's responses. The immune response – and, it is hoped, mass delivery of effective vaccines – will determine our future relationship with an organism that is causing huge distress.

I hope that lessons learned from the crisis, both positive and painful, will be captured, remembered, and translated into action to help prevent and tackle potential future threats to population health.