distribution, as some doctors at both extremes no doubt worked in venues other than hospitals. A similar relationship existed between record in undergraduate examinations and the number of outpatients for whom the young doctors were responsible (Table VIII).

One would expect to find that with increasing seniority doctors would become responsible for the care of larger numbers of patients; however, the proportion of doctors responsible for a large number of inpatients and outpatients did not increase with seniority (Table IX). On average, junior doctors spent more hours each week at work with patients or in equivalent activity than their more senior colleagues (Table X); the difference was not statistically significant.

On average, junior doctors devoted more time to study than their senior colleagues, and, as was noted in 1966, those who did well in examinations spent longer over continuing education than their colleagues who failed one or more times.

The original questionnaire survey was conducted by Dr. J. H. F. Brotherston and Dr. F. M. Martin at the Usher Institute, Uni-

versity of Edinburgh, under the auspices of the Association for the Study of Medical Education. The follow-up survey in 1966 was financially supported by the Ministry of Health and the Royal Commission on Medical Education, and the follow-up in 1969 was supported by the Ministry of Health. Reprints can be obtained from Dr. J. M. Last.

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MEDICAL HISTORY

Albert Cook 1870-1951 : Uganda Pioneer

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Omakwano gulta bingi (Friendship overcomes all difficulties) Luganda proverb.

"It is not the mere preacher that is wanted here. It is the practical Christian tutor, who can teach people how to become Christians, cure their diseases . . . this is the man who is wanted." So wrote Henry Morton Stanley, the explorer (Cook, 1945), from the court of King Mutesa in Uganda; and his letter, published in the *Daily Telegraph* in November 1875, brought an immediate response from Christians in England. But it was another 20 years before the man was found who would devote his lifetime to meeting the double need of which Stanley spoke.

Albert Ruskin Cook, born 2 March, 1870, was the son of W. H. Cook, M.D., a general practitioner in Hampstead. His mother's father, Edward Bickersteth, was a hard-working clergyman, and his uncle, E. H. Bickersteth, was Bishop of Exeter and a well-known hymn writer (Stock, 1899). Albert grew up with a love of books and poetry that was a lifelong satisfaction to him.

Early Years

From St. Paul's School, where he was Foundation Scholar, he went up to Trinity College, Cambridge, to gain a Double First and a Major Scholarship, and then on to St. Bartholomew's Hospital, where he was Shuter Exhibitioner. He took a B.Sc. before qualifying M.B. (London) in 1895. His family must have been an exceptionally clever one. His brother Jack was very well qualified, and another brother, Arthur, was a Double First and Craven Scholar at Cambridge and later professor of classical archaeology in the same university.

While still at Cambridge Albert had become keenly interested in missionary work, and in 1896 he left for Uganda to serve under the Church Missionary Society. Medically he was launching on a largely uncharted sea. The mosquito transmis-

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sion of malaria was not discovered by Ross until two years later; the causes of sleeping sickness, plague, yellow fever, and yaws were not known; and amoebic and bacillary dysentery had not been clearly differentiated.

After landing at Mombasa he waited nearly two months while 500 porters were recruited for the caravan and then marched some 850 miles (1,360 km.) inland in a company which included only the second party of white women to go to Uganda. One of these, Katharine Timpson, later became his wife. He camped on the future site of Nairobi, where "no house broke the monotony of the plains," and after a journey lasting nearly three months reached Kampala. On 22 February 1897, three days after arriving, he began work.

Practice in East Africa

He very quickly found that "Uganda with its little-known diseases was a professional man's paradise." Soon he was seeing 50 to 60 patients a day and using a camp bed as an operating table. The effects of chloroform anaesthesia—the painless operation and the quick recovery—seemed magical, and a patient blind from corneal scarring and made to see again by an optical iridectomy said that Cook must be God. Three months later a grass-roofed reed-walled hospital with 12 beds was opened, being called Mengo Hospital after the name of the royal enclosure near by (Fig. 1).

Uganda in those days was a far larger country than it is now and included much of present-day Kenya, yet there were only three doctors in the whole protectorate, and the one stationed in Kampala, Dr. Anson, left within a month. Cook therefore had the whole medical field to himself. From the first he kept careful records, and the entire series from 1897 is preserved in the library named after him in Makerere University Medical School. Davies *et al.* (1964) described these notes as "one of the medical marvels of Africa." Printed case sheets were used, and when these ran out the ladies of the

FIG. 1.—A ward in the early Mengo Hospital. The walls and beds were made from poles and reeds.

mission ruled extra temperature charts for him. Sometimes a brief note was sufficient, but when Cook was really interested there was a family history, full clinical findings, sketches of both the physical signs and the findings on microscopy, and careful progress notes.

He was joined in 1899 by his elder brother, Jack—John Howard Cook, M.S., F.R.C.S.—a kindly and loyal partner, and in two larger editions of the hospital (the first of these was struck by lightning and burnt in 1902) they were busy indeed. Their clinical laboratory, their library—Albert is said to have spent £50 a year on medical books, a big sum in those days—and their keenness in performing necropsies produced “an impressive standard of medical practice,” and the two brothers became “the consultants of East Africa” (Foster, 1970).

They were the first to describe sleeping-sickness in East Africa (J. H. Cook, 1901): Manson organized a Royal Society Commission to investigate the outbreak, and the discovery of the causative trypanosome by Castellani and Bruce, with all its interplay of personalities, is a fascinating story. Albert also proved at necropsy that heavy hookworm infestation could cause severe anaemia, and in 1904 recorded the presence of relapsing fever in Uganda (Cook, 1904).

In spite of this clinical activity he was constantly travelling. In 1897, soon after his arrival, he had volunteered to go as medical officer with the Baganda levies which quelled a mutiny of Sudanese troops near the Nile. He used the floor of his tent as an operating table and diluted his antiseptic lotions from rock pools. Next year he walked 200 miles (320 km.) to the west—in 17 days—in the company of Bishop Tucker, who had been a noted fell climber as a young man. On arrival Cook wrote: “Saw nearly two hundred patients and did four operations, one for an immense lipoma. The King (of Toro) was present for this operation.” A few years later he was away for over six months, prospecting for new mission stations in the Southern Sudan.

On furlough in 1901 he gained his London M.D. for a thesis on “Malarial Fever, as met with in the Great Lake Region of Central Africa” (A. R. Cook, 1901).

Back in Kampala hospital work continued to grow (Fig. 2). The prevalence of syphilis gave him great concern. Another royal commission came out to investigate this problem and Cook gave evidence. It was probably partly endemic and partly true venereal syphilis (Davies *et al.*, 1964). The main treatment centre for venereal disease, built on Mulago hill, later grew into the impressive University Hospital of today.

Visitors constantly came and went. Koch stayed a night with him in 1907, and ex-President Theodore Roosevelt, on a hunting trip with his son Kermit in 1910, opened the new isolation wards at Mengo, the Roosevelt block.

Wherever Cook was he kept up his medical reading, underlining passage after passage neatly. He would make marginal notes on what he had read when travelling by boat or car: “Began May 6, Mediterranean. Finished May 9, Red Sea,” or “in safari car, coming from Nakifuma” (Foster, 1967).

He was a keen B.M.A. member, one of the founders of the Uganda branch in 1913 and three times its president.

And all the time he was a faithful missionary. To him spiritual work was far more important than the relief of physical suffering, and his Baganda friends today remember that he was never too busy to speak for Christ. In the wards on Sunday he would take the service, wearing his M.D. hood over a surplice, and preach in careful Luganda, quoting the African proverbs of which he was so fond.

When the first world war came Mengo Hospital became a base hospital for the East African campaign. The worst sufferers were the Carrier Corps, who were ravaged with dysentery and arrived in hundreds. One day a message came: “329 sick and discharged porters coming this evening—how many can you accommodate?” The matron (Mrs. Cook) replied, “Dr. Cook asks me to say that all 329 can be put up tonight.”

Faced with this constant pressure the staff realized the need for African trained staff, and a school for medical assistants was started in 1917. After some years the training school was handed over to the Government and developed into today's Makerere Medical School. Katharine Cook—they married in 1900 and she served for many years as matron—opened the first midwives' training school at Mengo in 1919 and the first school for nurses in 1928.

His Versatility

Jack returned to England in 1920 for family reasons, but Albert continued abroad, working as hard as ever. Distinctions came to him—O.B.E., C.M.G., Chevalier de l'Ordre de Leopold, Silver Medal of the Royal African Society, and, lastly, a knighthood. Finally he retired in 1934 after 37 years' service.

Over the years he had built up a remarkable reputation for versatility and kindness. He used to say that he was “a physician by temperament and a surgeon by force of circum-

FIG. 2.—In the operating theatre. Albert Cook has his back to the camera. Katharine Cook is giving the anaesthetic.

stances," but he was pathologist, radiologist, and obstetrician as well, and had written a textbook in Luganda on midwifery for his student nurses (Fig. 3). His kindly ways were well known. "How is the little mouse today?" he would say gently to the mother of a nervous child, and his ward rounds were punctuated with friendly greetings, jokes, and proverbs (Billington, 1951).

FIG. 3.—Albert Cook in middle life.

No doubt he had his faults. Judged by today's standards the pattern of life was authoritarian and paternalist. There were clashes of temperament with other missionaries. And the Cooks (the brothers were joined by a nephew and a niece in the middle years) could be a formidable clan, closing their ranks in the face of criticism. But he was nevertheless a truly great man.

In early middle age, with his receding hair and closely trimmed beard, he looks in the photographs a little like Edward VII. In old age he had the stocky build of Winston Churchill. He still came to take occasional outpatient clinics in his old hospital, chugging up the cathedral hill in his model A Ford sedan. He would get out, a thick-set figure in a rather crumpled white cotton suit, with Aertex shirt and blue tie, and as he took off his white topee, one could see the remaining fringe of white hair and his friendly pale blue eyes.

Walking rather heavily—the legacy of typhoid phlebitis when a young man—he would enter the consulting-room and sit down. He questioned the patients carefully in the rather

metallic voice of a deaf man—the deafness no doubt the result of many years of prophylactic quinine—and made notes in his neat italic handwriting, which hardly changed in 50 years.

Back home again in his beautiful lakeside home at Makindye, just outside Kampala, he would read in the big book-lined room where the picture of Lady Cook in court dress stood on the mantelpiece beside his medals. Books were everywhere; many were on early African travels and explorations, and others were on medicine, current affairs, and of course poetry. To visitors who came during his years as a widower—Lady Cook died in 1938—he would read Browning aloud in the evenings, turning over the pages with careful fingers.

On his death in 1951, aged 81, he was already something of a legend. In March 1970 the centenary of his birth was celebrated at a scientific conference in Kampala organized by the Uganda Medical Association (the successor to the Uganda branch of the B.M.A.). Sir Albert's daughter, Dr. Margaret Bax (who herself sadly died two months later) was guest of honour, together with his friend and personal doctor, Hugh Trowell, who had done such notable research in Uganda. Albert's old friends gave vivid descriptions of his daily life, and papers were read on clinical subjects which had particularly interested him. There was an exhibition of his books and instruments, and a full bibliography of his writings was specially printed for the occasion.

His place as the founder of modern medicine in Uganda is now more secure than ever, but his own estimate of his achievements was very simple:

"To attempt to heal the suffering body is much

To carry the water of salvation to thirsty souls is more, but

To combine the two is the grandest work a man can have"

(Makerere University Medical School, 1970).

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