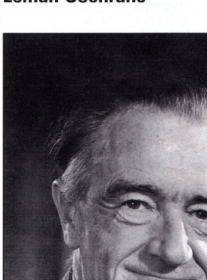
Obituary to Professor Archibald Leman Cochrane



Professor A L Cochrane

'ARCHIE' COCHRANE CBE, FRCP, FFCM, died on June 18th 1988. He was a remarkable man. He had a most unusual breadth of intellect and knowledge and he will long be remembered for his original and provocative mode of thought. He was a delightful conversationalist and a most loyal and helpful companion to many. Many people, world wide, were recipients of unstinted hospitality in his beautiful Rhoose Farm House and of encouragement, both in terms of time and in some cases finance, this last was often given from a Trust he had set up with his own money.

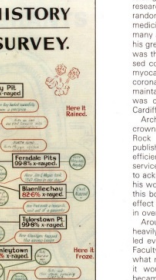
Archibald Leman Cochrane was born in Galashiels in 1909 into a family of tweed manufacturers. He was educated at Uppingham and King's College, Cambridge. He twice interrupted his medical studies, first, to go to Vienna to study psychoanalysis, and later to take part in the Spanish Civil War as a medical auxiliary in the International Brigade. After junior hospital posts he joined the Royal Army Medical Corps in 1940 and served as a Medical Officer in the Crete campaign. He was taken prisoner in 1941 and spent four years as a prisoner of war in Crete, Greece and Germany. In 1945 he was awarded the MBE for his services as a PoW Medical Officer.

Archie's experiences in PoW camps had a profound effect on him and it was many years before he was able to talk freely about them, though he did have a volume of poems, written while a prisoner, privately printed. Many of us will treasure the memory of a talk he gave on his treatment of men with prison oedema. Characteristically, he attempted to evaluate the effectiveness of his therapy as conveyed by the title of his talk 'My first, worst, but only successful controlled clinical trial'. The first time he gave it he was visibly moved as he talked about the suffering of his fellow prisoners and the almost impossible conditions under which he had to work.

Archie developed a special interest in tuberculosis through treating large numbers of Yugoslav, French and Russian PoW's with the condition. After the War this led him to go to the USA to study the epidemiology of tuberculosis and on his return he submitted plans to the MRC for a survey of the disease in Scotland. Charles Fletcher, then Director of the Pneumoconiosis Research Unit (PRU), reminisces: 'In late 1947 I wrote to various colleagues asking for suggestions for someone to take over the epidemiological studies we needed. Jerry Morris suggested Archie Cochrane whose interest in tuberculosis might be relevant. I met him for lunch. He was clearly ideal for our work and I emphasised the importance of tuberculosis in pneumoconiosis. Fortunately the MRC turned down his Scottish plans and he came to PRU'.

The breadth of Archie's vision became immediately apparent at that time. On the basis of previous work PRU had generated the hypothesis that progressive massive fibrosis might be tuberculosis modified by dust. Charles Fletcher again: 'Within a few months of his joining us Archie placed two typed pages on my desk outlining his plan to test this hypothesis and I was startled by its cogency. He proposed to X-ray every adult in the Rhondda Fach where there were four mines and to X-ray all miners at the three mines in the neighbouring Aberdare valley. Tubercle infection would be controlled in the Rhondda by admitting all sputum positive cases to hospital: only miners would be X-rayed in the control valley. Effectiveness of tuberculosis control would be shown by Mantoux testing of children and the role of tubercle infection in pneumoconiosis by comparing attack rates of Progressive Massive Fibrosis in the miners with simple pneumoconiosis over subsequent years. I agreed, and MRC provided finance (no difficulties in those days!). Archie obtained the unprecedently high cooperation rate of 98% in miners and 95% of the whole Rhondda population'. The field team maintained that the offer of transport to the clinic in his Jaguar was a powerful persuasion, but Archie declined the offer to set up a randomised controlled trial to evaluate that situation! Sadly the whole project failed in its secondary intention by the introduction of antibiotics which lowered tuberculosis rates dramatically in both valleys.

In order to make quantitative estimates of the relevance of dust to pneumoconiosis, Archie went on to propose a huge prospective study in which all miners in 25 pits throughout the country would be X-rayed periodically and detailed dust measurements made simultaneously. Archie was upset when the Council decided against it and most of the other Unit work on coalworkers be handed over to the National Coal Board. However, his initiation helped perhaps to maintain an interest in pneumoconiosis and it certainly fired a lifelong battle with the NCB and others over the clinical significance of uncomplicated pneumoconiosis. Ammunition for this came from long-term follow-up studies of cohorts of Rhondda miners, and he continued to work on these right up to the time of his death.



In 1960 Archie became David Davies Professor of Tuberculosis in the Welsh National School of Medicine (now the University of Wales College of Medicine). He ran his Department well and set high standards in the Postgraduate DTCD Course. His kindness to the students was almost unlimited but he found teaching and Committee work an irritating distraction from his chief love, research. He resigned his Chair in 1969.

During his time at PRU Archie had given close attention to observer error in the reading of X-rays, and this developed into a wider concern, which he himself termed an obsession, with the reproducibility of all clinical and related measurements. He also developed a concern for all aspects of field epidemiology: the representativeness of population samples, the standardisation of data collected, the validity of diagnoses, the completeness of follow-up, etc. In his own work he set standards for these and other aspects which few have been able to emulate.

Having developed and refined epidemiological field survey techniques while at PRU Archie then turned his interests to diseases other than pneumoconiosis. The scope of his pioneering work on bronchitis, anaemia, rheumatoid arthritis and other conditions was acknowledged by Council and in 1960 the Epidemiological Research Unit (later the Epidemiology Unit, South Wales) was set up under him. One of the first major triumphs of this Unit was pioneering work on the epidemiology of glaucoma and other ophthalmological conditions.

An interlude in epidemiological research was occasioned at this time by the discovery of porphyria variegata in a close relative and, subsequently, in himself. Archie organised a huge screening study, leading to the testing of urine and faecal samples from 152 of 153 of his known relatives living in about ten countries. He was immensely proud of this achievement in preventive medicine, and he often claimed that his 'stool had achieved greater importance than his Chair'.

Archie then switched the emphasis of his research to the evaluation of health services. In those early days his work on the evaluation of screening procedures, and of therapy, broke new ground. He also played a key role in raising the standards of medical research by urging the wider use of randomised controlled trials throughout medicine, including the evaluation of many aspects of medical care. Perhaps his greatest disappointment at this time was that the comparison in a randomised controlled trial of the treatment of myocardial infarction at home and in a coronary care unit, which he always maintained that he had first suggested, was conducted in Bristol and not in Cardiff.

Archie's work on medical care was crowned by his giving a memorable Rock Carling Lecture, subsequently published as 'Effectiveness and efficiency: random reflections on health services'. Although Archie was quick to acknowledge luck in the timing of all his work in this field, the publication of this book had a wide and international effect and it was eventually published in over ten languages.

Around this time Archie became heavily involved in discussions which led eventually to the setting up of the Faculty of Community Medicine. Somewhat reluctantly, because of the effect it would have on his research, he became the first President in 1971 of the Faculty. Together with Paul Luke, the gifted first Secretary, he steered the Faculty through a very difficult first few years, during which a Constitution was drawn up, a new education and retraining structure was organised, an admission and examination structure for Members and Fellows was agreed, the Faculty was widely publicised and put on a secure financial basis. During those few years Archie lectured all over the UK, from the Orkneys to Cornwall. He often said that one of the greatest pleasures of his term as President was the giving of an Honorary Fellowship of the Faculty to Sir Austin Bradford Hill, the man whom Archie believed had made one of the greatest contributions to medicine by promoting the randomised controlled trial.

Archie collected many honours during his career. He was appointed a CBE for his services to medicine in 1986. Doctorates were conferred on him by the Universities of York and of Rochester, and he was invited to give the Dunham Lectures at Harvard, perhaps the highest honour which can be conferred in the USA on a non-American scientist.

Archie was a patron of the arts and he built up a fine collection of modern paintings and sculpture. He never married but had a warm affection for all members of his family. He spent a very happy and peaceful final year of his life with his nephew's family in Dorset.

Dr P C Elwood, Director of the MRC Epidemiology Unit (South Wales).