

# The Most Influential Scientists in the Development of Medical informatics (16): John Anderson (1921-2002)

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John Anderson, MD, MA BSc, MRCP, FRCP, was professor of medicine at King's College Hospital Medical School. He was essentially an innovator and pioneered developments in metabolic medicine, medical education and medical computing (1-3). His background was in history, having obtained a BA with honours in modern history at Durham University in 1942. After the war he took up the opportunity of free education to armed services' survivors to read medicine at Durham, and graduated MB BS with honours in 1950. He earned his MA in modern history in the same year. After house officer appointments at the Royal Victoria Infirmary in Newcastle-upon-Tyne, he was awarded an MRC scholarship in physiology and obtained a BSc with honours in 1952. An MRC research fellowship in Charles Dent's department at University College London he followed, working on calcium metabolism. With his colleagues at department he described the now well-known use of steroids in the differential diagnosis of hypercalcaemia (1, 2). In 1956 he returned to Durham as first assistant in the Department of medicine. In the same year John obtained his MD with a thesis using a new technique of phosphate clearance by the kidney. Next year he was awarded a Rockefeller travelling fellowship to Harvard University and carried out studies on sodium transport in the isolated toad bladder at Massachusetts General Hospital, which he continued to research throughout his



subsequent career. He was present at Harvard when 'real time' was discovered, a concept which revolutionised the development of computer technology, and which he realised could be applied to medical records with enormous advantage.

He returned to Durham in 1957 to assume direction of the artificial kidney unit there. In 1959 he went to King's as senior lecturer in medicine and consultant in endocrine and metabolic medicine. He was a key figure in the development of renal medicine at King's during the 1960s when the first acute dialyses were performed. He established and directed the South East region artificial kidney unit at this time, which subsequently became based at Dulwich Hospital. He also set up the first Hypertension clinic in London. In 1964 he published, with Sidney Osbourne, the results of his noteworthy and courageous research, the world's first in-vivo neutron activation analysis. At the Atomic Energy Establishment (Harwell) they had both undergone neutron bombardment and demonstrated that this could be used to calculate the quantities of key elements such as sodium and calcium present in the whole body during life. Previous measurements had only been able to be obtained from the ash of cadavers. In 1965 he was appointed to the newly established chair in medicine at King's College Hospital Medical School. Although he continued to research in sodium transport and other metabolic projects, his main focus shifted to medical education and medical computing.

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In medical education, he reorganised the old curriculum, replacing the existing lecture courses with systems-based topic teaching. These integrated clinical subjects with basic medical sciences to illustrate and explain disease. These ideas have now become established throughout the country on the recommendation of the GMC. Between 1967 and 1970, with the support of the Department of Health, Anderson pioneered the development of computerised medical record keeping at King's. Although there were multiple difficulties, a useable record was achieved, together with a system of automated discharge summaries from the record to general practitioners, which eliminated the usual delays. Unfortunately the system was too slow, cumbersome and expensive for wider implementation and was not continued. In 1969, he became a fellow of the British Computer Society and chairman of its medical specialist group. He continued to publish and lecture on informatics and electronic medical records throughout the

rest of his career. Generations of students will remember his teaching and the way he said 'computer'. He would be gratified to learn that technological advances have at last enabled his ideas to become a reality at King's, 30 years later. The price of being a visionary is that recognition tends to come too late!

- Conflic of interest: none declared.

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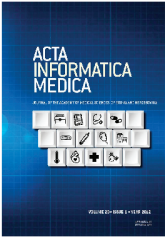
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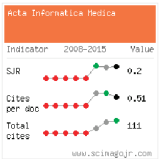
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