

Celebration Oxford, 19<sup>th</sup> May 2022

### **BIOGRAPHY: Peter Elwood**

Early in my career, following the required hospital clinical work and a short spell in primary care, I was privileged to attend a course on epidemiology under Prof. John Pemberton, epidemiologist, and Prof. Eric Cheeseman, statistician. I was entranced! After the uncertainties of clinical work, at last I was told how treatments and ideas about prevention could be investigated, hypotheses could be tested and levels of certainty estimated.

After a major investigation of chest disease, possible disablement and mortality in textile workers led by Pemberton, I was advised to apply to Archie Cochrane for a job with MRC.

Archie Cochrane interviewed me during a three day stay in his home in Rhoose... and an enormous agreement became clear between his clear and well-developed concepts and my rather fumbling understanding about epidemiology... about population representativeness, about randomisation, about relative and absolute risk, about clinical and statistical significance, about the inclusion of all relevant evidence...etc. The timing of my subsequent employment in Archie's Unit was superb. Following distinguished work in the MRC Pneumoconiosis Unit, Archie had been given his own MRC Epidemiology Unit and he had moved on to higher levels of epidemiology - challenging clinicians and leaders of health services across the world on the effectiveness and efficiency of the services they provided for their communities.

This left me free to set up and direct research within the Unit. We conducted surveys of iron deficiency including studies of the absorption of iron from bread and from radioactive labelled chapattis, and a large two-year randomised trial of the effect of iron added to the daily bread of 300 anaemic women; the association between blood lead and lead in household dust, air and water, together with comparisons of the blood lead levels of residents in three trafficless islands and subjects on the mainland; levels of vascular risk factor in residents in areas supplied with hard, and with soft water supplies, and the mortality of tropical fish randomised into hard and soft water; the effect of 'welfare' milk randomised to 300 pregnant mothers and their infants and the randomisation of 'school' milk provided to young children in economically deprived areas. Above all – the benefits of low-dose aspirin in the reduction of vascular disease mortality and later, aspirin as an additional treatment of cancer; and the 35-year Caerphilly Cohort study, which, in collaboration with clinical colleagues tested a very wide range of hypotheses – with its 'gold-dust' detailed examination of the relevance of healthy lifestyles to wellbeing, disease incidence, cognitive function and dementia in a cohort of 2,500 subjects, questioned and re-examined every five years.

The security and long-term rolling funding provided by MRC, together with a hard-working and loyal group of colleagues, was an enormous encouragement to generate new initiatives and enabled the conduct of long-term series of investigations. There are however two projects the aims of which, after many years and many studies, remain unfulfilled, and I would like to share with you my distress and my dissatisfaction in both of these.

Decades after our report of the first randomised trial of aspirin in vascular disease mortality in 1974, the interest of my research team focused upon aspirin and cancer, and during the past twelve years we have conducted a series of systematic reviews and meta-analyses to test aspirin as an additional treatment of cancer. These show that across a wide range of cancers aspirin taking is associated with about a 20% increase in survival, a reduction in metastatic spread and a reduction in thromboembolic complications. Our aim from the beginning of this work was to publicise these findings effectively so that the benefits were brought to the attention – not just of oncologists and clinicians – but to patients with cancer and their carers. Our aims were beautifully expressed by an oncologist colleague, friend and co-author:

‘Aspirin is inexpensive and readily available in almost every country. Its promotion could benefit both the affluent and the indigent within developed and under-developed countries, so that a truly global impact against cancer could be realised.’

Professor John Chia, Oncologist, Singapore. *Nat Rev Clin Oncol* 2012;9: 561-70

So far we have failed to fulfil these aims and rather than a ‘global impact’ we know of no patient with cancer who has started taking aspirin because of our publications. Our reports however lie in the public domain, they have been reported in correspondence with colleagues in WHO and in under-developed countries, and two long and detailed summaries of our findings lie with the National Institute of Clinical Evidence.

We failed, and yet I take comfort in a statement in ‘The Wisdom of Solomon’:

‘I thought about all my labour which I had taken under the sun: I should leave it unto the man that shall be after me. And who knoweth whether he shall be a wise man or a fool? yet shall he have rule over all my labour wherein I have laboured. This is all vanity.’ Ecclesiastes 2.18-19

I therefore leave the situation to God, to NICE, and to those who ‘...shall be after me and shall have rule over all our labours’.

Secondly, a project upon which my research team and I have spent over 35 years, was The Caerphilly Cohort study. Undoubtedly, the most important output was the definition of enormous benefits to health and to wellbeing of a healthy lifestyle. In October 2014 we presented these findings in a public meeting both in presentations by colleagues and in a specially prepared booklet with the title: ‘Healthy Living: Better than any pill – *and no side effects*’. The meeting was attended by 600 colleagues and members of the public.

The then Welsh Minister of Health gave a concluding public lecture at the meeting, and he also graciously wrote a preface for the booklet we distributed. He gave his contribution the title: ‘**HEALTH – our responsibility**’. and within this he included one of the findings reported in our booklet:

‘Had each man in the Caerphilly cohort been advised at baseline to adopt one additional healthy behaviour, and if only half had complied, then over the following thirty years there would have been a 13% reduction in dementia, a 12% drop in diabetes and 6% less vascular disease.’

and to this the Minister added his own comment:

**“Acting on this is surely one of the biggest challenges we face.”**

Subsequent to the reporting of the findings of the Caerphilly Cohort Study, lifestyles have continued to deteriorate across Wales. And yet I have peace, the Caerphilly team and I have done our bit and we now leave the situation to God, to the past Minister of Health (now the First Minister in Wales) and to ‘those after us who shall have rule over all our labours’.

Finally, I want to express my deep and enduring gratitude to the friends and colleagues in the teams which I was privileged to lead, for their work their support, their loyalty, their encouragement and the sheer pleasure of working with them. Undoubtedly, my greatest gift was the ability to delegate work to others and while the team did the work, I got the credit!

And finally, my deep gratitude to my wife, now deceased, and to our beloved family, enriched through fostering and adoption. Without their support, their understanding and their encouragement little of the above is likely to have been achieved

**Thank you all very much indeed and very special thanks  
to John and to George for having organised this wonderful event.**

*Peter Elwood* May 2022