A review on the occasion of the retirement of Professor Philip Wood

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In 1956 the Empire Rheumatism Council, as it was then named, founded the Field Unit for Rheumatism Research (ERU). The first director was John Lawrence, followed in 1968 by Philip Wood, and, now, with Professor Wood’s retirement in 1989 Alan Silman of the London Hospital has succeeded to this important post. It is thus an excellent time to review the ERU’s swift rise to fame in the national and international rheumatism field and beyond, and its further potential for development in a rapidly changing world. Wood’s citation from Heraclitus, that ‘you never step twice into the same river’, was a memorable reminder of today’s problems, when the river flows faster than it has ever done before and when its flora and fauna are deteriorating even more rapidly owing to pollution in various forms.

The original impetus for these now famous studies came from the request of the Miners’ Welfare Commission in 1948 to the departments of rheumatism (Professor Kellgren) and occupational health (Professor R E Lane) of the University of Manchester to survey rheumatism in miners. Dr John Lawrence was appointed to do this. He had had an unusual background: qualifying in 1930 in Edinburgh, he spent the next 18 years in junior hospital posts and general practice with occasional periods in research, and with the encouragement of Professor Francis Fraser at the Postgraduate Medical School of London at Hammersmith in 1938 he conducted a trial of the effects of gold on rheumatoid arthritis controlled by placebo injection, long before such precautions had become mandatory. From there he began research on the erythrocyte sedimentation rate, publishing a book on this subject, and thence to service in the Royal Air Force. He was led into the study of epidemiology through the National Coal Board in 1948.

Rheumatic complaints were common (30%) in both miners and non-mining employees of the National Coal Board, but loss of work, due largely to back and knee trouble, was significantly greater in the miners, associated with heavy lifting and stooping in low coal seams. Professor Kellgren in 1954 with a grant from the Medical Research Council extended these surveys, and in 1956 the Arthritis and Rheumatism Council set up the Field Unit with Dr Lawrence as director. Thenceforth population studies were started in numerous other areas as well as family studies in Manchester, Taplow, and Hammersmith, twin studies, and occupational studies, all with the aid of serological and radiological investigation and in close collaboration with other centres. The mobile equipment was supplied by the Wellcome Trust.

These surveys made a wide impact when published because for the first time we were made aware of the considerable prevalence of rheumatoid arthritis and other rheumatic disorders in samples of the general population in Yorkshire and Wales, in the United Kingdom, and in other countries. This stimulated worldwide comparisons of this and other epidemiological aspects, culminating in the symposia on ‘The Epidemiology of Chronic Rheumatism’, the first being held in 1957 at the National Institutes of Health, Bethesda, Maryland, United States. The second was held in 1961 in Rome, the third in 1966 in New York, and the fourth in 1981 again in Bethesda. Epidemiology of chronic rheumatism was now a worldwide specialty interest.

In 1968 John Lawrence retired (although he has never stopped working relentlessly in the field up to this day) and the Arthritis and Rheumatism Council (ARC) appointed Philip Wood to succeed him. His 20 years in its service have brought new insights and most valuable returns through a more sophisticated and up to date approach, including the study of new and different aspects of epidemiology.

Philip Wood, with clinical and research experience in Sheffield, St Bartholomew’s Hospital in London, the Royal Postgraduate School in Hammersmith and Buffalo, New York, entered the field of epidemiology and rheumatism in 1965 at Manchester on an ARC fellowship and quickly began to make his mark by questioning and defining those classic concepts used in classification and statistical studies. The Unit under his direction has since played a most important part in the national and international field in establishing the scientific basis of epidemiological terminology.

‘Biography is about chaps; Geography is about maps’ wrote E Clerihew Bentley. We might add ‘The epidemiologist takes both for his grist’. Epidemiology is about both, but the maps are now of many dimensions. The ‘chaps’ are not individually named, as in clinical medicine, but statistically batched or boxed and classified according to age, sex, and numerous other attributes, depending on sample size and computer capability.

The way we now use the word ‘epidemiology’ has changed considerably from its former use: ‘the study of epidemics of disease in man’. Firstly, it has been enlarged to include a more general study of diseases in man other than epidemic infections: their prevalence, distribution, and development over time with particular regard to any possible genetic or environmental causes. Secondly, it has been extended to include the distribution and prevalence of populations of plants, insects, and even perhaps coat hangers, which, it has been
predicted, may succeed human beings as the
dominant species by the end of the next century.

Philip Wood proceeded from the classic epide-
miological studies of the early years of the Unit to a
follow up study of a Welsh population and a study of
gout in the Cotswolds in the United Kingdom.
By the early 1970s, however, it became apparent
that without further basic scientific discoveries the
study of epidemiology of the chronic rheumatic
diseases was up against a brick wall with no
apparent way forward if classical methods continued
to be used. The discovery of Lyme disease could be
accommodated within the traditional frame-
work and was quietly dispatched by Steere and
Malawista. This was an easy victory though
compared with the challenge of the chronic arthritides, backache, soft tissue rheumatism, or
many of the other 200 odd rheumatic diseases
which are recognised today. The discovery of the
haplotype HLA-B27 in 1973 opened the way for
the bricks to be painstakingly taken down and
examined. In the meantime epidemiology seemed
to be at a dead end and waiting for new signposts
and directions.

From 1968 Philip Wood nevertheless leap-
frogged all the older limitations implied by the
definition of epidemiology in his response to the
needs of the age, and indeed also to the increas-
ingly sparse returns of the 'older epidemiology' in
the field of rheumatic disease.

The 'seventies and 'eighties saw rising expec-
tations and diminishing returns: an increasing propor-
tion of older people, an increased differ-
cential between the prosperous South and the old
industrial North in the United Kingdom (to which
Manchester belonged) and, latterly, a new distri-
bution of wealth between the rich and the poor,
which imposed new difficulties. There was also a
deficit of maintenance of the infrastructure of the
country on which all long term prosperity depends: this was the background of the 'new
epidemiology'.

The major contributions of the Unit's new
policy were to centre on the increased demand for
rheumatological services brought about by better
treatment methods and by the changing demo-
ographic profile of the population. There are now
many more elderly people and fewer school leavers
to recruit into the National Health Service. The
service has suffered from long waiting lists, staff
shortages, and capital cuts, not helped by reduction
in public spending by the government in the
universities, and there is, in addition, a rising
inflation rate, which has recently reached 8.3%.

Internationally, when 1977 was designated
'World Rheumatism Year', British rheumatology
sustained by the ARC responded admirably,
highlighting this cumulative problem of resources
versus needs. The Arthritis and Rheumatism
Council issued more than seven publications,
emanating largely from the Field Unit, dealing with
different aspects of patient needs and their
supply.

These publications included The Challenge:
Problems and Progress in Health Care for Rheumatic
Disorders and other reports on the availability or
otherwise of specialist rheumatologists and the
provision of orthopaedic surgery within and
between the various regions of the United
Kingdom. Other publications dealt with services
potentially available for rheumatism sufferers but
lacking in certain areas, such as welfare facilities
and social support. 'A publication, The Price We
Pay, dealt with the impact of the rheumatic
diseases on the individual and the community.

Finally, there was a seminal report on Under-
graduate Education in Rheumatology.

These surveys were meticulously researched and
clearly written in plain language, each covering a
wide field, and they led to important advances, which are of interest today. The problem of the
adequate care of these chronic and increasingly
common diseases is still unsolved; its solution
depends upon the future policy basis for the NHS.

Before, during, and after these vivid portrayals
of our urgent national problem—that is, the gap
between the needs of the large number of sufferers
from chronic rheumatism and the personnel and
resources available to deal with them—Philip
Wood has kept up intensive efforts in national
and international communication in this field. Fore-
most perhaps amongst these was his work with the
World Health Organisation (WHO). He played a
major part in updating the 9th revision of the
WHO International Classification of Diseases (ICD).
This was followed by collaboration with a group
including William Felitz of the United States in the
development of the ICD (Rheumatic and Ortho-
paedic) undertaken under the auspices of the
International League against Rheumatism.

One of his major contributions will be seen to be
the International Classification of Impairments,
Disabilities, and Handicaps (ICIDH), which was
published by WHO for trial purposes in 1980. An
important part of this report is the model of the
consequences of disease, which underpins the
classification. The model suggests a sequence of
consequences arising from a disease or disorder.
Firstly, impairments and defects in structure or
functioning of the body may result. These may
then give rise to disabilities, restrictions, or in-
abilities in the performance of activities. In turn
these may then lead to handicap and limit or
prevent the fulfilment of normal social roles,
depending on age, sex, and social and cultural
factors. These differences between frequently
confused categories are important for health,
social, and legal workers, and, indeed, politicians.
The ideas of the ICIDH are gradually being taken
up throughout the world, and are giving a new
impetus and perspective, particularly to those
concerned with rehabilitation and the care of
disabled people in the community.

The work of the Unit under the direction of
Philip Wood has laid a firm basis for future
research, basic and applied, into the rheumatic
and related diseases of the locomotor system. The
assessments of the state of care in the United
Kingdom for rheumatic patients, together with the
reviews of resource and manpower statistics which
were initiated under Professor Philip Wood and
Dr Elizabeth Badley and their highly professional
team, remain a major source of facts and figures
for professional and social action in the rheumatism
field. It is to be hoped that such assessments will
be continued in the ARC Epidemiology Research
Unit under its new director Alan Silman. His new
programme will undoubtedly address new
problems. It will, we can be sure, maintain the
Unit's high profile and continue to add significantly
to our knowledge of these common and various
rheumatic diseases: their causation, prevention,
amelioration, and perhaps even, who knows, cure.

My thanks are due to Professor Kellgren, Dr John Lawrence,
and Dr Elizabeth Badley for their help in the making of this
contribution.