



Keynote Lecture II

Public Health, Genetics and Health Policy

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Dr Ron Zimmern was appointed Director of the Public Health Genetics Unit in Cambridge in June 1997. He is also the Director of the Cambridge Genetics Knowledge Park (from April 2002) and the Institute of Public Health at the University of Cambridge (from January 2003).

He graduated in 1971 following his medical training at Trinity College, Cambridge and the Middlesex Hospital, London. After specialising in neurology he obtained a law degree and entered public health medicine in 1983. He was Director of Public Health for Cambridge and Huntingdon Health Authority from 1991 to 1998. He is also an Associate Lecturer at the University of Cambridge, a Consultant in Public Health Medicine at Addenbrooke's Hospital and a Senior Associate at the Judge Institute of Management Studies. He is Chairman of the Diagnostic and Screening Panel of the UK's Health Technology Assessment programme, serves on the Genetics Commissioning Advisory Group and the Steering Group for the National Genetic Testing Network at the Department of Health, and on the Advisory Group for Scientific Advances in Genetics at the Medical Research Council.

His special interests and expertise, in addition to Public Health Genetics, include strategic planning, the relationship between clinical services and teaching and research, priority setting in the NHS, and the law and ethics of medicine.

My talk will focus on the subject of public health genetics. This is defined as the application of advances in genetics on promoting health and preventing disease through the organised efforts of society. At first sight it may seem incongruous to suggest that genetic science might have any relation to the practice of public health but I shall attempt to show that this perception is incorrect. I shall suggest that it comes about because of a failure to incorporate modern concepts of biomedical science by the public health practitioner in their understanding of how health and disease are determined.

My talk will be divided into three sections. First, I shall outline key concepts in public health genetics: genes as a determinant of health, genetic diseases and complex diseases, and gene-environment interaction. Second, I shall show how it will be necessary for practitioners of public health genetics to understand three separate streams of knowledge: genetics and molecular sciences, population science and the humanities and social sciences. I shall stress the importance of public health leadership in this field and of ensuring the efficient and effective translation of the advances brought about by genomics and the completion of the human genome project into interventions that will lead to improvements in human health.

Finally, I shall introduce and discuss a range of key influences and drivers that will determine the interaction between the biomedical sciences and society and the set of policy responses that will be necessary for governments to address. I shall suggest that these are not trivial matters, nor matters to be dealt with as add-ons or adjuncts to the science, but that they must be given the same degree of importance as the science itself, if scientific advances are to be successfully and ethically exploited for the benefit of population health.