Epidemiology is a scientific discipline dating back about 150 years. During this period it has contributed enormously to our understanding of the causes of disease and to the identification of strategies for their prevention. Unfortunately, epidemiologists have been less successful in ensuring that the epidemiological information so exquisitely gathered is translated into effective policies and programmes. Epidemiologists have failed to actively contribute to improving the health of populations we serve, especially poor and disadvantaged populations. The case of non-communicable diseases (NCD) is instructive. Two in every 3 of the 57 million deaths worldwide each year are due to NCD, principally cardiovascular diseases, cancers, diabetes and chronic respiratory diseases; NCD death rates are now higher in poor than in wealthy countries and among poor people in all countries. The UN High-Level Meeting on NCD in September 2011 stems from the global NCD crisis and the need for a coordinated and effective response. If this meeting results in a positive outcome, it will be in part because of the contribution by epidemiologists in mapping the NCD pandemic and identifying its causes. However, a successful outcome will result only if we engage with the political dimensions of disease prevention and treatment. The steps required in translating the epidemiology of NCD into simple, focused and politically acceptable messages have not been easy and have taken epidemiologists into areas for which we are remarkably unskilled, but which provide important lessons for the future of epidemiology.

This talk will address the relationship between evidence and the development of health policy. It will focus particularly on epidemiological evidence (both observational and experimental), and the evolution of public health and social policies. In the UK, as in many other countries, there has been a political culture espousing the importance of basing policies on evidence, and of understanding ‘what works’, for a decade or more. However numerous policies and programmes have been recommended or implemented without being based on ‘evidence’ as epidemiologists would understand it, and without any explicit intention of evaluating the effectiveness of these policies and programmes. This talk will discuss some of the barriers to and facilitators of evidence-informed policy-making, and argue for a more sophisticated form of knowledge exchange between researchers, policymakers, practitioners, and politicians.

By the 1990s, global interest in the health of mothers and children had waned. HIV, malaria and non-communicable diseases were at centre stage in the global agenda. Yet, over 10 million under-five children and half a million mothers died every year. Attempting to reverse this situation, a group of concerned scientists and policymakers joined efforts to produce the Lancet Child Survival Series in 2003, and to set up the Countdown to 2015 Initiative 2 years later. The global Countdown conferences and reports are aimed at monitoring progress towards the Millennium Development Goals, and at holding governments and international actors accountable for insufficient performance. Sound epidemiological research laid the foundation for selecting a handful of cost-effective interventions and advocating for their incorporation into national and international policies. Epidemiology then contributed to measuring coverage with these interventions, assessing which population groups are lagging behind, feeding back this information to policymakers on a continuous basis, and evaluating large-scale programmes. Breastfeeding promotion and community case-management of pneumonia are used as examples of how rigorous research data can influence policy. Growing emphasis on accountability, results-based financing and real-time mortality monitoring in low-income countries will bring additional measurement needs, which require greater involvement of epidemiologists in global initiatives.