

SECURE workshop- held on February 12th 2016, Grosvenor Hilton Hotel, Glasgow.

Workshop Leader: Professor Marian Scott, University of Glasgow.

Topic: Environmental quality, human exposures and deprivation- improving our understanding of the interactions.

The relationships between human health and wellbeing and the environment are complex, and challenging to examine with many studies limited by the challenges in quantifying exposures, frequently relying on indirect measures. Examples of well-known health impacts include respiratory disease and air pollution and gastro-intestinal infections and poor water quality. "Knowledge gaps, uncertainties and shortages of data limit understanding of the complex interactions between human health, multiple environmental pressures, and social and demographic factors" (EEA, SOER, 2015).

This workshop will further the discussions between environmental health specialists, environmental scientists, statisticians and modellers and policy makers and regulators on data and knowledge gaps, and uncertainties and how they might be filled.

The workshop discussions and breakout sessions will consider the data needs of the future and how to maximise benefit of data resources we already hold. The interactions between the environment and human health and wellbeing are one of the key LWEC challenges. Furthermore, there is increasing interest in the development of a more integrated and holistic (ecological) approach to the delivery of public health and in the promotion of health and wellbeing as well as in the continued prevention and treatment of disease (ref. LWEC Health Conference 2014).

The dominance of the deficit model, which sees environment primarily in terms of threats to human health, is on the wane. Understanding how our environment can help keep us all equally well is increasingly seen as a priority as we face challenges including climate change, levels and rates of urbanisation, mass migration, and the emergence of poor mental wellbeing as a significant portion of the global burden of disease. What do we know, not know, and need to know about the positive contributions to health and wellbeing our environments can make, and their contribution to reducing health inequalities? What are the big data gaps and how might they be filled?

A major hurdle in reliable risk assessment and management of chemicals is the lack of harmonised information about population exposure to chemicals and their interplay with other concurrent environmental exposures and impact on health. A first step to better assess and understand this potential impact on health is to gather harmonised and comparable information on chemical exposures through human biomonitoring. This information can be linked to data on exposure sources and epidemiological surveys, providing useful information for policy making. Recent research and future plans for human biomonitoring of environmental toxicants at Public Health England will be discussed.

Keynote 1: Professor Rich Mitchell, U of Glasgow.

"Salutogenic and equigenic environments now and in the future: what do we know and what don't we know?"

Keynote 2: Dr Karen Exley, Public Health England

'Human biomonitoring: scientific assessment of human exposures to chemicals and potential health impacts'

Themed presentations by participants

Theme A: **Understanding interactions- what do we need to measure?**

Theme B: **How can we secure the health and wellbeing of the planet and the population?**