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School for Public Health Research @ LSHTM (SPHR@L)

**SPHR@L Seminar Series: 2016-2017**

A talk by **Dr Mark McCann**

MRC/CSO Social and Public Health Science Unit, University of Glasgow

Monday 27<sup>th</sup> February 2017, 12:45-13:45

Room G1 (Mary Seacole) 15-17 Tavistock Place

## **Agent Based Models for Public Health Research and Practice: Modelling Alcohol Systems**

### Abstract

Agent-based models (ABMs) have attracted attention in public health and epidemiology in recent years, given their ability to model complex systems composed of interacting components and multiple processes; however, their use is not widespread and they have attracted criticism. Recent epidemiological debate has questioned whether ABMs offer advantages over modern causal inference methods.

These criticisms stem from a mischaracterisation of the role that ABMs can play in public health. This presentation will explain how ABMs help address the challenges of understanding complex systems, address questions over the comparison of ABMs and epidemiological methods, and describe preliminary work using ABMs for health in relation to adolescent social networks and drinking frequency, and alcohol consumption and pricing.

*Dr Mark McCann is a Research Fellow with the MRC/CSO Social and Public Health Science Unit, University of Glasgow. His main topics of interest are mental health, alcohol and drug use, but the area he is most passionate about is applying statistical approaches (such as Multilevel Modelling, Directed Acyclic Graphs) and complex systems science methods to health problems.*