

## Pathways events

**12 June 2013**

*Confounded about confounding: An introduction to causal inference*

Joseph Rowntree Foundation  
University of York

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**9-11 September 2013**

*Studying pathways between social and biological factors using modern causal inference methods: an example using data from the ONS Longitudinal Study*

BSPS Conference  
Swansea

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**13 September 2013**

*New approaches to biosocial research: using genes in social and epidemiological studies*

Royal Statistical Society  
London

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**17-18 September 2013**

*A short course on concepts and methods in causal inference*

Department of Geography  
University of Cambridge



Prof Bianca De Stavola providing causal inference training in Sweden

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Causal inference: a summary

<http://pathways.lshtm.ac.uk>

[pathways@lshtm.ac.uk](mailto:pathways@lshtm.ac.uk)

@PathwaysNCRM

## Confounded about confounding? Our courses on causal inference

PATHWAYS runs a number of causal inference events, in the UK, and internationally.

These courses target delegates from entry-level, or with no prior knowledge, up to intermediate and advanced. At a minimum, they aim to provide attendees with a basic understanding of the key concepts of causal inference. The higher-level courses aim to equip delegates with the knowledge and confidence to use causal inference in their work or studies.

Traditional statistical language and analysis methods are appropriate to study association – not causation. Causal inference may be helpful in addressing the main limitation of associational models: the likely presence of confounding bias.

Our courses introduce key concepts in causal inference, including the language of counterfactuals and causal diagrams. We look at statistical methods used in causal inference, grouped according to the type of causal question they address, and the structure of the data available to answer them. Causal diagrams help to illustrate causal theories, the most common being Directed Acyclic Graphs (DAGs); these are graphical representations of our causal assumptions. Some of the Pathways courses incorporate pen and paper practicals and/or computer practicals using Stata.

Our two-day course is split between 'simple' causal questions and 'complex' causal questions. 'Simple' questions include 'what is the causal effect of a single exposure A, such as educational achievement, on a single outcome Y, such as blood pressure?'. By 'complex', on the other hand, we mean causal questions concerning the effect of time-changing exposures, and questions concerning pathways, such as how much of the causal effect of A on Y is mediated by a third variable M?

Causal thinking tends to clarify our research objectives and reduce the ambiguities of traditional tools, such as the epidemiological triangle. It also shows us that conditioning can be harmful, as well as helpful, and allows us to deal with arbitrarily complex settings. [So, why not book a place on one of our courses to find out more?](#)

## Pathways node publications

- [The Demography of Ageing](#) Emily Grundy on YouTube, PublicHealth@Cambridge launch event
- [Deriving flexible summaries from life course data](#). George and Richard: *NCRM MethodsNews Spring Edition*
- [Availability and use of UK based ethnicity data for health research](#). Rohini, Liam and Emily: *NCRM working paper*

