



SACEMA

DST-NRF Centre of Excellence in Epidemiological Modelling and Analysis

Short Course on Using quantitative bias analysis with epidemiologic data

Stellenbosch University, 13 to 15 May 2019

SACEMA invites applications for the short course on using quantitative bias analysis with epidemiological data. The course will be held at SACEMA and will take place over 3 days starting 13 to 15 May 2019. The course starts at 09h00 daily and ends at 16h00.

Dr. Matthew Fox of the Department of Epidemiology and the Departments of Epidemiology and Global Health at Boston University will be presenting an intensive three-day course on using quantitative bias methods with epidemiological data, at SACEMA. The course fee is **R5500.00 for early bird registration** by the 31st of March and **R 6500.00 for late registration**. Registration information can be found at www.sacema.org/node/quantitative-bias-2019.

Course overview: Students of epidemiology are well versed in ways to reduce systematic error (bias) in the design of their studies and to describe random error in the analysis of their studies through confidence intervals and p values. However students are rarely taught methodologies for quantifying systematic error in their studies.

Quantitative bias analysis (QBA) provides a methodology for assessing the impact of bias on study results by making assumptions about the bias parameters. QBA allows for assessment of both the direction and magnitude of systematic error and gives an estimate of effect (or a series of estimates of effect) that would have occurred had the bias been absent, assuming the bias parameters are correct. Such analyses allow investigators to go beyond speculation about bias in discussion section and can be a powerful tool for quantifying the impact of such biases.

The emphasis of this course will be on the basic methodologies and on applying the methods to data. We will not emphasize statistical theory, but rather the simple mathematics required to correct for study errors. All aspects of quantitative bias analysis, including probabilistic bias analysis, will be demonstrated using freely available software in Microsoft Excel. A few examples in later sessions will be demonstrated in SAS only to allow participants to understand ways to continue with their training in QBA. However we do not expect students to be proficient in SAS. Examples can be translated to STATA by participants after the course. All participants are expected to bring a laptop with Microsoft Excel. It is preferable if students bring a dataset with them that has sources of random error.

For further details, instructions, and application forms, go to:

www.sacema.org/node/quantitative-bias-2019

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