Graduate School Seminar Series

THE UNIVERSITY OF MELBOURNE

MELBOURNE SCHOOL OF POPULATION & GLOBAL HEALTH

Oral anticoagulants for prevention of stroke in atrial fibrillation:

Can network meta-analyses overcome the limitations of evidence from randomized trials?

Professor Jonathan Sterne

Professor of Medical Statistics and Epidemiology, Department of Population Health Sciences, University of Bristol, UK; and Deputy Director, NIHR Bristol Biomedical Research Centre

The oral anticoagulant warfarin is effective for prevention of stroke in patients with atrial fibrillation. However, bleeding associated with warfarin is a major cause of hospitalisation, and warfarin treatment requires monitoring to ensure optimal efficacy while limiting the risk of bleeding. Direct acting (non-vitamin K antagonist) oral anticoagulants (DOACs) overcome some of the limitations of warfarin, offering important benefits that can improve quality of life for patients and their carers. The class includes factor II inhibitors (e.g. dabigatran) and factor Xa inhibitors (e.g. apixaban, betrixaban, edoxaban, and rivaroxaban). These are increasingly used in place of warfarin, based on randomized trials that have compared individual drugs with warfarin, but not with each other. Jonathan will describe the methods and results of a systematic review, network meta-analyses and cost-effectiveness analyses of 23 randomized trials that aimed to establish the optimal and most cost-effective treatment for patients with atrial fibrillation, and discuss limitations of the available evidence.

Jonathan Sterne is Professor of Medical Statistics and Epidemiology in the University of Bristol's Department of Population Health Sciences, and Deputy Director of the NIHR Bristol Biomedical Research Centre. Jonathan has a longstanding interest in methodology for systematic reviews and meta-analysis, led development of the ROBINS-I tool for assessing risk of bias in non-randomised studies of interventions, and contributed to the development of the Cochrane risk of bias tool for randomised trials. He also leads a large collaboration of HIV cohort studies that led to advances in our understanding of prognosis of HIV positive people in the era of effective antiretroviral therapy. He has authored highly-cited papers on causal inference, including methodology for instrumental variable analyses of Mendelian randomisation studies. Other research interests methodology for epidemiology and health services research and the epidemiology of asthma and allergic diseases.

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12.30 - 1.30 pm, Seminar Room 515

Melbourne School of Population and Global Health

Level 5, 207 Bouverie Street, Carlton

ALL WELCOME