Data driven application of Bayesian approach and Monte Carlo Markov Chain methods to estimation of HIV prevalence

Workshop dates: 3-4 December 2013

Venue: Faculty of Mathematics, Informatics and Mechanics, University of Warsaw, Banacha 2, Warsaw, Room 2180 (1st floor)

Meeting Agenda

Tuesday, December 3

10.30 – 11.00 *Registration*

11.00 – 13.00 *Session open for interested Audience*

Session 1. Introduction of multi-parameter evidence synthesis (MPES) methods

Theoretical basis for MCMC methods – commonly used algorithms, pros and cons. (Wojciech Niemiro, Błażej Miasojedow, Department of Mathematics, Informatics and Mechanics, Warsaw University)

The concept of MPES – Bayesian approach to combine data sources (Daniela de Angelis, MRC Biostatistics Unit, Cambridge)

13.00 – 14.00 *Lunch*

14.00 – 15.00 *Session open for interested Audience*

Session 1. Cont.

Basic prevalence model - application with different data sources: British and Dutch data (Stefano Conti, Public Health England, London)

15.00 – 17.00 *Working group meeting (coffee break when needed)*

Session 2. Understanding the data systems producing HIV data in different counties

Country presentations (Maria Dorrucci and Vincenza Regine, Instituto Superiore di Sanita, Rome, Mercedes Dies, Behavioural Monitoring and HIV/AIDS Surveillance Unit, SPNS/Centro Nacional de Epidemiología, Madrid, Belen Alejos, Instituto de Salud Carlos III, Madrid, Susan Cowan, Statens Serum Institut, Copenhagen, Magdalena Rosinska, National Institute of Public Health – NIH, Warsaw)

Poland

Italy

Spain

Denmark

Conclusions and discussion: generic types of data common to each country and the problems/biases in the data that need to be addressed in any model of the HIV epidemic

Wednesday, December 4

9.00 – 17.00 *Working group meeting*

Session 3. Model evaluation and common problems with data

Conflicting evidence and estimation of bias (Anne Presanis, MRC Biostatistics Unit, Cambridge)

Dealing with missing data and underreporting (Anne Presanis, MRC Biostatistics Unit, Cambridge, Magdalena Rosińska, National Institute of Public Health – NIH, Warsaw)

10.30 – 11.00 *Coffee break*

Session 4. Working out a basic model for a selected subpopulation for each country

13.00 – 14.00 *Lunch*

Session 4. Cont.

15.30 – 16.00 *Coffee break*

Session 5. Further extensions

Implementation of dynamic models (SIR) in the MPES framework to obtain estimates of incidence (Daniela de Angelis, Anne Presanis, MRC Biostatistics Unit, Cambridge)