

Comparing methods of continuous clinical measurement

A short course and lecture.

Course co-ordinator

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Lecturer

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Dates

(28th,) 29th, 30th November 2007 (Wednesday - Friday).

Venue

Medical Epidemiology and Biostatistics, Karolinska Institute, Stockholm, Sweden.

Target audience

Biostatisticians, students of biostatistics, investigators working in clinical research. A basic knowledge of biostatistics is required. Familiarity with the clinical concepts would be advantageous in the absence of formal biostatistical training.

Format and Aim

The format will be lectures and practical computer practicals on your own computer.

An introductory afternoon on **R** is offered ahead of the course, mainly to get the computing environment set up. This consists in installing **R**, the **R**-packages **R2WinBUGS**, **MethComp**, and the program **WinBUGS**. These are prerequisites for doing the practicals.

Course participants will be able to work through computing practicals with minimal background since they are provided with full computing code, solutions and ample tutors.

The course should give an understanding of the basic concepts in comparing different methods of clinical measurement. Furthermore it should give practical skills in conducting an appropriate analysis that is beyond the simplest methods usually described in the literature.

What to get

Download and install **WinBUGS** and make it work (you need a license but it is free!), **R**, the **MethComp**, **Epi** and **R2WinBUGS** packages for **R**, and try to make the latter work on your computer (you should make the example in the help-file for the function **bugs** work).

Course outline

Wednesday 28th November 2007

14:00 – 14:30	Introduction to R — in particular R2WinBUGS
14:30 – 16:00	Getting it all working: Everyone should have the basic examples running.

Thursday 29th November 2007

09:30 – 09:45	Registration and coffee
09:45 – 10:45	Lecture: Measurement: Repeatability, reproducibility. Comparing two methods without replicates. Comparing methods with replicate measurements.
10:45 – 11:00	Morning Tea
11:00 – 12:30	Practical: Plotting data, Bland-Altman-plot, limits of agreement. Wide and long representation of data. Analysis using means and using single replicates. Comparing the two approaches.
12:30 – 13:30	Lunch
14:00 – 15:00	Seminar in Lennart Nilsson salen, Nobels väg 15a (everyone are welcome): A general model for analysis of method comparison studies: A practical approach to analysis and reporting.
15:00 – 15:15	Afternoon Tea
15:15 – 16:30	Practical: Practical use of the methods introduced in the seminar: Using the MethComp function to analyze method comparison studies with different exchangeability structure.

Friday 30th November 2007

09:30 – 10:00	Recap of yesterday's practicals
10:00 – 10:30	Lecture: Reporting results of method comparison studies.
10:30 – 10:45	Morning Tea
10:45 – 12:30	Practical: Practical reporting from analyses. Further use of the MethComp package
12:30 – 13:00	Closure and evaluation
