



## PRELIMINARY COURSE PROGRAM

### Big Data in Health Services (Version 4/8/2017)

#### Advanced methods for multi-disciplinary doctoral education

##### Place of the course:

ICT- building, University of Turku, Department of Nursing Science, Turku, Finland  
Joukahaisenkatu 3-5, 20520 Turku

**Overall aim:** This course aims to provide students with an understanding of how big data can be utilized in health services research.

**Timing:** 1.9.2017 (9:00-17:00), 4.9.2017 (9:00-17:00) and 5.9.2016 (9:00-16:00)

##### **Lecturers:**

Professor Sharon-Lise Normand

Department of Health Care Policy, Harvard Medical School

Department of Biostatistics, Harvard T.H. Chan School of Public Health Harvard Medical School, USA

Professor Min Yang

West China Research Center for Rural Health Development, Huaxi Medical Center;  
Sichuan University, China

Adjunct Professor, PhD Sari Räisänen

Training Coordinator in Open Science and Research initiative, The National Library of Finland, Finland

PhD Turkka Näppilä

Data Management Expert, Biostatistics, School of Health Sciences, University of Tampere, Finland

Dr Tao Zhang

Department of Epidemiology and Health Statistics, West China School of Public Health;  
Sichuan University, China

**Credits:** 2 ECTS

**Assessment:** Accepted/failed

## PROGRAM 1/9/2017

### Aims

1. The students know different kinds of data types, i.e. clinical records and health research records (Especially examples from Finnish data sets).
2. The students understand the management and use of electronic datasets.
3. The students know possibilities and challenges of utilizing secondary big data in research.
4. The student understand the importance of data management during the research process.
5. The students are familiarized with the data managers' role in research projects.

### 9:00 – 17.00 Room: B2033, 2nd floor, ICT- building

#### 9:00-11:30 **Big data in research - possibilities and challenges**

Examples of big data in health service research

Data management during the research process

Ad.prof. Sari Räisänen, National Library of Finland, Helsinki

#### 11:30-13:00 **Lunch**

#### 13:00-14:00 **Data Manager's role**

PhD Turkka Näppilä, University of Tampere, Tampere (UTA)

#### 14:30-17:00 **Hospital visits** (more detailed information in the Moodle)



## PROGRAM 4/9/2017

### 9:00 – 17.00 Room: B2033, 2nd floor, ICT- building

Professor Sharon-Lise Normand, Department of Health Care Policy, Harvard Medical School  
Department of Biostatistics, Harvard T.H. Chan School of Public Health Harvard Medical School, USA

- 9:00 – 9:15 Introductions and overview of day
- 9:15 – 10:00 What are **big** data? Definitions & examples
- 10:00-10:30 Break
- 10:30 – 11:30 Statistical assumptions
- 11:30 – 13:00 Lunch
- 13:00 – 14:00 Statistical approaches
- 14:00 – 14:30 Break
- 14:30 – 17:00 Case studies

## PROGRAM 5/9/2017

### 9:00 – 17.00 Room: Lambda- hall, 1st floor, ICT- building

Professor Min Yang, West China Research Center for Rural Health Development, Huaxi Medical Center  
Sichuan University, China

Dr Tao Zhang, Department of Epidemiology and Health Statistics, West China School of Public Health  
Sichuan University, China

- 9:00 – 10:00 Introduction to surveillance database for infectious diseases in China (Dr Zhang)  
Applications of infectious diseases data in disease control and prevention (Dr Zhang)
- 10:00 – 10:30 Break
- 10:30 – 11:30 Time-series models for disease forecasting (Dr Zhang)
- 11:30 – 13:00 Lunch
- 13:00 – 14:00 Introduction to the First Page of Inpatient Hospital Database (FPIHD) in China (Prof Yang)
- 14:00 – 15:00 Case studies of FPIHD application (Prof Yang)
- 15:00-16:00 Course assessment



## Pre-reading for the course

To be announced.