EPIB 672 – Winter 2015

Principles and Practice of Public Health Surveillance
Arnaud Chiolero & David Buckeridge
2 credits course (26 hours)
Pre-requisite: EPIB 603 & EPIB 621

Learning objectives of the course:

Public health (PH) surveillance is the ongoing systematic collection, analysis, and interpretation of data, closely integrated with the timely dissemination of these data to those responsible for preventing and controlling disease and injury. Students who complete the course successfully will be able:
1) to define PH surveillance and its purposes,
2) to describe the characteristics of a surveillance system and the data sources commonly used for surveillance activities,
3) to appraise the utility of health indicators for PH surveillance, and
4) to apply basic methods for the analysis of surveillance data and interpret the results.

Instructional Approach:

The course will consist of one week of intensive introductory classes on the principles of PH surveillance (9 hours), a series of weekly laboratory sessions to acquire analytical skills and complete a project (12 hours), and one final week with project presentations and a class on the future and challenges of PH surveillance (5 hours).

The emphasis will be on the surveillance of chronic diseases with some consideration of surveillance for infectious diseases and other topics of public health interest. In the laboratory sessions, students will work with surveillance data and statistical software to learn basic methods for managing and analyzing surveillance data and disseminating results.
Instructors:

Arnaud Chiolero MD PhD is an epidemiologist, senior lecturer (Privat-Docent) at the Institute of Social and Preventive Medicine (IUMSP; www.iumsp.ch) of Lausanne University Hospital, Switzerland, and chief physician at the Observatoire valaisan de la santé (www.ovs.ch) of Sion, Switzerland. He oversees the public health surveillance activities at the OVS. He is interested in particular in the surveillance of chronic diseases. He also conducts research on cardiovascular epidemiology.

David Buckeridge MD PhD is associate professor at the Department of Epidemiology, Biostatistics and Occupational Health of McGill University where he holds the Canada Research Chair in Public Health Informatics and directs the Surveillance Lab (http://surveillance.mcgill.ca/). His research focuses on the informatics of public health surveillance and he practices public health with the Quebec Public Health Institute and the Montreal Public Health Department.
Program:

**Introduction (principles of PH surveillance) (9h)**
Monday 01/05/2015, 2:30-5:30pm (3h):
Definition, purposes, and methods of public health surveillance (Chiolero)
Wednesday 01/07/2015, 2:30-5:30pm (3h):
Health indicators for public health surveillance (Chiolero)
Friday 01/09/2015, 2:30-5:30pm (3h):
Basic issues with the analysis of surveillance data (Chiolero)
Introduction to public health surveillance laboratory (Buckeridge)

**Laboratory (practice of PH surveillance) (12h)**
6 sessions of 2 hours every second week
Wednesdays 01/14/2015, 01/28/2015, 02/11/2015, 02/25/2015, 03/11/2014, 03/25/2015, 2:30-4:30 pm (2h):
Public health surveillance laboratory (Buckeridge)

**Conclusion (5h)**
Wednesday 04/08/2015, 2:30-5:30pm (3h):
Students’ presentations of project (Buckeridge)
Monday 04/13/2015, 2:30-4:30pm (2h):
Future and challenges of public health surveillance (Buckeridge)
References:

Text Books
Lee LM, Thacker SB, St. Louis ME, Teutsch SM. Principles and Practice of Public Health Surveillance. 2010, 3rd edition, Oxford University Press USA
Lombardo JS, Buckeridge DL. Disease Surveillance: A Public Health Informatics Approach. 2007, John Wiley & Sons USA
Fricker RD. Introduction to Statistical Methods for Biosurveillance. 2013, Cambridge University Press USA

Journal Articles