

European Educational Programme in Epidemiology Florence, Italy, 2019

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Introduction.

This report contains a brief summary of the European Educational Programme in Epidemiology (EEPE) course. I attended the course, with support from the Norwegian Research School of Global Health (NRS GH).

Conference: Title, Place and Dates.

The 32nd residential summer course of the European Educational Programme in Epidemiology was held in Florence, Italy from 17th June to 5th July 2019, at Centro Studi.

Training Content and topics.

The first week of the course covered general modules in epidemiology and biostatistics. The detailed content for the general module in epidemiology includes the basic principles in epidemiology, an overview of study designs, measures of association and attributable risk, confounding, effect modification and Directed Acyclic Graphs (DAGs). For the biostatistics, the content included sampling and confidence intervals, statistical tests and P-values, likelihood tests, analysis of risks and rates, confounding and effect modification, and survival analysis. Interactive practical sessions were an integral part of the learning experience and reinforced most of the concepts and content learnt.

In the second week of the course, we were introduced to more advanced topics in epidemiology and biostatistics. We revisited the various study designs. The detailed content included data analysis processes for specific study designs, information and selection bias, modelling strategies, molecular and genetic epidemiology, logistic regression models and survival analysis 2, in particular, Poisson regression, and Cox regression. We also had a lecture on meta-analysis. We used Stata as data analysis software throughout the course.

In the third week, we looked at advanced methods in statistics and Infectious disease epidemiology. In advanced statistics, we looked at competing risks, recurrent events and longitudinal data, cohort sampling, propensity score and causal modelling. In infectious disease epidemiology, we learned about concepts and definitions used in infectious epidemiology including principles of disease transmission, analysis and interpretation of surveillance data, Vaccinology and study designs used for vaccine effectiveness, and investigation of (primary foodborne) outbreaks.

Knowledge and Skills gained. What are the Lessons Learnt?

I learnt about the concepts of DAGS in causal thinking, which was a completely new and interesting concept for me. It is an efficient way of assessing variables of interest and possible confounders, intermediary variables and effect modifiers. We also had the opportunity to draw DAGS during the practical sessions of the workshops. We were also trained in a different way to see significance tests and interpret P values. We were strongly discouraged from saying “statistically significant” and encouraged to use language of “strong or weak evidence against the null”. In the modelling strategies module, I learnt important differences about predictive and causal models. The modelling strategy depends on the research question and informs your analysis, and interpretation of results.

What I liked most about this course is the clear and concise manner the course content was delivered. I benefited a lot from the comprehensive and detailed presentations and practical sessions of the course. Some sessions helped me re-interpret some of my results in the current research articles for my PHD projects.

Positive and Negative Experiences of the Course.

I highly recommend this course to all PHD students. It is a good learning experience and a very interactive course. It was also an opportunity to network with experienced researchers. This opportunity to learn and network was timely for me in my PHD process. The only negative is

