

## Overview of the epidemiologic research: editorial guideline

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To the readers:

Epidemiology can be considered as a very old science. For example, John Graunt, a statistician, published *Natural and Political Observations. In the Bills of Mortality* in 1662, he analyzed the mortality rolls in London before the Great Plague, presented one of the first life tables, and reported time trends for many diseases. He provided statistical evidence for many theories on disease, and challenged some common beliefs about them. Later, a Greek physician Hippocrates was the first person known to have examined the relationships between the disease occurrence and environmental influences. He believed that the cure to the sickness was to remove or add the humor in question to balance the body; he also mentioned the terms *endemic* (for diseases usually found in some places but not in others) and *epidemic* (for diseases seen sometimes but not always). Epidemiology could also be considered as a modern science. Dr. John Snow is indeed famous for his investigations about the causes of the 19<sup>th</sup> century cholera epidemics in London, and is also known as the father of (modern) epidemiology.

There are some different definitions for epidemiology. In one definition, Epidemiology is described as “the science that studies the patterns, causes, and effects of health and disease conditions in a defined population”. It is the cornerstone of public health, and informs policy decisions and

evidence-based practice by identifying risk factors for disease and targets for preventive healthcare (<http://en.wikipedia.org/wiki/Epidemiology>).

Another definition considers Epidemiology as “the study of the distribution and determinants of health-related states or events (including disease), and the application of this study to the control of diseases and other health problems”. Various methods can be used to carry out epidemiological investigations: surveillance and descriptive studies can be used to study distribution; and analytical studies are used to study determinants (<http://www.who.int/topics/epidemiology/en>).

Based on the third definition, Epidemiology is “the science concerned with the study of the factors determining and influencing the frequency and distribution of disease, injury, and other health-related events and their causes in a defined human population”. And also, the sum of knowledge gained in such a study (<http://medical-dictionary.thefreedictionary.com/epidemiology>).

Major areas of epidemiological research include disease etiology, outbreak investigation, disasters, disease surveillance and screening, biomonitoring, and comparisons of treatment effects such as in clinical trials. Epidemiologists rely on other scientific disciplines such as biology for better understanding of disease processes, statistics for making efficient use of the data and drawing appropriate conclusions, social sciences to better understanding of proximate and distal causes, and engineering for assessment exposing.

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Epidemiologists could work on a number of different settings. Some epidemiologists work in the field of community, commonly in a public health/health protection service and are often at the forefront of investigating and combating disease outbreaks. Others may work for non-profit organizations, universities, hospitals and larger government entities such as the Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), or the Public Health Agency of country. Epidemiologists can also work in profit organizations such as pharmaceutical and medical device companies, in groups such as market research or clinical development. Epidemiologists would help other scientists in research study design, in collection and statistical analysis of data, and in interpretation and dissemination of results (including peer review and occasional systematic review). Epidemiology as a science has helped in boosting methodology used in clinical research, public health studies and, to a lesser extent, in basic research in the biological sciences.

Although Epidemiology could be considered as backbone of public health; however, it acts as an independent science, exceeding the classic aspects of public health. Our new journal aims to provide opportunities for debates and exchange of knowledge and experience in the entire field of epidemiology among epidemiologists and researchers in a global context. It publishes

articles in the area of epidemiology of non-communicable and communicable diseases as well as the disease modeling of individual and community health. In addition, national health policy programs and their assessments; international collaborations against common diseases and epidemics could also published in this journal.

Since epidemiologic research could include various study designs such as individual and population-based designs, clinical studies, and qualitative and quantitative designs, we hope that international organizations and researchers of different fields contribute to provide an international forum for publication of high quality papers on epidemiologic research. We consider the main topics in Epidemiologic Research, i.e. epidemiology, biostatistics, management/administration, clinical epidemiology, environmental epidemiology, occupational health, genetic epidemiology, pharmacoepidemiology, and other epidemiology-related fields. Hopefully, the papers published in the first issue of our journal can represent, at least partly, the journal's areas of interest.

We are pleased and proud to launch this journal; we hope that researchers from all over the world support us to provide a scientific international forum in various fields of epidemiologic research.

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