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Editorial

EVIDENCE-BASED PUBLIC HEALTH (EBPH): Where we were?

Evidence-based public health (EBPH) could be defined as a public health endeavour in which the development, implementation, and evaluation of effectiveness of programmes and policies in public health practices carry out through an application of principle of scientific methods. Therefore EBPH involves using the best available evidence to make informed public health decision makings. Unfortunately the EBPH has been lagged behind as compared to the counterpart of evidence-based medicine (EBM). There are several important distinctions between EBPH and EBM; they include the volume of evidence, study designs used to inform research and practice, the setting or context in which the intervention is applied, and the training and certification of professionals. The clinical studies of pharmaceutical and procedure normally rely on randomized control trial, which is the most scientifically rigorous of epidemiological study design. In contrast to public health intervention which relies mainly on cross-sectional studies, quasi-experimental and time-series analyses, which are normally lacking of control or comparison groups, therefore require careful interpretation of the results.

Primarily EBPH deals with two main basic applications of evidence. The first application of EBPH which is most clearly associated with the EBM is the evidence of effectiveness of interventions and their translation into programmes and policies. The second area of application of EBPH has to do with defining the health risk, identifying groups at special risk, elucidating causal pathways, aetiology, preventable risk factors and assessing the impacts of disease spread and the impacts of control and prevention measure. The applications of EBPH have been become increasingly popular in the field of public health medicine. EBPH methods also have been applied to health problem in sub-speciality of public health medicine such as infectious disease epidemiology, non-communicable diseases epidemiology, health care management and others fields of sub-discipline of public health medicine.

There are several analytical tools commonly used in EBPH, include; public health surveillance, systematic review, economic evaluation, health impact assessment and participatory approaches. Public health surveillance is a process of ongoing systematic collection, analysis, and interpretation of specific health data, closely integrated with the timely dissemination of these data to those responsible for disease prevention and control. Systematic reviews are syntheses of comprehensive collections of information on a particular

topic; it is the most efficient ways to become familiar with various practices on specific topics of public health. Economic evaluation is an important component of evidence-based practice, it provide information on the relative value of alternatives of public health programs and policies. Cost-effectiveness analysis and cost-benefit analysis are two popular technique employed in economic evaluation of health program. In cost-benefit analysis, all the costs and consequences of the decision options are valued in monetary terms. Health impact assessment is a relatively new method that seeks to estimate the probable impact of non health sectors, such as agriculture, transportation, and economic development, on population health. Participatory approaches are research or intervention that involves community members in EBPH.

Applying EBPH in health program and policy decisions, public health medicines specialists are facing challenges from increasing diseases rates, limited funding, and the ever growing demand on scientific basis for proven strategies to improve population health. Common question face by public health medicines specialists are how to give evidence-based guidance when evidence is scarce and the time is limited? Uncertainties can arise at all stages of a public health decision-making process, or while producing a risk assessment. It is important to handle uncertainties explicitly and transparently and to communicate them to the policymakers. As time goes by and access to evidence increases, uncertainties can be reduced.

Definitive scientific evidence is not always available, in a rapidly evolving situation such as during an emerging of new infectious diseases or an outbreak of established infectious diseases; scientific decisions were mainly based on high levels of uncertainty and this lack of certainty clearly frustrated decision-makers at times.

The successful implementation of EBPH in public health medicine is both a science and an art. The science is built on epidemiology, behavioural, and policy research which will show evidences likely to be effective in addressing the health problem. The art of decision making often involves knowing which information is important to a particular policy at the right time. Unfortunately evidence is imperfect, and public health medicines specialists should seek the best evidence available not the best evidence possible.

References:

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