# 1.P. Skills building seminar: Skills building in HTA: how to address the economic impact of public health interventions

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Health technology assessment (HTA) is proposed by international and national organizations as an indispensable tool to adequately confront the arrival of new technologies and rising costs in health care. It has come out as a crucial tool in modern public health, evolving from academic environment to the indispensable point in the decision-making process. The growth of HTA reflects the demand for reliable information to support the decisions in uptaking and dismissing of health technologies. Key factors for HTA further implementation are building human resources and implementing robust HTA methodology. HTA should be known, understood and used by all public health practitioners because health technologies represent the building blocks of healthcare systems. HTA requires multidisciplinary teams and adaptive human resources, representing different disciplines but having a common scientific language. Because of the interdisciplinary nature of HTA, present and future public health professionals should have a broad training in diverse research skills and understanding of several topics and methods, as clearly underlined during the 9th European Public Health Conference in Vienna. One of the skills of a public health practitioners doing HTA is evaluating the costs and benefits of health technology because this is a requirement for an efficient spending and for guaranteeing sustainability. At the same time, also public health practitioners using HTA should know the economic jargon. It is indeed fundamental for PH practitioners to understand the importance of economic evaluations as part of a comprehensive public health decision-making process. This skills building seminar is an opportunity to continue building HTA capacity within EUPHA. Putting the accent in particular on the economic evaluation and its interface with public health expertise, this seminar will provide participants with the knowledge and tools to better understand the complexity and multidisciplinarity of the HTA. We will begin with an overview presentation of economic methods used in the HTA, followed by two case studies on specific public health issues, namely healthcare associated infections and nutrition which will further promote an interactive discussion of the audience on several issue linked to the economic evaluation of public health interventions within the context of HTA.

### Key messages:

- HTA is a necessary tool for modern public health practitioners and skills building initiatives are needed, particularly when evaluating the costs and benefits of health technology
- Case studies on healthcare associated infections and nutrition will help attendants acquiring skills in understanding key elements of HTA reports, with particular emphasis on economic evaluation

# (Almost) Everything you wanted to know on costeffectiveness analyses of public health interventions Tek-Ang Lim

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#### Issue

There is a growing request to improve the efficiency of public health interventions from all stakeholders point of view especially considering a context where financial resources become scarce. Economic analyses can contribute to improve the efficiency of public health interventions by providing a methodology to determine the optimal allocation of resources or, phrased differently, to determine the most cost effective interventions given the resources available. This presentation in the context of a skills building seminar on HTA will propose a step by step process to understand how HTA is used within the methodology of cost effectiveness analyses (CEA) in order to support decision making. We propose to apply the step by step presentation of CEA of public health interventions to the field of healthcare associated infections (HAI). Each year in the European Union, according to ECDC, there is an estimation of over 4 million patients acquiring a HAI, with an estimate of almost 40 000 deaths directly linked to the acquired infection. This is a major concern across the world and there were many interventions proposed to eradicate HAI. One main intervention is related to hand hygiene. In this presentation, we propose to apply the CEA to the intervention of hand hygiene in order to prevent HAI.

#### Methods

This presentation will be an interactive presentation where the CEA methodology will be presented step by step and the audience will be engaged to help framing the issue. We will start by presenting the public health issue and work with the participants to determine what is the best solution to tackle the public health issue.

#### Lessons

In times of austerity, economic evaluations help to determine the most effective strategies and as such set priorities. However, it is essential to adopt a multidisciplinary approach in order to develop a more robust and comprehensive framework for health assessment in the decision making process.

# The potential of daily nutrition as preventative health technology

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Food choices have a considerable potential to influence endlessly increasing healthcare costs. Nevertheless, even today health economic analyses mostly focus on the cost-effectiveness of drugs and medical devices in patients rather than targeting improved nutrition in large populations.

#### Methods

The presentation will illustrate how the impact of nutrition on various public health concerns can be estimated in spite of methodological difficulties due to the long time frame in which dietary patterns produce their effects. Established tools for the evaluation of the effectiveness of treatment interventions, such as randomized controlled trials, have a limited role in the assessment of complex health promotion strategies, and model-based approaches are required to translate the short-term outcomes measured by such evaluations into longer term effects to be expected at population level.

## Results

Although it is generally acknowledged that the role of nutrition in acute and chronic diseases is extensive, public health interventions have offered variable results. Major hurdles exist, e.g. uncertainties related to causality and transferability of study results, the need to study whole foods or whole diets rather than single nutrients, the fact that food is part of lifestyle with its many environmental confounders, the absence of a clearly identifiable payer, and many others.

Lessons

HTA will be a key contributor in designing the appropriate framework for nutrition economic assessments to generate reliable data. Trans-disciplinary skill-building is needed to face the challenges of combining rationalism and empiricism, to offer new perspectives on the best way to take into account the particular characteristics of the field of nutrition and its underlying principles. This will not only facilitate evidence-informed decision making on efficient preventive strategies but will also serve as a support to enhance health literacy among citizens.