BOD / COI ANALYSIS AT THE OECD AND ITS USE TO GUIDE POLICY ACTION IN PUBLIC HEALTH

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BoD / Col Analyses Are a Key Component Of OECD Reports To Make The Case To Scale Up Investment In Public Health



BoD / CoI analysis creates urgency for action and is used as evidence for planning and advocacy Analysis of the current level of policy implementation identifies policy gaps against gold standards and best practices

The return-on-investment analysis calculates the investment required to move from the status quo to the desired level of implementation and its dividends

Disclaimer: The OECD Does Not Use A Standard Approach To Carry Out BoD & Col Studies

- Our objective is to respond to the question:
 - what would happen if we could eliminate a public health threat (a disease, a risk factor, whatever); as opposed to
 - what was the health/economic burden of a public health threat in a given year
- We use a dynamic approach as compared to a static framework
- We include projections (normally to 2050) as opposed to focusing on one year, normally in the past
- We do not account for years of life lost due to premature mortality (YLLs) but only years lived with a disability (YLDs)
- Our analyses account for the increased cost of other public health threats that are not directly related to the objective of the study
 - e.g. if we could eliminate cardiovascular diseases, more people would develop dementia
 - this reduces the gains obtained from eliminating the targeted threat (up to ≈50% when we made the calculation) but – we believe – provides an estimate closer to reality

Overweight And Its Associated NCDs Decrease Life Expectancy and Healthy Life Expectancy by About 3 Years

An example of what the OECD approach can calculate, which is not normally possible in many standard BoD analyses



Overweight And Its Associated NCDs Carry Significant Costs For EU Countries And Their Citizens



Source: OECD (2019) The heavy burden of obesity - https://oe.cd/obesity2019

The OECD SPHeP (Strategic Public Health Planning) Models Are Used For The Analyses



Reference: https://oe.cd/phmodelling

The NCD Model Covers 32 Diseases and 14 Risk Factors That Are Highly-Relevant for Public Health Purposes

Ischemic heart disease Stroke Lung cancer Alzheimer/dementia COPD Lower resp infections Colorectal cancer Chronic kidney disease Diabetes mellitus Cirrhosis/chronic liver dis Pancreatic cancer Hypert heart disease Breast cancer Prostate cancer Stomach cancer Falls Self-harm Atrial fibrillation Parkinson's disease Liver cancer Road injuries Cardio & myocarditis Leukemia Bladder cancer Esophageal cancer Drug use disorders Kidney cancer Interpers violence Alcohol use disorders Cervical cancer Skin melanoma Foreign body



A New Generation of Healthcare Costs Is Being Implemented In The Model

- We are moving towards a new generation of healthcare costs, calculated by using neural networks on micro-level data;
- We include both expenditure and use of healthcare services as this will enable to better understand health systems constraints;
- We have worked with six countries and working with another 6 to obtain country-specific estimates;
- Country-specific estimates are extrapolated to other countries using data from the System of Health Account and other statistics on healthcare services

Patient characteristics:

Demography Epidemiology



Use of healthcare services:

Up to 5 services: GP, inpatient, outpatient, pharmaceuticals, ER



Healthcare expenditure: By service Total expenditure

And we Are Also Expanding The Scope Of the Analyses: The Burden Of Public Health Threats on Well-being



Pros & Cons Of Multi-country (And Multi Risk Factor) Studies Vs National (And Single Risk Factor) Studies

Multi-country (and multi risk factors) studies

- Easier to carry out cross-country comparison (same assumptions, methodology, data);
- Likely to have higher costs in absolute terms, but lower costs per country due to economies of scale;
- Broader applicability of findings and additional insights are usually found by comparing dynamics across countries.



Country-specific (and single risk factor) studies

- Less need to compromise on certain methodological choices and assumptions as you do not need to stop at the 'highest common denominator' across countries;
- Some country specificities may be lost
- Easier to carry out sub-national level analyses.

My Personal View On What We Are Missing And The Opportunities To Expand BoD / Col Analysis

- 1. We have paid a lot of attention to getting the epidemiology right, but there is much more we can do in <u>cost analysis</u>, including accounting for <u>access to care</u> (e.g. for mental health problems);
- 2. How we deal with co-morbidities is based on weak (or no?) evidence, both in terms of disability weights and health care costs;
- 3. Looking at the past is only marginally informative about the future impact of intervention policies and more emphasis needs to be placed on knock-on effects;
- 4. Greater granularity, both in terms of sub-national level and population groups (e.g. by SES, etc.) would be helpful.

The Road Ahead: What You Could Expect From The OECD In The Near Future

Work on the burden of public health threats on health, economy and wellbeing will continue:

- The global economic burden of **AMR** (joint with WHO, FAO, UN-Env and WOAH); to be released by Q2-2024^{*};
- The burden of **cancer** in 51 countries; to be released by Q3-2024^{*};
- The global economic burden of **hospital-acquired infections** (joint with WHO); to be released by Q4-2024^{*};
- The health and economic burden of mental ill-health in EU/EEA countries; to be released by Q1-2025^{*};
- The health and economic burden of potential future epidemic outbreaks; to be released by Q2-2025 *;
- The work on cancer will be extended to all the other key NCDs (e.g. diabetes, CVDs, COPD, etc.); to be released by Q4-2025^{*};

* Estimated release date, to be confirmed

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