

Catalogue no. 11-522-XIE

**Statistics Canada International
Symposium Series - Proceedings**

**Symposium 2006 :
Methodological Issues in
Measuring Population Health**

2006



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Measuring the Health of Populations: The Conceptual and Analytic Approach of the Global Burden of Disease Study

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Abstract

In the last two decades, considerable international effort has been put into the development of summary measures of population health that integrate information of mortality and non-fatal health outcomes and international policy interest in such indicators is increasing. There are two main classes of summary measures of population health: health gaps and health expectancies. The Disability-Adjusted Life Year (DALY) is the best known health gap measure and quantifies the gap between a population's actual health and a normative health goal, defined in terms of a global standard life table specifying the healthy years of life lost due to a death at any given age.

This paper gives an overview of the Global Burden of Disease (GBD) conceptual framework, the relationship of the DALY to other measures of population health, and the GBD analytical approach, with particular attention to issues in (1) dealing with biased and missing data, (2) dealing with uncertainty and (3) specific technical issues in ensuring cross-population comparability. The latter include dealing with variations in quality and completeness of cause of death information, explicit use of a comprehensive framework and internal consistency checks for improving comparability of estimates of incidence, prevalence and mortality for causes, the assessment of disability weights, and techniques for improving the comparability of the assessment of the disease burden attributable to risk factors.

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