

Systematic review of the burden of non-communicable diseases and injuries among the world's poorest billion people

Citation

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Review question

What is the prevalence of non-communicable diseases, injuries, and their associated risk factors among members of the world's poorest billion in select low- and middle-income countries?

What is the mortality due to non-communicable diseases and injuries among members of the world's poorest billion in select low- and middle-income countries?

What interventions have been employed to address non-communicable diseases and injuries in high-poverty populations?

Searches

We will search PubMed using the attached search strategy (see PDF file, link provided below).

The search strategy will include search terms corresponding to Global Burden of Disease Level 2 non-communicable disease categories as well as injuries, combined with the names of selected countries (e.g. Afghanistan, Ethiopia, Haiti, India, Kenya, Liberia, Malawi, Mozambique, Nepal, Rwanda, Tanzania).

There will be no language restrictions.

Studies published between January 1st 2006 and July 31st, 2016 will be searched.

The results will be filtered and restricted to "Humans."

Additional databases will be searched and dates of publication expanded to supplement the literature for countries where results from the above search are few in number.

Search strategy

http://www.crd.york.ac.uk/PROSPEROFILES/52177_STRATEGY_20161025.pdf

Types of study to be included

The following study designs will be included in the review: epidemiologic studies containing either prevalence, risk, or mortality data for NCDIs or their risk factors in the population of interest; studies containing epidemiologic information on NCDIs stratified by or in relation to indicators of socioeconomic status, poverty status, or geographic location in the countries of interest; case series reporting on the distribution of types of cases and diagnoses among admissions/deaths in a hospital or clinic or on the characteristics of cases/deaths; and studies reporting on interventions or service delivery models for these conditions in the population of interest.

Condition or domain being studied

The diseases and conditions being studied are non-communicable diseases and injuries.

Participants/population

The populations of interest are populations in low- and middle-income countries, particularly individuals in extreme poverty or living in areas of high poverty in the following countries: Afghanistan, Ethiopia, Haiti, India, Kenya, Liberia, Malawi, Mozambique, Nepal, Rwanda, Tanzania, Bangladesh, Pakistan, Nigeria, and Democratic Republic of Congo.

Intervention(s), exposure(s)

The role of socioeconomic status or poverty status, as indicated by education, income, wealth/assets/living conditions, occupation, geographic location, or other indicators will be examined in relation to the burden of non-communicable diseases and injuries (NCDIs).

Comparator(s)/control

Where relevant, the data will be compared to data from populations in high-income countries and to that from individuals who are not members of the world's poorest billion within the countries of interest.

Main outcome(s)

Prevalence, risk, and mortality from NCDs and injuries, as well as rates of exposure to risk factors from NCDs and injuries in the poorest populations.

Additional outcome(s)

The distribution of case types within NCDI disease categories, as well as the age distribution and socioeconomic distribution of cases. In addition, interventions to address NCDI conditions in these populations will be an outcome of interest.

Data extraction (selection and coding)

The titles, abstracts, and full texts of retrieved studies will be screened by country and NCDI disease category by review team members, each independently reviewing studies from a different country/disease category to identify studies that meet the inclusion criteria. The full texts of included studies will be reviewed, and data will be extracted using standardized, pre-piloted spreadsheets. The following information will be extracted from the included studies: study type, study location, geography type (e.g. urban, urban slum, rural, both urban & rural, referral hospital), availability of socioeconomic and geographic data, outcome measure type, availability of sex/gender information of subjects, availability of age information of subjects. Further information on the sample size, health conditions/outcomes reported, and point estimates for the prevalence/occurrence of or mortality from NCDIs and/or risk factors in the study population, or for the association between disease or risk factor and socioeconomic status will also be extracted.

Risk of bias (quality) assessment

For individual epidemiologic studies, the characteristics and demographic breakdown of the samples (socioeconomic status, geographic origin/study location, age, etc.) will be used to examine quality and the extent to which the study and its results represent or do not represent the population of interest, namely those in extreme poverty. The overall risk of bias and strength of the evidence in the epidemiological data on NCDIs in our population of interest will be assessed primarily by examining whether there are socioeconomic or geographical (e.g. urban) biases in the epidemiological evidence. The proportion of included studies reporting data from urban areas, rural areas, or referral hospitals as well as from various locations within each country will be used to assess this. In addition, the socioeconomic distribution of cases reported in the studies will be used to assess bias in the representativeness of data in the studies.

Strategy for data synthesis

A narrative synthesis of the bibliometric and epidemiologic information from the included studies will be provided. The synthesis will focus on the types of studies (population-based study, hospital/clinic-based study, intervention study, etc.), the location and geography of the studies, the availability of socioeconomic and geographic data tied to the disease or risk factor outcomes, the availability of demographic information tied to the disease or risk factor outcomes (e.g. sex/gender, age), and the types of outcomes analyzed (prevalence, mortality, etc.) in the literature on NCDIs from these countries. The burden of specific NCDIs in the form of measures such as prevalence estimates, and measures of the association between socioeconomic/poverty status and NCDIs will also be summarized from included studies. Given the heterogeneity of studies using different methodologies and examining different populations, a meta-analysis will not be pursued.

Analysis of subgroups or subsets

Subgroup analyses may include narrative summaries of the burden of specific NCDIs reported in the literature from these countries by sex/gender, age group, (e.g., under 40 years versus above 40), poverty status, and geographic location (e.g. urban versus rural).

Contact details for further information

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Type and method of review

Epidemiologic, Intervention, Systematic review

Anticipated or actual start date

31 August 2016

Anticipated completion date

31 May 2017

Funding sources/sponsors

Leona M. and Harry B. Helmsley Charitable Trust,
Minneapolis Foundation

Conflicts of interest

None known

Language

English

Country

United States of America

Stage of review

Review Ongoing

Subject index terms status

Subject indexing assigned by CRD

Subject index terms

Cost of Illness; Developing Countries; Disease; Epidemiology; Global Health; Healthcare Disparities; Humans; Income; Poverty; Prevalence; Wounds and Injuries

Date of registration in PROSPERO

29 November 2016

Date of first submission

Stage of review at time of this submission

Stage	Started	Completed
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	Yes
Formal screening of search results against eligibility criteria	Yes	No
Data extraction	Yes	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

Revision note

Review team order has been updated to put the PI, Dr. Gene Bukhman, in the senior author position.

The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.

The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.

Versions

29 November 2016

06 December 2016