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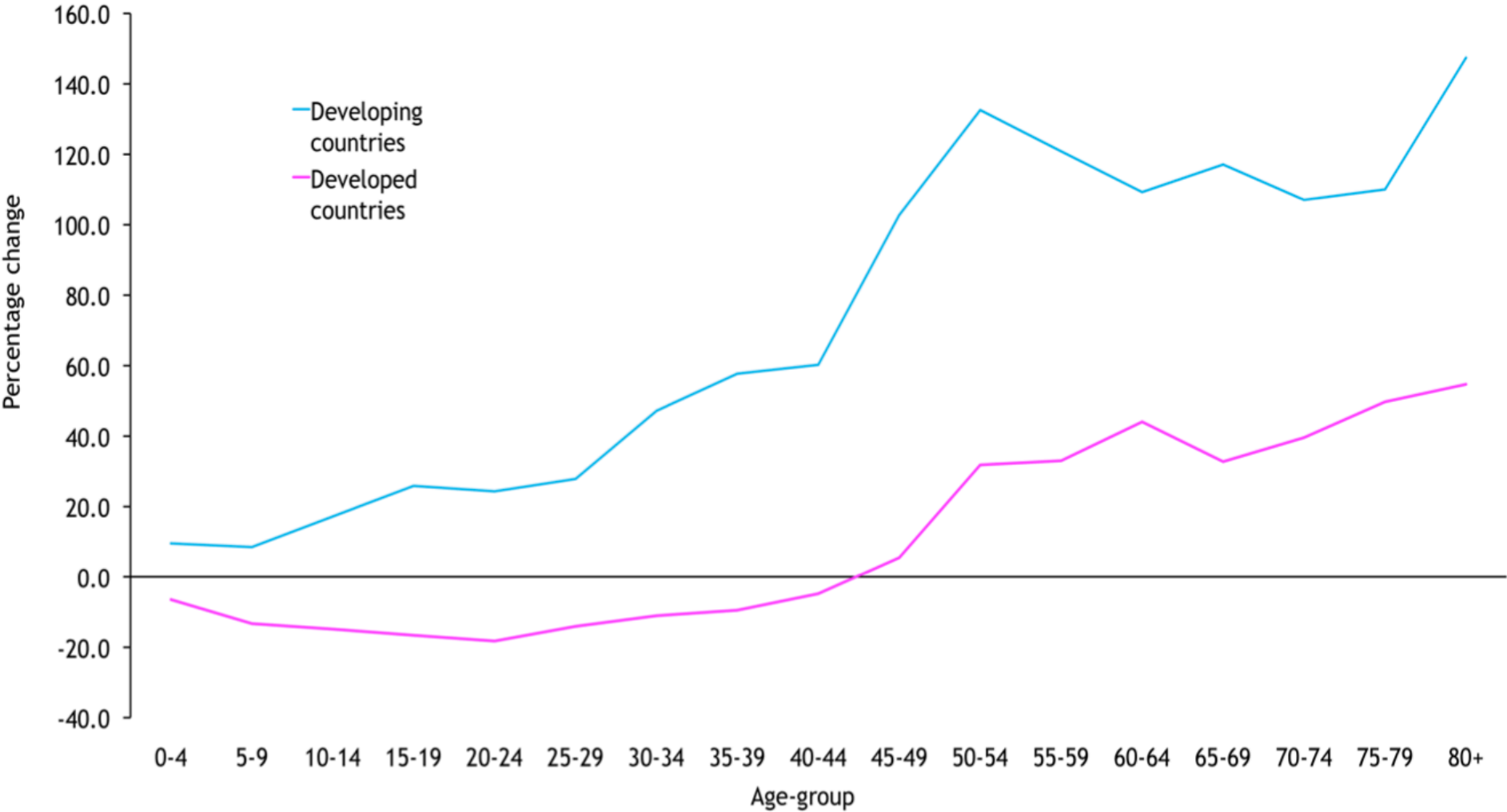
Section B

Major Tasks

1. Demographic Baseline

- Demographic inputs to the study required at the beginning
- Must precede cause-of-death analysis and epidemiological analysis
- Population by age, sex, and geographical region for the reference year
- Total mortality by age, sex, and geographical region for the reference year

Population Growth, by Age (1995-2020)



Data source: United Nations 1996 revision estimates.

1. Demographic Baseline (2)

- Demographic inputs to the study required at the beginning and must precede cause-of-death analysis and epidemiological analysis
 - Population by age, sex, and geographical region for the reference year; and
 - Total mortality by age, sex, and geographical region for the reference year
- Data sources for estimating child mortality include:
 - Vital registration systems
 - Sample registration systems
 - Census or survey questions and birth histories

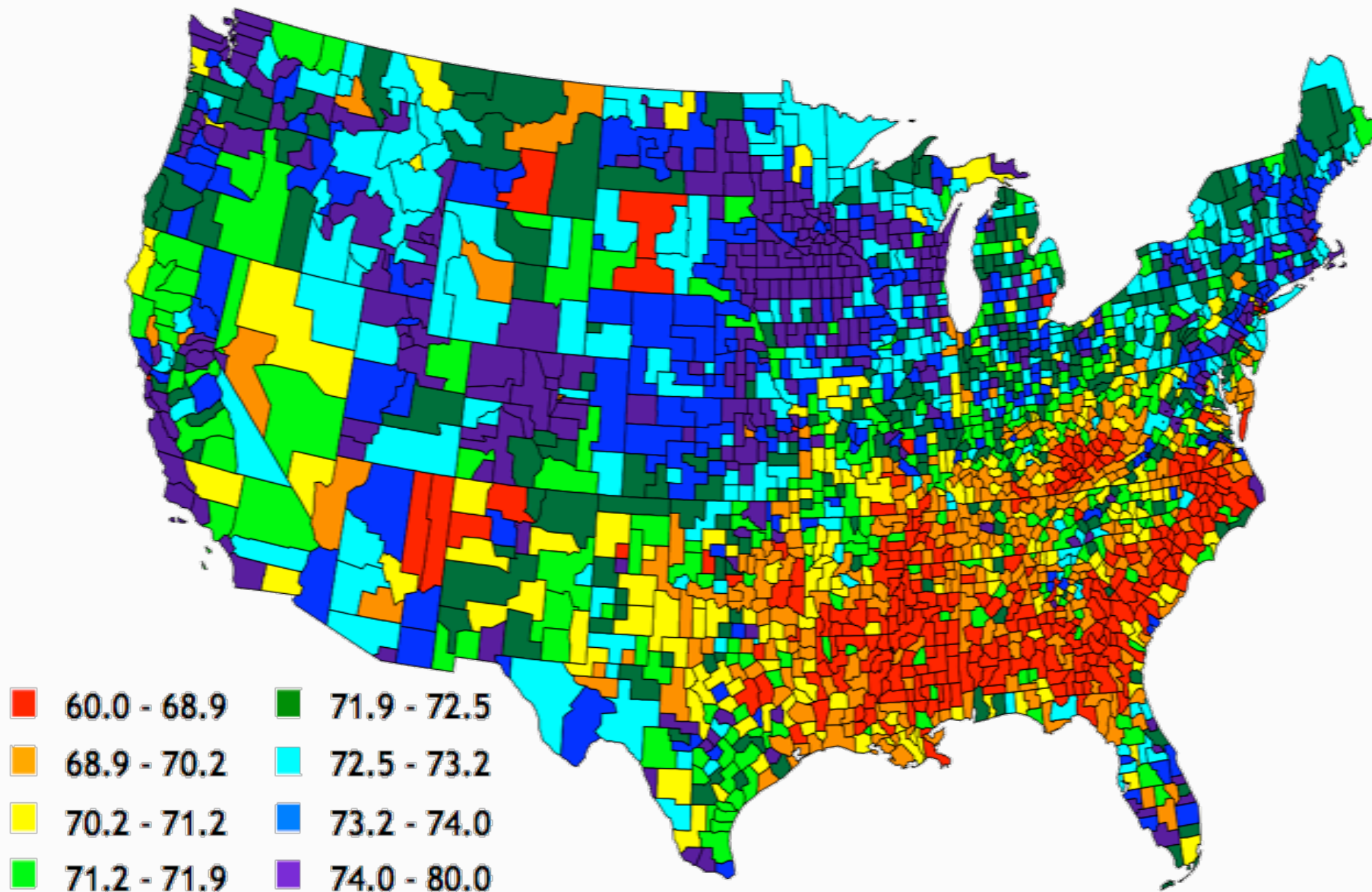
1. Demographic Baseline (3)

- Data sources for estimating adult mortality include:
 - Vital registration systems
 - Sample registration systems
 - Census or survey questions on deaths in households during the past 12 months
 - Census or survey questions on whether an individual's mother or father is alive
 - Census or survey questions on whether an individual's spouse is alive
 - Census or survey questions on whether a women's sister is alive

1. Demographic Baseline (4)

- Estimating “age-specific mortality rates” (ASMR) by gender for reference year
- Assessments of “error” (under-reporting) using model life tables or other tests
- “Envelope” of deaths by age/gender to estimate distribution of deaths by cause
- Development of national “life table” for both genders for reference year

Male Life Expectancy at Birth, 1990



Data source: United State Census Bureau

2. Cause of Death Analysis

- For countries with a good vital registration system, data can be used with adjustments for completeness and certification errors
- For countries without a good vital registration system
 - Collation of data sources: health surveys, hospital discharges, medical registries, police records, etc.
 - Use of verbal autopsy studies
 - Definition of a list of diseases (number of diseases that have to be analyzed in detail)
 - Following the list of selected diseases, estimation of mortality rates by cause, age, and sex

3. Epidemiology of Non-fatal Health Outcomes

- The basic steps in describing the epidemiology of non-fatal health outcomes include:
 - Systematic review of current knowledge of the selected disease and sequelae
 - Construction of a diagram of the natural history of the disease and sequelae
 - Identification of the epidemiological indicators to be estimated (incidence, prevalence, disability ratios, fatality)

3. Epidemiology of Non-fatal Health Outcomes (2)

- The basic steps in describing the epidemiology of non-fatal health outcomes include:
 - Systematic review of current knowledge of the selected disease and sequelae
 - Construction of a diagram of the natural history of the disease and sequelae
 - Identification of the epidemiological indicators to be estimated (incidence, prevalence, disability ratios, fatality)
 - Review of the published and non-published epidemiologic data available; evaluation of the best available studies that provide information for the epidemiological indicators
 - Collation of all available data sources: health surveys, hospital discharges, medical registries, police records, etc.
 - Creation of the first set of estimates
 - Production of a second set of estimates—will occur after checks for internal consistency

4. Internal Consistency Checks

- Using established epidemiological relationships
- Using WHO/Harvard software DisMod
- Using expert consultation
- Production of a second set of estimates, which are internally consistent

5. Calculation of SMPH

- Years of life lost from premature mortality
 - YLL (DALY), or HeaLYpm
- Years of life lost from disability
 - YLD (DALY) or HeaLYd
- Composite measure generation
 - DALY, HeaLY
- Other measures generated
 - DALE, PYLL, HALE, etc.

6. Sensitivity Analysis

- Test the robustness of estimates to the social values used in the analysis
 - Life expectancy
 - Age weights
 - Discounting
- Allows national decision makers to see the impact of alternative choices and whether they affect decisions

7. Reporting

- Final reports
 - Need to make methods and results available and transparent
 - Technical reports with full methods
 - Well-written results with policy implications
- Dissemination
 - Of the report and contents
 - Seminars and dialogues at national and sub-national levels
 - Scientific dissemination through meetings/papers

Summary of Major Tasks

- Demographic analysis
- Cause-of-death estimation
- Epidemiology of non-fatal health outcomes
- Consistency checks
- Calculation of SMPH
- Sensitivity analysis
- Reporting and dissemination
- +/- comparative risk assessment