Health of the World’s Adolescents

A synthesis of internationally comparable data

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Global patterns of mortality in young people: a systematic analysis of population health data

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Summary

Background Pronounced changes in patterns of health take place in adolescence and young adulthood, but the effects on mortality patterns worldwide have not been reported. We analysed worldwide rates and patterns of mortality between early adolescence and young adulthood.

Methods We obtained data from the 2004 Global Burden of Disease Study, and used all-cause mortality estimates developed for the 2006 World Health Report, with adjustments for revisions in death from HIV/AIDS and from war and natural disasters. Data for cause of death were derived from national vital registration when available; for other countries we used sample registration data, verbal autopsy, and disease surveillance data to model causes of death. Worldwide rates and patterns of mortality were investigated by WHO region, income status, and cause in age-groups of 10–14 years, 15–19 years, and 20–24 years.

Findings 2.6 million deaths occurred in people aged 10–24 years in 2004. 2.56 million (97%) of these deaths were in low-income and middle-income countries, and almost two thirds (1.67 million) were in sub-Saharan Africa and southeast Asia. Pronounced rises in mortality rates were recorded from early adolescence (10–14 years) to young adulthood (20–24 years), but trends varied by region and sex. Maternal conditions were a leading cause of female deaths at 15%. HIV/AIDS and tuberculosis contributed to 11% of deaths. Traffic accidents were the largest cause and accounted for 14% of male and 5% of female deaths. Other prominent causes included violence (12% of male deaths) and suicide (6% of all deaths).

Interpretation Present global priorities for adolescent health policy, which focuse on HIV/AIDS and maternal mortality, are an important but insufficient response to prevent mortality in an age-group in which more than twice as many deaths are due to intentional and unintentional injuries.

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Introduction

Adolescence is commonly regarded as a healthy time of life, with peaks in strength, speed, fitness, and many cognitive abilities. However, major shifts in health take place around puberty as new health risks with potentially lifelong-reducing consequences become prominent. Reproductive maturity brings about risks for sexually transmitted diseases including HIV, and for women, particularly in low-income and middle-income countries, risks linked to pregnancy and child birth. Patterns of injury change with physical maturity, with young men in particular incurring trauma from war, violence, and traffic injuries. Furthermore, ease of access to psychoactive substances might heighten risks for mental health disorders and suicide. The inexperience and ongoing neurodevelopment of adolescents might leave them vulnerable to some health risks associated with economic change.

No comprehensive studies of death in people aged 10–24 years have been done, even though this group consists of around 30% of the world’s population. Reports have generally used country data to address overall mortality or specific causes of death. Some studies have compared mortality between countries or
No Common Framework

– Little comparability
  • Indicators
  • Definitions
  • Measurement

– None comprehensive
Three Questions

1. Which indicators?
2. How good a picture now?
3. How healthy are they?
Indicator Criteria

- Public health importance
- Measurable
- Relevant to major policies
- Compelling
- Modifiable & available over time
Social, educational, and economic policies and interventions

Social determinants:
- economic development*
- status of women*
- globalisation*

Risk and protective factors:
- family, school*
- neighbourhood*
- individual

Puberty & social role transitions:
- first sex, marriage, parenthood, education, employment

Health related behaviours and states:
- obesity, substance use, sexual health, mental health

Health outcomes

* No indicators included in this paper
How do young people die?

Male deaths aged 10-24:
- Injuries: 52%
- NCDs: 21%
- Infectious: 27%
- Maternal: 2%

Female deaths aged 10-24:
- Injuries: 30%
- NCDs: 22%
- Infectious: 33%
- Maternal: 15%
2: How good a picture now?

- Household Surveys (DHS – MICS)
- School Surveys
  - Health Behaviour of School Aged Children
  - Global School Health Survey
- Databases
  - Global Mortality Database
  - ILO & UNESCO
- Other
  - Global Mental Health survey
Countries where at least 70% of deaths are registered
Comparable household survey data
Potentially comparable school survey data
Global coverage of adolescent health
Three Questions

1. Which indicators?
2. How good a picture now?
3. How healthy are they?
‘Best available’ estimates of maternal mortality rate in 15-19 year olds in Sub-Saharan Africa
Traffic Injury Deaths (100,000/year) in males
20-24 years: selected countries (high income yellow)
Homicides in 20-24 year old males in selected countries across the globe
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