

Overview of Mortality from Pakistan Demographic Survey (PDS)

Introduction

Understanding patterns of birth, deaths and causes of death and their causes is important evidence to shape policies.^{1,2}

Findings

Among all deaths, non-communicable diseases account for 66% of all deaths in Pakistan and include cardiovascular diseases (33%), stroke (14%), cancer (12%), and diabetes (10%). Traffic accidents caused approximately 11,000 deaths (1.25%) each year and an additional 7,000 deaths (1%) were reported from injuries. On the other hand, communicable diseases such as non-specified fever (37%), gastroenteritis (10%), and viral hepatitis (9%) are major causes. 22% of all deaths occur before age one year.

Figure I: Population Pyramid of Mortality (Age-Gender-Death count) Figure III: Causes of Infant Mortality

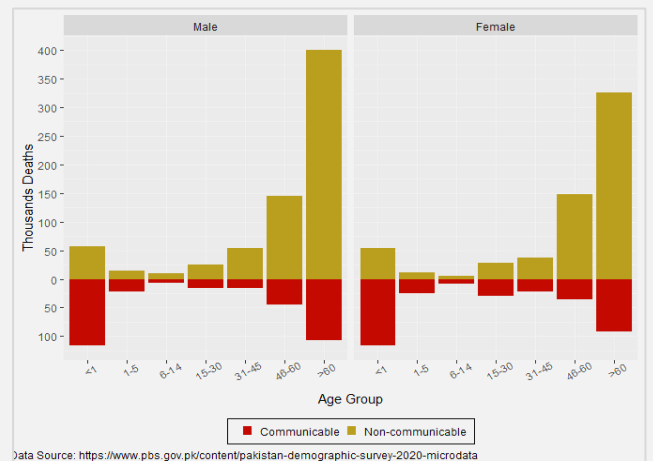
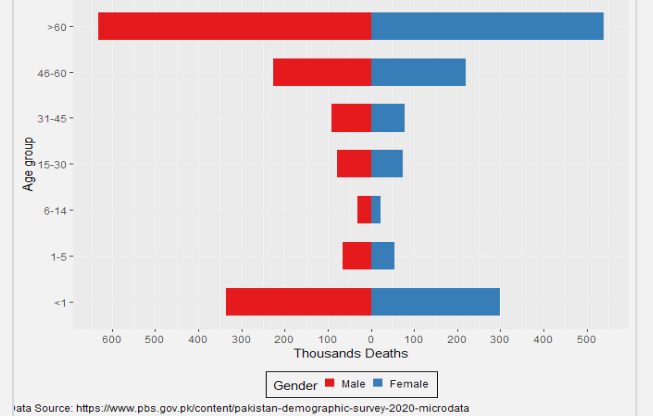


Figure II: Age-Stratified Mortality by Nature of Disease



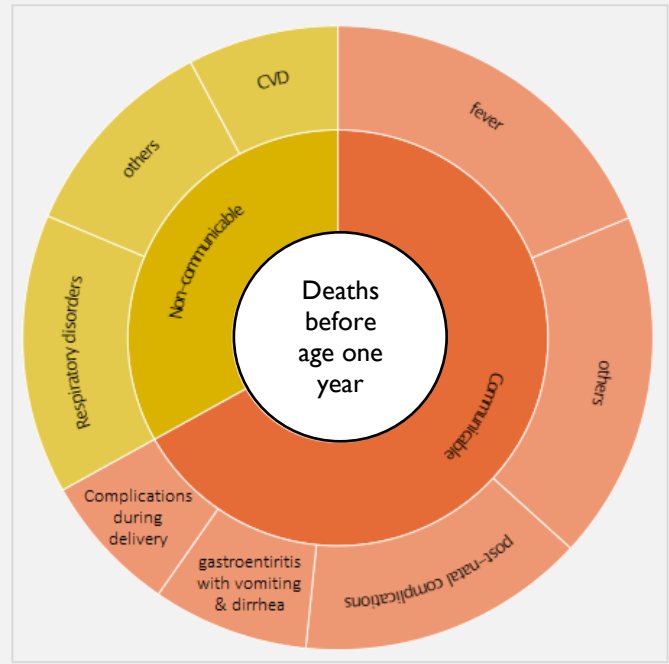
¹Pakistan Demographic Survey covers four sections: roster, fertility, birth, and death, covering four provinces. This brief focuses on mortality rates surveyed from households of 2018-20.

Salient Features

- 250,000 children die before age 1 year annually
- This accounts for 22% of all deaths
- Respiratory illness and post-partum complications account for most infant deaths
- Deaths from non-communicable diseases (NCD) account for 67% of all deaths
- Deaths from NCD outnumber those from communicable diseases at all ages
- Among NCD, cardiovascular diseases, diabetes and cancer are the leading causes among those 45 years or older.

The PDS reported 2.7 million deaths between 2018 and 2020 in Pakistan, or an average of 0.9 million deaths annually. Of these 22% occurred before age one year (infant deaths). Most infant deaths occurred due to complications during delivery (4%), post-natal complications (8%), respiratory disorders (7.7%), and gastroenteritis (4.7%).

Figure III: Causes of Infant Mortality



²The survey includes demographics and reasons of deaths. We have assessed deaths against age, gender and the nature of the disease (communicable or non-communicable disease) using population size weights. Categorizing diseases into communicable and non-communicable, provides insights into the prevalence and distribution of different types of diseases in a population, and identify patterns that may help guide public health interventions.

Figure IV: Cause-Specific Mortality by Age and Gender (non-communicable)



Recommendations

1. Infant deaths (before age one year) account for 22% of all deaths and are mostly due to preventable causes. Over half of these, are due to delivery (4% overall) and postnatal (8% overall) complications, that can be addressed by increasing access to skilled providers.
2. In addition, 4.7% of all deaths are due to gastroenteritis. These may be prevented through availability of clean drinking water, basic hygiene and the use of ORS+Zinc. These are low cost, high impact interventions that can save 45,000 or more lives.
3. Non-Communicable Diseases (NCDs) cause the highest mortality. NCD must be addressed along with their major contributors such as lifestyle behaviors, tobacco use, physical activity, unhealthy diets and access to testing and sustained treatment to conditions such as hypertension and diabetes. This may be done through both private and public sector initiatives.
4. Since information on the cause of death from families may not be reliable due to limited medical knowledge of family respondents, Verbal Autopsy (VA) and other methods may be explored and added in the demographic survey to enhance accuracy and reliability of cause of death data.
5. Survey data such as PDS may be supplemented with real time vital records such as those in the National Database and Registration Authority (NADRA) to register all births and deaths. Having both real time records and survey data are important complementary sources of vital statistics.
6. Since only around 10% of all deaths are reported to the NADRA, modeling estimates may be used to supplement vital records to understand population dynamics.

This report was made possible with support from Bill & Melinda Gates Foundation (BMGF). The contents are the responsibility of Research and Development Solutions, Private Limited and do not necessarily reflect the opinion of BMGF.