

Mortality Associated with Non-Communicable Diseases: Exploratory Analysis of Pakistan Demographic Survey (PDS)

Introduction

The Pakistan Demographic Survey (PDS) informs about aspects of population including birth, deaths and causes of death and is an important source of vital statistics information. Understanding these patterns and their causes is an important contributor to evidence informed policies.¹²

Findings

The PDS reported 2.7 million deaths between 2018 and 2020 in Pakistan, for an average of 0.9 million deaths annually. Of these infant deaths (before age one year) were the largest group and accounted for 22% of all deaths. Major categories of causes of infant deaths include post-natal complications (8.11%), miscellaneous respiratory disorders (7.73%), while complications during delivery (3.96%) and gastroenteritis (4.72%) also contribute substantially.

Salient Features

- Around 250,000 children age less than one dies each year. This accounts for 22% of all deaths. Among these, respiratory illness and post-partum complications account for the majority.
- Deaths from non-communicable diseases (NCD) account for 67% of all deaths. At all ages, NCD account for more deaths than communicable diseases
- Among these, cardiovascular diseases, diabetes and cancer are the leading causes among those 45 years or older.

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

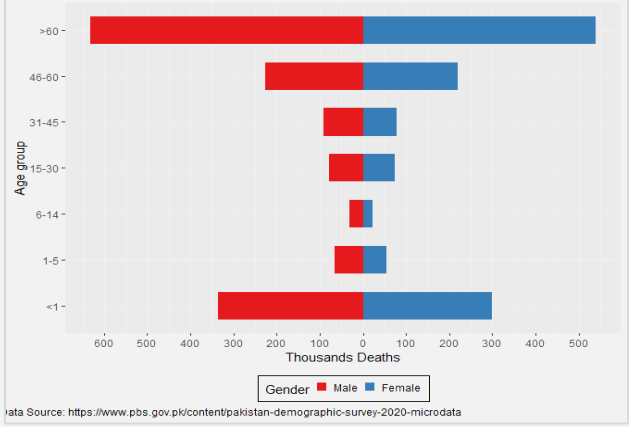


Figure II: Age-Stratified Mortality by Nature of Disease

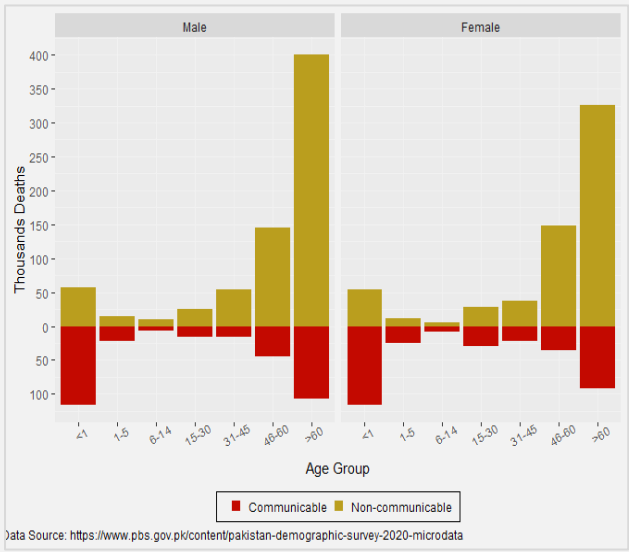
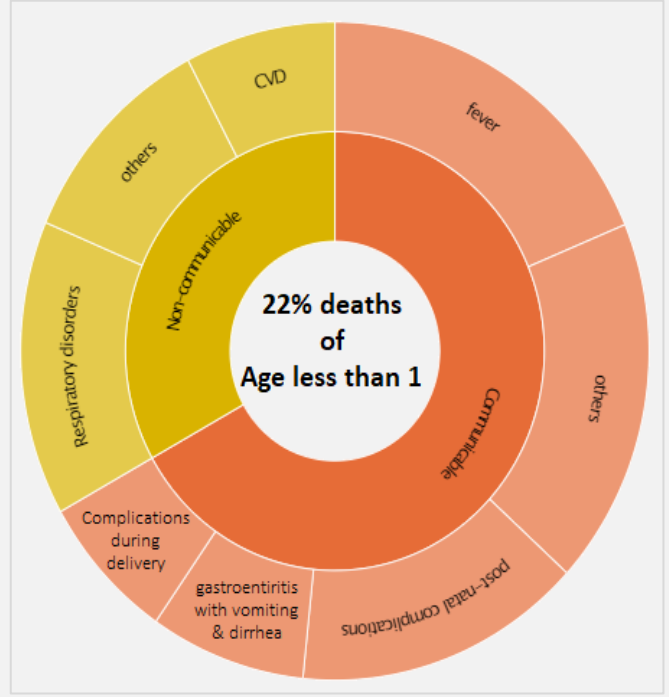


Figure III: Causes of Infant Mortality



Overall, 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.

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.

²The death section 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. 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.
2. Since information on the cause of death from families may not be reliable due to limited medical knowledge of family respondents, Verbal Autopsy (VA) may be added in the demographic survey to enhance accuracy and reliability of cause of death data.
3. Non-Communicable Diseases (NCDs) cause the highest mortality. There is a need to address NCDs and its major contributors such as lifestyle behaviors, tobacco use, physical activity, unhealthy diets and to ensure access to testing and sustained treatment to conditions such as hypertension and diabetes. This may be done through both private and public sector initiatives.

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