Research
And
Development
Solutions

Data on Non-Communicable Diseases:
A Missed Opportunity In Pakistan

Introduction

In Pakistan, a Low- and Middle-Income Country (LMIC) and the fifth most populous globally, Non-Communicable Diseases (NCDs) such as cardiovascular, respiratory and diabetes have emerged as a leading cause of death (Fig 1) The nation's lag in achieving health-related Sustainable Development Goals (SDGs), particularly the one-third reduction in premature mortality from NCDs (SDG 3.4), signals an immediate need for health interventions.

Key Challenges

Insufficient and outdated NCD surveillance data hinders the understanding of disease trends and impedes effective decision-making, leading to inadequate health system responses and intervention strategies at the national level.

Table 1: Challenges in NCD Surveillance and Data Collection in Pakistan

Provincial Disparities

After devolution of health from federal to provincial, data collection, and intervention strategies vary significantly across provinces. This impedes identification of risk factors and burden of disease.

Subnational Survey Limitations

The 2013-2014 subnational survey (WHO STEPS) provided valuable insights but excluded key provinces like Khyber Pakhtunkhwa, Gilgit-Baltistan, and Baluchistan, limiting representativeness and comprehensive understanding of NCD burden in the country.

Outdated National Surveys

The only comprehensive and representative national health survey on NCDs was conducted over three decades ago during 1990-94 by the Pakistan Medical Research Council (PMRC). National surveys (PSLM, DHS, MICS) conducted on a frequent basis do not include NCD data.

Key Points

- NCDs like CVD and diabetes are the leading cause of death in Pakistan, highlighting an urgent need for intervention.
- Data on NCDs is outdated and insufficient, with the last comprehensive national survey conducted three decades ago.
- Embracing digital solutions such as mobile-based surveys could revolutionize data collection efforts for NCDs in Pakistan.
- Integration of NCD data in national surveys can help to understand disease trends, facilitate decision making and improve health outcomes.

The **existing health system response to the alarming NCD burden remains inadequate,** with insufficient efforts to establish appropriate surveillance models and tailored interventions.

Recommendations

- **Integrated Data Collection:** Expand the scope of existing national surveys (e.g., Pakistan Social and Living Standards Measurements (PSLM), Demographic Health Survey (DHS), Multiple Indicator Cluster Survey (MICS)) to include NCD-related health indicators.
- **Strengthen District Health Information Systems:** To include comprehensive NCD data, enabling real-time monitoring of NCD prevalence and risk factors at the local level.
- **Adopt Digital Data Collection:** Explore the use of digital mobile surveys for more efficient and widespread data collection reducing burdens

Figure 1: Change in leading causes of death in Pakistan from 1990 to 2019[1]
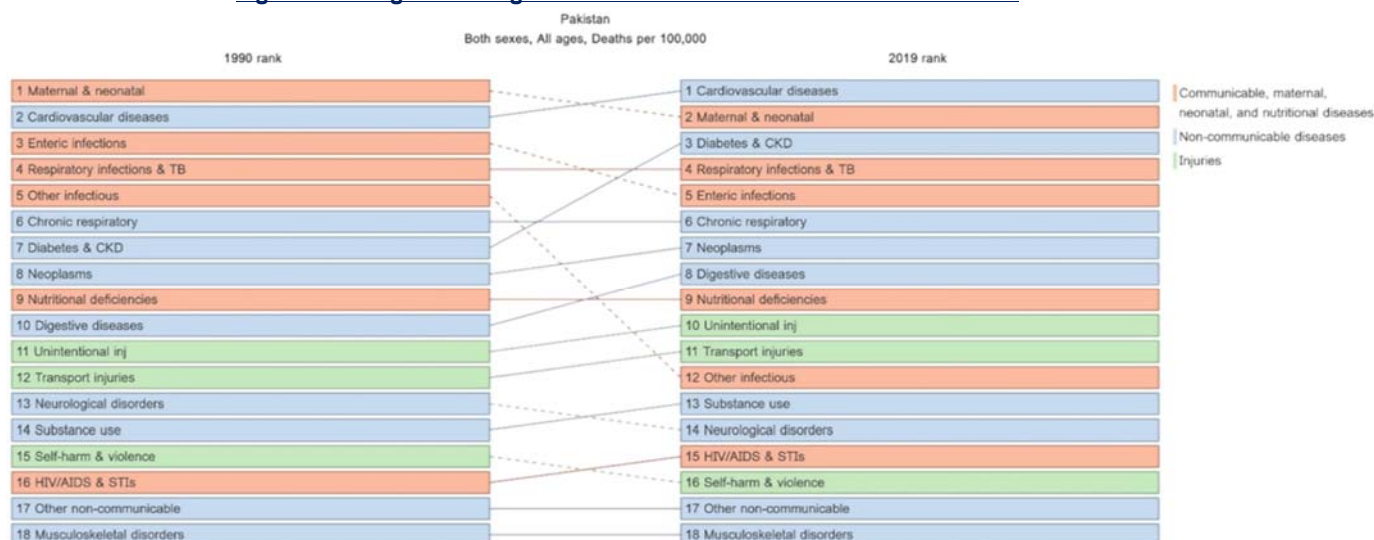

Pakistan
Both sexes, All ages, Deaths per 100,000

1990 rank	2019 rank	
1 Maternal & neonatal	1 Cardiovascular diseases	Communicable, maternal, neonatal, and nutritional diseases
2 Cardiovascular diseases	2 Maternal & neonatal	Non-communicable diseases
3 Enteric infections	3 Diabetes & CKD	Injuries
4 Respiratory infections & TB	4 Respiratory infections & TB	
5 Other infectious	5 Enteric infections	
6 Chronic respiratory	6 Chronic respiratory	
7 Diabetes & CKD	7 Neoplasms	
8 Neoplasms	8 Digestive diseases	
9 Nutritional deficiencies	9 Nutritional deficiencies	
10 Digestive diseases	10 Unintentional inj	
11 Unintentional inj	11 Transport injuries	
12 Transport injuries	12 Other infectious	
13 Neurological disorders	13 Substance use	
14 Substance use	14 Neurological disorders	
15 Self-harm & violence	15 HIV/AIDS & STIs	
16 HIV/AIDS & STIs	16 Self-harm & violence	
17 Other non-communicable	17 Other non-communicable	
18 Musculoskeletal disorders	18 Musculoskeletal disorders	

Figure 2: International Approaches to NCD Surveillance

India's National Family Health Survey (NFHS): Conducted every five years, collects household-level data on NCD prevalence and related risk factors with technical assistance from organizations like ICF and funding support from entities including USAID and the Bill and Melinda Gates Foundation.

Brazil's VIGITEL Survey: Conducted annually since 2006, utilizes mobile-based interviews to assess NCD risk factors like smoking, alcohol consumption, physical activity, and nutrition.

Philippines' National Nutrition Survey (NNS): Conducted since 1978, focuses on nutritional status, diet, and lifestyle-related risk factors for NCDs, with periodic redesigns like the Expanded National Nutrition Survey (Expanded NNS) in 2018.

associated with traditional paper-based surveys.

- **Capacity Building and Engagement:** Strengthen research capacity in NCDs and promote engagement between policymakers, media, and researchers to foster evidence-based decision-making and implementation of targeted NCD interventions.
- **Utilization of Universal Health Coverage Model:** Utilize frameworks like NCDs and Mental Health National Action Framework 2021-2030 to drive policy and action plans. This should be endorsed by provincial and federal governments and relevant stakeholders, to ensure a unified approach towards NCD management.

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