

**2020 Asia–Pacific Statistics Week**

**A decade of action for the 2030 Agenda: Statistics that leaves no one and nowhere behind**

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## **Civil Registration and Vital Statistics**

# **CRVS Overview and Study on Causes of Death in Punjab Province, Pakistan**



***Dr. Zulfiqar Khan***  
***Health System expert***  
***WHO - Pakistan***

# Scheme of Presentation

- **Objectives of the study**
- **Findings of the study and**
- **Some key recommendations**

# Core Principles of National CRVS

## A well-functioning CRVS system

- Registers all births and deaths;
- Issues birth and death certificates;
- Compiles and disseminates vital statistics, including **cause-of-death** information

# CRVS: Key Thematic Areas Pakistan

## CRVS Thematic Areas

**CRVS Legal Framework**

**Resources for CRVS**

(Physical, Human and Financial)

**Registration Practices, Coverage, and  
Completeness**

**Death Certification & Cause of Death**

**International Classification of Diseases (ICD)**

(Mortality & Coding Practices)

**CRVS Data Access, Use & Quality Checks**

**Mainstreaming Vulnerable / Marginalized  
Population**

# Role of Health Sector in CRVS

- According to **Rules of Business 1985**, Health Sector is assigned the responsibility of:
  - Data Collection.
  - Data Compilation.
  - Registration and Analysis of Vital Health statistics (specifically Deaths and Births).
  - Estimate Future Projections, based on baseline information.
  
- **Health Sector** in this scenario is responsible for registering every birth and death with accurate and ICD compliant underlying cause of death.

# Significance of Mortality Data

- ✓ **Importance realized in current COVID-19 scenario**
- ✓ Provide information on mortality by age, sex and cause (who dies of what, at what age?).
- ✓ Establishment of **health priorities** (information on what kills our people).
- ✓ Assessment of Health System Performance.
- ✓ Tracking national strategies such as health sector reform, poverty reduction and development efforts.
- ✓ To facilitate monitoring of Health related SDGs goal and targets.

# Study Objectives

## The specific objectives of this study:

1. Current available arrangements or readiness in terms of physical infrastructure, trained HR, IT Support, capacity and other resources in tertiary and secondary hospitals.
2. Current practice of death and cause of death registration in hospitals and use of ICD coding and reporting
3. Mortality data analysis and trends on causes of death

# Methodology

1. Literature Review.
2. Development of study instruments; data Collection Formats.
3. Interviews with Professional Staff (Govt./Partners)
4. Focus Group Discussions
5. Data Collection through Field Visits.
6. Data Analysis and Report Development
7. Synthesis of Findings and Result Sharing



# Study Location / Hospitals List

**A purposive sampling technique was used for selection of 20 hospitals from 13/36 districts of the Punjab Province; include tertiary & Secondary hospitals.**

S. No.	Name of the Hospital	District
1.	Allied Hospital, Faisalabad City	Faisalabad
2.	Benazir Bhutto Hospital, Rawalpindi	Rawalpindi
3.	Civil Hospital, Bahawalpur City	Bahawalpur
4.	District Head Quarter/ Teaching Hospital, Gujranwala	Gujranwala
5.	District Head Quarter Hospital, Faisalabad City	Faisalabad
6.	Holy Family Hospital, Rawalpindi	Rawalpindi
7.	Nishtar Hospital, Multan	Multan
8.	Services Hospital, Lahore City	Lahore
9.	Sir Ganga Ram Hospital, Lahore City	Lahore
10.	DHQ Hospital, Sargodha	Sargodha
11.	Sheikh Zayed Hospital, Lahore City	Lahore
12.	Sheikh Zayed Hospital, Rahimyar Khan	Rahimyar Khan
13.	Jinnah Hospital, Lahore City	Lahore
14.	Aziz Bhatti Shaheed Hospital, Gujrat	Gujrat
15.	Bahawal Victoria Hospital, Bahawalpur City	Bahawalpur
16.	Children Hospital, Faisalabad City	Faisalabad
17.	Children Hospital, Multan	Multan
18.	Children Hospital, Lahore	Lahore
19.	Mayo Hospital, Lahore City	Lahore
20.	Asfand Yar Bukhari Hospital, Attock	Attock



# Research Questions / Scope

## Two Field Questionnaires were developed.

### ➤ *Mortality & Morbidity Data Management Mechanism of:*

- Mortality Statistics
- Death Data Reporting
- Use of ICD Coding
- Data Compilation Method (Manual or Computerized)
- Cause of Death Labeling
- Morbidity Statistics
- Specific Disease Surveillance
- ICD Coding Practices for Disease Surveillance
- Availability of IT Infrastructure

### ➤ *Causes of Death Analysis by using WHO ANACoD Tool (ICD Enabled):*

- Patients Inflow, Indoor Capacity & Bed Occupancy Rate (by Age , Gender)
- Overall Summary of Deaths by Gender & Age-Group
- Number and Causes of Deaths (by Ages & Gender)
- Leading Causes of Death for < 1-Year (both sexes)
- Leading Causes of Death for < 1-5 Year (both sexes)
- Leading Causes of Death for > 5-Year (both sexes)

# Findings – System

- Out of 20 surveyed hospitals, majority (16) follow **mix type of system** (e.g. electronic & manual). Remaining 4 operating Full Automated Hospital MIS.
- **None of the hospital has adopted ICD coding** practices for mortality & morbidity or disease surveillance data compilation.
- To generate automated ICD coding based reporting, **IT infrastructure was seen available between 80%** at the managerial and clinical levels of surveyed hospitals.



# Findings – Some Results

Analysis based on Hospitals Records / DHIS Data on Following Indicators

## 1. Major indicators of each Hospital

- Number of Beds
- Daily OPD attendance (#)
- Bed Occupancy Rate (#)
- Hospital Death Rate (%)
- Neonatal Deaths #
- Still Births % Vs. Total Births
- Total Death Reported Indoor
- Death Reported by Disease

Indicators	2018	2019
Number of Beds	1,500	1,500
Daily OPD attendance (#)	3,245	2,728
Bed Occupancy Rate (#)	113	115
Hospital Death Rate (%)	5%	4%
Neonatal Deaths #	2,363	1,372
Still Births % Vs. Total Births	8.1	13.7%
Total Death Reported Indoor	16,623	13,496
Death Reported by Disease	6,118	5,400

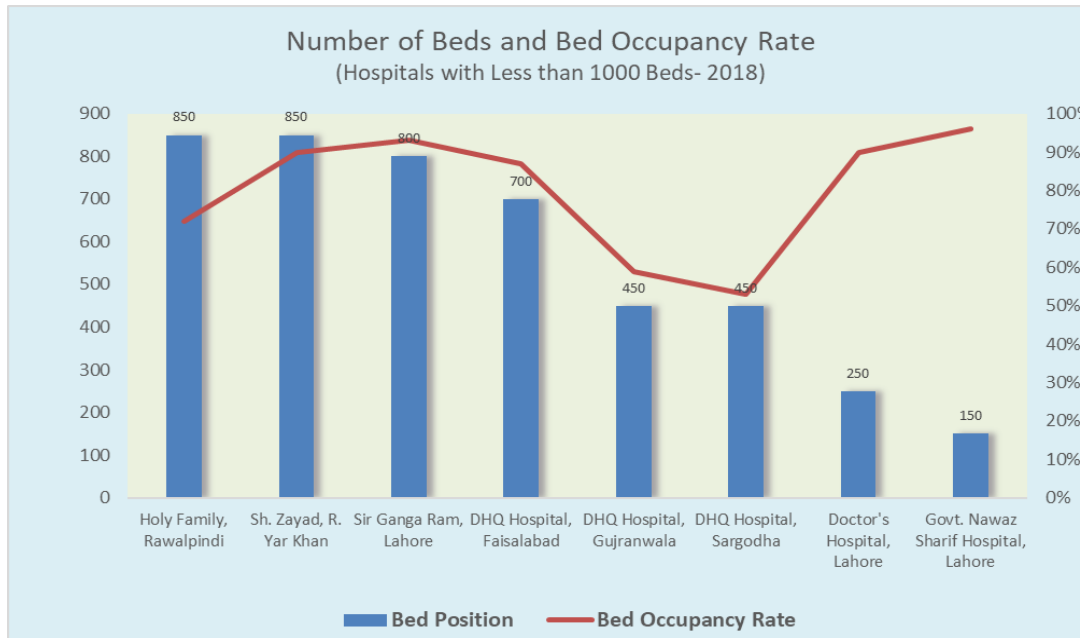
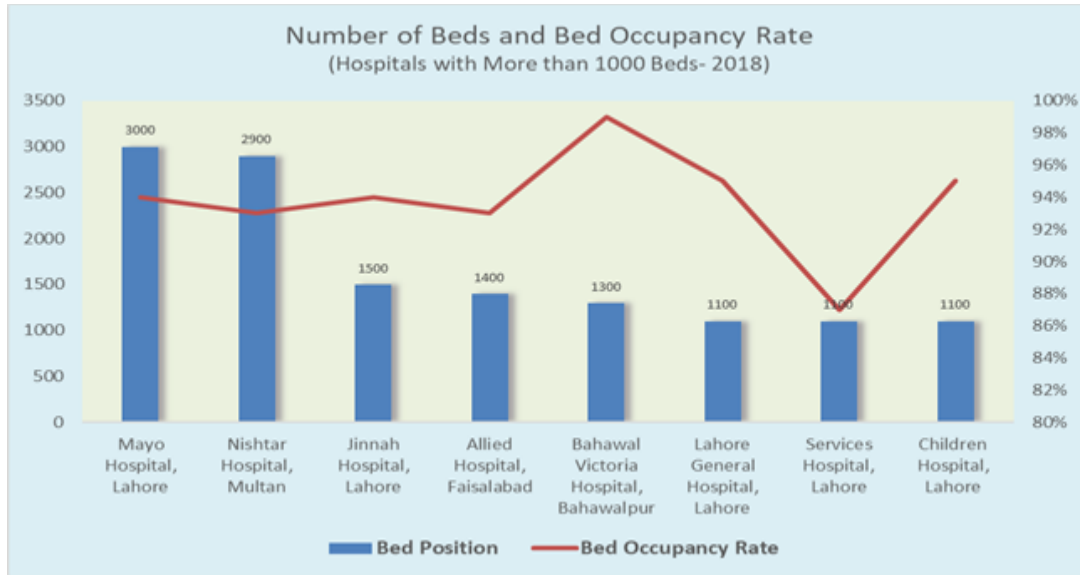
## 2. Burden of Patients by Age Group

## 3. Leading Causes of Deaths (Top Ten Diseases)

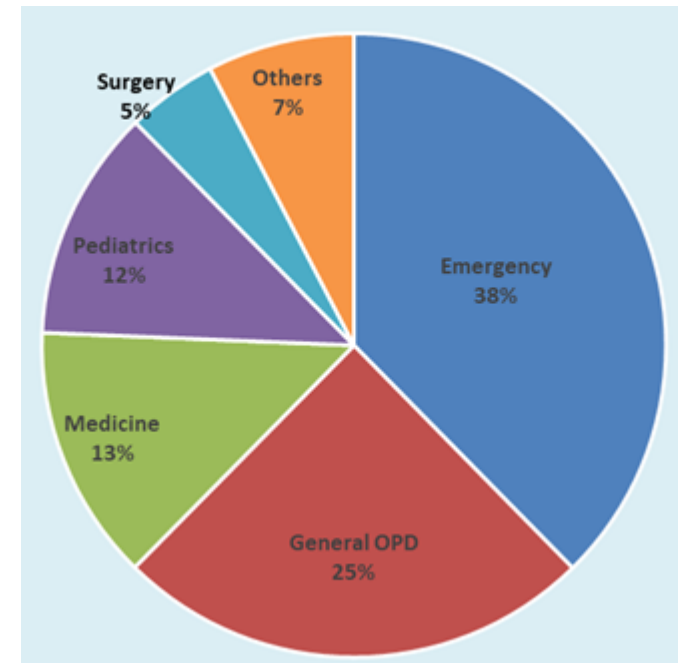
## 4. Neonatal Deaths in Hospital During 2019

## 5. Deaths Reported Vs. Death Rate (by Major Indoor Services - 2019)

# Other - Findings

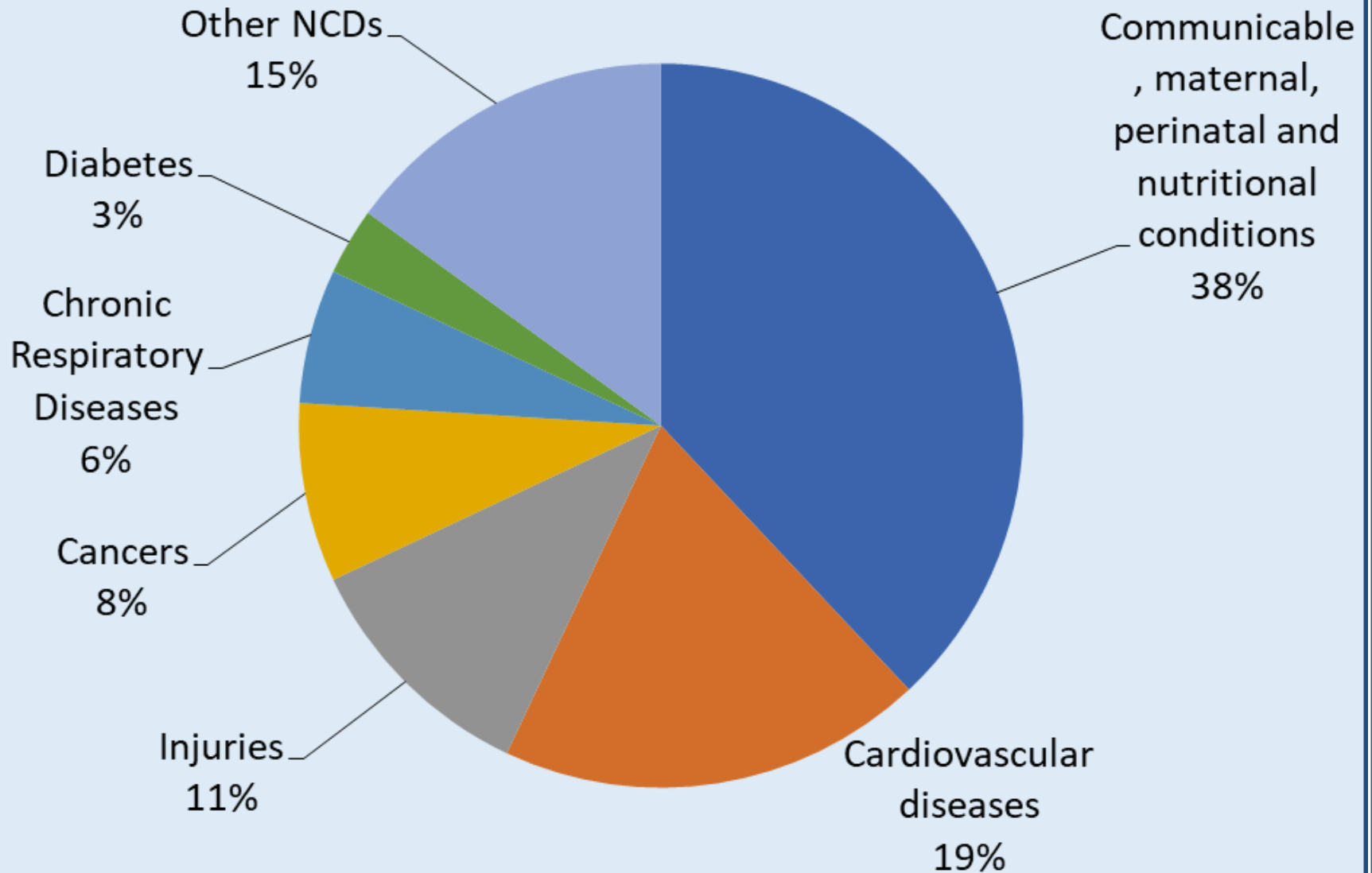


## Overall Patients Load/ In-flow (OPD) by Specialty



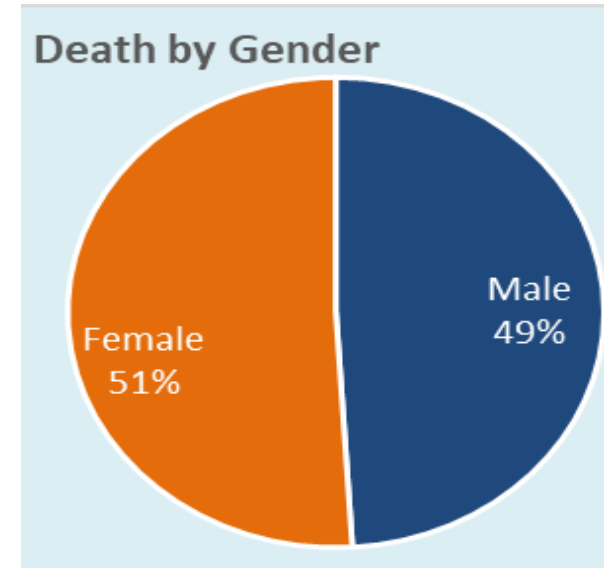
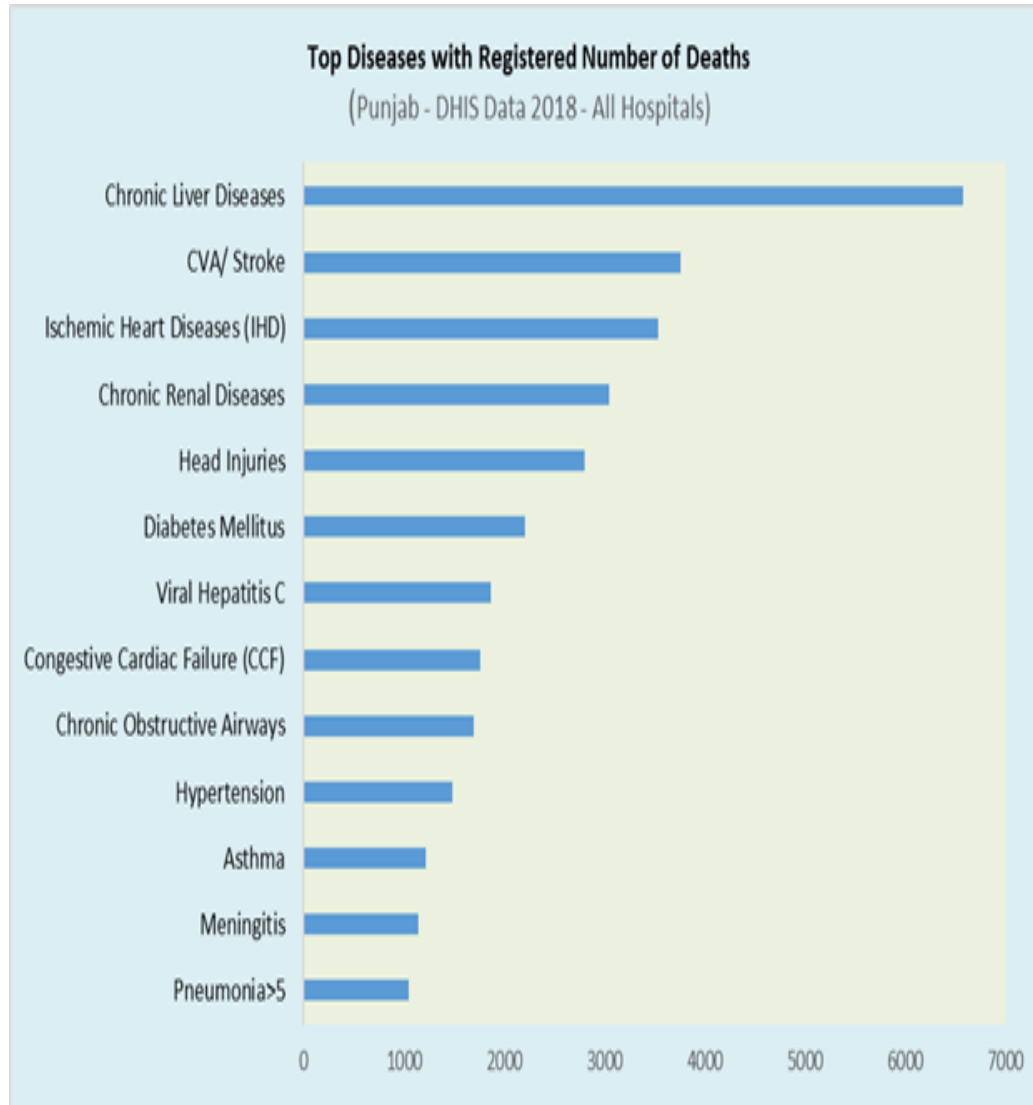
**National Hospital Based Death Study 2015 (MOH - WHO)**

**N=84311**



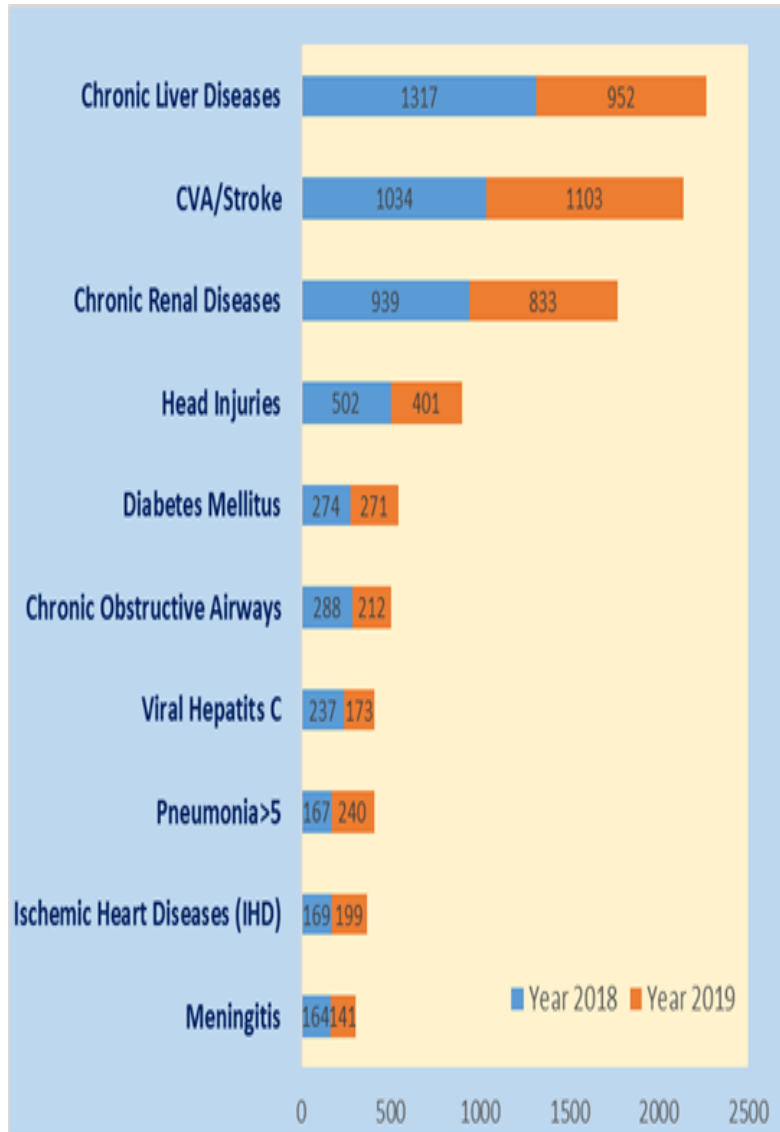
# Findings - Top Ten Causes of Death

## Overall – Punjab (DHIS Data)

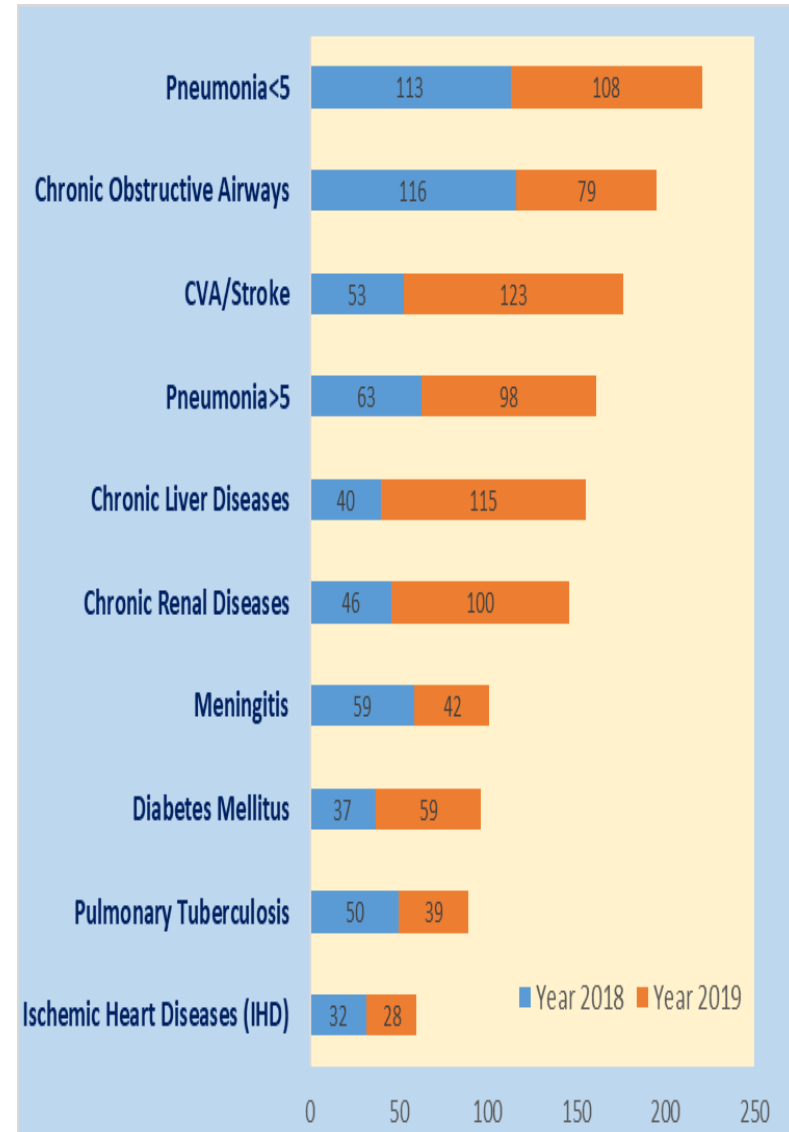


# Findings - Top Ten Causes of Death

Allied Hospital – Faisalabad



Benazir Bhutto Hospital – Rawalpindi



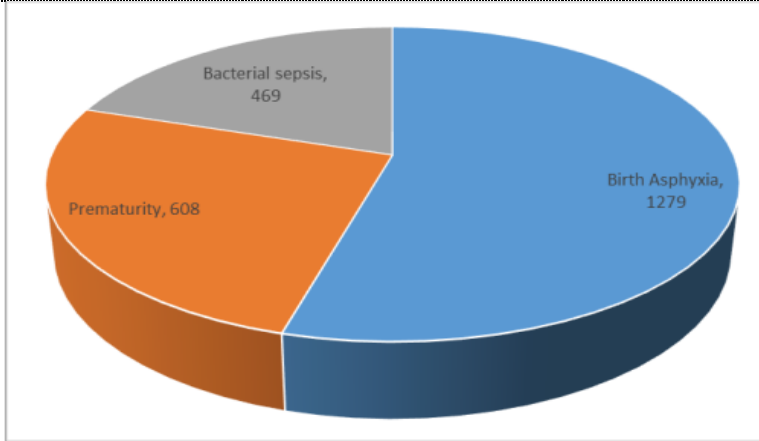


# Findings – Another comparison

## Allied Hospital – Faisalabad

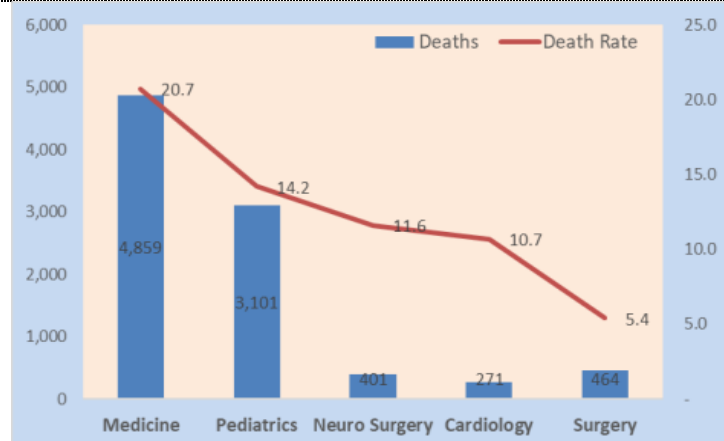
**Neonatal Deaths in Hospital During 2019**

(Major Causes)



**Deaths Reported Vs. Death Rate**

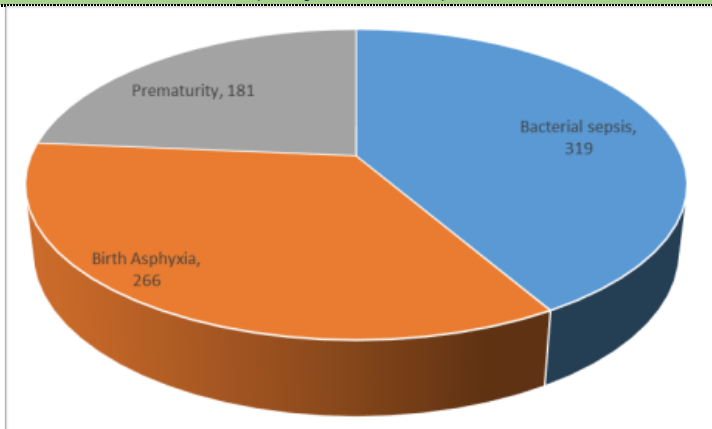
(by Major Indoor Services - 2019)



## Benazir Bhutto Hospital – Rawalpindi

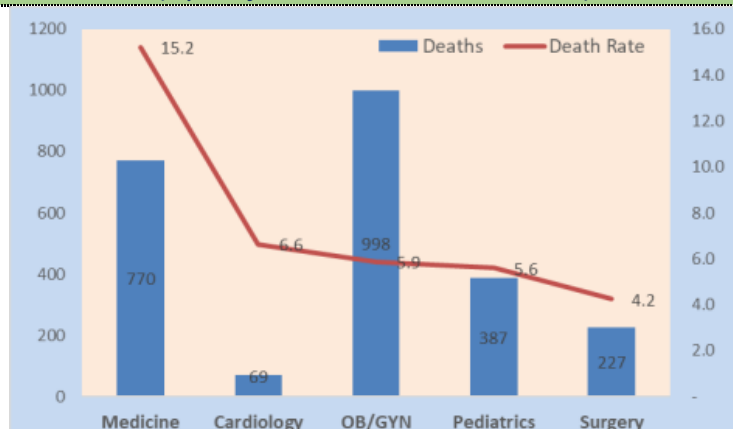
**Neonatal Deaths in Hospital During 2019**

(Major Causes)



**Deaths Reported Vs. Death Rate**

(by Major Indoor Services - 2019)



# Major Recommendations

- Develop a comprehensive **plan for improvement** of Hospital based morbidity and mortality statistics.
- Hospital **MIS/ Statistical Unit be revitalized** to take the leading role in development, capacity building and system maintenance.
- Need for immediate adaptation, piloting and **implementation of ICD-10** coding for certifying cause of deaths on standard pattern.
- A **standard death certificate** with ICD enabled cause of death be developed.
- **Hospital death review committees** be formulated.
- **Hospital MIS software** be developed and launched
- Development of Annual Feedback Reports with GIS Mapping
- Improved **IT infrastructure at Hospital level.**

**Thank you**