Chapter 2: Country-level Aging and Disease Burden

Key Messages

- Among South Asia countries, Afghanistan is at the earliest stage and Sri Lanka and the latest stage of the demographic transition.
- Among all countries, CVD, diabetes, cancer, chronic respiratory diseases, and injuries are important causes of morbidity and mortality. In addition, mental health is an important issue, particularly for Afghanistan and Pakistan.
- All countries are experiencing the double-disease burden.
- Implications of this aging and disease pattern shift are a larger NCD burden. This in turn will further strain health sector budgets, service delivery, and household budgets financing care, and reduce household income due to disability and early mortality among wage earners. All these aspects will diminish the potential for reaping a demographic dividend.

Introduction

The major findings in Chapter 1 were from the WHO Global Burden of Disease Study and global tobacco use studies, both of which used standard methods across countries. However, further regional comparisons are challenging for two reasons: few other NCD studies are available across the region in all the countries, and studies that are available often use different methods and analyses that limit valid comparisons.

Several design and analytical issues come into play that can affect both the reported disease burden and risk factors. These including urban and rural status, age range (NCDs are more common with aging); institution-based studies (hospital and clinics) that do not represent the entire population (participants tend to be less healthy); measurement protocols for anthropometrics, blood pressure, glucose, and lipid levels; and cut-off points and thresholds used to define disease or risk.

However, despite these limitations, available studies provide valuable country-level data that can be very useful in shedding more light on the extent of the problem and in focusing prevention and control efforts. The approach here has been to briefly summarize important demographic and NCD burden trends for each South Asian country.10

Afghanistan

Afghanistan is yet to start the demographic transition that will just start to be evident in 2025 (Figure 2.1). The proportion of the population 65 years and older will move from 2.1 percent in 2000 to 2.9 percent in 2025.

10 These are summaries from country reports compiled between March and September 2009 by a team of South Asia–based consultants (see Acknowledgements for details). The reports included burden, risk factors, capacity assessment, and accomplishments. The country reports themselves contain the citations for the findings given here.
In 2004, NCDs accounted for 43 percent of the total forgone DALYs, with the remainder from communicable diseases and MCH issues. Of the total DALY burden, CVD accounts for 14.0 percent, mental health 6.7 percent, cancer 4.0 percent, respiratory diseases 2.3 percent, diabetes 0.6 percent, and injuries 6.4 percent.

- **CVD**: This is the leading cause of overall forgone DALYs with the most from IHD (47 percent).
- **Stroke**: Accounts for 2.8 percent of the total DALY burden.
- **Respiratory diseases**: These account for 3.4 percent of all deaths, of which 34 percent were due to COPD and 31 percent due to asthma. Indoor air pollution from burning solid biomass fuel for cooking and outdoor dust are major problems. Most rural households (85 percent) use animal dung as fuel for cooking and over 70 percent of roads are unpaved and dusty.
- **Hypertension and diabetes**: No data are available.
- **Cancer**: The leading cause of cancer deaths among women is breast followed by esophageal cancer. Among men, the leading cause of cancer deaths were mouth and oropharynx, followed by esophageal and lung. Approximately 22,000 people died from cancer in 2005.
- **Injuries**: The second leading cause of overall forgone DALYs. Of the total DALY burden road traffic injuries account for 1.6 percent of DALYs and deaths.
- **Mental health**: A nationally representative survey found that half of the population aged 15 or older suffers from mental disorder (depression, anxiety, or post-traumatic stress disorder). Women had significantly poorer mental health status than men, in part due to their worse social indicators.
- **Smoking**: Prevalence data among adults are not available; among youth prevalence is similar to other South Asia countries (boys 13 percent, girls 3 percent).
Chapter 2: Country Level Aging and Disease Burden

Bangladesh

Bangladesh is in the early stages of the demographic transition, which is expected to advance in the future (Figure 2.2). The proportion of the population 65 years and older will move from 4.5 percent in 2000 to 6.6 percent in 2025.

Figure 2.2 Age structure in Bangladesh, 2000 and 2025

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2000 Percentage</th>
<th>2025 Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>5-14</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>15-34</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>35-64</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>65-69</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>70-74</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>75+</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>


In 2004, NCDs account for 61 percent of the forgone DALYs, with the remainder from communicable diseases and MCH issues. Of the total DALY burden, CVD accounts for 13.4 percent, mental health 11.2 percent, cancer 3.9 percent, respiratory diseases 4.0 percent, diabetes 1.2 percent, and injuries 10.7 percent.

- **CVD**: Estimated to be the main cause in 25.1 percent of deaths and is projected to be the main cause in 37.2 percent of deaths in 2030. IHD is the leading cause of death and is responsible for 12 percent of all mortality while cerebrovascular disease (or stroke) is the sixth leading cause of death (in 2005).
- **Diabetes**: The prevalence is estimated to be 6.9 percent (7.5 percent male and 6.5 percent female). Urban-area studies find higher prevalence than in rural areas (urban approximately 8–10 percent).
- **Cancer**: This causes 7.5 percent of deaths; 70.7 percent of all cancer deaths were among men in 2008. By 2030, cancer deaths are projected to constitute 12.7 percent of the total. Among men, the leading cancer is mouth/oropharynx, followed by lung, and then esophagus; for women, mouth/oropharynx cancer is followed by cervical and breast cancer.
- **Asthma** and **respiratory diseases**: A small national sample estimated 6.9 percent prevalence of asthma. For those over 30 years, the estimated prevalence of COPD is about 3 percent. Nearly 90 percent of the population use solid fuels, including biomass such as dung and wood or coal for routine cooking and heating. In 2002, the disease burden due to indoor air pollution related to solid fuel caused some 46,000 deaths, of which 13,620 were from COPD and an estimated 32,330 from acute lower respiratory infection in children under the age of 5 years.
Chapter 2: Country Level Aging and Disease Burden

- **Hypertension**: Approximately 25 percent of slum dwelling women and 38 percent of non-slum women had hypertension compared to 18 percent and 25 percent among men, respectively.

- **Injuries**: Road traffic injuries are the most common cause of serious injuries among men (40–45 percent among urban men). The leading cause of injury-related death among children (1–17 years) is drowning (59.3 percent) followed by road traffic accidents (12.3 percent). Among women, 57 percent reported serious injuries due to domestic accidents, including domestic violence.

- **Smoking**: Prevalence is higher than in other South Asian countries (males 47 percent, females 4 percent) while smoking prevalence among youth is similar (boys 9 percent, girls 5 percent).

**Bhutan**

Bhutan is in the early stages of the demographic transition, but, because of significant reductions in fertility in the last 20 years, its expected to age more rapidly than some of its neighbors (Figure 2.3). The proportion of the population 65 years and older will move from 4.4 percent in 2000 to 7.3 percent by 2025. The prevalence of NCDs increases with age and thus the burden of disease caused by NCDs will also rise.

**Figure 2.3 Age structure in Bhutan, 2000 and 2025**

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age group</td>
<td>0-4</td>
<td>20-24</td>
</tr>
<tr>
<td>20-24</td>
<td>40-44</td>
<td>60-64</td>
</tr>
<tr>
<td>40-44</td>
<td>80-84</td>
<td></td>
</tr>
</tbody>
</table>


In 2004, NCDs accounted for 62.3 percent of total forgone DALYs, with the remainder stemming from communicable diseases and MCH issues. Of the total DALY burden, CVD accounted for 13.7 percent, mental health 12.1 percent, cancer 3.7 percent, respiratory diseases 4.3 percent, diabetes 1.1 percent, and injuries 11.1 percent. NCDs accounted for 68 percent of all deaths, with CVD (19 percent), cirrhosis of the liver (8 percent), and COPD/bronchial asthma (7 percent) being the three leading causes of death.

No country-level study has been conducted on NCDs or their major risk factors such as tobacco among adults. In 2007, a survey of risk factors of non-communicable diseases was carried out in Thimphu found...
only 7 percent of the population over 25 years of age smoke tobacco but 10 percent among those 25-34 years old. In 2006, a tobacco use survey carried out among youth (13–15 years) found the prevalence at 29 percent and 12 percent for boys and girls, respectively—these are the highest rates among youth in South Asia. The 2007 study also found that 31 percent of the population over 25 had consumed alcohol in the last 30 days and 8 percent of men drank almost every day compared with 3 percent of women. Cancers, chronic rheumatic heart disease, and renal failure were the top three conditions referred abroad for tertiary care. MoH assessments using primarily institution-based patient diagnoses find increasing trends for hypertension, diabetes, and cancer. Circulatory disease deaths were the leading cause of inpatient mortality with 88 deaths. In 2006–7, road traffic injuries included 724 nonfatal and 111 fatal cases (93 percent of which were among men).

India

India is in the early stages of the demographic transition, which is expected to advance in the future (Figure 2.4). The proportion of the population 65 years and older will move from 4.4 percent in 2000 to 7.6 percent in 2025.

Figure 2.4 Age structure in India, 2000 and 2025

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


In 2004, NCDs accounted for 62 percent of the total burden of forgone DALYs, with the remainder from communicable diseases and MCH issues. Of the total DALY burden, CVD accounts for 12.7 percent, mental health 11.6 percent, cancer 3.5 percent, respiratory diseases 4.6 percent, diabetes 1.1 percent, and injuries 12.5 percent. Particular trends are as follows:

- **CVD**: Expected to emerge by 2030 as the main cause of death (36 percent). It is characterized by early occurrence compared to the rest of the world, higher case fatality rates, and disease onset at lower risk factor thresholds, particularly for those who are overweight or obese.
• **Diabetes:** Prevalence, increasing in both urban and rural areas, is in the range of 5–15 percent among urban populations, 4–6 percent in semi-urban populations, and 2–5 percent in rural populations. Diabetes is particularly increasing among the marginalized and the poor.

• **Hypertension:** Present in 25 percent of the urban and 10 percent of the rural population. The number of people with hypertension will rise from 118.2 million in 2000 to 213.5 million by 2025.

• **COPD:** Prevalence among men is in a range of 2–9 percent in north India and 1–4 percent in south India. Among males, tobacco smoke is the major cause of COPD, while smoke from indoor combustion of solid fuels is the major cause for women.

• **Cancer:** Over 70 percent of cases are diagnosed during the advanced stages of the disease, resulting in poor survival and high case mortality rates. Tobacco use is the major cause of cancer for both lung and oral cavity diseases.

• **Smoking:** Prevalence is similar to other South Asian countries (males 33 percent, females 4 percent) while smoking prevalence among youth is higher (boys 17 percent, girls 9 percent). Smoking accounts for 1 in 5 deaths among men and 1 in 20 deaths among women, accounting for an estimated 930,000 deaths in 2010.

• **Alcohol:** A study on CVD risk factors in industrial populations found higher alcohol consumption conferred a higher risk for CVD. The reasons for the lack of protective effect found in other populations could include (i) unfavorable enzymatic metabolism of alcohol in Indians that is known to impact CVD, (ii) harmful drinking patterns with irregular heavy or binge drinking that is associated with CVD, and (iii) consumption mostly among the disadvantaged and poor who carry a higher risk of CVD than others.

• **Injuries:** Road traffic injuries and deaths are on the increase along with the rapid economic growth. Annually, they result in more than 100,000 deaths, 2 million hospitalizations, and 7.7 million minor injuries. Nonfatal road traffic injuries are highest among pedestrians, motorized two-wheeled vehicle users, and cyclists. This is a major problem among young populations, with three-quarters occurring among 15–45 year olds, predominantly among men. If the present pace of increase continues, in 2010 150,000 deaths and 2.8 million hospitalizations are likely and, in 2015, these numbers will rise to 185,000 and 3.6 million.

• **Diet:** Exact data on consumption of oils/fats at the individual and household level are missing. However, national aggregate statistics show high consumption of unhealthy oils. The share of raw oil, refined oil, and vanaspati oil (hydrogenated oil) in the total edible oil market is estimated at 35 percent, 55 percent, and 10 percent, respectively. Trans fats are added to vanaspati oil, which is widely used in the commercial food industry to lengthen shelf life.

### Maldives

Maldives is in the mid to later stages of the demographic transition, which is expected to advance in the future (Figure 2.5). The proportion of the population 65 years and older will move from 3.5 percent in 2000 to 6.3 percent in 2025.

---

11 Although moderate consumption of alcohol appears to be protective for heart attacks in western populations, it appears to be either neutral or confer higher risk among South Asians.
In 2004, NCDs accounted for 77.4 percent of the total burden of forgone DALYs, with the remainder from communicable diseases and MCH issues. Of the total DALY burden, CVD accounts for 9.7 percent, mental health 18.7 percent, cancer 10.6 percent, respiratory diseases 2.7 percent, diabetes 2.4 percent, and injuries 14.6 percent. NCDs account for 74.5 percent of all deaths with CVD (26.1 percent) the leading cause followed by cancer (24.0 percent), respiratory diseases (6.4 percent), and diabetes (5.2 percent). Injuries account for 12.9 percent of total deaths.

- **CVD**: This is the leading cause of mortality and contributed to 45 percent of all deaths in 2003.
- **Diabetes**: Affects 7.1 percent of men and 6.8 percent of women.
- **Obesity**: Approximately 13 percent are obese (body mass index $>30$ kg/m$^2$) and its prevalence is twice as high in women (17 percent) as in men (9 percent). The prevalence of obesity increases with age: approximately 50 percent of women over 35 years are overweight or obese.
- **Injuries**: Among all injuries, road traffic injuries account for 2.3 percent of total deaths and 2.8 percent of total DALYs.
- **Thalassaemia**: It is major public health problem. One out of every six persons is a carrier for thalassaemia, and the country has the highest incidence of the disease in the world.
- **Smoking**: Prevalence is among the highest in South Asia (males 45 percent, females 12 percent) while smoking prevalence among youth is lower than in most other countries (boys 9 percent, girls 3 percent).

**Nepal**

Nepal is in the early stages of the demographic transition, which is expected to advance in the future (Figure 2.6). The proportion of the population 65 years and older will move from 4.2 percent in 2000 to 5.8 percent in 2025.
In 2004, NCDs accounted for 60.1 percent of the total age-standardized burden of forgone DALYs with the remainder from communicable diseases and MCH issues. Of the total DALY burden, CVD accounts for 13.1 percent, mental health 11.0 percent, cancer 4.2 percent, respiratory diseases 3.6 percent, diabetes 1.2 percent, and injuries 11.6 percent. NCDs account for 65.7 percent of all deaths with CVD the leading cause (31.1 percent) followed by cancer (8.6 percent), respiratory diseases (6.7 percent), diabetes (2.2 percent), and mental illness (1.5 percent). Injuries account for 8.8 percent of total deaths. Key NCD trends include:

- **Service utilization for NCD**: In the public sector, NCDs accounted for 81.5 percent of outpatient department cases and 88 percent of inpatient morbidity.
- **CVD**: Of all deaths, those from CVD are expected to increase to 34.9 percent by 2030.
- **Cancer**: Of all deaths, those from cancer are expected to increase to 12 percent by 2030.
- **Diabetes**: Prevalence is 10.8 percent among adults.
- **Hypertension**: Prevalence is 21.5 percent among adults.
- **Obesity**: The prevalence of overweight and obesity is highest in the 25–34 year age group among males, while among women the prevalence of overweight and obesity is highest in the 45–54 year age group.
- **Alcohol**: The prevalence of hazardous and harmful drinking (combined) in the last seven days among current drinkers is more common among males (38.9 percent) than females (30.3 percent).

---

12 WHO defines hazardous drinking as the consumption of 40–59.9 grams of pure alcohol for males, and of 20–39.9 grams of pure alcohol for females, on an average day; and harmful drinking as the daily consumption of ≥60 grams of pure alcohol by males, and of ≥40 grams of pure alcohol by females.
Chapter 2: Country Level Aging and Disease Burden

- **Smoking:** Overall prevalence is in the regional midrange for males but is highest in women among South Asian countries (males 36 percent, females 28 percent) while smoking prevalence among youth is among the highest (boys 13 percent, girls 5 percent). Tobacco use increases with age, with the highest rates at age 45–54 (approximately 85 percent among men and 45 percent among women).

**Pakistan**

Pakistan is in the early stages of the demographic transition, which is expected to advance in the future (Figure 2.7). The proportion of the population 65 years and older will move from 3.9 percent in 2000 to 5.4 percent in 2025.

![Figure 2.7 Age structure in Pakistan, 2000 and 2025](image)

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


In 2004, NCDs accounted for 59 percent of the total forgone DALYs, with the remainder from communicable diseases and MCH issues. Of the total DALY burden, CVD accounts for 12.7 percent, mental health 11.9 percent, cancer 3.5 percent, respiratory diseases 3.9 percent, diabetes 1.4 percent, and injuries 9.3 percent.

- **CVD:** Accounts for 34 percent of all deaths. A population-based study among persons 40 years and older found prevalence at 25 percent (using both clinical and ECG criteria) with higher rates in urban than rural populations. A third of the population was classified as having metabolic syndrome—a risk factor for CVD.
- **Diabetes:** Pakistan ranks sixth globally in the number of persons with diabetes. A high prevalence of diabetes was noted in all provinces especially in urban and rural Sindh (16.5 percent and 13.9 percent, respectively). Approximately half those with diabetes were unaware of their condition. Future projections indicate a two- to threefold increase in diabetes over the next decades.
Chapter 2: Country Level Aging and Disease Burden

- **Cancers:** The most common among men are lung and oropharynx, and in women, breast and oral cavity.
- **Respiratory diseases:** Smoking is one of the most significant risk factors. Other environmental pollutants such as biomass fuel, commonly used in villages, have been associated with symptoms of COPD in rural areas. A recent survey found physician-diagnosed asthma present in 15.8 percent of school children.
- **Injuries.** In Karachi, about 42 percent of vehicle crashes involved public transport or heavy goods vehicles. About half the fatal cases were among motorbike riders. Despite a motorcycle helmet law, only 8 percent of riders wear helmets.
- **Hypertension:** During 1990–1994 the prevalence was 17.9 percent among those 15 years or above. The odds for hypertension were 20 percent lower in literates versus illiterates, indicating higher risk in those socially deprived. In 2004, in Karachi, the prevalence of hypertension was 40 percent in those aged 40 years or over.
- **Mental health:** Of the general population, 10–16 percent suffer from mild to moderate psychiatric illnesses. Suicide rates have surged in recent years from a few hundred pre-1990s to almost 7,000 in 2008.
- **Obesity:** In the past 10 years, a twofold increase in prevalence of overweight and obesity among school going children in urban Pakistan has occurred.
- **Smoking:** Prevalence is in the midrange among South Asian countries for adults (males 35 percent, females 7 percent) and for youth (boys 12 percent, girls 8 percent).

**Sri Lanka**\(^\text{13}\)

In combination with substantial declines in fertility since the 1970s, advances in human development have led to rapid demographic aging (Figure 2.8). The proportion of the population 65 years and older will increase from 6.7 percent in 2000 to 13.6 percent in 2025. This demographic transition has been accompanied by an epidemiologic transition, that is, a growing NCD burden.

---

\(^{13}\) See World Bank (2010).
In 2004, NCDs accounted for 87.5 percent of the total burden of forgone DALYs, with communicable diseases and MCH issues the remainder. Of the total DALY burden, CVD accounted for 9.3 percent, mental health 11.5 percent, cancer 4.7 percent, respiratory diseases 5.1 percent, diabetes 1.9 percent, and injuries 35.9 percent.

- **CVD:** Approximately 82,000 admissions in government hospitals were IHD cases, equivalent to a rate of 410 admissions per 100,000 population, which is comparable to the rate in Organisation for Economic Co-operation and Development (OECD) countries (330–1,200).
- **Diabetes:** Among those 18 years and older, 10.3 percent have diabetes, similar to that found in the United States.
- **Lipids:** Mean total cholesterol and low-density lipoprotein-cholesterol levels in the population are 203 and 133 mg/dl, respectively. Levels are significantly higher in females than in males.
- **Hypertension:** A national survey in 1998–2002 reported a prevalence of hypertension in adults of 13 percent in men and 14 percent in women.
- **Respiratory diseases:** Since 1991, the annual number of deaths from asthma has doubled from under 2,000 a year to more than 4,000 in 2003, to account for 4 percent of all deaths.
- **Injuries:** Traumatic injuries are the leading cause of inpatient morbidity. NCDs account for 36 percent of all admissions, of which half are injuries.
- **Smoking:** Prevalence is lower than in other South Asian countries (males 32 percent, females 2 percent) while smoking prevalence among youth is similar (boys 12 percent, girls 6 percent).

**Implications for South Asia**

Population aging is a major feature in South Asia and will result in a demographic dividend due to favorable dependency ratios. However, as noted in Chapter 1, aging is occurring rapidly and without the social changes that accompanied aging in developed countries decades ago. In addition, the
international health community has become increasingly concerned with the shift of the disease burden toward NCDs while a residual burden for MCH remains. This shift is not only because NCDs are more common with aging, but also due to changes in lifestyles and environments (especially diet, physical activity, and tobacco use) associated with globalization and development. NCD-related illness, disability, and unhealthy aging all threaten gains from the demographic dividend. Countries such as the Russian Federation, where little attention was given to NCD for decades, are already experiencing the impact in multiple dimensions (Box 2.1).

Many implications from these transitions are evident. First, the NCD burden will grow with continued aging and strain health sectors that will struggle to be more responsive to these additional demands. With most health care financed with private out-of-pocket resources, some people may never escape poverty or be driven into poverty, some will forgo treatment and suffer excessively, and household consumption patterns will be switched from other human development investments such as education. The impact on individuals in terms of short- and long-term disability, premature death, and forgone wages will be significant. At the macroeconomic level there will be adverse impacts on labor productivity and while empirical data are scant, productivity declines and reduced economic growth may occur.

South Asian countries all face a double-disease burden. Most people in rural populations moving to urban areas will experience changes in lifestyles that may increase their NCD risks. Extreme poverty and fetal and early childhood undernutrition account for a sizable part of the total burden.

While the variation in the disease burden is large across the region, risk factors such as tobacco use are similar, suggesting that regional approaches may add value. Less is known about diet and physical inactivity but, where there are data, these are also likely issues.

Because all countries have low total expenditures on health and a substantial share of health financing comes out of pocket, all people, especially the poor, are at great financial risk, making financing a common issue in the region. Finally, unfavorable social determinants are common, such as poverty, poor education, and low social position. Addressing these determinants requires broad, multisector approaches.

Part 2 argues the case for the need to act now.
Box 2.1 The Social and Economic Impact of NCDs in the Russian Federation

The Russian Federation’s unprecedented mortality upsurge due to noncommunicable diseases (with cardiovascular disease the main cause) and injuries in the last two decades, coupled with fertility rates that are well below replacement level, has several implications beyond the sociodemographic makeup of the country.

**Shrinking population:** Since the beginning of the 1990s, the population has declined by 6 million to an estimated 143 million. Continued high mortality and declines in fertility are expected to lead to a further population decline.

**Fewer workers:** Female life expectancy (72 years) is close to the level of 1955 while male life expectancy (59 years) is four years less than that year. If these trends persist, the size of the Russian labor force will continue to shrink. A healthy population aged 65–75 could represent a sizable untapped workforce. However, the high burden of ill health among surviving older Russians may limit what can be achieved.

**Adverse economic effects include:**

- The cost of absenteeism due to ill health.
- Adverse impact on labor supply.
- Adverse impact on labor productivity.
- Job losses due to harmful alcohol use.
- The impact of NCD on early retirement.
- Adverse impact on the family.