

Invisible numbers

The true extent of **noncommunicable diseases**
and what to do about them

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Foreword

Every year, noncommunicable diseases (NCDs) claim the lives of 17 million people under the age of 70 – one every two seconds. Most of these premature deaths are preventable. NCDs affect all countries and regions, but by far the largest burden falls on low- and middle-income countries, which account for 86% of these premature deaths. The COVID-19 pandemic took an especially heavy toll on people living with NCDs, highlighting how these diseases undermine the very foundations of good health.

The COVID-19 pandemic has demonstrated that protecting and promoting health is not only the domain of health ministers. In the same way as COVID-19, NCDs endanger lives, livelihoods and global development, which means that preventing and managing these diseases requires a concerted effort, with a whole-of-government, whole-of-society response across countries and sectors.

This report is a reminder of the true scale of the threat posed by NCDs and their risk factors. But, crucially, it also shows what can be done to avoid them. There are cost-effective and globally applicable interventions that can protect people from NCDs or minimize their impact. Every country, no matter its income level, can and should be using and benefitting from these policies – saving lives and saving money.

The clock is ticking towards the 2030 deadline for achieving the Sustainable Development Goal target to reduce premature mortality from NCDs by one third. Currently, we are far off track. This report contains the data and the evidence-based interventions that countries must have to act, through legislation, regulation and mobilizing resources. As the report demonstrates, spending an additional US\$ 18 billion per year across all low- and middle-income countries could result in benefits worth trillions of dollars, proving once again that health should be seen as an investment, not a cost. The longer countries delay in using these interventions, the heavier the burden their populations and economies will have to bear.

NCDs are everyone's business. Working together, we can build a healthier, safer and fairer world for all.

Dr Tedros Adhanom Ghebreyesus
Director-General
World Health Organization

1. Executive summary

Noncommunicable diseases (NCDs) – chief among them, cardiovascular diseases (heart disease and stroke), cancer, diabetes and chronic respiratory diseases – along with mental health, cause nearly three-quarters of deaths in the world (1).

Their drivers are social, environmental, commercial and genetic, and their presence is global. Every year 17 million people under the age of 70 die of NCDs, and 86% of them live in low- and middle-income countries (LMICs) (1).

Many of these early deaths are not inevitable. Addressing major risk factors that can lead to them – tobacco use, unhealthy diet, harmful use of alcohol, physical inactivity and air pollution – could prevent or delay significant ill health and a large number of deaths from many NCDs.

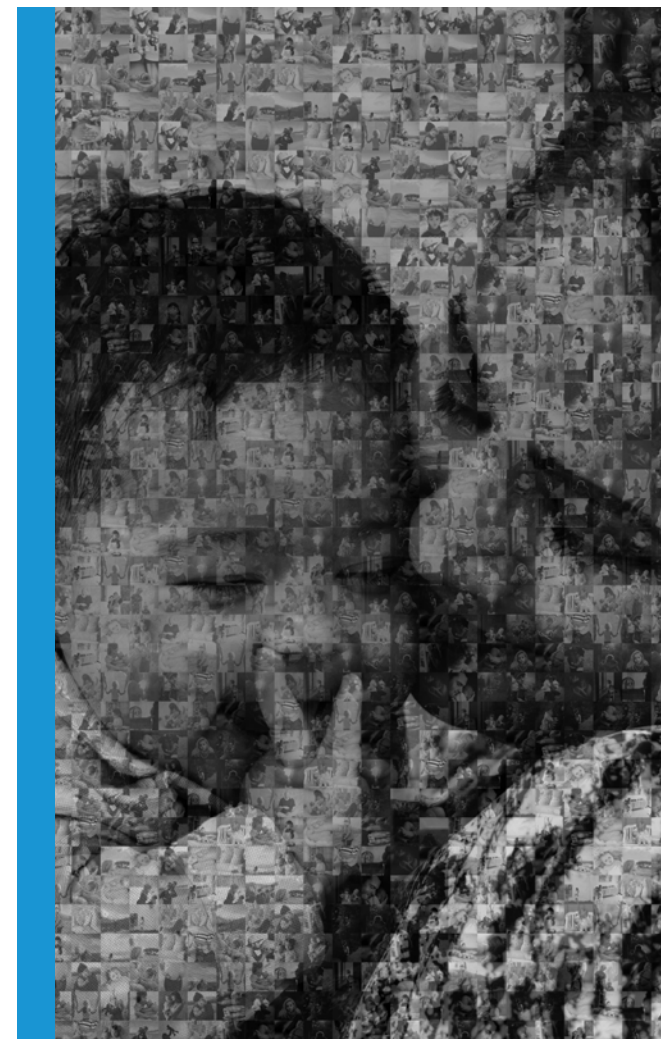
The data paint a clear picture. The problem is that the world isn't looking at it.

A lack of awareness of the data means that not enough action is being taken. Millions of people – especially in lower-income settings – cannot access the prevention, treatment and care that

could prevent or delay NCDs and their consequences. This huge inequity undermines the human right of everyone, in all countries, to the best available standard of health. All too often, government commitments are not being met. Every Member State of the United Nations has committed to the Sustainable Development Goals (SDGs), which include a target to reduce premature death from NCDs by a third by 2030. This could save millions of lives, but few countries are on track to achieve the target.

The good news is that this can be changed. Relatively small additional investments in NCD prevention and treatment could make a big difference long before 2030: spending an additional US\$ 18 billion per year across all LMICs could generate net economic benefits of US\$ 2.7 trillion over the next seven years (2). This is an investment, not simply a cost, with the benefits of action going far beyond health.

The right policies for NCD prevention and treatment will have significant win-wins for other sustainable development concerns. Poverty and inequity can be reduced through the introduction of universal health coverage





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that avoids the need for catastrophic expenditure on treatment for those with an existing NCD. Education will improve, as children will be able to stay in school rather than having to care for sick relatives. Food systems will be healthier for people and the planet. Active travel options will support physical activity and reduce carbon emissions.

Governments that are serious about health and sustainable development must address NCDs both domestically and internationally, and the availability of cost-effective policies means that it is no longer affordable not to take action. The World Health Organization (WHO) has identified policies to prevent future ill health,

ensure that people living with NCDs can play a full and happy part in family, community and society, and reduce the impact of other health conditions such as COVID-19.

There is much that can be done today to protect people from NCDs. WHO is leading this effort by mobilizing partners, providing technical resources, and sharing examples from around the world showing how countries are already taking action.

But health is everyone's business, and NCDs are no exception. The purpose of this report is to highlight data on the true impact of these diseases for government members and


policymakers from all sectors. Everyone should be aware of the burden these diseases represent to health, economic and social development, and – crucially – what can be done to change this.

NCDs cause 74% of all deaths. But if every country were to adopt the interventions that are known to work, at least 39 million NCD deaths could be averted by 2030 (2), and countless other lives would be longer, healthier and happier. This report makes the NCD numbers visible and shows what can be done to change them.

2. What are noncommunicable diseases?

NCDs cause almost three-quarters of deaths in the world each year (1). But most of these deaths, and much ill-health, could be prevented or delayed by addressing shared risk factors – behavioural (tobacco use, unhealthy diet, harmful use of alcohol and physical inactivity), biological (raised blood pressure, overweight and obesity, raised blood glucose and raised cholesterol)¹ and environmental (air pollution). Providing access to timely and quality treatment and care for those with NCDs is also critical.

Government action is a powerful force in ensuring that where we live, learn, work and play minimizes our exposure to these risk factors and diseases.

 The term “NCD” can cover a range of diseases. In 2011, the first ever High-level Meeting of the United Nations General Assembly on the Prevention and Control of NCDs officially focused global action on four major diseases and four main risk factors. This became known as the “4 x 4 NCD agenda”.

In 2018, a subsequent UN High-level Meeting broadened this scope to include mental health conditions and air pollution. This is now known as the “5 x 5 NCD agenda”.

Comprehensive information on mental health is available in the WHO *World mental health report: Transforming mental health for all*.

All other NCDs and risk factors are covered in this report and on the WHO Noncommunicable Diseases Data Portal.

More information:



The four major NCDs – cardiovascular diseases (heart disease and stroke), cancer, diabetes and chronic respiratory diseases – along with mental health, account for a very high proportion of deaths and ill health. In total, 41 million people – 74% of all deaths – die of an NCD each year (1). Many millions more are living with at least one NCD, which can reduce quality of life for years. The broader scope of noncommunicable conditions also includes mental health and liver and kidney diseases (1). The focus of this report is on the four groups of diseases outlined in the *Global Strategy for the Prevention and Control of Noncommunicable Diseases*.

3/4



Almost 3/4 of all deaths in the world are from an NCD

¹ Behavioural and biological risk factors are each presented in their order of magnitude.

→ *Want to know more about each NCD? Turn to page 7*

These diseases are some of the greatest health and development challenges of this century, affecting every country in the world. More than three-quarters of NCD deaths are in LMICs (1) and include people of all ages.

In 2019, 17 million people died of NCDs before reaching the age of 70, with 86% of these deaths taking place in LMICs (1). Whatever age you are, the chance of dying from an NCD is higher if you live in a lower-income country than if you live in a higher-income country.



**Every 2 seconds
someone aged under 70
dies of an NCD (1)**

The tragedy is that NCDs are often preventable, and millions of people could avoid years of poor health and live longer, healthier, happier lives within their families and communities. Most deaths from NCDs could be delayed or even prevented by eliminating risks to health (3), chief among them four behavioural risk factors: tobacco use, unhealthy diet, harmful use of alcohol and physical inactivity. These lead to biological risk factors: raised blood pressure (hypertension), overweight and obesity, raised blood glucose and raised cholesterol. Air pollution is also a significant risk factor. All of these contribute to the development of one or more of the four major NCDs.

The majority of NCD deaths could be prevented or delayed

→ *Want to know more about the risk factors? Turn to page 8*

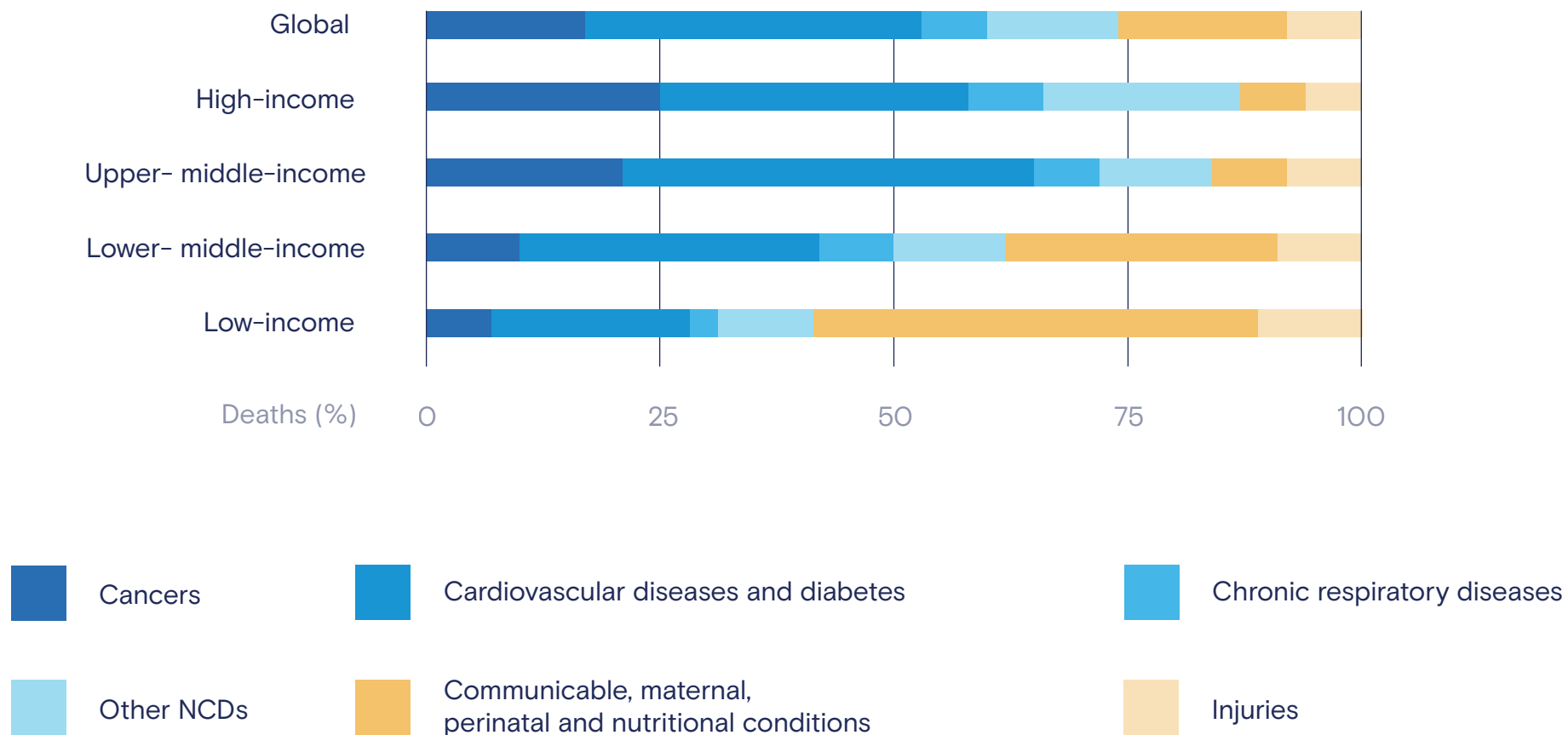


Q Understanding the term “NCDs”

The acronym “NCDs” is not well known outside health circles, unlike TB or HIV. Even the term “noncommunicable diseases” is not fully understood among the public. This needs to change! These diseases can be described in many other ways – for example, as “chronic” diseases – because they last for many years, often for a lifetime. They are sometimes referred to as “lifestyle” diseases, but this is misleading, as much exposure to risk factors is not within individuals’ control.

| **Box 1**

Fig. 1. NCDs are leading causes of death: deaths by cause, globally and according to World Bank country income classification (2019)



Source: Global health estimates 2019: deaths by cause, age, sex, by country and by region, 2000–2019. Geneva: World Health Organization; 2020 (1)



It is often suggested that we as individuals are responsible for making decisions that lead to developing an NCD. But it isn't that simple. Doing what is right for our health does not depend only on our individual choices, on our desire to be healthy, or on knowledge of what is good for us. Instead, our behaviour is strongly influenced by social, cultural and environmental factors (where we live, learn, work and play) and commercial factors (the impact of the worlds of work, commerce and industry on daily life).

Far too often, the environment in which we live constrains our decisions, making healthy choices difficult, if not impossible. Healthy food may be too expensive or unavailable in local shops. Roads are often too dangerous to walk or cycle on. Areas for play, walking and other forms of physical activity may be in short supply, unattractive and unsafe. There are also external influences. Marketing for unhealthy food, alcohol and, in many countries, tobacco is everywhere, and the industries that produce it actively target vulnerable populations, such as children and young people (4).

Access to health services is no less important. Without access to timely screening, diagnosis and treatment for NCDs, lives are unnecessarily impacted or lost, and catastrophic spending on health conditions such as NCDs regularly pushes people into poverty. It is often those least able to afford the consequences of NCDs who are at the highest risk.

Government can play an essential role in changing this health equation. Policymakers across government can work together to create environments where everyone, regardless of income, is supported to be more active, to eat healthily and to avoid tobacco and the harmful use of alcohol. For example, action can be taken to restrict advertising on unhealthy food or to place a tax on unhealthy products, the revenue from which can be used to fund health. Governments also need strong health care services to guarantee effective NCD treatment, ensuring that everyone, throughout their lives, can access and afford basic health care. This can provide all of us – wherever we live in the world and whatever our circumstances – with the means and opportunity to live better and longer, and can contribute to sustainable development.

Four major NCDs

More information can be found in the WHO fact sheet on NCDs. Data on all four major NCDs in your country are available on the WHO Noncommunicable Diseases Data Portal (5).

Cardiovascular diseases

Cardiovascular diseases (CVDs) affect the heart and blood vessels and are the cause of more deaths globally than any other disease.



1 in 3 deaths
17.9 million people
a year (1)

Fact: 86% of CVD deaths could have been prevented or delayed by eliminating risks to health through prevention and treatment (3)

More information:



Chronic respiratory diseases

The most common chronic respiratory diseases are asthma and chronic obstructive pulmonary disease (COPD). COPD is the third leading cause of death worldwide (1).



1 in 13 deaths
4.1 million people
a year (1)

Fact: 70% of chronic respiratory diseases deaths could have been prevented or delayed by eliminating risks to health (3)

More information:



Cancer

Cancer is a disease in which abnormal cells are rapidly created and spread out of control to affect other parts of the body (6).



1 in 6 deaths
9.3 million people
a year (1)

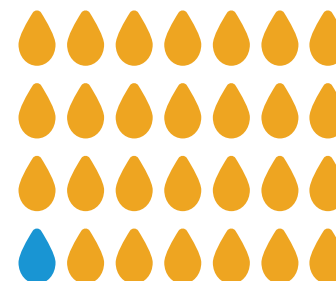
Fact: 44% of cancer deaths could have been prevented or delayed by eliminating risks to health (3)

More information:



Diabetes

Diabetes occurs either when the pancreas does not produce enough of the hormone insulin (type 1 diabetes) or when the body cannot effectively use the insulin it produces (type 2 diabetes) (7).



1 in 28 deaths
2.0 million people
a year² (1)

Fact: More than 95% of diabetes cases globally are of type 2 diabetes (8)

More information:



² Includes kidney disease deaths due to diabetes (1).

Risk factors

Some risk factors for disease cannot be changed – for example, type 1 diabetes and some cancers have a genetic component. However, the main NCDs share major risk factors that *can* be modified. Data on these risk factors in your country are available on the WHO Noncommunicable Diseases Data Portal (5).

Tobacco use

Tobacco – smoked, chewed or secondhand – is one of the leading causes of preventable death (9). Tobacco kills one in every two smokers.



More than 8 million deaths – and over a million of these are from second-hand smoke (3)

More information:



Harmful use of alcohol

Alcohol consumption is linked to major NCDs, such as liver cirrhosis, some cancers and CVDs (11).



1.7 million NCD deaths in 2016 (4% of NCD deaths) (12)

More information:



Unhealthy diet

Unhealthy diets take different forms: undernutrition, a shortfall in essential micronutrients and overnutrition (a leading cause of obesity) (10). Eating a balanced diet contributes greatly to reductions in NCDs, including diabetes, heart disease, stroke and cancer (10).



8 million NCD deaths a year (all dietary risks combined; 19% of NCD deaths) (3)

More information:



Physical inactivity

Physical activity contributes to preventing and managing NCDs such as CVDs, cancer and diabetes (13). However, one in three women, one in four men, and more than 80% of adolescents are not physically active enough to experience good health (14, 15).



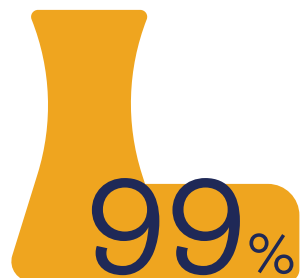
830 000 NCD deaths a year (2% of NCD deaths) (3)

More information:



Air pollution

Air pollution – both outdoor and indoor – is a major environmental driver of ill health and an important risk factor for some NCDs (16). Second-hand tobacco smoke is also a source of indoor air pollution.



Outdoor: In 2019, 99% of the global population were estimated to live in places where WHO's Air Quality Guidelines (17) – which set the threshold for harmful levels of pollution – were not met.

Indoor: 2.4 billion people cook and heat their homes with fuels such as wood, kerosene and coal (18).

More information:



Commercial determinants of health

Consumption of unhealthy food, tobacco use and harmful use of alcohol are heavily influenced by commercial determinants of health, including the formulation, packaging design, marketing and promotions of products. Commercial determinants of health are activities of the private sector that affect our health, either positively or negatively (19). These determinants affect all of us, but young people are at particular risk (for example, the tobacco and alcohol industries actively target vulnerable populations, such as children and young people, to consume their products). Government action is vital in ensuring that companies play a role in reducing rather than increasing health inequity and that any negative influence of the private sector on health is minimized.

| Box 2

Tobacco use, unhealthy diet, harmful use of alcohol and physical inactivity, in turn, drive responses in our bodies that also increase NCD risk: raised blood pressure, overweight and obesity, raised blood glucose and raised cholesterol. All can be managed through appropriate treatment and by protecting people from risk factors.

More information on risk factors in your country can be found on the WHO Noncommunicable Diseases Data Portal (5).

Raised blood pressure (hypertension)

Hypertension, meaning that blood pressure is too high, is a major risk factor for CVDs and other diseases (20). Two thirds of the people with hypertension live in LMICs, but almost half of the people with hypertension are not even aware they have it (see fig. 2).

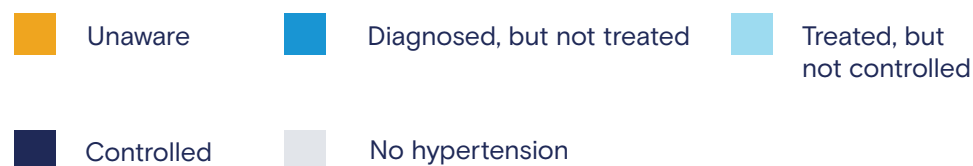
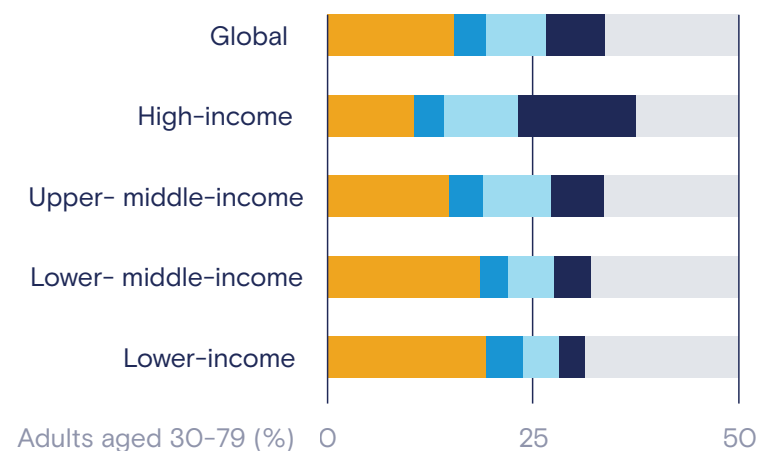


Fact: Hypertension currently affects around 1.3 billion adults aged 30 to 79 (20)

More information:



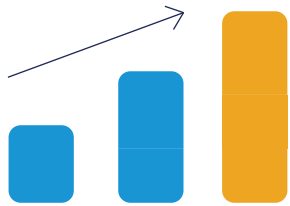
Fig. 2. Almost half of people with hypertension are unaware of their condition: adults aged 30–79 years by hypertension status, globally and according to World Bank country income classification (2019)



Source: Global Health Observatory [online database]. Geneva: World Health Organization; 2022 (21)

Obesity

Obesity, is a major risk factor for NCDs such as CVDs, diabetes, musculoskeletal disorders and some cancers (22). Obesity has been a major health concern in high-income countries for decades and is rising rapidly on the agenda in LMICs (22). Rates among children and adolescents are particularly concerning.



Fact: Obesity worldwide has nearly tripled since 1975 (23)

More information:



Raised cholesterol

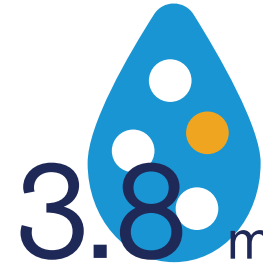
Raised cholesterol leads to a build-up of fat in blood vessels, blocking arteries and raising the risk of heart disease and stroke. Contributing factors include eating unhealthy foods, being above a healthy weight, not being physically active enough, using tobacco and consuming too much alcohol. Raised cholesterol may also be genetic or hereditary (that is, it may run in families).



Fact: High cholesterol was responsible for an estimated 3.9 million deaths in 2017 (24)

Raised blood glucose

Raised blood glucose can cause serious health problems if levels stay high for a long time or become very high. It can be treated with insulin or with oral medication (7).



Fact: 20% of cardiovascular deaths – 3.8 million deaths – are caused by raised blood glucose (3)

NCDs are one of the greatest health and development challenges of this century, affecting people of all ages and in all parts of the world. But too often they are overlooked and underfunded because their health and financial impacts are misunderstood and underestimated. The next section sets out why NCDs should be a priority for every government in the world – both for the health impacts of investment and for the benefits to economies and sustainable development.



3. Why do noncommunicable diseases matter?

NCDs affect the lives of millions of people, their families and communities, but many people are unable to access the care they need, and many are being pushed into poverty when health care is unaffordable. NCDs are an enormous drain on global and national economies – according to one estimate, they will cost US\$ 30 trillion in the years 2011 to 2030 (25).

However, the prevention, treatment and care of NCDs can support the achievement of many of the SDGs, to which every government in the world is committed – giving benefits far beyond the health sector.

We all instinctively understand why NCDs matter to individuals and families, because each of us knows someone who has at least one NCD, and many of us are living with NCDs ourselves. But this understanding of the individual health consequences has not translated into adequate action, either nationally or globally.

This inaction is partly due to a failure to understand the scale of the toll that NCDs take on health, on equity and on economies. Investing in tackling these diseases will have significant benefits for lives at all ages

→ *Want to know more about how NCDs impact individuals and families?*
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and stages: at school, in the workforce and in providing for families, and into older age.

NCDs undermine broader health and wellbeing.

NCDs have a negative impact on health as diseases in their own right and also in the way that they interact with other conditions. They can leave people significantly more vulnerable to other health issues. Addressing NCDs can therefore help protect populations from severe outcomes from other diseases such as HIV, TB or COVID-19.

→ *Want to know more about how NCDs affect national economies?*
Turn to page 17



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Q COVID-19 and NCDs

COVID-19 highlighted the links between NCDs and infectious disease, with serious impacts on:

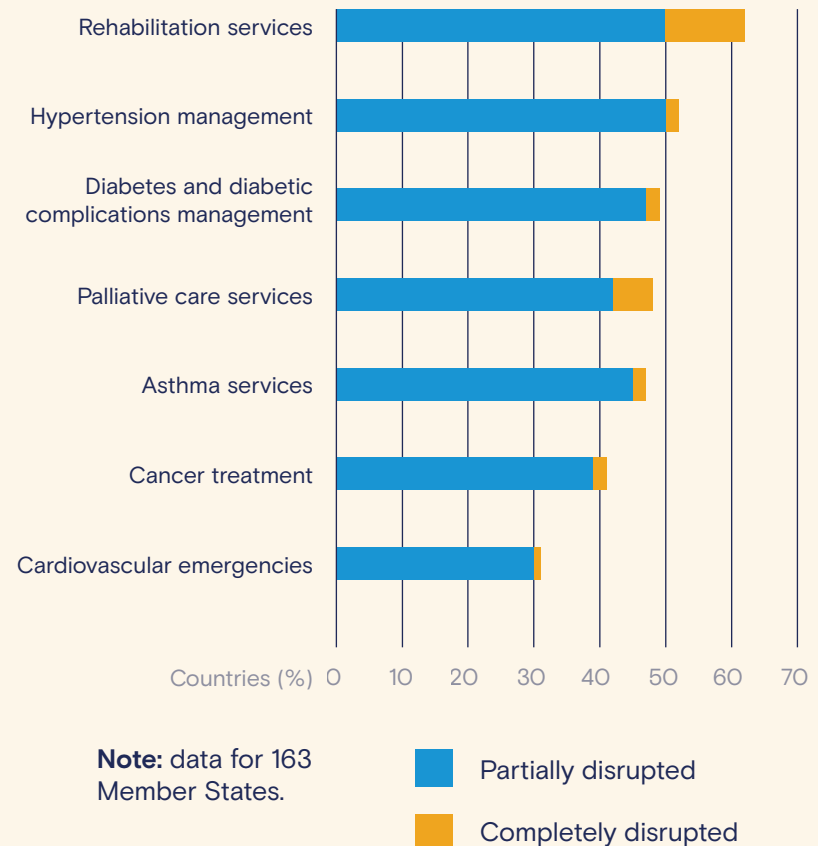
NCD care. In the early months of the pandemic, 75% of countries reported disruption to essential NCD services because of lockdown restrictions and channelling of resources, including cancellation of elective care, reductions in screening and redeployment of staff (26).

Exposure to risk factors. During the COVID-19 pandemic, exposure to NCD risk factors changed. Public health measures such as lockdowns often led to less physical activity, and economic insecurity meant many people could not afford to eat a healthy diet.

COVID-19 outcomes. People living with NCDs are at greater risk of becoming seriously ill from COVID-19 (27). Current evidence suggests, for example, that people with obesity or diabetes have a greater chance of being hospitalized or dying from COVID-19; people with coronary artery disease and COPD are also at higher risk of severe outcomes; and smoking increases the chance of dying from COVID-19 (28, 29, 30, 31, 32). This implies that protecting people from NCDs and their risk factors will also build resilience to other health conditions, including infectious diseases, minimizing the health and economic consequences of future epidemics.

Box 3

Fig. 3. NCD services were disrupted by COVID-19: percentage of countries reporting disruption to NCD services during the COVID-19 pandemic (2020)



Source: The impact of the COVID-19 pandemic on noncommunicable disease resources and services: results of a rapid assessment. Geneva: World Health Organization; 2020 (26)

Fig. 4. NCDs are key to achieving the SDGs



There is a vicious circle linking **poverty** and NCDs.



Addressing **all forms of malnutrition** includes preventing and managing overweight and obesity.



Universal health coverage will not be achieved without addressing NCD prevention and treatment.



Education increases understanding of health and risk factors, and the school environment can itself be designed to promote good health and wellbeing.



Gender affects people's risk of developing or dying from an NCD. Men and women are exposed to risk factors and interact with the health system differently.



Both within and between countries, **inequality** means that lower-income groups are often disproportionately affected by NCDs and their risk factors.



More than half of the world's population now lives in **cities** (33), which can be designed to make it easier to lead sustainably healthy lives.



Unsustainable food systems are a burden on planetary systems and on human health (34).



Synergies between addressing **climate change** and NCDs and their risk factors include sustainable food systems and active travel (35).

There are many other links between the SDGs and NCDs, but this summarizes the biggest win-wins.



Preventing and treating NCDs has benefits far beyond health. Prevention and treatment of NCDs is a prime opportunity for investment that will have myriad impacts on economic growth, far outweighing the money spent (see *Section 4*).

NCDs are at the heart of sustainable development. The SDGs recognize the importance of NCDs, having a specific target (SDG 3.4) of reducing premature deaths from NCDs by a third by 2030. Action on NCDs can have benefits for SDGs far beyond this specific target (*fig. 4*).

In 2022, only a handful of countries were on track to meet the SDG target on reducing early deaths from NCDs by a third by 2030

How do NCDs affect individuals?

NCDs are about so much more than deaths. Because NCDs often last for many years, they can severely limit people's ability to live happy and healthy lives with their families.

Addressing NCDs and their risk factors has benefits for all ages.

When NCDs and their risk factors are addressed, children are healthier, happier and do better at school. Younger adults can play a full part in the workforce and provide for their own children. Older adults can be healthier for more years, contributing fully to family and society into and beyond retirement.

NCDs do not affect only people living in wealthy countries.

More than three quarters of all NCD deaths occur in LMICs. Even in Africa, the region of the world with the lowest number of deaths from NCDs, the burden has risen rapidly, from 2.1 million to 2.9 million deaths in two decades (1).

Poverty and NCDs go hand in hand. NCDs are definitively not diseases of affluence and can constitute a vicious circle that runs across generations. In low-income countries, 44% of all spending on health is paid out of people's own pockets (37), which can have catastrophic consequences for families. This can be particularly the case for NCDs, as treatment may be needed for years.

Even before the COVID-19 pandemic, an estimated half billion people were pushed into or further into extreme poverty by health-care costs (38)

Many people live with more than one disease. Living with more than one health condition is known as co-morbidity. Often, co-morbidities are of NCDs: for example, people with CVDs are at greater risk of type 2 diabetes, and people with high blood pressure are at greater risk of stroke. But NCDs, their risk factors and infectious diseases are also linked. People living with HIV are more likely than the general population to get lung cancer or cervical cancer (39), and people with diabetes are more likely to get TB (40). In 2020, 730 000 TB episodes were estimated to be linked to tobacco smoking (40).

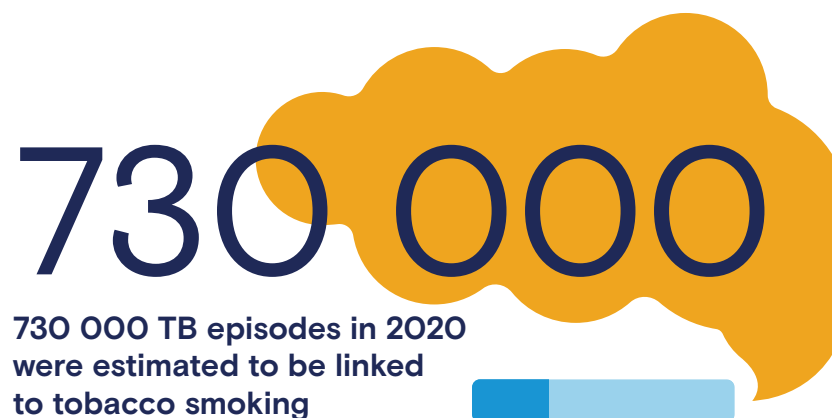
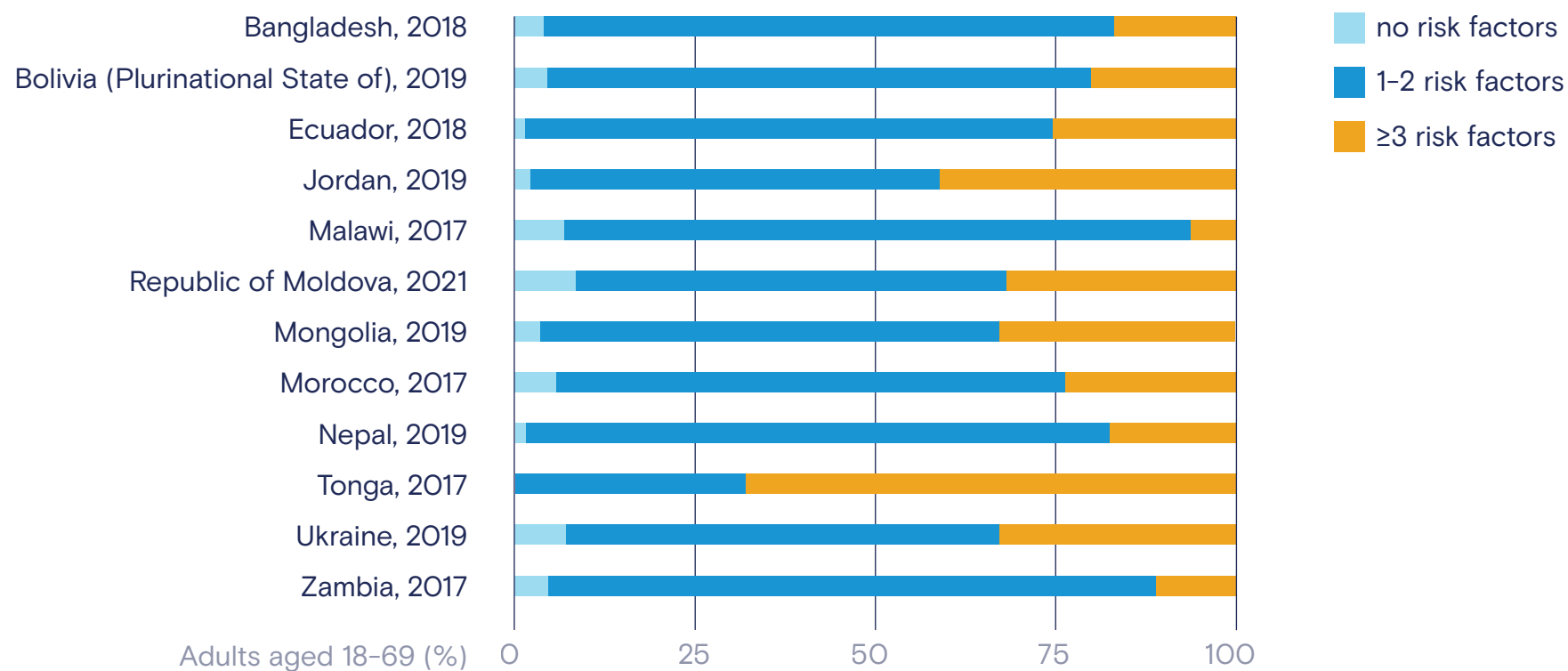


Fig. 5. NCD risk factors often occur together: percentage of adults aged 18–69 years by number of NCD risk factors



Note: Data are from selected nationally representative STEPwise approach to NCD risk factor surveillance (STEPS) surveys. The following risk factors were considered: current daily smokers, less than five servings of fruits and vegetables per day, insufficient physical activity, overweight (BMI ≥ 25 kg/m²), raised blood pressure (systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg or currently on medication for raised blood pressure).

Source: NCD Microdata Repository [online database]. Geneva: World Health Organization (36)

How do NCDs affect economies?

The health care costs of NCDs are startling. Annual spending on health is around US\$ 8.5 trillion globally (37). NCDs are widespread and tend to last for many years, so they are likely to account for a large part of this spending.

The indirect economic costs of NCDs are even greater. NCDs also prevent people from earning income by limiting their ability to work (fig. 6). Between 2011 and 2030, the cost of this lost productivity from the four major NCDs is estimated to be a staggering US\$ 30 trillion – and adding mental health increases it to US\$ 47 trillion. CVDs alone could account for more than half of this figure (41). The scale of these losses show why NCDs should be taken seriously by governments: they are central to economic growth.

Investing in NCD prevention and treatment is important for economic growth as well as for individual health. By protecting people from NCD risk factors and ensuring access to treatment if they do become ill, governments can help people to remain in work longer and to be more productive at work, leading to benefits for national economic growth as well as for everyday family finances and children's school attendance. Investing in NCD control today is therefore not just for long-term benefit: it can also have more immediate impacts.

Without action on NCDs, millions of people – especially in lower-income settings – will not be able to access the prevention, treatment, rehabilitation and palliative care that could delay or prevent NCDs and their consequences. This huge inequity undermines the human right of everyone, in all countries, to have the best available standard of health.

The good news is that the right NCD policies have very significant returns on investment. Strong, concerted policy action has been shown to be cost-effective. The next section highlights simple, straightforward policies that can catalyse better health and wellbeing for millions of people.



Fig. 6. NCDs damage the economy

In addition to being a major part of government health spending, NCDs can lead to:



4. What can be done?

There is a solution. Strong political leadership can take countries on the path to achieving their commitments to address NCDs, directed by the *WHO Implementation Roadmap for the Global Action Plan on NCDs 2023–2030*. Spending on a small number of interventions covering NCD prevention and treatment is a highly cost-effective investment to avoid the devastating health and socioeconomic impacts of NCDs. These “best buys” have very significant economic returns, providing excellent value for money and potentially prolonging healthy life for millions of people. However, financing for NCDs falls far short of reflecting the real burden of the diseases. Developing the national and global capacity needed to put the knowledge of what works to use more widely is long overdue.

We know what needs to happen

Too many people are getting sick and dying from NCDs that could have been avoided. Inaction on NCDs is not an option for any government that cares about its people or its economy. Countries have the power to turn the tide on NCDs. This requires a few ingredients:

- **Political will.** Action starts and ends with leadership. Strong national commitment to protecting people from NCDs is essential. National and international leaders must use their positions of power to increase the visibility of NCDs and highlight what can be done to tackle them.
- **The right policies and interventions.** Spending on a small number of WHO-recommended interventions for NCD prevention and treatment is a highly cost-effective investment to avoid the devastating health and socioeconomic impacts of NCDs. Many of these interventions can be integrated within primary health care and also support universal health coverage. The NCD best buys are interventions that are considered to be the most cost-effective and feasible measures to implement in all countries, providing excellent value for money and potentially prolonging healthy life for millions of people (42, 43).

- **Stronger health care delivery.** Countries need strong health care systems to guarantee effective NCD prevention, detection and treatment, ensuring that everyone can access services for screening, diagnosis and management. These NCD services should be included in any kind of basic benefits package for universal health coverage. Effective delivery also includes strengthening a country’s health workforce, ensuring that health workers all have the knowledge and resources they need to address NCDs.

- **Protection for the vulnerable.** Identifying groups most at risk from NCDs can enable targeted support. For example, the impact of NCDs is magnified in humanitarian settings where access to care and treatment can be severely and persistently disrupted.

Action must be based on evidence, and the evidence for what needs to be done has been building for many years. *The Global Action Plan for the Prevention and Control of NCDs 2013–2020* (now extended to 2030) sets out actions against the leading risk factors for NCDs and the strengthening of national health system responses. It also offers a set of nine voluntary global targets that can help countries identify priorities for reducing NCD mortality and improving health care services.

All countries, as WHO Member States, have agreed to adopt a set voluntary global NCD targets: one mortality target (aligned with SDG 3.4); six risk factor targets (harmful use of alcohol, physical inactivity, dietary sodium intake, tobacco use, raised blood pressure,

and diabetes and obesity); and two national systems targets (drug therapy to prevent heart attacks and strokes, and essential NCD medicines and technologies to treat major NCDs). Achieving these targets would represent major accomplishments in NCD and risk factor reductions. We know that this is possible. Sixty countries are currently on track to meet the tobacco reduction target, and low-income countries are currently achieving the most progress (44).

A new *Implementation Roadmap for the Global Action Plan on the Prevention and Control of NCDs (GAP) 2023–2030*, published in 2022, offers additional guidance and support for countries to accelerate progress and reorient domestic action plans (see *box 4*). It aims to help place

countries on a sustainable path to achieve the nine global NCD targets outlined in the Global Action Plan, as well as the global SDG target on NCDs. The plan includes the WHO NCD best buys (a set of cost-effective interventions that, taken as a package, support lifelong good health for people living with NCDs and for the whole population (42)), as well as other recommended interventions that can strengthen health care and improve access to NCD screening, diagnostics and management.

Q The NCD Implementation Roadmap for the GAP 2023–2030

- Accelerate the national response
 - Evaluate progress and identify barriers to interventions in your country
- Scale up and implement the most feasible and appropriate interventions
 - Work across government, with civil society, people living with NCDs and international organizations to identify the best interventions
 - Accelerate implementation of these interventions for your country
 - Align NCD action to ensure win-wins for other SDGs (see also *fig. 4*)
- Gather and assess timely and accurate data on NCDs
 - Monitor NCD measures to demonstrate where there has been success and where more effort is still required

| Box 4

It is also important that **people living with NCDs** be involved in decisions about how best to address their condition. We all have the right to participate in decisions that affect our own lives – and people living with NCDs can and should also play a key role in creating solutions for NCDs (including at the level of national policy) that are acceptable, sustainable, equitable and effective (see *box 5*).

Q People living with NCDs

People living with NCDs face many challenges in accessing and maintaining the care that they need as part of their fundamental right to the best available standard of health and to participation in decisions affecting their lives. The main challenges they face from living with NCDs are:

Affordability: Is treatment too expensive?

Accessibility: Is the right treatment available, is access sustainable, and is it on offer at a nearby facility?

Awareness: Is enough known about NCDs – by people living with or at risk of health conditions, or by policymakers and those in positions of power and influence – to understand what needs to be done to prevent, detect and manage NCDs?



“If I needed medicine, I must search in ... pharmacies, and after that I don't know what destiny has ... Because of the inflation we have now, and our devalued currency, we reached a stage where a diabetes patient today is unable to do what I did back then. Ultimately, it's the negative situation we're in. These are our economic conditions, and this is our life now.”

Learn more about Ali's lived experience and work in his local community in Lebanon.



“I try to understand where [young people with diabetes] can go and, of course, how to nurture them ... I think that's very important. So, for me, it has been fundamental ... to provoke, or facilitate, or encourage.”

Learn more about Mark's story, that of a global advocate in Brazil for improving diabetes care and prevention.



“My hope for the future for everyone with NCDs is that they're valued, involved in planning their own care, have a louder voice to policymakers – that they're more involved right from the beginning.”

Learn more about Helena's lived experience and advocacy work in the United Kingdom.

The benefits are clear...

Tackling NCDs would benefit all countries. However, LMICs could benefit most, in relative terms.

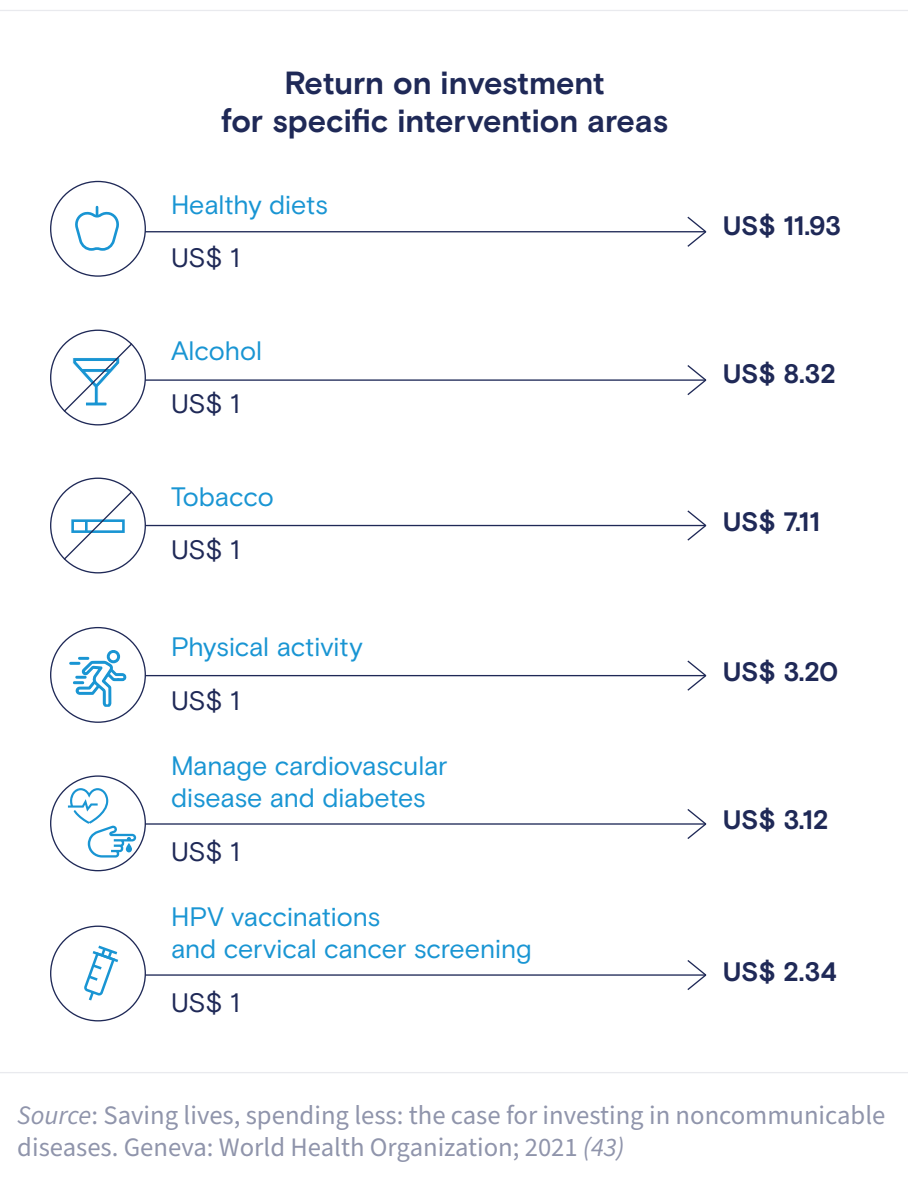
A recent WHO assessment of the impact of the NCD best buys in 76 low- and lower-middle income countries suggests that investing less than US\$ 1 per person per year could save 7 million lives in some of those countries by 2030, with even more deaths averted beyond this timeframe. The return on investment of each individual intervention is significant (see *fig. 7*), and the economic and social benefits for these countries could be more than US\$ 230 billion (43).

Between now and 2030, the NCD best buys could generate economic and social benefits of more than US\$ 230 billion in lower-income countries.

Implementing additional interventions on top of the NCD best buys in all LMICs could provide even more health and economic benefits – up to US\$ 2.7 trillion, according to some estimates (2). Although countries would need to further prioritize among these interventions, “policies to reduce tobacco smoking, harmful use of alcohol, and excess sodium intake would be relevant in nearly every country, accounting for nearly two-thirds of the health gains of any locally tailored NCD package” (2).

There are also clear benefits from prioritizing NCDs for certain groups or in particular settings. For instance, the negative impact of NCDs is magnified in humanitarian settings where access to care and treatment can be severely and persistently disrupted. People in such settings may also find themselves more exposed to risk factors, with reduced access to healthy food and safe physical activity opportunities, and with tobacco and alcohol used to cope with the resulting stress. Emergencies often increase the risk of NCD-related complications: events such as heart attacks and strokes may be up to two to three times more common in emergency situations (45). It is vital that people living with NCDs have access to the medicines and care they need in times of conflict and other humanitarian crises.

Fig. 7. Saving lives also saves money: return on investment for specific NCD interventions



...but more financing is needed

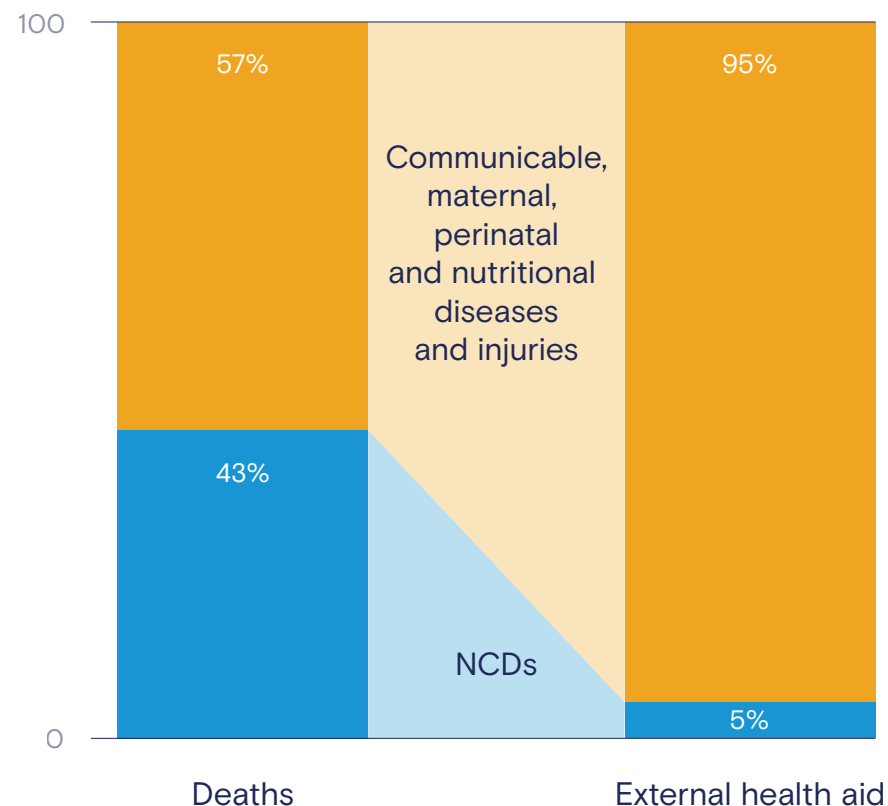
Even investments with high returns still require initial funding. Reaching SDG 3.4 in LMICs would require an additional US\$ 18 billion each year – a total of US\$ 140 billion by 2030 (2). New ways of thinking and financing are also needed, and there are opportunities from both domestic and international financing sources (42).

Only 5% of external aid for health goes to addressing NCDs in LMICs (46)

Historically, domestic sources of financing for NCDs have not been sufficient. More needs to be done to shore up domestic financing mechanisms, as these are generally still the most significant sources of NCD and health financing. An example of leveraging new domestic revenues would be increasing taxes on tobacco, alcohol and sugar-sweetened beverages to provide a significant financing boost, while at the same time providing a positive health impact through reduced consumption of these harmful products.

A similar story of underinvestment can be seen in international financing. Despite knowledge about what works for prevention and control of NCDs, there is a huge gap between the burden of NCDs in low-income countries and the support that controlling the diseases receives. External aid makes up almost 30% of health spending in lower-income countries (36), but only a small proportion of this aid goes towards NCDs (46) (see box 6 and fig. 8).

Fig. 8. NCD aid falls short: percentage of deaths and external health aid by disease/injury category in 51 selected low- and middle-income countries (2019)



Sources: Global health estimates 2019: deaths by cause, age, sex, by country and by region, 2000–2019. Geneva: World Health Organization; 2020 (1). Global Health Expenditure Database [online database]. Geneva: World Health Organization; 2022 (46)

Q The aid shortfall

Donor governments and private philanthropists dedicate relatively little health assistance to NCDs. Data from 2019 suggest that assistance for NCDs amounted to about 5% of external aid to LMICs, reflecting both direct support for NCDs and some cross-cutting aid for NCD services (such as for broader health systems strengthening) (46). This is also an equity issue: the poorest countries get only a tenth of the small amount being allocated to NCDs (47).

However, some donor governments are beginning to acknowledge and act on this need. Since 2019, Norway has had an international development strategy specifically on NCDs, supported by dedicated development assistance for health. The strategy is positioned within the SDG framework, building on and supporting its existing global health and international development priorities and assistance (48).

Box 6

To further maximize impact, limited resources should also be put to the best possible use in strategic, integrated and cost-effective ways. Strengthening health systems is a great way to do this: strong health systems help with the prevention and management of NCDs, as well as other diseases, benefitting people of all ages.

Filling the funding gap is likely to require a combination of tried-and-tested routes, new partnerships and new ways of financing. Overall, increasing funding for NCD control should be seen for what it is: not just a health investment, but part of a national plan for long-term sustainable development (2).

Time is running out

It is time for all governments to step up on their promises to reach the NCD global targets and the SDGs. There are fewer than eight years left to achieve SDG 3.4 to reduce premature deaths from NCDs by a third.

If past trends continue, only a handful of countries will reach this target (49). Yet with extra spending equivalent to 0.6% of LMICs' gross national income per capita, 90% of LMICs could meet the target and prevent or delay 39 million deaths (2). This is an opportunity that must not be wasted.



With sufficient investment, 90% of LMICs could meet the SDG target to reduce premature deaths from NCDs by a third by 2030

If every country in the world adopted the interventions that are known to work in controlling NCDs, life would be very different for millions of people. There is still a long way to go, but many countries are taking successful action to address NCDs. Your country could be next.



5. How to change the numbers

Change is possible if governments work with the right partners to set priorities, choosing and implementing the policies and interventions that will make the greatest difference.

Taking action on a problem as large as NCDs might seem daunting. But there are steps that any country can take and that can be supported by any member of government or policymaker.

Find the right partners

NCDs are a problem for all countries. However, there is a silver lining to the problem: it means that there can be strong political interest in finding solutions at both the national and international level.

WHO has been working in this space for decades and has extensive technical resources, guidance and mechanisms to support the prevention and management of NCDs. These include support with strategy development, health system strengthening and political leadership (see *box 7*), as well as providing data on NCDs and their risk factors, and how these data compare to regional or global trends. Countries are strongly encouraged to work with WHO to raise the national profile of NCDs and identify how their impact can be lessened.

“The solution to fighting noncommunicable diseases is clear: making long-term investments in prevention and treatments that have proven to work. Bloomberg Philanthropies will continue expanding our efforts to help more cities and countries take actions that will stop preventable deaths, and ensure longer, healthier and happier lives for all.”

– Michael R. Bloomberg, WHO Global Ambassador for Noncommunicable Diseases and Injuries

Q Leading from the top: a Global Compact on NCDs

The Global Group of Heads of State and Governments on NCDs is an informal and voluntary initiative for exchange, collaboration and action on NCDs at the highest level. Led by Norway and Ghana, the group launched a Global Compact on NCDs in April 2022, with the goal of saving 50 million people from dying prematurely of NCDs by 2030 through focusing on five key areas of commitment (50):

- Reducing deaths from NCDs by implementing the most cost-effective measures to prevent and control NCDs
- Protecting people living with NCDs during humanitarian emergencies by ensuring that they have access to the medicines and care they need
- Integrating NCDs within primary health care and universal health coverage
- Comprehensive NCD surveillance and monitoring
- Meaningfully engaging people living with NCDs and mental health conditions in policymaking and programming

The group will gather together heads of state and government who are championing the NCD agenda and will convene annually at the UN General Assembly. Any country can apply to join, demonstrating a commitment to tackling NCDs.

| Box 7

“Tackling the phenomenon of NCDs requires leadership to provide visibility to NCD issues. I ask my Heads of State colleagues to join hands with me as we establish a Presidential Group...and as we find solutions to NCDs with a roadmap of universal health coverage and the Sustainable Development Goals. In our time, this will be our legacy.”

– Mr Nana Addo Dankwa Afuko-Addo, President of Ghana

Set the right priorities

Understanding the national return on investment of the different NCD interventions is vital. Without this, it is hard to make the case about the urgency and impact of action to ministers and heads of state and government.

A national investment case can be particularly useful in establishing nationally appropriate policy and programme priorities. WHO and the

United Nations Development Programme (UNDP) have already partnered with a number of governments in LMICs to produce national investment cases, which are now being put to good use in directing and catalysing the most appropriate action (51). Countries can also use the WHO NCD Implementation Roadmap (see box 4).

Choose the right policies and interventions

Once a country’s NCD priorities are established, their delivery can be supported by using WHO-recommended interventions for prevention, management and surveillance.

The WHO technical packages are a good starting point. They are appropriate for use in every country, including in low-income and humanitarian settings. Each one outlines the evidence and rationale for intervention, with guidance and toolkits on how best to implement each step.

The packages and other information are available on the WHO Noncommunicable Diseases Data Portal (5).



6. Conclusion



Almost three quarters of deaths globally are from NCDs



However, the majority of NCDs can be prevented or delayed



COVID-19 outcomes are worse for people with NCDs, including diabetes, coronary artery disease and obesity



Learnings from the COVID-19 pandemic offer insights for strengthening emergency preparedness and responses for NCDs



Only 5% of external aid for health in LMICs goes to prevention and control of NCDs



An additional investment of US\$ 140 billion could lead to net economic gains of US\$ 2.7 trillion in LMICs by 2030



Only a handful of countries are on track to reach SDG 3.4 on reducing premature deaths from NCDs



However, 90% of LMICs could still achieve SDG 3.4 by 2030 with the right funding and interventions

Noncommunicable diseases are a huge challenge, affecting economies, families and individuals in every region, country and neighbourhood of the world. But in many cases, their negative impacts are not inevitable. Action to prevent, track, treat and manage NCDs is both affordable and achievable, with economic and social repercussions far beyond health.

By implementing the policies and interventions outlined in this document at an appropriate scale, more countries could achieve the SDG target for NCDs (SDG 3.4) to reduce premature deaths. Not only would this mean significant improvements in health outcomes,

it would also improve financial and social wellbeing, improve resilience to other diseases such as COVID-19 and benefit many other development goals.

Tackling NCDs is not just about reaching a target. It is an opportunity for government – for ministries of finance, education, the environment, equality, trade and health, among others – to unlock the many benefits of a healthier, happier and more productive society and to build resilience against COVID-19 and future pandemics.

NCD FAQs

Q: What does NCD mean?

A: NCDs are noncommunicable diseases, which include some of the world's biggest killers: cardiovascular diseases (heart disease and stroke), cancer, diabetes and chronic respiratory diseases.

Q: Are NCDs really a health problem for my country?

A: Absolutely! NCDs are a problem in some shape or form everywhere, although patterns of disease vary between countries and regions. You can see which NCDs and risk factors should be health priorities in your country in the WHO Noncommunicable Diseases Data Portal.

Q: Aren't NCDs inevitable because we all have to die of something?

A: Many NCDs are preventable – and too many people are becoming ill and dying too young and unnecessarily. The majority of the 17 million deaths from NCDs each year among people under age 70 could be prevented or significantly delayed.

Q: What drives NCDs?

A: Four major risk factors linked to our everyday environment – tobacco use, unhealthy diet, the harmful use of alcohol and physical inactivity – drive responses in our bodies that also increase NCD risk: raised blood pressure, obesity, raised

blood glucose and raised cholesterol. Indoor and outdoor air pollution is also a contributing factor.

Q: Do NCDs cost our country money?

A: Yes – and the economic costs and benefits are often not fully understood, so it is important to build understanding of the extent of NCDs and the potential for action.

Q: Won't fixing this problem cost too much money in the short term for benefits that won't be seen for years?

A: Not addressing NCDs is already costing billions of dollars a year. The return on investment of a package of measures to address NCDs can be as high as 7:1 – that is fantastic value for money that can significantly reduce individual and national health care costs. Spending today can prevent the onset of disease and prevent complications, and it can also produce benefits very quickly – for example, for people with diabetes and hypertension.

Q: Aren't NCDs just down to individuals making poor choices?

A: No! Behaviour is hugely affected by our surroundings: people can't eat healthy food if unhealthy food is all that is available or affordable, nor can they be more active if the local neighbourhood is unsafe; and they cannot be expected to not use alcohol or tobacco if

these are being aggressively promoted. But we can all live longer, healthier lives if governments live up to their responsibility to create supportive environments that protect people from developing NCDs and provide treatment to manage these diseases and prevent complications for those living with them.

Q: Shouldn't our focus be on investing in addressing COVID-19 and preventing future pandemics?

A: This is not an either/or situation! COVID-19 showed that people with existing health conditions (particularly NCDs) are more vulnerable to severe outcomes from many infectious diseases, and resilience against future pandemics depends on strong health systems that include NCD prevention and treatment.

Q: What can individuals living with NCDs do to improve the response to NCDs?

A: Individuals and communities with first-hand experience of living with NCDs hold key insights and expertise that can unlock opportunities to overcome barriers to accessing and sustaining health care. The right to participate in one's own care is also a fundamental part of the human right to the highest attainable standard of health.

Q: Why should my country invest in addressing NCDs when we have so many other urgent issues to deal with, such as conflict, humanitarian crises and climate change?

A: Everyone has the right to the best available standard of health, even during crises. Every effort must be made to ensure that as many people as possible who are living with NCDs can continue to access appropriate prevention, treatment and medication, whether in immediate matters of life and death (such as access to insulin for people with type 1 diabetes) or in longer-term treatment (such as blood pressure medication). Efforts to address climate change, such as ensuring a healthy, sustainable food supply, can also help to address NCDs.

Q: Aren't NCDs really a big problem only for men?

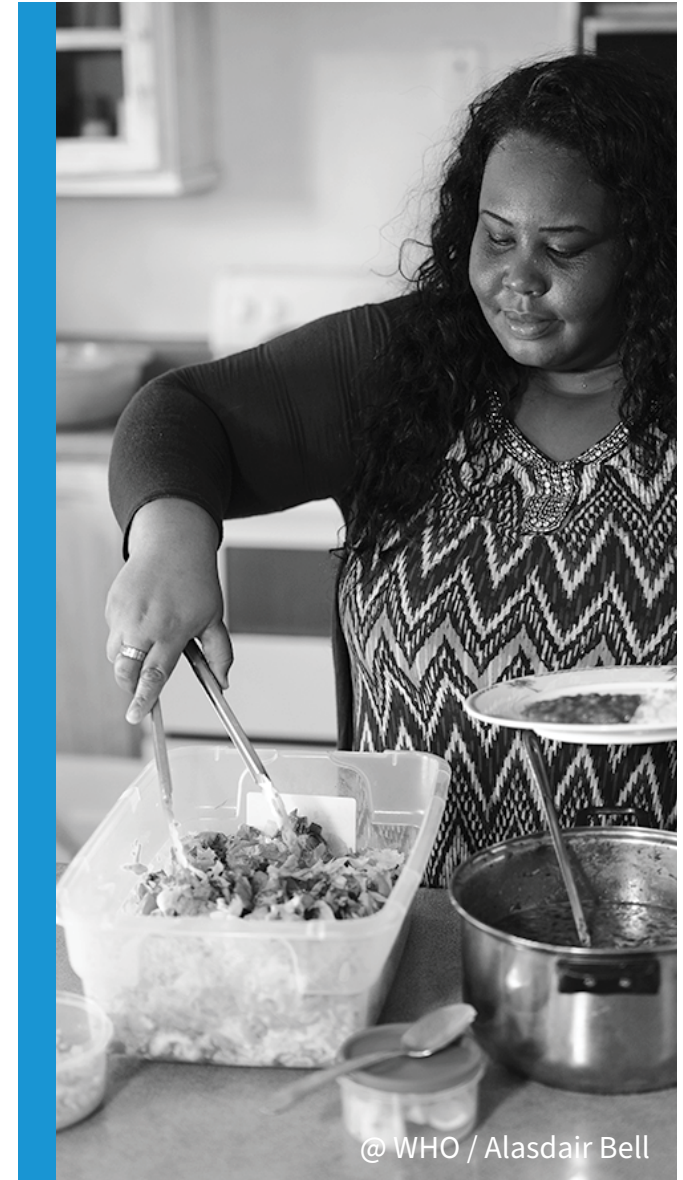
A: No! Women and girls often face the triple challenge of reproductive and maternal conditions, infectious disease and NCDs.

Q: Will addressing NCDs have benefits beyond health?

A: Yes! NCDs are central to sustainable economic development, but this is often not fully appreciated. Good NCD prevention, treatment and care can have significant co-benefits, with improvements in education, equality and the environment, with reducing poverty, and in boosting economic growth.

Q: As a donor, can development assistance really make a difference?

A: Yes! This isn't about financing a whole health system: your assistance can be instrumental in finding ways to unlock domestic funding or be used in targeted, effective ways, with long-lasting, far-reaching impacts.



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